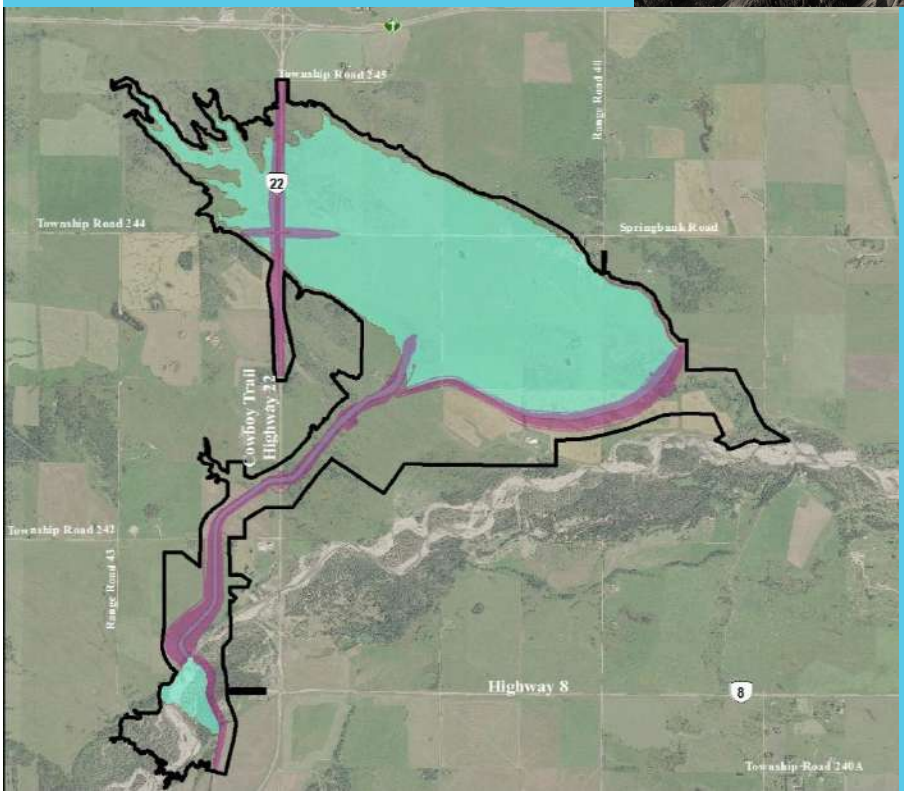
Springbank Off-stream Reservoir Project





Impact Assessment Agency of Canada Annual Report - 2024/2025 Reporting Year

October 2025

Alberta Transportation and Economic Corridors

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Executive Summary

The Springbank Off-stream Reservoir Project (the Project; SR1) is the Government of Alberta's (GoA, the Province) response to the June 2013 flood disaster in southern Alberta. SR1 is a flood mitigation Project designed to help reduce the effects of extreme flood events on infrastructure, watercourses, and downstream communities, including the City of Calgary. The Project is located approximately 15 kilometres (km) west of Calgary in Rocky View County.

The Province received the Impact Assessment Agency of Canada (IAAC) Decision Statement in July 2021 and the Natural Resources Conservation Board (NRCB) Approval in October 2021. The Project construction is delivered by Alberta Transportation and Economic Corridors (TEC) and is owned and operated by Alberta Agriculture and Irrigation (AGI), on behalf of the Province.

The Project has transitioned toward long-term operations during the 2024/2025 reporting year (June 30, 2024, to July 1, 2025). Effective May 1, 2025, responsibility for the ongoing operations and maintenance of the Project has transitioned from TEC to AGI. This transition ensures alignment with the Province's operational mandates and will support the continued safe and effective functioning of the reservoir system. TEC will remain involved in the final aspects of construction (e.g., reclamation activities) until they are completed by Spring 2026. All environmental obligations, regulatory approvals, and commitments made under the IAAC Decision Statement will continue to be upheld by the Government of Alberta.

This report comprises a summary of construction and environmental monitoring activities completed during the 2024/2025 reporting year as they pertain to the IAAC approval conditions. The IAAC Decision Statement Amendment was received June 2, 2025, with changes to the annual reporting year to a calendar year (January 1 to December 31). As the IAAC reporting period has been adjusted to a calendar year basis, a follow-up report will be submitted April 30, 2026, to address remaining activities in 2025 (July 1, 2025, to December 31, 2025).

Construction and Operations and Maintenance Activities during 2024/2025 Reporting Year

During the 2024/2025 reporting year, construction activities included continued work on the inlet channel at the Elbow River, excavation of the diversion channel, and at the approach and exit channels of the low-level outlet structure. Major milestones included completion of the Service Spillway, Auxiliary and Emergency Spillways, Grade Control Structure, and Debris Deflection Barrier; substantial fill placement and completion of the dam embankment; switching of the Elbow River back to its original alignment; and soil placement, riprap installation.

As part of the Project operations and maintenance, in April 2025, the GoA conducted testing of the Service Spillway and Diversion Inlet gates. This activity ensures that the gates seal properly for watertightness and that the Service Spillway gates operate up to design loads, thereby confirming the dam can perform as intended for public safety.

Environmental Management and Mitigation

To manage impacts to the surrounding environment as a result of construction activities, best management practices were implemented and adhered to provincial and federal requirements. Sediment and erosion control measures were installed in Project construction areas that were sensitive to construction activities (e.g., adjacent to Elbow River, wetlands, etc.). These were and continue to be routinely inspected and replaced or augmented, as necessary.

Terrestrial - Vegetation

Topsoil and subsoil stockpiles were monitored for the presence of invasive alien and noxious weeds. Weeds were mechanically removed and disposed of at an approved waste facility.

Silt fences at the toe side of soil stockpiles were routinely inspected. Seeding commenced during the 2024/2025 reporting year. Areas were reseeded using approved seed mixes.

Existing roads and farm trails, along with a constructed light-duty vehicle road paralleling the diversion channel and dam, were used to access the construction area. Equipment fueling, cleaning, and maintenance activities were conducted at least 100 meters from waterbodies and wetlands, utilizing secondary containment. Substances with potential environmental harm were stored over 100 m from water bodies and wetlands.

Surface water management occurred throughout the 2024/2025 reporting year, except during winter when the ground was frozen. Areas where water entered the site either by precipitation or naturally seeping through the excavated wall included the diversion inlet structure, grade control structure construction area, and dam area. No water was directly discharged to nearby waterbodies.

Terrestrial - Wildlife

During the 2024/2025 reporting year, multiple wildlife sweeps were completed by the Contractor in advance of vegetation clearing or construction activities (e.g., fencing) as required to comply with the *Migratory Birds Convention Act*, *Species at Risk Act*, and Alberta *Wildlife Act*. All observations and wildlife features were documented, and site-specific mitigation measures were implemented and monitored. Details included in Section 4.7.2.1.

Installation of wildlife friendly fencing commenced during the 2024/2025 reporting year with the remaining wildlife friendly fencing scheduled to be installed in the fall of 2025.

Water

Continuous turbidity measurements were recorded using turbidity sondes installed at three locations in the Elbow River: approximately 355 m upstream of the Project, Highway 22 bridge, and downstream of the Project at the confluence of Unnamed Creek and Elbow River. The sonde upstream of the Project was moved from immediately upstream of the construction location to proximity to the Bragg Creek Water Survey of Canada station on June 19, 2025, ahead of flood season. Several grab water samples were collected far downstream during the 2024/2025 reporting year. Additionally, turbidity was measured in the field, where access was determined to be safe, at three locations in Unnamed Creek, between the confluence with the Elbow River and 400m upstream of the confluence, when flow was observed in the creek following the rain in late June 2025.

Total suspended sediment (TSS) concentrations were elevated during several events during the 2024/2025 reporting year at all three sondes; however, this was attributed to sonde malfunctions (e.g., sonde freezing), ice break-up events, and heavy rainfall. For example, peaks observed in March 2025 and during late June rainfall could not be attributed to Project construction, as no instream work was occurring in March 2025 or in June 2025. Downstream TSS concentrations were consistent with, or lower than, upstream levels, in line with previous years. No effects of Project construction on TSS concentrations are evident based on the monitoring data.

In August 2024, the Elbow River was successfully moved from its temporary diversion channel to its original alignment to enable completion of the Service Spillway and Diversion Inlet.

Fish and Fish Habitat

During the 2024/2025 reporting year, activities relating to fish and fish habitat were carried out with attention to regulatory requirements and aquatic conditions. Instream work at the Diversion Inlet and Low-Level Outlet involved fish salvage and relocation programs. These programs were overseen by a Qualified Aquatic Environment Specialist (QAES), who captured and moved fish before construction works.

Construction of the Elbow River fish passage v-weirs reached substantial completion in August 2024. These structures were designed in consultation with Fisheries and Oceans Canada and Transport Canada to support movement of fish through the Project area. Monitoring of fish passage is scheduled for 2026, and results will be evaluated against baseline data collected in 2021 to assess the effectiveness of mitigation measures.

Offsetting measures required under the *Fisheries Act* Authorization also advanced during the reporting year. These measures are intended to address potential permanent and temporary alteration and loss of fish habitat, including areas used by bull trout, a species at risk. In September 2024, the Elbow River Side Channels were constructed as part of the approved Offset Measures Plan included in the *Fisheries Act* Authorization.

Air and Noise

The air quality monitoring network was established in June 2022. During the 2024/2025 reporting year, the air monitoring stations at SR1 continued to collect data. Any concentrations of total suspended particulates (TSP), coarse particulate matter (PM_{10}), or fine particulate matter ($PM_{2.5}$) above the Alberta Ambient Air Quality Objectives and Guidelines (AAAQO and AAAQG) were investigated and when necessary, dust mitigation measures were implemented. Dust and emission control mitigations that were implemented included the application of water or calcium chloride to roads to suppress dust generation, speed limit reductions on roads within the Project construction areas, a no-idling policy, visual inspection of roads and Project construction areas for dust, and adaptive mitigation in response to dust complaints and elevated ambient particulate monitoring concentrations at the monitoring stations.

Monitoring continued to operate throughout the 2024/2025 reporting year at the following three sites:

- between the construction access road and the diversion channel (Station 1)
- at the dam construction site (Station 2)
- at any borrow source site used and at the parking areas (Station 3)

The three sites were equipped with three environmental beta-attenuation mass monitor (EBAM) stations to measure $PM_{2.5}$, PM_{10}, and TSP. Meteorological monitoring of wind speed, wind direction, temperature, relative humidity, and atmospheric pressure is co-located with the $PM_{2.5}$ EBAM station with the sensors are installed at instrument height (2 m above ground surface). No changes were made to the monitoring equipment, and the location of the three sites remains the same as the previous reporting year (2023/2024).

In addition to the three sites, the Springbank Air Quality Monitoring Station (AQMS) was commissioned on June 7, 2023. The AQMS is in the community of Springbank at the Lions Soccer Park near the intersection of Range Road 33 and Township Road 244. The AQMS is equipped with $PM_{2.5}$ and nitrogen dioxide (NO_2) analyzers, and meteorological sensors to measure wind speed, wind direction, vertical wind speed, ambient temperature, relative humidity, barometric pressure, solar radiation, and precipitation. The wind sensors are mounted on a 10 m tower attached to the AQMS shelter and the other sensors and analyzer inlets are located on the roof of the shelter at a height of 3 m above the ground surface.

An air quality monitoring station was located on the west side of Calaway Park during the period when the park was open to the public. In 2024 the station was active from May 3 to October 15 and was redeployed on May 15, 2025, and will be removed in late October when the park closes for the season. The site is equipped with two EBAM stations to measure $PM_{2.5}$ and TSP. Meteorological monitoring of wind speed, wind direction, temperature, relative humidity, and atmospheric pressure is co-located with the $PM_{2.5}$ EBAM station with the sensors installed at instrument height (2 m above ground surface).

Archaeological and Heritage Resources

Archaeological and heritage resource management for the 2024/2025 reporting year was carried out in accordance with the Archaeological and Heritage Management Plan. No *Historical Resources Act* Section 31 chance finds requiring additional investigation were recorded during the reporting year.

In accordance with IAAC Condition 9.4, Cultural awareness training continued to be provided to construction personnel, reinforcing procedures for recognizing and protecting archaeological and heritage values during project activities. Records for cultural awareness training received for the 2024/2025 reporting period are included in Section 4.10.2 of this report.

In addition, palaeontological monitoring was maintained across key excavation areas. No palaeontological discoveries requiring mitigation or additional studies were identified during the 2024/2025 reporting year.

Indigenous Monitor and Independent Environmental Monitor

In accordance with IAAC Condition 9.1, Indigenous Monitors were retained prior to construction and continued active participation throughout the 2024/2025 reporting year. The Indigenous Monitors observed, recorded, and reported on the implementation, throughout construction, of requirements set out in the Decision Statement.

A third-party Independent Environmental Monitor (IEM) was also retained for the construction phase to observe adherence of the IAAC approval conditions.

Monitoring Plans

Mitigation and monitoring measures were developed, which were outlined in various monitoring plans for SR1. The monitoring plans that were required to be finalized prior to the start of construction were sent to Indigenous groups and appropriate regulators (e.g., IAAC, Health Canada, Environment and Climate Change Canada, etc.) for review prior to implementation. Monitoring during construction continues to be completed, and mitigation measures are implemented, as necessary. No updates to monitoring plans were required during the 2024/2025 reporting year.

Résumé

Le projet de réservoir hors cours d'eau de Springbank (le Projet, SR1) a été mis en œuvre par le gouvernement de l'Alberta à la suite des inondations catastrophiques de juin 2013 survenues dans le sud de la province. Le Projet consiste en la conception d'une infrastructure d'atténuation des crues destinée à prévenir les effets d'événements extrêmes sur les infrastructures, les cours d'eau et la population des villes en aval, dont la ville de Calgary. Le Projet est situé à environ 15 kilomètres à l'ouest de Calgary, dans le comté Rocky View.

Le gouvernement provincial a reçu la déclaration de décision de l'Agence d'évaluation d'impact du Canada (AEIC) en juillet 2021 et les autorisations de l'organisme Natural Resources Conservation Board (NRCB) en octobre 2021. Le Projet, dont la construction est assurée par le ministère albertain Transportation and Economic Corridors (TEC), est détenu et exploité par Alberta Agriculture and Irrigation (AGI) pour le compte du gouvernement de l'Alberta.

Le Projet est passé à l'étape d'exploitation à long terme au cours de l'année de déclaration 2024-2025 (du 30 juin 2024 au 1er juillet 2025). Depuis le 1er mai 2025, la responsabilité des activités d'exploitation et d'entretien du Projet a été transférée de TEC à AGI. Cette transition est en adéquation avec les mandats opérationnels du gouvernement provincial et favorisera le fonctionnement sûr et efficace de l'infrastructure du réservoir. Le ministère TEC restera impliqué dans les derniers aspects de la construction (par exemple, les activités liées aux réclamations) jusqu'à ce que le tout soit terminé au printemps 2026. Toutes les obligations environnementales, les autorisations réglementaires et les engagements pris en vertu de la déclaration de décision de l'AEIC continueront d'être respectés par le gouvernement de l'Alberta.

Le présent document dresse un résumé des activités de construction et de surveillance environnementale réalisées au cours de la période de déclaration 2024-2025 conformément aux conditions d'autorisation de l'AEIC. Dans sa déclaration de décision modifiée qui a été reçue le 2 juin 2025, l'AEIC modifie l'année de déclaration pour la fixer à l'année civile (du 1er janvier au 31 décembre). La période de déclaration correspondant maintenant à l'année civile, un rapport de suivi sera soumis le 30 avril 2026 pour traiter des activités restantes en 2025 (du 1er juillet 2025 au 31 décembre 2025).

Travaux de construction, d'exploitation et d'entretien réalisés au cours de la période de déclaration 2024-2025

Pendant la période de déclaration 2024-2025, les activités de construction se sont poursuivies à l'ouvrage de dérivation de la rivière Elbow, dont l'excavation du canal de dérivation, du canal d'amenée et du canal de décharge de l'ouvrage d'évacuation de bas niveau. Les principales réalisations ont été l'achèvement de l'évacuateur de crue, des évacuateurs auxiliaires et de secours, de l'ouvrage de stabilisation des pentes et de la barrière de déviation des débris, la

mise en place de remblais importants et l'achèvement du remblai du barrage, le retour de la rivière Elbow à son lit d'origine, la mise en place de terre végétale et d'enrochements.

Dans le cadre des activités d'exploitation et d'entretien du Projet, en avril 2025, le gouvernement de l'Alberta a effectué des essais sur les vannes d'entrée de l'évacuateur de crue et de l'ouvrage de dérivation. Ces essais ont permis de vérifier que les vannes sont étanches, que les vannes de l'évacuateur de crue fonctionnent selon les charges de conception et que le barrage peut fonctionner comme prévu pour assurer la sécurité publique.

Gestion environnementale et mesures d'atténuation

Pour limiter les effets sur les milieux environnants des travaux de construction, des pratiques exemplaires ont été mises en œuvre et les exigences des autorités provinciales et fédérales ont été respectées. Des mesures d'atténuation de l'érosion et du transport des sédiments ont été mises en place dans les zones du Projet sensibles aux travaux de construction (p. ex. les zones adjacentes à la rivière Elbow et les milieux humides). Ces mesures ont fait (et font toujours) l'objet d'une surveillance régulière, et des mesures supplémentaires ou modifiées ont été mises en œuvre au besoin.

Végétation terrestre

Les amoncellements de terre végétale et de sols inertes ont été surveillés pour déceler la présence d'espèces exotiques envahissantes et d'herbes nuisibles. Les mauvaises herbes ont été enlevées mécaniquement et éliminées dans des installations autorisées de traitement des déchets.

Les clôtures anti-érosion installées au pied des amoncellements de terre ont fait l'objet d'une surveillance régulière. Le réensemencement a commencé au cours de la période de déclaration 2024-2025 à l'aide de mélanges de graines approuvés.

Des routes existantes et des sentiers agricoles ainsi qu'une route pour véhicules légers construite en parallèle du canal de dérivation et du barrage ont été utilisés pour accéder au chantier de construction. Les activités de ravitaillement en carburant, de nettoyage et d'entretien de l'équipement se sont déroulées à une distance d'au moins 100 mètres des plans d'eau et des milieux humides, et un système de confinement secondaire a été déployé à cet effet. Les substances susceptibles d'avoir des effets nocifs sur l'environnement ont été stockées à plus de 100 mètres des plans d'eau et des milieux humides.

La gestion des eaux de surface a été effectuée durant la période de déclaration 2024-2025, sauf en hiver lorsque le sol était gelé. Les zones où l'eau a pénétré sur le site, soit par précipitation, soit en s'infiltrant naturellement à travers les parois excavées, comprenaient la zone de l'ouvrage de dérivation, la zone de construction de l'ouvrage de stabilisation des pentes et la zone du barrage. Aucun déversement d'eau n'a été directement effectué dans les plans d'eau avoisinants.

Faune terrestre

Au cours de l'année de déclaration 2024-2025, de multiples relevés de la faune ont été effectués par l'entrepreneur avant le défrichage de la végétation ou les activités de construction (par exemple, la pose de clôtures), conformément à la *Loi sur la convention* concernant *les oiseaux migrateurs*, à la *Loi sur les espèces en péril* et à la *Loi sur la faune et la flore de* l'Alberta. Toutes les observations et les caractéristiques de la faune ont été documentées, et des mesures d'atténuation particulières au site ont été mises en œuvre et font l'objet d'un suivi. Des informations détaillées sont fournies dans la section 4.7.2.1.

L'installation de clôtures respectueuses de la faune a commencé au cours de l'année de déclaration 2024-2025 et devrait se terminer à l'automne 2025.

Eau

Des mesures continues de la turbidité ont été enregistrées à l'aide de sondes de turbidité installées à trois endroits dans la rivière Elbow : à environ 355 mètres en amont du Projet, au pont de la route 22 et en aval du Projet, soit au confluent du ruisseau sans nom et de la rivière Elbow. Le 19 juin 2025, soit avant la saison des inondations, la sonde en amont du Projet a été déplacée à proximité de la station hydrométrique Bragg Creek de Relevés hydrologiques du Canada. Plusieurs échantillons ponctuels d'eau ont été prélevés loin en aval au cours de l'année de déclaration 2024-2025. Aussi, la turbidité a été mesurée là où l'accès a été jugé sûr, à trois endroits dans le ruisseau sans nom, entre sa jonction avec la rivière Elbow et 400 mètres en amont de cette jonction, lorsqu'une augmentation du débit a été observée dans le ruisseau à la suite des précipitations reçues à la fin de juin 2025.

Les concentrations de matières en suspension totales (MES) ont été relativement élevées lors de plusieurs événements au cours de l'année de déclaration 2024-2025, selon les lectures des sondes. Cependant, ces concentrations étaient probablement liées au mauvais fonctionnement des sondes (p. ex., gel des sondes), à des épisodes de débâcle des glaces et à de fortes pluies. Par exemple, les pics observés en mars 2025 et pendant les précipitations de fin juin n'ont pas pu être attribués à des travaux de construction du Projet, car il n'y a pas eu de travaux dans le cours d'eau en mars 2025 ni en juin 2025. Les concentrations de MES en aval étaient semblables ou inférieures aux concentrations en amont, comme par les années passées. Les données de suivi indiquent que les travaux de construction du Projet n'ont eu aucun effet sur les concentrations de MES.

En août 2024, la rivière Elbow a retrouvé avec succès son lit original pour permettre l'achèvement de l'évacuateur de crue et de l'ouvrage de dérivation.

Poissons et habitat du poisson

Au cours de l'année de déclaration 2024-2025, les activités relatives aux poissons et à leur habitat ont été menées suivant les exigences réglementaires et les conditions aquatiques. Les travaux dans le cours d'eau à l'entrée du canal de dérivation et à la sortie de l'ouvrage d'évacuation de bas niveau ont entraîné la mise en œuvre de programmes de sauvetage et de relocalisation des poissons. Ces programmes ont été supervisés par un spécialiste qualifié de l'environnement aquatique (QAES); celui-ci a capturé et déplacé les poissons avant les travaux de construction.

La construction des passes à poissons en V de la rivière Elbow a été achevée en août 2024. Ces passes ont été conçues en consultation avec Pêches et Océans Canada et Transports Canada pour faciliter le déplacement des poissons dans la zone du Projet. La surveillance du passage des poissons est prévue pour 2026, et les résultats seront évalués par rapport aux données de référence recueillies en 2021 pour évaluer l'efficacité des mesures d'atténuation.

Les mesures de compensation exigées en vertu de la *Loi sur les pêches* ont également progressé au cours de l'année de référence. Ces mesures visent à remédier à la perte et aux dommages potentiels permanents et temporaires de l'habitat du poisson, y compris des zones utilisées par l'omble à tête plate, une espèce en péril. En septembre 2024, les canaux latéraux de la rivière Elbow ont été construits dans le cadre du plan de mesures compensatoires approuvé et inclus dans l'autorisation accordée en vertu de la *Loi sur les pêches.*

Bruit et qualité de l'air

Le système de surveillance de la qualité de l'air a été mis en place en juin 2022. Au cours de la période de déclaration 2024-2025, des données ont été collectées par les stations de surveillance de la qualité de l'air du Projet. Dans tous les cas où la concentration des particules totales en suspension (PTS), des particules en suspension < 10 µm (PM_{10}) ou des particules fines ($PM_{2.5}$) a dépassé les limites fixées dans les lignes directrices Alberta Ambient Air Quality Objectives and Guidelines (AAAQO et AAAQG), une enquête a été menée et des mesures de réduction des poussières ont été prises au besoin. Les mesures de réduction des poussières et des émissions mises en place comprenaient l'établissement de limites de vitesse sur les routes du Projet, une politique interdisant le fonctionnement des moteurs au ralenti, l'application d'eau ou de chlorure de calcium comme abat-poussière, l'inspection visuelle des routes et des zones de construction du Projet relativement aux poussières, ainsi que des mesures d'atténuation particulières en réponse aux plaintes relatives à la poussière et aux concentrations élevées de particules en suspension mesurées aux stations de surveillance.

La surveillance s'est poursuivie tout au long de la période de déclaration 2024-2025 sur les trois sites suivants :

- entre la route d'accès au chantier et le canal de dérivation (station 1);
- sur le chantier du barrage (station 2);
- sur tous les sites d'emprunt utilisés et sur les aires de stationnement (station 3).

Les trois sites étaient munis de trois appareils de mesure à technologie d'atténuation bêta pour mesurer les $PM_{2.5}$, PM_{10} et les PTS. Les dispositifs de mesures de la vitesse et de la direction du vent, de la température, de l'humidité relative et de la pression atmosphérique sont situés au même endroit que l'appareil de mesure des $PM_{2.5}$, les capteurs étant installés à la hauteur de l'appareil (soit 2 mètres au-dessus du sol). Aucun changement n'a été apporté à l'équipement de surveillance et l'emplacement des trois sites de surveillance est resté le même que pour l'année de déclaration précédente (2023-2024).

En plus de ces trois sites, la station de surveillance de la qualité de l'air de Springbank a été mise en service le 7 juin 2023. La station se trouve dans la collectivité de Springbank, au parc de soccer (*Lions* Soccer *Park*), près de l'intersection de la route rurale 33 et de la route de canton 244. La station est munie d'analyseurs des particules fines ($PM_{2.5}$) et du dioxyde d'azote (NO_2), ainsi que de capteurs météorologiques pour mesurer la vitesse et la direction du vent, la vitesse verticale du vent, la température ambiante, l'humidité relative, la pression barométrique, le rayonnement solaire et les précipitations. Les capteurs de mesure du vent sont montés sur une tour de 10 mètres fixée à l'abri de la station et les autres capteurs et dispositifs de mesure sont situés sur le toit de l'abri à une hauteur de 3 mètres au-dessus du sol.

Une station de surveillance a été installée sur le côté ouest du parc Calaway pendant la période où le parc était ouvert au public. En 2024, la station a pris des mesures du 3 mai au 15 octobre. Elle a été remise en fonction le 15 mai 2025 et le restera jusqu'à la fin du mois d'octobre lorsque le parc fermera pour la saison. La station est munie de deux appareils de mesure à technologie d'atténuation bêta pour mesurer les $PM_{2.5}$ et les PTS. Les dispositifs de mesures de la vitesse et de la direction du vent, de la température, de l'humidité relative et de la pression atmosphérique sont situés au même endroit que l'appareil de mesure des $PM_{2.5}$, les capteurs étant installés à la hauteur de l'appareil (soit 2 mètres au-dessus du sol).

Ressources archéologiques et patrimoniales

La gestion des ressources archéologiques et patrimoniales pour l'année de rapport 2024-2025 a été effectuée conformément au plan de gestion archéologique et patrimonial. Aucune découverte fortuite relevant de l'article 31 de la loi *Historical Resources Act* et nécessitant des études supplémentaires n'a été enregistrée au cours de l'année de référence.

Conformément à la condition 9.4 de l'AEIC, une formation de sensibilisation à la culture a continué d'être donnée au personnel de construction, dans le but de renforcer le respect des procédures de reconnaissance et de protection des éléments ayant une valeur archéologique et patrimoniale au cours des activités du Projet. Les renseignements relatifs à la formation de sensibilisation à la culture reçue pour la période de référence 2024-2025 sont fournis à la section 4.10.2 du présent rapport.

De plus, une surveillance paléontologique a été maintenue dans les principales zones de fouilles. Aucune découverte paléontologique nécessitant des mesures d'atténuation ou des études supplémentaires n'a été identifiée au cours de l'année de référence 2024-2025.

Surveillance environnementale effectuée par les communautés autochtones et une tierce partie indépendante

Conformément à la condition 9.1 de l'AIEC, les services de surveillants autochtones ont été retenus avant la construction et tout au long de l'année de déclaration 2024-2025. Les surveillants autochtones ont observé les activités du Projet relativement au respect des conditions énoncées dans la déclaration de décision, et en ont rendu compte.

Les services d'un surveillant environnemental indépendant tiers ont aussi été retenus pour effectuer la surveillance pendant la construction et vérifier la conformité aux conditions énoncées par l'AIEC.

Programmes de suivi

Les mesures d'atténuation et les activités de surveillance qui figurent dans les différents programmes de suivi du Projet ont été élaborées. Les programmes de suivi qui devaient être finalisés avant le début des activités de construction ont été transmis aux groupes autochtones et aux autorités réglementaires appropriées (p. ex., AEIC, Santé Canada, Environnement et Changement climatique Canada) pour examen avant leur mise en œuvre. Depuis le début de la construction, la surveillance est réalisée de manière continue et les mesures d'atténuation nécessaires ont été mises en œuvre. Aucune mise à jour des programmes de suivi n'a été requise pour la période de déclaration 2024-2025.

Abbreviations

%	percent
°C	degrees Celsius
µg/m^3	microgram per cubic metre
AAAQG	Alberta Ambient Air Quality Guidelines
AAAQO	Alberta Ambient Air Quality Objectives
AACSW	Alberta Arts, Culture and Status of Women
AEIC	Agence d'évaluation d'impact du Canada
AEPA	Alberta Environment and Protected Areas
AGI	Agriculture and Irrigation
AMD	Air Monitoring Directive
AQMP	Air Quality Monitoring Plan
AQMS	Air Quality Monitoring Station
AVC	Animal-vehicle collision
BC AQO	British Columbia Ambient Air Quality Objective
BTEX	benzene, toluene, ethylbenzene, xylenes
BV	Bureau Veritas
CAAQS	Canadian Ambient Air Quality Standards
CCME	Canadian Council of Ministers of the Environment
CEAA	*Canadian Environmental Assessment Act, 2012*
CRAZ	Calgary Region Air Zone
DFO	Fisheries and Oceans Canada
DO	Dissolved oxygen
DOC	dissolved organic carbon
EBAM	environmental beta-attenuation mass monitors

EC	Electrical conductivity
ECCC	Environment Climate Change Canada
EIA	Environmental Impact Assessment
FNLUAC	First Nations Land Use Advisory Committee
FNLUCC	First Nations Land Use Collaboration Committee
GoA	Government of Alberta
GWMP	Groundwater Monitoring Plan
HADD	harmful alteration, disruption, and destruction
HRA	*Historical Resources Act*
HRA Section 31	*Historical Resources Act* Section 31 Chance Find
IAAC	Impact Assessment Agency of Canada
km	kilometre
km/h	kilometres per hour
kPa	kilopascal
KWBZ	Key Wildlife Biodiversity Zone
L	litre
LAA	Local Assessment Area
LOC	Licenses of Occupation
m	metre
m^3	cubic metre
mg/L	milligrams per litre
m/s	metres per second
mm/h	millimetre per hour
µg	micrometre
NO	Nitrogen monoxide
NO_2	Nitrogen dioxide

NO_X	Oxides of Nitrogen or Nitrogen Oxides
NRCB	Natural Resources Conservation Board
NTU	Nephelometric Turbidity Units
ORP	oxidation-reduction potential
PDA	Project Development Area
PLA	*Public Lands Act*
PM_{10}	Course particulate matter with an aerodynamic diameter of 10 µm or less
$PM_{2.5}$	Fine particulate matter with an aerodynamic diameter of 2.5 µm or less
ppbv	parts per billion volume
QA/QC	quality assurance and quality control
RAP	Restricted Activity Period
SARA	*Species at Risk Act*
SIR	Supplemental Information Requests
SR1; Project	Springbank Off-stream Reservoir Project
SWMP	Surface Water Monitoring Plan
TDL	Temporary Diversion License
TEC	Alberta Transportation and Economic Corridors
TFA	Temporary Field Authorization
TSP	Total suspended particulate; with an aerodynamic diameter 100 µm or less
TSS	Total Suspended Solids
W/m^2	watts per square metre
WMMP	Wildlife Mitigation and Monitoring Plan
WSC	Water Survey of Canada

1.0 INTRODUCTION

The Springbank Off-stream Reservoir Project (see Figure 1.1, the Project; SR1) is located in Rocky View County 15 kilometres (km) west of the City of Calgary, Alberta. The Project is a dry reservoir system that will divert excess flood water from Elbow River to an off-stream reservoir where it will be held until the risk of flooding has passed. At that time, the retained flood water will be returned to Elbow River in a controlled manner.

The Government of Alberta (GoA, the Province) received Project approvals from the Impact Assessment Agency of Canada (IAAC) in July 2021, and the Natural Resources Conservation Board (NRCB) in October 2021. The Government of Alberta Order in Council was signed in October 2021. The Project construction is delivered by Alberta Transportation and Economic Corridors (TEC) and is owned and operated by Alberta Agriculture and Irrigation (AGI), on behalf of the Province.

IAAC approval conditions for Project construction and operations outline federal reporting requirements to be carried out during all phases of the Designated Project. During the 2024/2025 reporting year, construction activities continued at the inlet channel at the Elbow River, excavation of the diversion channel, excavation of the approach channel and exit channel of the low-level outlet structure and fill placement at the dam.

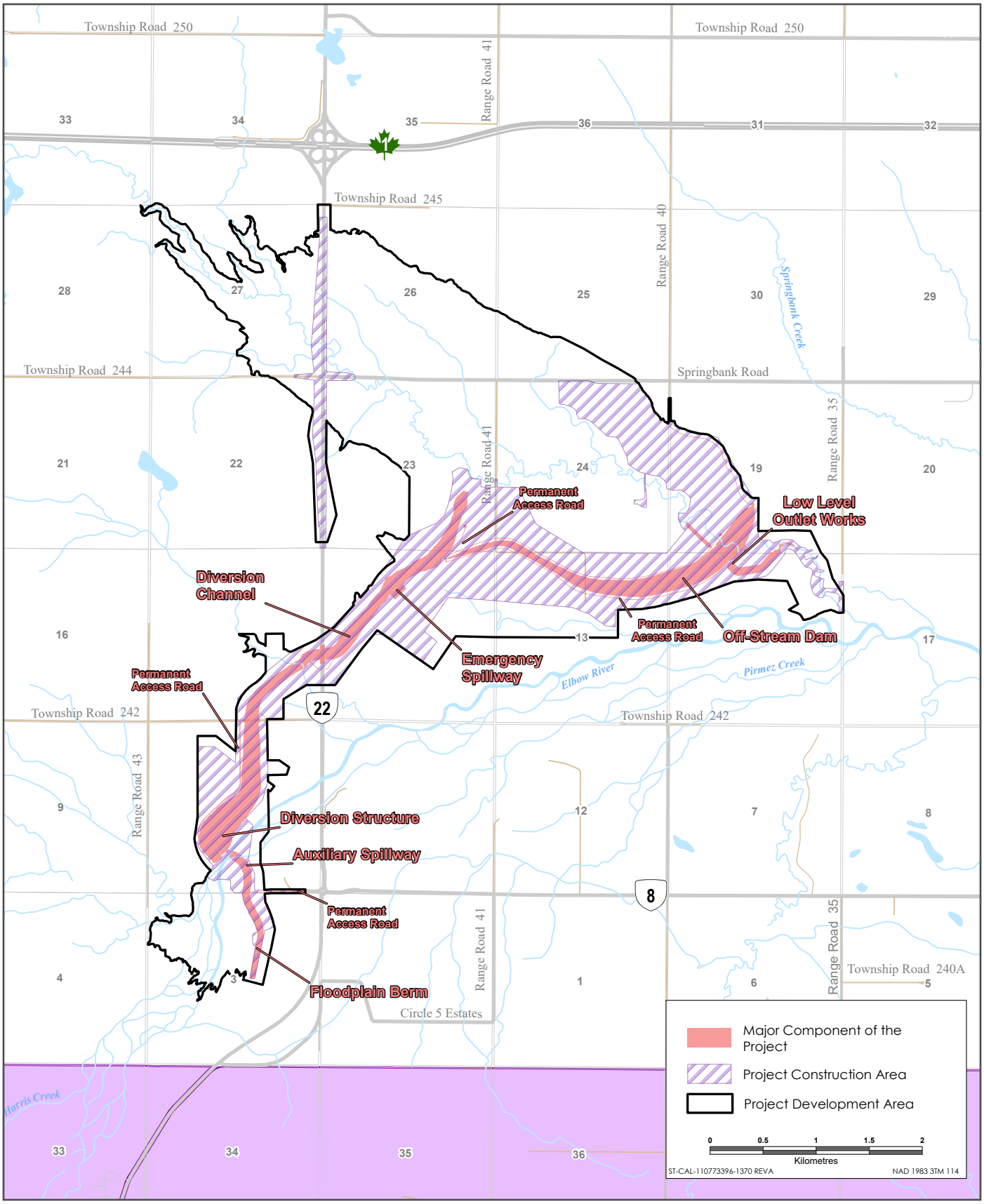
TEC submitted an amendment application to IAAC for revisions to approval conditions such as the reporting year to a calendar year (condition 1.32) and corresponding submission date of the annual report (condition 2.12), and the wildlife friendly fencing to reflect the current plans for installation (condition 8.5). Details of the amendment application were captured in IAAC's Draft Analysis of Alberta Transportation and Economic Corridors Proposed Changes to the Springbank Off-Stream Reservoir Project that released for Public and Indigenous Consultation Period with a closing date of December 13, 2024. On June 2, 2025, IAAC issued the amended Decision Statement, received by AGI, on behalf of the Province. All corresponding changes per the amendment Decision Statement have been made in Appendix A and C.

The GoA confirms that, during the 2024/2025 reporting year, all activities undertaken during construction were executed in a careful and precautionary manner, promoting sustainable development, utilizing the best available information, including Indigenous and community knowledge, and adhered to recognized industry standards, while employing qualified individuals and the most economically and technically feasible technologies. A concordance table in Appendix A provides a summary of the IAAC approval conditions and indicates the sections of this report where these conditions are addressed.

1.1 REPORT STRUCTURE

The Province is committed to regulatory compliance. As required by IAAC approval condition 2.10, the following annual report provides a summary of all activities completed for SR1 undertaken by TEC during the 2024/2025 reporting year (July 1st, 2024, to June 30th, 2025) of the construction period. The report has been organized into the following sections:

- Regulatory Update
- Monitoring Update
- Project Activities and Status



Sources: Base Data - Government of Canada. Thematic Data - Government of Alberta
Service Layer Credits:

Disclaimer: This map is for illustrative purposes to support this Stantec project; questions can be directed to the issuing agency.
10/25/2022

Stantec

ALBERTA TRANSPORTATION SPRINGBANK OFF-STREAM RESERVOIR PROJECT

Project Location

Figure 1.1

2.0 REGULATORY UPDATE

The Province holds all regulatory permits and approvals for the Project. Should they be required, the Prime Contractor is responsible for obtaining additional temporary permits required to complete construction activities in accordance with provincial and federal regulations.

2.1 PROJECT APPROVALS

Table 2.1 summarizes the Project approvals, authorizations, and notifications received prior to the start of construction activities. An amendment to the IAAC Approval 1139551E was signed on June 2, 2025; this amendment updated the reporting year from July 1 to June 30 to January 1 to December 30. The two Temporary Field Authorizations (TFA) TFA251184 and TFA251194 were amended updating their expiry dates to March 31, 2026. The *Fisheries Act* Authorization was also amended on March 13, 2025, revising the number of sites that needs to be completed and updating the completion date for the fisheries offsetting remediation program in the Elbow River Watershed to December 31, 2027.

Table 2.1 SR1 Project Approvals

Subject Matter/Commitment	Approval Number	Approval Received	Approval Expiry
***Canadian Environment Assessment Act, 2012* (CEAA)**			
IAAC Decision Statement	139551E	8-Jul-21	N/A
***Natural Resources Conservation Board Act* (NRCB)**			
Decision Statement	NR-2021-1	19-Oct-21	N/A
Alberta Environment and Protected Areas (AEPA)			
Water Act Approval for Wetland Disturbance	DAUT008702	08-Feb-22	31-Dec-72
Temporary Field Authorization (TFA) - Watercourse Realignment/Reconstruction	TFA221088	13-Aug-21	31-Mar-26
TFA Incidental Activity – Temporary Workspace	TFA221119	13-Aug-21	31-Mar-26
Public Lands Act (PLA) Licence of Occupation (LOC) – Water Diversion – Outfall	DLO210186	09-Feb-22	08-Feb-47
PLA LOC - Water Diversion – Water Intake	DLO200141	09-Feb-22	08-Feb-47
Fisheries and Oceans Canada			
Fisheries Act Authorization also Acting as a Permit under the *Species at Risk Act* (Elbow River)[2]	16-HCAA-00537	18-Mar-22	31-Mar-36
Transport Canada			
Canadian *Navigable Waters Act*	2021-604875	14-Dec-21	N/A

Subject Matter/Commitment	Approval Number	Approval Received	Approval Expiry
Alberta, Arts Culture and Status of Women			
Historical Resources Act[1]	4825-15-0004-018	22-Jan-24	N/A

Notes:

1 Work is ongoing to address the outstanding condition requirements under the *Historical Resources Act* (HRA), which will include construction monitoring and investigations of chance finds. See Section 4.10.1 for details.

2 The GoA obtained an amendment to the *Fisheries Act Authorization* on March 13, 2025.

2.2 PERMITS RECEIVED

In addition to the approvals, authorizations and notifications, the Prime Contractor obtained the following permits for temporary construction activities:

Table 2.2 Permits for Temporary Construction Activities

Subject Matter/Commitment	Permit Number	Permit Received	Permit Expiry
Water Act Temporary Diversion License (TDL) to withdraw water from the Elbow River at the Diversion Point called "North 2"	DAUT0015676	18-Apr-24	17-Apr-25
TDL to withdraw water from the Elbow River at well 1023595 in SE 23-024-04 W5 to support construction of the Springbank Dam	DAU0013860	24-Nov-23	23-Nov-24
TDL to withdraw water from the Elbow River at well 1023594 in SE 23-024-04 W5 to support construction of the Springbank Dam	DAUT0013861	24-Nov-23	23-Nov-24
TDL to withdraw water from the Elbow River at Diversion Points in SE 10-024-04-W% and NE 13-024-04-W5 to support construction of the Springbank Dam	DAUT 0022495	14-May-25	12-May-26
Water Act Water Storage Approval to store water in 3 dugouts	DAUT0010134	20-Apr-23	Dec-2025
Wildlife Act Amphibian Research Permit to capture amphibians within the Springbank Dam Project Area and translocate amphibians to identified release sites	#154-150	22-Mar-24	31-Dec-24
Fisheries (Alberta) Act Fish Research License (FRL) for fish rescue associated with construction in the Elbow River and Unnamed Creek	24-5008	26-Mar-24	31-Mar-25
FRL - for fish rescue associated with wet test for locations in the Elbow River	25-0211	28-Mar-25	31-Oct-25
FRL - for fish rescue associated with construction in the Elbow River and Unnamed Creek	25-0232	09-Sept-25	15-Nov-25

3.0 MONITORING UPDATE

Mitigation and monitoring measures were developed and captured in various environmental monitoring plans for SR1. See Table 3.1 below for a list of the monitoring plans and mitigation measures as identified in the Environmental Impact Assessment (EIA), including Supplemental Information Requests (SIR) and in accordance with approval conditions identified by IAAC and the NRCB.

Table 3.1 provides a summary of activities and results pertaining to the monitoring plans for the Project.

Table 3.1 Summary of Activities

Monitoring Plans	Summary of Activities
Air Quality Monitoring Plan (AQMP) *(IAAC Approval Condition(s) 6.4, 7.10)*	An Air Quality Management Plan was prepared based on the final decision documents from IAAC and NRCB. The three sites located around the Project boundary were established as per the AQMP in June 2022. Each site is equipped with three environmental beta-attenuation mass monitor (EBAM) stations to measure total suspended particulates (TSP), coarse particulate matter (PM10), and fine particulate matter (PM2.5). Meteorological sensors were co-located with the PM2.5 EBAM station at each site. An additional site is located on the west side of Calaway Park when the park is open to the public. The site is equipped with two EBAM stations to monitor PM2.5 and TSP as well as meteorology. In 2024 the station was active from May 3 to October 15 and was redeployed on May 15, 2025, and will be removed in late October when the park closes for the season. On June 2, 2023, an Air Quality Monitoring Station (AQMS) was commissioned in the community of Springbank in the Lions Soccer Park at the corner of Range Road 33 and Springbank road. The AQMS was equipped with instruments to measure PM2.5 and nitrogen dioxide (NO2) as well as meteorology. Any concentrations of TSP, PM10, PM2.5, or nitrogen dioxide (NO2) above the Alberta Ambient Air Quality Objectives and Guidelines (AAAQO and AAAQG) were investigated and when necessary, dust mitigation measures were implemented. Monthly calibration and maintenance were conducted. See Section 4.9.1 for details on air quality monitoring during the July 2024 to June 2025 reporting period.

Monitoring Plans	Summary of Activities
Wildlife Mitigation and Monitoring Plan (WMMP) *(IAAC Approval Condition(s) 4.1 to 4.10; 4.11; 5.1; 5.2 to 5.5; 8.1; 8.3 to 8.5)*	In areas where construction activities were planned during the migratory bird breeding period, wildlife sweeps were completed by qualified wildlife biologists to reduce potential disturbance to nesting birds and appropriate setback buffers were implemented where necessary, consistent with conditions 4.6 and 4.8 as well as direction provided in the WMMP. In accordance with IAAC approval condition 4.11.1, and the Bank Swallow Mitigation Plan, bank swallow use was monitored during Project construction where active residences were checked twice yearly between May 1 and August 31. The 2025 monitoring focused on bank swallow colonies that were previously identified on Elbow River during the 2022 monitoring period. In accordance with the WMMP, a remote camera monitoring program was completed in the Local Assessment Area (LAA) between April 1, 2024, and March 31, 2025. See Section 4.7.2 and Appendix B.1 for details on the WMMP during the 2024/2025 reporting year.
Surface Water Monitoring Plan (SWMP) *(IAAC Approval Condition 3.19, 3.20)*	Three turbidity sondes were installed at three locations in the Elbow River (upstream of the Project, at Highway 22 and downstream in the immediate receiving environment outside the entire Project boundary) with daily measurements collected at these locations during the 2024/2025 reporting year. The sonde installed at the upstream of the Project was moved and re-installed further upstream to Bragg Creek in June 2025 ahead of flood season. When there was flow in Unnamed Creek and when it was safe to do so, turbidity was measured in the field at three locations in Unnamed Creek and further downstream of the Project. Total suspended sediment concentrations were elevated during several events during the 2024/2025 reporting year at all three sondes; however, it was likely related to sonde malfunctions (e.g., sonde freezing), ice break-up events or heavy rainfall. Downstream TSS concentrations were generally consistent with, or lower than, upstream levels, in line with previous years. No effects of Project construction on TSS concentrations are evident based on the monitoring data. See Section 4.8.1 for details of the surface water quality monitoring completed during the 2024/2025 reporting year. Channel morphology will be monitored following flood operations.
Fish Tissue Program *(IAAC Approval Condition 7.8)*	This condition pertains to post flood operations and thus was not initiated in the 2024/2025 reporting year.
Fish Rescue and Fish Health Monitoring and Mitigation *(IAAC Approval Condition 3.18)*	This condition pertains to post flood operations and thus was not initiated in the 2024/2025 reporting year.
Fish Passage *(IAAC Approval Condition 3.17)*	Construction of the fish passage v-weirs was initiated at the end of the 2023/2024 reporting year and was finished during the 2024/2025 reporting year. Fish passage monitoring will be conducted following the first year of operation of these structures in 2026.

Monitoring Plans	Summary of Activities
Vegetation and Wetland Mitigation, Monitoring and Revegetation Plan *(IAAC Approval Condition 8.13)*	In accordance with IAAC approval conditions 3.5, 8.1, 8.2 and 9.8, equipment arrived clean and free of debris at site and soil stockpiles were monitored for weeds and erosion. Erosion and sediment control measures were adjusted when required; for example, additional silt and sediment fencing was installed around topsoil stockpiles. Fuel and other harmful substances have been stored and re-fueling conducted a minimum of 100 metres (m) from waterbodies and wetlands and spill containment measures were in place. Reclamation was started in the 2024/2025 reporting year. Portions of the Highway 22 embankment, slopes of the dam, intake channel, and associated disturbance were seeded using project approved mixes. Disturbed areas will be monitored for a minimum of two years post-construction and a minimum of two to five years post-flooding. Monitoring will continue if targets are not achieved, or conditions are not reasonably stable by the end of the minimum monitoring period. In accordance with IAAC approval condition 8.2 GoA will manage noxious weeds and invasive alien species as necessary to promote successful revegetation. Four noxious weeds under the Alberta Weed Control Act were observed, including Canada thistle (*Cirsium arvense*), perennial sow thistle (*Sonchus arvensis*), tall buttercup (*Ranuncluus acris*), and black henbane (*Hyoscyamus niger*). The weeds were observed in various locations, including topsoil and subsoil stockpiles. The plants were pulled and disposed of at an approved off-site waste facility.
Archaeological and Heritage Management Plan *(IAAC Approval Condition 9.3, 9.9)*	Archaeological pre-impact investigation was completed for the Project as required by Alberta Arts, Culture and Status of Women (AACSW) and conditional approval was granted apart from one archaeological site requiring avoidance and a requirement for paleontological and archaeological construction monitoring. HRA approval will be obtained before construction occurs in the archaeological site area that is located within the construction area. Palaeontological construction monitoring is ongoing, as required. *The Historical Resources Act* Section 31 (HRA Section 31) clause in the Plan has been enacted on several occasions. Five finds were determined to not be protected by the *Historical Resources Act* due to the disturbed context of the finds and were communicated to Indigenous groups. All finds were communicated to AACSW, IAAC and Indigenous groups. Semi-permanent buffers were installed at two sites identified in 2023 to facilitate that no inadvertent impacts occurred during construction. These buffers will be removed following construction completion. HRA approval will be obtained should there be any construction in these areas.
Groundwater Monitoring Plan (GWMP) (*IAAC Approval Condition 7.9*)	The GWMP was prepared in accordance with IAAC approval conditions 7.6, 7.9, and domestic well baseline testing commitments made during the NRCB hearing. Groundwater monitoring network development, monitoring and sampling was completed between July 2024 and June 2025. Monitoring network development included decommissioning EIA project wells within the wetted perimeter of the reservoir prior to dry operations. Fall 2024 and Spring 2025 groundwater monitoring and sampling programs were completed and are summarized in Section 4.8.2 and Appendix B.2.
Land Use Plan (IAAC Approval Condition 8.14)	The Preliminary Approach for Monitoring and Evaluation of the land use plan was submitted to IAAC in May 2022 and will be refined where necessary as the plan is implemented.

3.1 CONSULTATION

The Government of Alberta (GoA) is committed to ongoing communication with the Indigenous groups involved in the Project.

As required by IAAC approval conditions 2.3, 2.4, and 2.9, Indigenous groups were provided written notice of opportunities to present their views on monitoring plans, to participate in ceremonies prior to the start of construction activities and offered opportunities to observe historical resource pre-impact investigations. This communication took place in advance of construction starting in late 2021/early 2022. There were no updates to the existing monitoring plans during the 2024/2025 reporting year (IAAC condition 2.6).

The Prime Contractor reported two reportable spills to TEC on July 16, 2024, and July 31, 2024 (see Section 4.4 for additional details). In accordance with IAAC Condition 11.5, the spill reporting protocol was initiated, including notification to IAAC and Indigenous groups within 24 hours of each incident, submission of the 30-day and 90-day written reports, and adherence to all related communication and follow-up requirements. An Indigenous group requested to visit the spill site, and the site visit was completed in September 2024. All Indigenous group concerns were addressed, and no further issues were raised following the site visit.

In spring of 2025, TEC provided an update to the Indigenous groups on the reclamation activities associated with construction and need to revise the seed mix presented in the Vegetation and Wetland Mitigation, Monitoring and Revegetation Plan since they were not available for purchase. Comparable substitutions were identified. Following a 30-day review period as required by IAAC condition 2.3, no questions or concerns were raised by Indigenous groups.

The Fish Passage Monitoring Plan (IAAC condition 3.17) was submitted to Indigenous groups and relevant regulatory authorities on June10, 2025 for a 30-day review period as required by IAAC condition 2.3 and 2.6. No comments or questions were received, and the Fish Passage Monitoring Plan was finalized and is ready to be implemented.

As required by IAAC approval conditions 2.12 and 2.13, the 2023/2024 Annual Report was distributed on October 31, 2024, and was posted on the Government of Alberta (GoA) SR1 website.

During the 2024/2025 reporting year, Indigenous groups were informed of *Historical Resource Act* Section 31 (HRA Section 31) Finds, see Section 4.10.1 for additional details.

An update on the engagement that was conducted to support the development of the Land Use Plan is described in Section 4.11.

4.0 PROJECT ACTIVITIES AND STATUS

4.1 SUMMARY OF WORK COMPLETED ON SITE

Construction of the following Project components were completed during the 2024/2025 reporting year:

- Completion of the Floodplain Berm, including rip rap placement, pending road access grading, ramp, upstream riprap void filling with Native Alluvium backfill and topsoil grading by June 2025.
- Completion of the concrete works of the Auxiliary Spillway structure in 2024 with majority of technical backfill completed pending Fuse Plug backfill and upstream and downstream regrading by June 2025.
- Completion of the Diversion Inlet and Service Spillway structures pending road access grading.
- Switch of the Elbow River back in its original alignment in August 2024.
- Completion of the Debris Deflection Barrier Structure in August 2024.
- Diversion Channel bulk excavation completed with majority completion of riprap placement pending riprap void fills and topsoil grading along Channel South and Central.
- Completion of the Emergency Spillway including Concrete Works and technical backfill.
- Completion of the Grade Control Structure pending crack filling repair work.
- Construction completion of the Dam Embankment in November 2024 pending drainage works and road access.
- Seeding completion of the Highway 22/Springbank Road grade raise in the fall 2024.
- Realignment of Unnamed Creek through the conduit under the dam (Low Level Outlet channel).
- Completion of the Low-level outlet approach channel and partial completion of the exit channel and check structures.

All equipment and machinery were inspected daily for drips, leaks, and new or returning equipment and machinery to the construction area were inspected for the presence of invasive alien species and noxious weeds. Drip trays were placed under idle equipment and machinery as well as fueling equipment. Monitoring was conducted to confirm drip tray use and deficiencies were reported to the Contractor and mitigated. See Section 4.4 for a summary of the accidents and malfunctions that occurred during the 2024/2025 reporting year.

During the 2024/2025 reporting year, night shifts continued up until November 2024 and stayed through the winter with minor activities such as riprap bedding placement, de-watering and heater maintenance until approximately February 2025. Nightshifts comprised primarily of earthworks construction activities at the Diversion Channel. Lighting towers were installed in key areas such as the construction site office, Diversion Inlet, low-level outlet, bridges and along certain portions of the Haul road/light duty road to allow work to proceed during low light hours. All lighting installed complied with the International Commission on Illumination enforced by Labour Canada and Occupational Health and Safety Code, RA 87/2009 Part 12. Any portable lighting devices installed were pointed downwards towards the construction area and not towards public roads. Portable lighting devices were relocated as required to focus light on the active work areas only.

4.1.1 Construction Activities

4.1.1.1 Earthworks

Earthwork activities were ongoing during the 2024/2025 reporting year with the exception of the winter months when fill placement activities were stopped due to frozen conditions and in the spring during snow/rain events. Primary earthworks activities during the winter months were channel excavation and with bedding riprap placement. Topsoil and subsoil placement activities were conducted within the following locations between July 2024 and June 2025 when weather conditions permitted:

- Soil placement along the north bank of the Elbow River on either side of the Diversion inlet structure).
- Soil placement along Diversion Channel upper slopes through sections of Channel South and Central. Soil placement completed along Channel North.
- Soil placement along Dam embankment area (bulk fills finished in November 2024).
- Soil placement along approach Channel and Exit Channel for the Low-Level Outlet.
- Unnamed Creek in relation to the excavated channel and check structures.
- Borrow Pits one and two were excavated for material use at the OSSD up to November 2024; backfilling of the borrow pits was completed during the winter 2024 and spring 2025 using primarily remaining material excavation from the Diversion Channel North.
- Riprap placement along portions of the Diversion Channel and Low-Level Outlet Exit Channel started in the fall of 2024 and continued over winter into the spring of 2025.
- Topsoil adjustment along Highway 22 and Springbank Road/Township Road 242.

Excavation and other earthwork activities also occurred at the above locations.

There was minimal soil stripping activity during the 2024/2025 reporting year. As reported in previous IAAC annual reports, stripped soil was generally stockpiled in the vicinity of the area being stripped, and in some instances relocated to other places for longer storage. When possible, stockpiles near Elbow River and Unnamed Creek were placed at least 50 m and 30 m respectively from the top of the bank; in areas where space was limited, sediment fencing and straw wattles were installed at the base of the stockpiles to prevent sediment releases. Topsoil and subsoil were stockpiled separately to prevent mixing; stockpiles were spaced at least 3 m apart, in cases where stockpiles were closer than 3 m at the toe of the slope silt fencing was installed to prevent admixing. Topsoil stockpile locations have been documented in order to place the stripped topsoil back in the same general area, as required by IAAC approval condition 3.8.

Topsoil stripped in previous years from the Diversion Channel remained stockpiled along the channel within the construction boundary. These, stockpiled topsoil is to be used in the restoration of the Diversion Channel when excavation is completed and reclamation beings, as required by IAAC approval condition 3.8.

Stockpiles were inspected to determine the appropriate erosion and sediment control measures. To protect the topsoil and subsoil from erosion and sediment discharge, silt fences were installed at the downstream side of stockpiles. In some locations, wattles were installed as a measure to protect from erosion and sediment release; for example, this occurred on the south bank of the Elbow River, on the cliff on the north bank of the Elbow River and at the low-level outlet.

Routine inspections of the Project construction area were conducted to assess the stripped areas and the stockpiles. The quality of the stripped soil was not impacted. It was noted that the stripping operations were performed with negligible admixing of soils, and that the topsoil recovery was excellent.

4.1.1.2 Civil Works

Construction of the bridges were completed during the last reporting year.

4.1.1.3 Structures

During the 2024/2025 reporting year, Structural works construction activities were completed by May 1, 2025. This includes the Diversion Structure (diversion inlet and service spillway), low-level outlet, Grade Control Structure, Auxiliary Spillway and Emergency Spillway.

Each construction activity area was provided with waste skips (receptacles) to collect construction wastes depending on their type (wood, metal, concrete) for further segregation and disposal. Each location where concrete was poured had a dedicated skip to collect the wastewater from cleaning the gully of the concrete truck at the end of the pouring.

Any equipment that was filled with fuel was provided with a drip-tray to contain spillage in case of incident; the drip-trays were appropriate size (able to collect 110% of the main content of the hazardous substance container). For example, all generators (diesel powered) at the Auxiliary Spillway were provided with drip-trays and replaced as required. Spill-kits of suitable size were also available should they have been required.

Equipment fueling, cleaning, and maintenance activities maintained a distance of 100 m from waterbodies and wetlands and utilized secondary containment.

4.1.2 Operations and Maintenance

As part of operations and maintenance, in April 2024, the GoA conducted annual operational testing of the Service Spillway and Diversion Inlet gates. This activity ensures that the gates seal properly for watertightness and that the Service Spillway gates operate up to design loads, thereby confirming the dam can perform as intended for public safety. Testing was completed in accordance with Project approvals, including Alberta *Water Act* Approval DAUT0008702, *Fisheries Act* Authorization 16-HCAA-00537, and *Canadian Navigable Waters Act* Approval 2021-604875. Notification letters were sent to all relevant regulatory agencies and Indigenous groups prior to the testing. The relevant regulatory agencies, Indigenous groups, and parties subscribed to and engaged in the SR1 project activities, were notified of temporary measures implemented during the testing including modifications to the portage route, additional signage, and placement of message boards, and as a safety precaution, the general public was also notified of this activity and recommended avoiding using the Elbow River during the testing period.

During the testing, the Service Spillway gates were slowly raised one at a time to raise the backwater within the Elbow River, once operation of gates and seals were confirmed the Service Spillway gates were slowly lowered to return the Elbow River level back to normal conditions. Turbidity monitoring was conducted throughout the duration of the testing; see Section 4.8.1.2 for details on the turbidity monitoring and reporting.

4.2 EROSION AND SEDIMENT CONTROL

Specific erosion and sediment control measures are described in Sections 4.1 above and 4.3.1 below. In general, erosion and sediment control measures included:

- Installation of straw wattles.
- Installation of silt/sediment fences.
- Leaving a natural vegetative buffer.
- Installation of fiber rolls.
- Covering of exposed areas using geotextile or other suitable material.

- Placing stockpiles at least 50 m from the Elbow River and 30 m from Unnamed Creek; in areas where space was limited, sediment fencing and straw wattles were installed at the base of the stockpiles to prevent sediment releases.
- Separating topsoil and subsoil piles by at least 3 m; in areas where space was limited, sediment fencing was installed in between topsoil and subsoil piles to prevent admixing of soil.
- Erosion control measures were revised and implemented prior to winter shutdown and additional measures were taken to insulate/cover drainage pipes and installation of additional silt fencing to manage snow drifts and snowmelt/surface run off during the spring.
- Installation of control devices that are appropriate for winter melt and spring runoff.

A combination of the above measures were used to control erosion and sedimentation as and where needed. These measures were inspected routinely and repaired, replaced, or augmented when necessary. Ahead of the colder season, additional controls were installed in select areas to reduce the risk of erosion, sediment movement, or runoff during spring melt. Inspections were increased following snowmelt or rain events.

Additional erosion and sediment control supplies and equipment were available onsite to be used as required.

4.3 WATER MANAGEMENT

4.3.1 Surface Drainage/Runoff

Surface water and runoff within the Project construction area was managed as follows:

- Where water pooled naturally, and there were no potential impacts to the surrounding environment, it was left to naturally seep into the ground. In the event of potential impacts to surrounding environments, pooled water was pumped into nearby dug-outs or to a nearby vegetated buffer to naturally seep into the ground (see Section 4.3.2 for details surrounding dewatering activities). If pumped to a nearby vegetated buffer, the hoses were also equipped with sediment bags.
- Silt fences and/or wattles were installed at the perimeter of wetlands that intersect the construction area where either construction activities were directly adjacent to the wetland or where there was the potential for water to flow into the wetland from the construction area. For areas where the topography sloped away from a wetland, an up to 10 m vegetated buffer was maintained.
- Along the Unnamed Creek, erosion and sediment control measures (i.e., straw wattles, sediment fences) were installed to direct water and potential sediment away from the Unnamed Creek.

- Surface water (from drainage and runoff) was collected in small dug-outs and drained via tube away from the construction site to a vegetated buffer.
- Straw wattles were installed parallel to the Elbow River to control potential surface water flows into Elbow River.
- Silt fencing was installed along the base of stockpiles that had greater risks of erosion.
- A 500 m long earthen berm (constructed the previous reporting year) along the top of the north bank of the Elbow River was kept in-place to prevent water and debris from falling into the Elbow River by directing rainfall towards the diversion structure. As construction of the Service Spillway advanced this was removed early in the 2024/2025 reporting year to give way for moving the Elbow River back to its original alignment.

4.3.2 Dewatering

Dewatering occurred throughout the 2024/2025 reporting year (except in winter when the ground was frozen).

Dewatering activities at the Diversion Inlet Structure occurred continually throughout the 2024/2025 reporting year. Water seeping through the excavated walls at the Diversion Inlet Structure was pumped to a settling pond located to the East of the Diversion Structure. The Settling Pond was drained in early August by removing some bermed material and letting water slowly drain from the area. Turbidity was monitored during the de-watering and once the area was drained the settling pond was backfilled then surface drainage was returned to the Elbow River. Water was pumped out of the Diversion Inlet Structure up the slope to a vegetated buffer; a sediment filter bag was attached to the hose outlet when near areas of ecological concern.

Dewatering activities along the Diversion Channel and the Grade Control Structure occurred through the 2024/2025 reporting year. Water entered naturally either by rain, snow/snow melt or seeping through the excavated channel walls. Water was either left to evaporate or was pumped from the low-lying areas to a collection pond which had a secondary pump and hose outfitted with a silt bag at the outlet. An overflow channel was installed at the collection pond with multiple straw wattles in the channel to prevent any overflow run-off carrying sediment to Unnamed Creek. A vegetated buffer between the pumped water and Unnamed Creek was also utilized as an additional erosion and sediment control measure. Water was also used for dust suppression and backfill moisture conditioning.

The Dam area dewatering occurred after rainfall events and involved pumping water into nearby dugouts when possible or pumping into vegetated areas. Water was not discharged directly to a waterbody.

Snow was actively removed from construction sites with the use of tracked equipment and runoff from snowmelt was collected in low laying areas then pumped into dugouts.

4.3.3 Work in River

The realignment of Unnamed Creek by the Low-level Outlet was completed during the 2023/2024 reporting year. The surrounding area was stripped and graded to create a constructed channel that connects to the creek's natural alignment on either side of the dam. As a result, when there is water flowing in Unnamed Creek, the water will now flow through the constructed channel and conduit and into Elbow River. Reclamation (i.e., seeding) of the realigned Unnamed Creek channel will be completed next year.

In August 2024, the Elbow River by the Diversion Inlet was successfully moved from its temporary diversion channel to its original alignment to enable completion of the Service Spillway and Diversion Inlet. The works were staged over approximately four weeks, with river isolation completed in four to five days. Activities included removal of bank armoring, turbidity monitoring of settling ponds, and installation of silt curtains and bulk bags to carefully manage water flow and sediment movement during the transition. A fish salvage program, overseen by a Qualified Aquatic Environment Specialist (QAES), was implemented to capture and relocate fish progressively as water flows were shifted from the temporary diversion channel into the restored channel. The QAES also oversaw a turbidity monitoring program in the Elbow River during instream works. Berms were constructed to gradually redirect flows and limit sediment release. To maintain public access and safety, a temporary portage route was established to replace the old route, which had to be cut to allow for regrading and excavation of the Auxiliary Spillway structure; the new route was constructed with the same two-metre-wide access standard, following the regraded riverbank and incorporating stairs to cross the structures. Once the river was re-established in its permanent location, the temporary diversion structures, fish fences, and silt curtains were removed, and permanent re-grading and stabilization of the banks were completed.

4.3.4 Dug-Outs

The four dugouts that were established during the 2022/2023 reporting year were maintained and utilized during non-frozen conditions. TDLs were renewed to divert water from the Elbow River at three locations. A license to use groundwater in construction activities was also renewed. Water diverted from both sources was stored within the dugouts to be used during construction for Earthworks moisture conditioning and dust control across site. Pumping rates were kept within licensed amounts. Section 2.2 lists the permits that were obtained during the 2024/2025 reporting year including the TDLs described above.

In December 2024, the dug-outs were slowly emptied using a combination of methods. In some cases, water was pumped out through hoses toward the river, while in others, trenches were constructed to allow water to flow into adjacent upland vegetated areas where it could naturally seep into the ground. The process continued into early 2025, with ice being broken and piled near the dug-outs to support ongoing drainage. During site inspections, no flooded areas were observed; ground cover and vegetation were visible, confirming that the surrounding

areas remained stable. Backfilling of the dug-outs is underway, with full reclamation scheduled for completion by fall 2025.

4.4 ACCIDENTS AND MALFUNCTIONS

As required by IAAC approval condition 11.2, Accident and Malfunction measures that was proposing for the construction phase were presented to Indigenous groups in a letter for review and comment. No feedback on the proposed accident and malfunction measures were received. TEC used the measures to develop the Construction Spill Response and Communications Plan which was submitted to IAAC and Indigenous groups in March 2022. The Plan outlines the following information:

- Types of spills that could result at the Project site.
- Hazardous materials spills, handling, and containment procedures & practices.
- Reporting requirements.

There were no updates or revisions to the Construction Spill Response and Communication Plan during the 2024/2025 reporting year.

During the 2024/2025 reporting year, several minor leaks or spills of substances were reported internally but none met the threshold requiring self-reporting to regulators. All minor leaks and spills were documented internally including the date, time, location, equipment/machinery, substance, quantity, reason for the release and follow up actions. All contaminated soil and materials were contained, and the contaminated materials were removed and placed within a labeled waste bin for disposal at an appropriate waste facility. All equipment and machinery that experienced a leak or were malfunctioning were repaired or removed from the construction site for replacement. Equipment and machinery re-entering the construction site were inspected prior to re-use.

During the 2024/2025 reporting year, there were two reportable spills that occurred in July 2024. In accordance with IAAC condition 11.5.2, both incidents were communicated to IAAC, Indigenous groups, and relevant authorities within 24 hours of occurrence. As required by IAAC approval conditions 11.5.3 and 11.5.4, 30-day and 90-day post-spill reports were produced and distributed to IAAC and Indigenous groups. In addition, on September 20, 2024, a site visit was conducted with representatives from an Indigenous Group, at their request, to review project activities and maintain open communication regarding environmental protection measures. All follow-up actions and information requests related to these incidents have since been addressed, and no outstanding concerns were identified by the participating Indigenous groups.

4.5 ONSITE MONITORS

4.5.1 Indigenous Monitoring Program

In accordance with IAAC approval condition 9.1 and condition 2.10, Indigenous Monitors were retained prior to construction to observe, record, and report to the GoA and Indigenous groups on the implementation, throughout construction, of requirements set out in the Decision Statement including the Archeological and Heritage Management Plan referred to in IAAC approval condition 9.3. During the 2024/2025 reporting years, discussions continued with Indigenous groups expressing interest in the program. During the 2024/2025 reporting years, Indigenous Monitors from Ermineskin Cree Nation, Louis Bull Tribe, Métis Nation of Alberta Districts 4, 5 and 6, Montana First Nation, Piikani Nation, Samson Cree Nation, and Stoney Nakoda Nations; Bearspaw First Nation, Chiniki First Nation, and Goodstoney First Nation participated.

All participating Indigenous groups through a contract agreement with the Province employed Indigenous Monitors from their respective communities to participate in the monitoring program. All Indigenous Monitors, prior to mobilizing to the construction site, were provided onboarding training to discuss their role, review the Environmental Monitoring Plans, and the IAAC approval conditions to prepare for their role.

The Indigenous Monitors worked onsite with an Indigenous Relations Coordinator to observe construction activities on a daily basis, and discuss any questions regarding daily observations, or the role and requirements of the Indigenous Monitors while onsite. Each day, the Indigenous Monitors recorded their observations in an online tool. These daily field reports were shared with the respective contract holders. A monthly observation report was drafted by the Indigenous Relations Coordinator using observations from the Indigenous Monitors' daily field reports. The draft monthly report was verified by the Indigenous Monitors and provided to the GoA for review and comment prior to being finalized. Once final, these reports were shared with the GoA, IAAC, and each Indigenous group engaged on the Project.

4.5.2 Independent Environmental Monitor

A third-party Independent Environmental Monitor was retained for the construction phase of the Project. The Independent Environmental Monitor observed and recorded the implementation of the IAAC approval conditions and submitted monthly reports directly to IAAC. The monthly reports summarized observations and made recommendations with respect to implementation of the approval conditions.

4.6 SCHEDULES

Construction activities remained on schedule during the 2024/2025 reporting year, allowing the Project to reach operational status by spring 2025. While major construction is complete, reclamation of disturbed areas will continue through fall 2025. Additional reclamation might happen in spring 2026 to address areas affected by above-average rainfall in June and July, including reseeding sections of the Diversion Channel. The heavy rains in late June and July 2025 created wet ground conditions that delayed some reclamation and finishing work.

4.7 TERRESTRIAL

4.7.1 Vegetation and Wetland Management

4.7.1.1 Weed Management and Invasive Species

In accordance with IAAC approval condition 3.5, equipment and machinery that entered the construction area during the 2024/2025 reporting year of construction were inspected for the presence of invasive alien and noxious weeds, and soil debris.

The topsoil and subsoil stockpiles were monitored during the growing season for the presence of invasive alien and noxious weeds. Weed management was undertaken following the process outlined in the Vegetation and Wetland Mitigation, Monitoring and Revegetation Plan, Section 7.3 Table 7.4 (i.e., hand removal). No herbicides were used during the 2024/2025 reporting year.

In July 2024, mechanical control of black henbane was carried out, and the harvested plants were removed and placed into a designated soil pile for decomposition.

4.7.1.2 Vegetation and Reclamation Monitoring

As discussed in Section 4.1.1, vegetation removal and minor soil stripping activities continued during the 2024/2025 reporting year in the Unnamed Creek area in advance of construction of the erosion check structures, which will be completed later in 2025. Only the trees and shrubs located within the Project construction area were removed. Soil stripping was also conducted at Borrow Pits 1 and 2 for material use for construction during summer and fall 2024.

During the 2024/2025 reporting year, key soil stripping and stockpiling mitigation measures included but were not limited to:

- Implementing stripping and stockpiling practices, which prevent admixing with other soil horizons such as spacing stockpiles 3 m apart or installing sediment fencing between topsoil and subsoil stockpiles when workspace was limited.

- Placing stockpiles within the construction footprint area and storing the topsoil from the diversion channel separately for later use in the restoration of the diversion channel (i.e., adjacent to the diversion channel) as required by approval condition 3.8.
- Sloping soil stockpiles (less than 70 degrees) to reduce the risk of erosion as required by approval condition 4.5.3.
- Placing stockpiles within the construction footprint area at least 30 m from the top of Unnamed Creek and wetlands.
- Monitoring topsoil piles for erosion and weed growth.
- Using silt fencing to limit dust generation from stockpiled soils.

The vegetation removal (i.e. shrubs and trees within the check structure area by Unnamed Creek) was completed in September 2025 and was avoided during excessively windy conditions and inclement weather (e.g., heavy rain) to reduce the area of exposed soils vulnerable to wind and water erosion. Where required (i.e. near or adjacent to environmentally sensitive areas), silt fences and other ESC measures such as straw wattles were installed and were routinely inspected and repaired as needed. During the migratory bird nesting period, wildlife sweeps were conducted in advance of all vegetation clearing as well as topsoil and subsoil stripping activities.

During the 2024/2025 reporting year, existing roads, farm trails, and a constructed light-duty vehicle road paralleling the diversion channel and dam were used to access the construction area. A new construction access road was established to access the check structure work site. Topsoil along the Highway 22 embankment south of Highway 1 to the south of Springbank Road was seeded in 2025 as well as slopes of the Dam, intake channel, and associated temporary disturbances. Areas were seeded between June 5 and August 7, 2025, using Project approved seed mixes as detailed in the Vegetation and Wetland Mitigation, Monitoring, and Revegetation Plan. Seed substitutions were needed for some species that were not available. The seed substitutions were presented to Indigenous groups prior to seeding (see Section 3.1 for details).

4.7.1.3 Wetland

In fulfillment of IAAC approval conditions 5.8 and 5.9, IAAC and the Indigenous groups were provided with a figure prior to the start of construction (January 2022) showing the wetlands to be permanently removed as a result of construction activities.

Equipment fueling, cleaning, and maintenance activities maintained 100 m from waterbodies and wetlands and utilized secondary containment. Substances with potential to cause harmful effects to the environment were stored greater than 100 m from water bodies and wetlands. Sediment control measures, vegetated buffers, and signage were used to avoid and minimize disturbance to wetlands.

A *Water Act* Code of Practice and associated Wetland Assessment and Impact Form were submitted for crossing wetlands for the installation of Project fencing. Wetlands were dry when crossed and small equipment (e.g., skid loader) was used to reduce potential vegetation and soil effects.

4.7.2 Wildlife

4.7.2.1 Wildlife Sweeps

During the 2024/2025 reporting year, multiple wildlife sweeps were completed by the Contractor in advance of vegetation clearing or construction activities (e.g., fencing) as required to comply with the *Migratory Birds Convention Act*, *Species at Risk Act*, and Alberta *Wildlife Act*.

All observations and wildlife features were documented, and site-specific mitigation measures were implemented, as required, in accordance with IAAC approval conditions related to migratory birds and amphibian species at risk including IAAC approval conditions 4.1, 4.6, and 4.8. In general, wildlife mitigation and monitoring measures included:

- Establishing buffers around active wildlife features
- Restricting access and/or reducing speed of construction vehicles near active buffers.
- Wildlife monitors checked active wildlife features to determine if established setback buffers were effective in reducing negative impacts to nesting or denning activities.
- Frequent meetings with construction crew/operators to foster operator awareness and caution during construction activities.

Incidental Observations by Construction Crew and Indigenous Monitors

Indigenous Monitors recorded incidental observations of wildlife and wildlife features observed in or near the construction area during the 2024/2025 reporting year, see Appendix D.

Migratory Birds

The majority of trees and shrubs that could provide suitable nesting habitat were cleared during the 2021/2022 reporting year to reduce the potential for migratory birds nesting within the Project construction area. In accordance with IAAC approval condition 4.6, construction activities, such as vegetation clearing, that may affect migratory birds were scheduled to avoid the migratory bird breeding period (April 1 to August 31) where possible. In areas where construction activities were planned during the migratory bird breeding period (i.e., borrow pit areas), pre-construction wildlife sweeps were completed to reduce potential disturbance to nesting birds by implementing an appropriate setback buffer consistent with IAAC approval conditions 4.6 and 4.8 as well as direction provided in the WMMP.

4.7.2.2 Wildlife Friendly Fencing

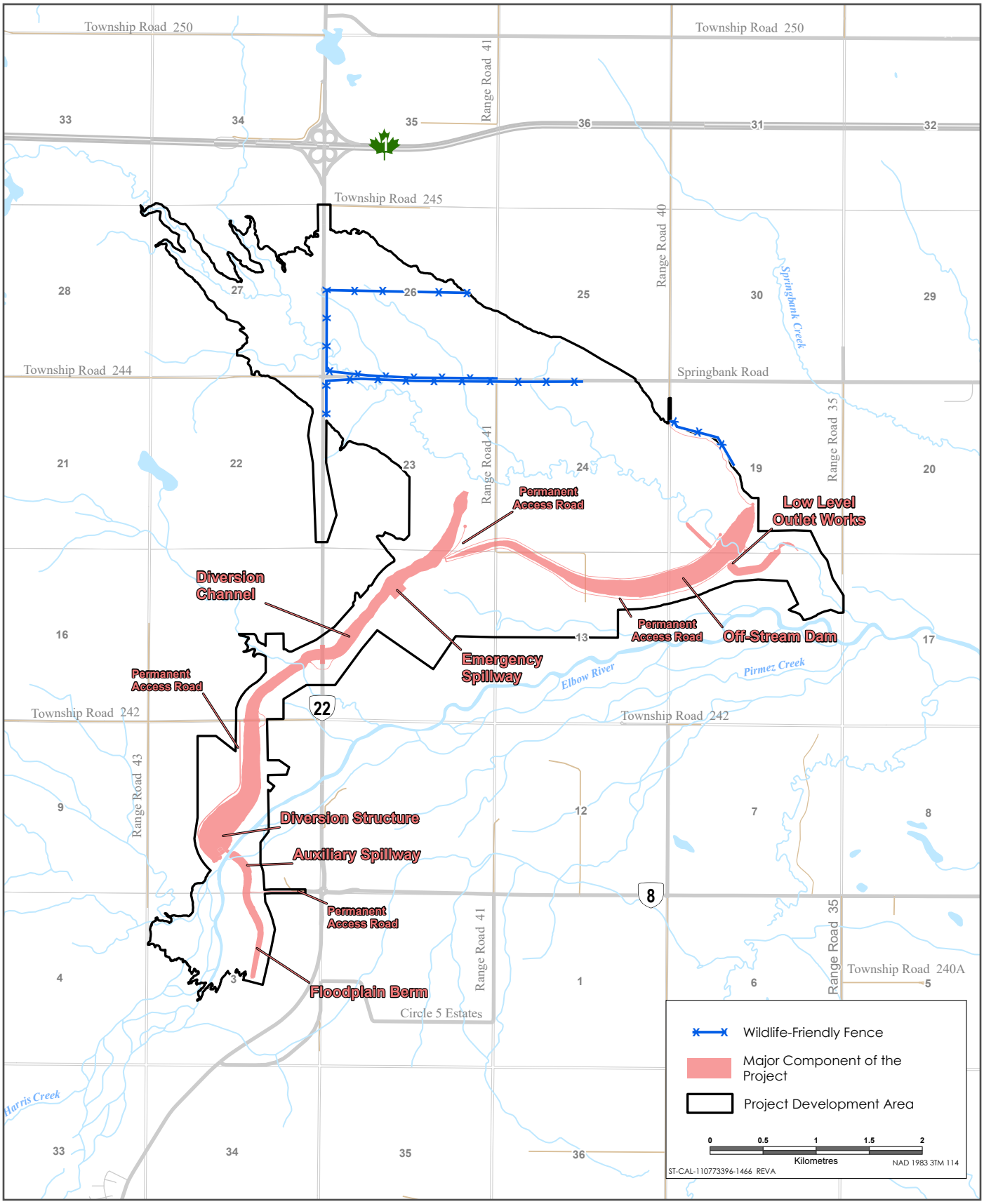
As per IAAC condition 8.5, some wildlife friendly fencing was installed during the 2024/2025 reporting year, following design specifications described in the Alberta Landholder's Guide to Wildlife Friendly Fencing (Paige 2020), to prevent access by livestock and allow wildlife passage., see Figure 4.1. The remaining wildlife friendly fencing will be installed in the fall of 2025. Wildlife behaviour at wildlife friendly fence locations and crossing success will continue to be monitored as part of the WMMP.

4.7.2.3 Remote Camera Monitoring Program Summary

As part of the remote camera monitoring program, wildlife use in the LAA was monitored during the 2024/025 reporting year. This Annual Report includes data collected during all four seasons: spring (April 1 to May 31, 2024); summer (June 1 to August 31, 2024); fall (September 1 to November 30, 2024); and winter (December 1, 2024, to March 31, 2025).

The 27 remote cameras deployed during the 2021/2022 construction period were maintained; however, the number of cameras that were operational during each season varied due to malfunctions (e.g., livestock damage, battery failure). Although some of the cameras were not fully operational during each seasonal monitoring period, there was sufficient data collected (> 30 monitoring days) for the analyses. Overall, 27 of 27 (100%) cameras were operational during the 61-day spring monitoring period. During summer, 26 of 27 remote cameras (96.3%) were operational during the 92-day monitoring period with one camera operational for 70 days. During fall, 24 of 27 cameras (88.9%) were operational for the 91-day monitoring period with three remaining cameras operational for 86, 74 and 61 days. During the winter monitoring period, 25 of 27 cameras (92.6%) remained operational, as two units malfunctioned and failed to collect data. Of the 25 operational cameras, 22 functioned continuously throughout the 121-day monitoring period. The remaining three were active for 77, 64, and 48 days, respectively (see Appendix B.1).

Remote cameras detected 9,245 independent events over 8,992 camera-days across all four seasons during the 2024/2025 reporting year (April 1, 2024, to March 31, 2025) (Appendix B.1; Table 1). Of those, 89.2% of total detections were comprised of three species, including elk (43%), white-tailed deer (35.2%), and coyote (11%). Other focal wildlife species detected included mule deer (*Odocoileus hemionus*) (3.6%) as well as unidentified deer (*Odocoileus* spp.) red fox, moose, black bear (*Ursus americanus*), and cougar (*Puma concolor*) each comprising less than 1% of independent events. The remainder of independent events included other wildlife (2.9%) (e.g., birds, small mammals (e.g., white-tailed jackrabbit [*Lepus townsendii*]), humans including vehicles and construction equipment (1.5%), cows (0.3%), as well as unknown (unidentified) animals (0.7%).



Sources: Base Data - Government of Canada. Thematic Data - Government of Alberta
Service Layer Credits:

Disclaimer: This map is for illustrative purposes to support this Stantec project; questions can be directed to the issuing agency.
8/20/2025

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ALBERTA TRANSPORTATION SPRINGBANK OFF-STREAM RESERVOIR PROJECT

Wildlife Friendly Fencing Installation - June 2025

Figure 4.1

Eight focal wildlife species were detected during the 2024-2025 construction period (Appendix B.1). Overall, elk had the highest relative abundance index across all seasons followed by white-tailed deer and coyote. Similar to previous IAAC Annual Report reporting year (i.e. 2023/2024 reporting year), elk relative abundance was highest during spring and summer, with relatively lower photographic rates during fall and winter. Similarly, white-tailed deer and mule deer photographic rates were also higher during spring and summer compared to fall and winter. Coyote was detected more frequently during spring and winter compared to summer and fall, whereas red fox was detected during all seasons. However, photographic rates were relatively higher during spring compared to other seasons. Although black bear was detected during spring and fall, they were detected most frequently during summer along Elbow River. Cougar was detected infrequently during spring, fall, and winter with no detections during summer. Similar to other reporting years, mule deer was detected most frequently along Elbow River during spring and summer with relatively lower photographic rates during winter compared to other seasons (Appendix B.1).

Overall, the relatively high seasonal (naïve) occupancy estimates[1] for white-tailed deer (>95%), elk (74-93%) and coyote (79-96%) across all remote cameras indicated these three focal wildlife species remained well distributed throughout the LAA during the 2024/2025 reporting year.

The highest photographic rates[2] for elk and white-tailed deer occurred at CAM15b, CAM-19b, CAM-24b, CAM-28, CAM-30b, and CAM-32b during spring and summer (see Appendix B.1, Figure 1). Relatively high photographic rates at these monitoring stations are consistent with previous monitoring years (Annual Report 2023/2024) and likely reflect the preferred forage and cover present at these locations that are varying distances from construction activities. Although photographic rates of white-tailed deer and elk have been relatively high during winter at CAM-30b, photographic rates were lower during the 2024/2025 winter compared to other years.

Although elk were not detected frequently along Elbow River, elk photographic rates during summer at CAM-01 along Elbow River were relatively high compared to other seasons. The relatively high number of elk detected at this monitoring station was similar to the 2023/2024 reporting year. The relatively high percentage of cameras that detected elk calves (young of the year) (73%) between late May and early July indicated elk continued to use the LAA during the calf rearing period while construction activities occurred.

Detailed methods and results of the remote camera monitoring program are provided in Appendix B.1.

[1] Naïve occupancy, defined as the proportion of sites with at least one species detection (see Appendix B.1).

[2] Photographic rates were calculated by summing the count for each species over all independent events and dividing by the number of days the camera was operational and calculated as the number of detections/100 camera-days (see Appendix B.1).

4.7.2.4 Bank Swallow

In accordance with IAAC approval condition 4.11.1, and the Bank Swallow Mitigation Plan (Stantec 2021), bank swallow (*Riparia riparia*) activity was monitored at three previously identified colonies between May 1 and August 31, 2025.

Methods

Three bank swallow colonies previously identified along the Elbow River during the first year of construction (2022), were visited twice on foot in 2025 to determine colony status (i.e., active/inactive) and activity levels during the bank swallow (BANS) nesting period for nesting zone B4 (i.e., early-May to mid-July) [Birds Canada 2023). The three colonies included BANS_Colony_01 located in NE-18-24-03-W5 as well as BANS_Colony_02 (comprised of 02A, 02B, and 02C), and BANS_Colony_03 (comprised of 03A and 03B) located in NW-18-24-03-W5 (Figure 4.2).

Although BANS_Colony_01 has not been active for the last two years due to bank failure and a decline of nesting habitat suitability (IAAC Annual Report – 2023/2024 Reporting Year), it was visited during 2025 to assess bank conditions. Other vertical banks along Elbow River adjacent to the Project were also scanned using binoculars for new bank swallow nesting activity. Each bank was monitored for a minimum of 20 minutes during each of the two visits. The number of individuals (adults and juveniles) and number of active burrows (i.e., burrows with active excavation, adults entering or exiting, or nestlings visible) were recorded, where applicable.

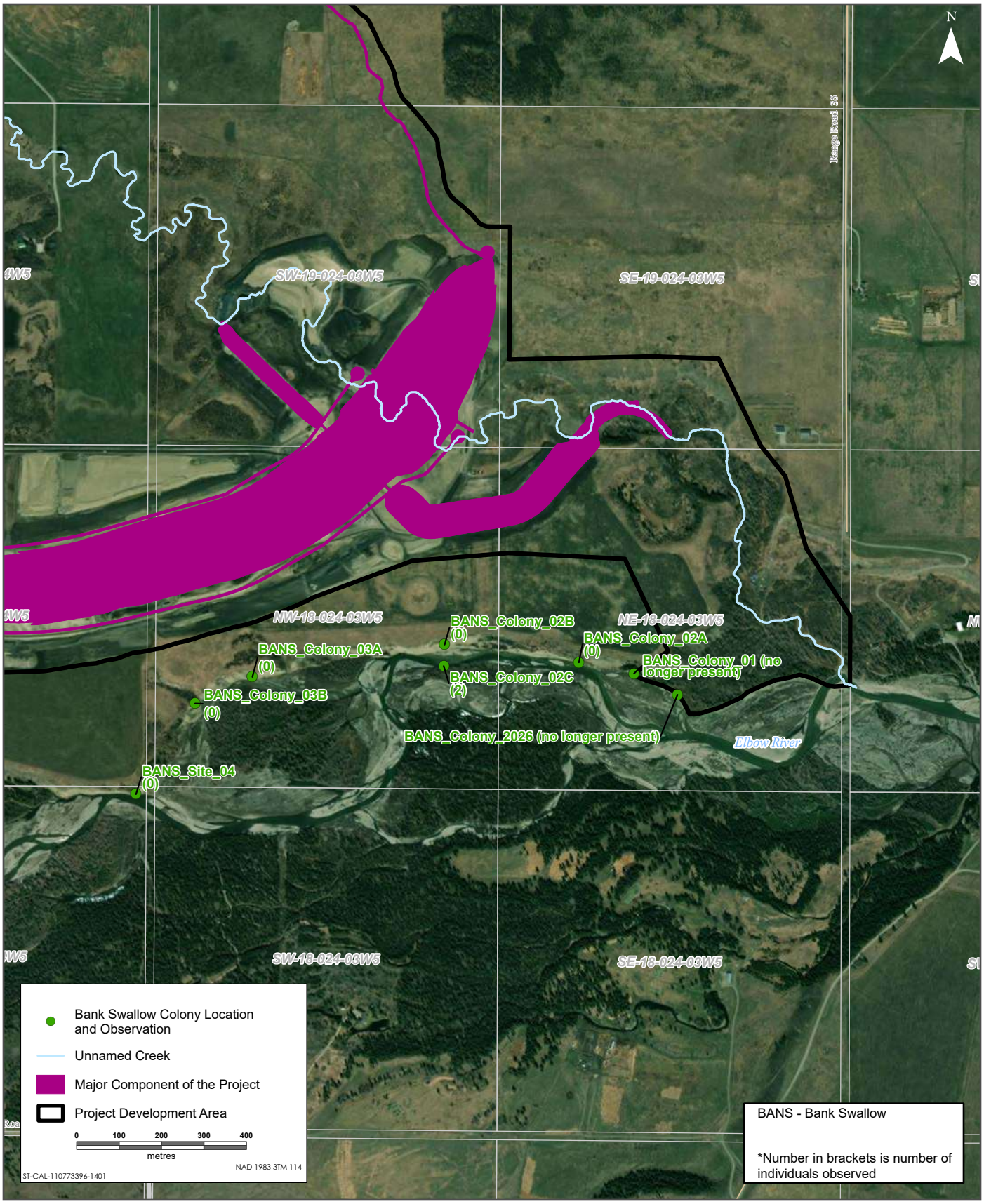
Results

Three previously identified bank swallow colonies on Elbow River were surveyed on June 11, 2025, and June 18, 2025.

Bank Swallow Colony 1

BANS_Colony_01 was visited on June 11, 2025, between 11:35 and 11:55 AM and on June 18, 2025, between 08:38 and 09:00 AM. Temperatures during the visits ranged from 16 to 21 degrees Celsius (°C), winds were calm (< 1 km/hr), with 10-20% cloud cover and no precipitation.

No bank swallows were observed foraging or nesting and no nest cavities were observed in the vertical bank at this location. The banks along this section of Elbow River have partially collapsed, exposing a hardened vertical surface, which likely has reduced the area of suitable nesting habitat due to limited ability to excavate new burrows and no evidence of new excavations (Photo 4.1).



Sources: Thematic Data - Stantec. Base Data - Government of Alberta, Stantec

Bank Swallow Colony Locations and Observations Along Elbow River - 2025 Monitoring Results

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Figure 4.2

Photo 4.1 Eroded bank along Elbow River where Bank Swallow Colony_01 was previously identified during 2022



Bank Swallow Colony 2

BANS_Colony_02 was visited on June 11, 2025, between 12:02 and 12:53 PM. Temperature was 18°C, with light winds (1-5 km/hr), 10% cloud cover, smokey skies, and no precipitation. This site was split into three locations (2A, 2B, and 2C) based on which side of Elbow River the colony was observed (i.e., north vs south) and distance between adjacent vertical banks (Figure 4.2; Photo 4.2, Photo 4.3, Photo 4.4). Northern rough-winged swallows (*Stelgidopteryx serripennis*; 1-6 individuals) were observed in flight and entering burrows at BANS_Colony_02A or 02B along the north side of Elbow River; however, no bank swallows were observed near or in burrows at either location. Two bank swallows were observed excavating two burrows and inflight above the river and shoreline at BANS_Colony_02C located on the south side of Elbow River. Bank swallows were observed excavating, but there was no evidence of occupied nests (i.e., with eggs or young) during the June 11th visit. Seven additional inactive burrows were also observed at this site.

A second visit to BANS_Colony 02A, 02B and 02C was completed on June 18, 2025, between 09:10 and 10:40 AM, temperature was 18°C with light winds, clear skies, and no precipitation. Consistent with the first visit, there were no bank swallow observed in or near cavities on the north side of Elbow River at BANS_Colony_02A and 2B, while northern rough-winged swallows (1-7 individuals) were observed at BANS_Colony_02B in flight and entering burrows in the dark soils below overhanging grass along the north bank of Elbow River. On the south bank at BANS_Colony_02C, two to four adult bank swallows were observed in-flight and entering and excavating the same two burrows as visit one. Given the consistent use of these burrows observed over the two visits, they are considered occupied nesting burrows for 2025.

Photo 4.2 Unoccupied bank swallow colony (BANS_Colony_02A) along north side of Elbow River - June 2025



Photo 4.3 Unoccupied bank swallow colony (BANS_Colony_02B) along north side of Elbow River - June 2025



Photo 4.4 Occupied bank swallow colony (BANS_Colony_02C) along south side of Elbow River, with swallows observed in cavities above the band of rocks (red arrow) – June 2025



Bank Swallow Colony 3

BANS_Colony_03A and 03B were visited on June 11, 2025, between 13:00 and 13:21 PM and on June 18, 2025, between 11:10 AM and 12:30 PM. Temperatures during the visits ranged from 21°C to 23°C, with light winds, 0-10% cloud cover, and no precipitation.

No bank swallows were observed nesting or flying near the banks at Colony 03A or Colony 03B (Photo 4.5). At Colony 03B, a pair of northern rough-winged swallows were observed entering and existing a burrow carrying insects during both visits.

Bank swallow nesting activity was only observed at BANS_Colony_02C located on the south side of Elbow River. The maximum number of bank swallows observed at BANS_Colony_02 declined from 41 individuals observed in 2023 to six individuals observed in 2024 with a further decline to two individuals during 2025 (Table 4.1). No bank swallows were observed in or nest cavities at the other colony locations.

Photo 4.5 Unoccupied bank swallow colony 03A and 03B (far upper left) along Elbow River – June 2025



Summary

Although no new bank swallow colonies were identified during the 2025 surveys, potential habitat was identified approximately 250 m southwest of Colony 03B along the north side of Elbow River, referred to as Site_04 (Figure 4.2). Although this site did not contain any burrows or signs of swallow activity during the 2025 survey, it will be monitored for potential bank swallow use during the next three years post-construction (i.e., dry operations).

Overall, the monitoring program has indicated bank swallow nesting activity, and the number of breeding pairs observed along Elbow River has varied annually since 2022. This appears to be partly related to natural bank erosion and collapse resulting in abandonment and/or reduced use. Trend in bank swallow abundance and status of three colonies located along Elbow River over the last three years is provided in Table 4.1. An evaluation of bank swallow monitoring results relative to performance indicators and targets identified in the WMMP is provided in Table 4.2.

Table 4.1 Summary of Bank Swallow Colony Status and Abundance: Construction 2022-2025

Colony ID	Monitoring Year	Status	Maximum Number of Individuals
BANS_Colony_01	2022	Occupied	12
	2023	Unoccupied	0
	2024	Unoccupied	0
	2025	Unoccupied [a]	0
BANS_Colony_02	2022	Occupied	10
	2023	Occupied	41
	2024	North Side of Elbow River Unoccupied South Side of Elbow River Occupied	6 (south side of Elbow River)
BANS_Colony_02A	2025	Unoccupied	0
BANS_Colony_02B	2025	Unoccupied	0
BANS_Colony_02C	2025	Occupied	2 (south side of Elbow River)
BANS_Colony_03	2022	Occupied	10
	2023	Occupied	14
	2024	Unoccupied	0
BANS_Colony_03A	2025	Unoccupied	0
BANS_Colony_03B	2025	Unoccupied	0
Site_04	2025	Unoccupied (potential habitat – no burrows observed)	0

Note:
[a] Colony_01 no longer provides suitable nesting (burrow) habitat for bank swallow

Table 4.2 Summary of Bank Swallow Monitoring Outcomes, Performance Indicators and Targets: 2024/2025 Reporting Year

Performance Indicator	Target	Monitoring Outcomes
Number of breeding pairs and active bank swallow burrows in the Project area	Continued use of the Project area each monitoring year as indicated by the number of breeding pairs of bank swallow and active burrows observed during construction and dry operations.	Monitoring results for 2025 indicated reduced bank swallow use along Elbow River due to natural bank erosion and lower habitat suitability at previously identified colonies. Maximum number birds observed at BANS_Colony_2C was 4 individuals over two visits (likely 2 pair), which is a decrease compared to the 26-41individuals (13 -20 breeding pairs) observed during 2023 and the 6 birds or 3 pairs observed in 2024. BANS_Colony_ 01, 02A, 02B as well as Colony 03A and 03B were not active during 2025.
Number of residences destroyed or created due to Project activities	Zero residences destroyed	No residences were destroyed due to Project activities

4.7.2.5 Wildlife Monitoring Results, Performance Indicators, and Targets

An evaluation of wildlife monitoring results relative to performance indicators and targets identified in the WMMP is provided in Table 4.3.

Table 4.3 Summary of Wildlife Monitoring Outcomes, Performance Indicators, and Targets used to Evaluate Mitigation Effectiveness during Construction 2024-2025

Residual Effect	Performance Indicator	Target	Monitoring Outcome
Change in Habitat (sensory disturbance)	Number of active wildlife features that remain in use to meet species breeding needs (i.e., successful nesting, denning due to effective setback buffers)	100% of active wildlife features receive an effective setback buffer that results in nesting or denning success (i.e., evidence of fledging, or no den abandonment)	All active bird nests received appropriate setback buffers until the nests were complete (i.e., juvenile birds had fledged)

Residual Effect	Performance Indicator	Target	Monitoring Outcome
Change in Movement (Ungulate Movement/ Habitat Use)	Number of days construction activities occur during the RAP for the Key Wildlife Biodiversity Zone (KWBZ) along Elbow River (December 15 to April 30)	Minimize the number of days construction activities occur during the RAP for the KWBZ along Elbow River (December 15 to April 30)	Construction activity occurred during approximately 85% of the KWBZ RAP (116 of 136 days), primarily along Elbow River near the diversion structure. Based on the results of the remote camera monitoring program, relative abundance (photographic rates) of ungulates along Elbow River during the winter 2024/2025 was variable. Two remote cameras deployed along Elbow River malfunctioned during winter, which reduced the amount of data collected. White-tailed deer photographic rates along Elbow River were relatively low during 2024/2025, which is consistent with previous monitoring years (i.e., 2021, 2022, 2023). Overall, white-tailed deer and elk were detected less frequently in the LAA during winter compared to other seasons (see Appendix B.1). Except for CAM-01, elk were not detected along the Elbow River during the 2024/2025 winter but used upland areas (grassland/shrublands) extensively, which is consistent with previous monitoring years (i.e., 2021, 2022, 2023). Mule deer were detected at CAM-01, CAM-02b and CAM-10 as well as CAM-11b along the Elbow River near the diversion inlet construction activities (see Appendix B.1).
Change in Mortality Risk	Number of active wildlife features (i.e., nests, dens, roost sites, hibernacula) destroyed	Zero active wildlife features destroyed	Pre-construction wildlife sweeps were completed to reduce potential mortality risk. No active wildlife features were destroyed.
	Number of animal-vehicle collisions (AVC) in the LAA (e.g., Hwy 22, Springbank Road) that can be attributed to the Project (i.e., construction traffic)	Zero AVC in the LAA that can be attributed to the Project	There were no AVC collisions in the LAA that could be attributed to the Project.

Residual Effect	Performance Indicator	Target	Monitoring Outcome
	Number of reported wildlife–human conflicts	Zero wildlife-human conflicts	There were two black bear encounters during this reporting year, which occurred near the floodplain berm. Bear was deterred using an air horn on both occasions with no further mitigation required.
	Number of problems (i.e., conflict) wildlife removed from the Project site	Zero problem wildlife removed from the Project area due to human-wildlife conflicts All workers (100%) on site receive wildlife awareness training (e.g., Bear Smart)	No problem wildlife were removed from the Project area due to human-wildlife conflicts. All workers on site received the appropriate safety training prior to all field surveys.

4.8 WATER AND AQUATICS

4.8.1 Water Quality

4.8.1.1 Turbidity Monitoring

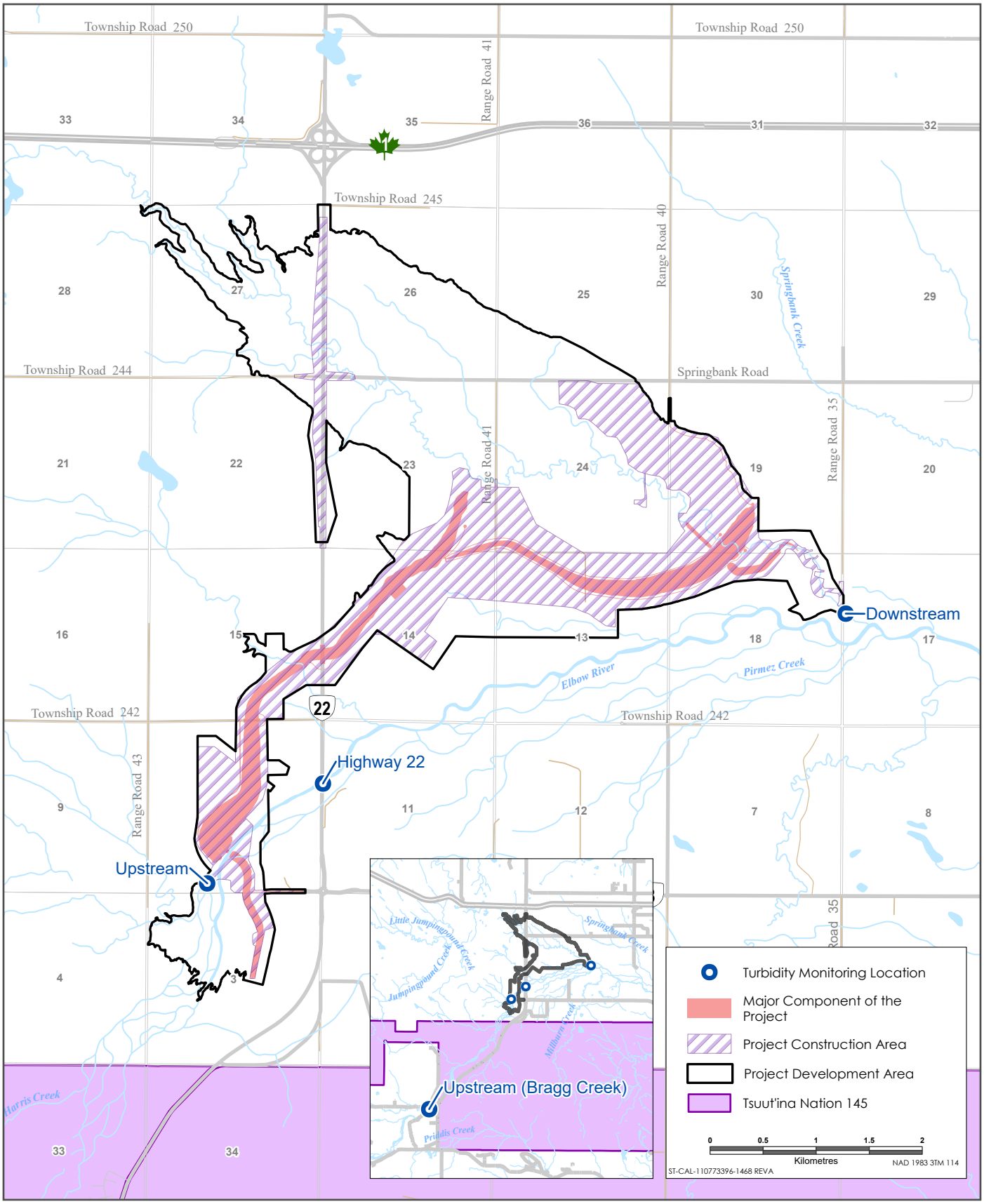
Near-Field Turbidity Monitoring Locations and Frequency

As outlined in the SWMP, continuous turbidity measurements were recorded at a set interval (once per hour) using turbidity sondes installed at three locations in the Elbow River (see Figure 4.3):

- Elbow River upstream of construction activities (July 1, 2024, to June 19, 2025)
- Elbow River at Highway 22 bridge (February 28, 2025, to June 30, 2025)
- Elbow River downstream of the entire Project boundary (July 1, 2024, to June 30, 2025)

The turbidity sonde located upstream of construction activities in the Elbow River was moved and re-installed further upstream at Bragg Creek on June 19, 2025, to characterize far-field upstream turbidity as described in the SWMP (see Figure 4.3).

Additionally, turbidity was measured in the field, where access was determined to be safe, at three locations in Unnamed Creek, between the confluence with the Elbow River and 400m upstream of the confluence, when flow was observed in the creek following the rain in late June 2025.



Sources: Base Data - Government of Canada. Thematic Data - Government of Alberta
Service Layer Credits:

Disclaimer: This map is for illustrative purposes to support this Stantec project; questions can be directed to the issuing agency.
10/29/2025

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ALBERTA TRANSPORTATION SPRINGBANK OFF-STREAM RESERVOIR PROJECT

Turbidity Monitoring Location

Figure 4.3

Near-Field Turbidity Monitoring Results

Linear relationships between measured total suspended solids (TSS, milligrams per litre [mg/L]) and measured turbidity (Nephelometric Turbidity Units [NTU]) from the Elbow River and Unnamed Creek were established in 2021 following the procedures described in the Government of Alberta (2023) guidance document. These linear relationships between TSS and turbidity are shown in Figure 4.4 and Figure 4.5 and were used to estimate site-specific TSS (mg/L) from continuous turbidity sonde measurements in NTU.

Figure 4.4 Elbow River TSS-Turbidity Curve

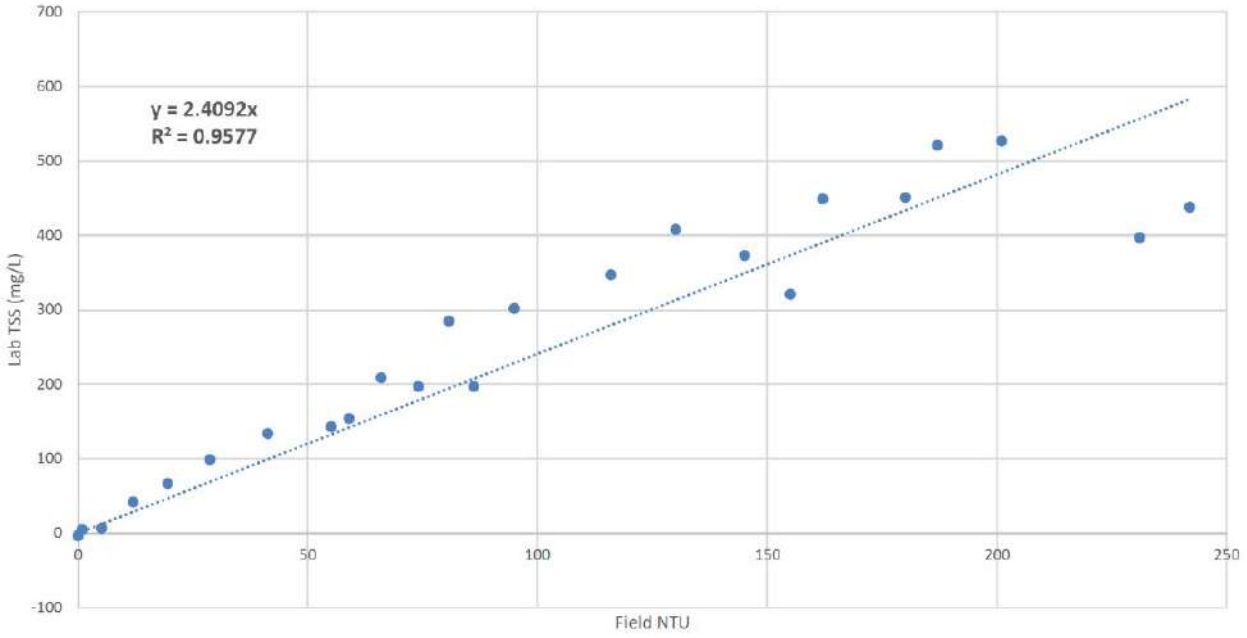
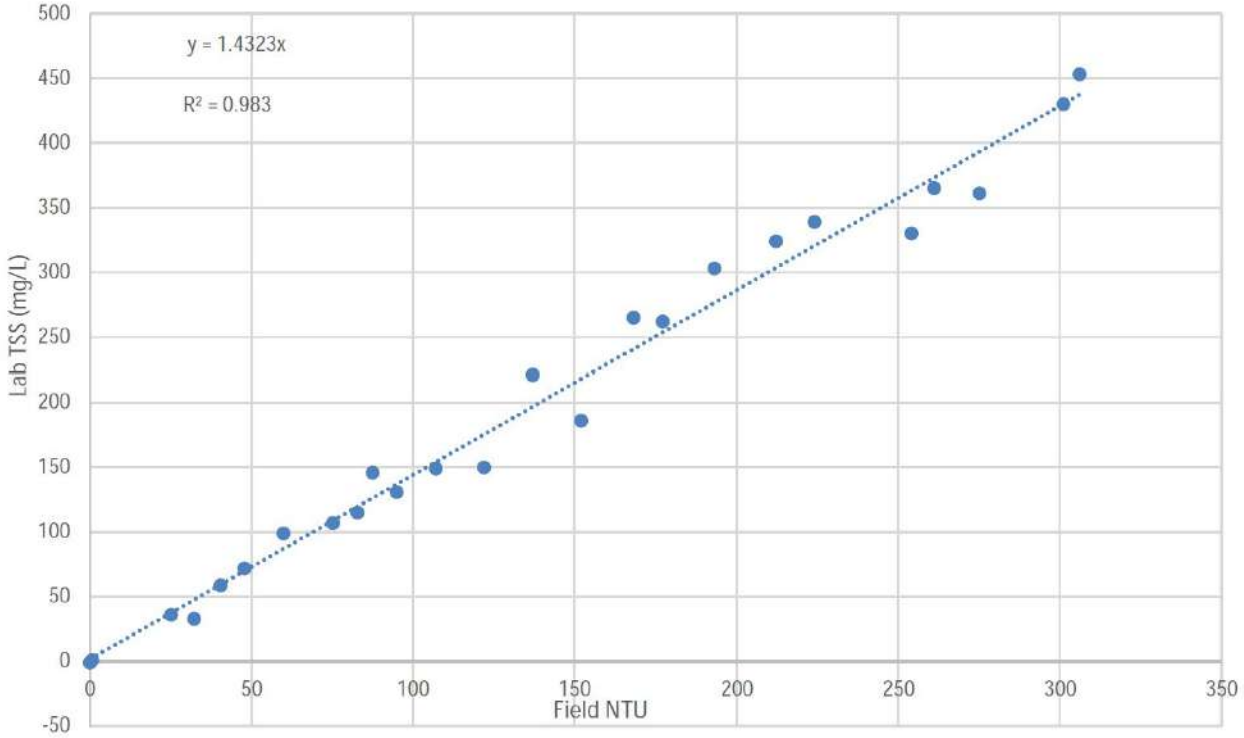


Figure 4.5 Unnamed Creek TSS-Turbidity Curve



It is important to mention that sondes installed in the Elbow River produced occasional measurement errors from battery failure and ice influence, resulting in unusual readings (e.g., zeros, negative, and extremely high values). As such, regular repair and maintenance of these sondes helped to reduce the occurrence of measurement errors. Periods with interrupted continuous turbidity measurements were as follows:

- Upstream sonde:
- July 16, 2024, to August 12, 2024
- August 20 to September 11, 2024
- September 27, 2024, to October 10, 2024
- December 12, 2024, to January 29, 2025
- Downstream sonde:
- July 16, 2024, to August 6, 2024
- October 25, 2024, to December 1, 2024
- December 20, 2024, to January 22, 2025

As part of quality control, unexplainable zero, negative turbidity values, and other unusual readings were excluded from further analyses. Estimated continuous TSS values, derived from the Elbow River TSS-turbidity linear regression relationship (Figure 4.4) for the three locations in the Elbow River are provided in Figure 4.6 and Figure 4.7. Two figures are provided with the first showing estimated TSS concentrations up to the maximum and the second showing estimated TSS concentrations of 550 mg/L and below to capture variability in the lower range of concentrations.

Estimated TSS concentrations were relatively high during several events during the 2024/2025 monitoring year at the upstream, Highway 22, and the downstream monitoring locations. However, this may be related to sonde malfunctions and ice break-up effects. In keeping with observations made during the past three reporting years, downstream Elbow River TSS concentrations were generally similar or lower than upstream concentrations throughout the 2024/2025 reporting year. The only notable exceptions were in March 2025 when TSS concentrations were higher at Highway 22 and the downstream locations compared to the upstream location (Figure 4.6 and Figure 4.7). These concentrations were not related to the Project construction since there were no construction activities in or directly adjacent to the Elbow River. As such, the higher TSS may have been either the result of ice influence on the sondes or other sediment sources within the Elbow River.

Another instance of elevated estimated TSS was associated with heavy rains that occurred in late June 2025 (see Section 4.9.1 for a summary of the rainfall). These rains affected both upstream areas and the Project site near Highway 22, resulting in higher than normal discharge and water levels (GoC 2025). Increased turbidity and TSS concentrations were recorded both at Highway 22 and downstream locations in the Elbow River (Figure 4.6 and Figure 4.7). There was no active construction in-stream or directly adjacent to Elbow River at this time. However, river water levels rose substantially, and water entered the site along the river at the Auxiliary Spillway. The observed rainfall-related increases in turbidity and TSS in the Elbow River were not related to the Project construction, as increases were relatively similar between Highway 22 and the downstream location. In summary, based on continuous monitoring data during the 2024/2025 monitoring year, there is no evidence of elevated TSS concentrations being caused by Project construction activities in the Elbow River.

TSS concentrations in Unnamed Creek, which were obtained using manual turbidity measurements and converted to TSS concentrations using the TSS-turbidity linear regression in Figure 4.5, are shown in Figure 4.8. Unnamed Creek turbidity was manually measured in the field during three days in October 2024 and during five days in June 2025. In October 2024, these measurements were taken because soil piles were moved near Unnamed Creek and sediment fencing was being installed as part of the ESC measures. Additional turbidity measurements were collected in June 2025 following heavy rains and when flow was observed in Unnamed Creek. Turbidity values were higher in the Elbow River immediately downstream of Unnamed Creek confluence compared to Unnamed Creek sites during each sampling event.

Figure 4.6 Elbow River TSS Concentrations Upstream of the Project Site, at Highway 22, and Downstream of the Project Site, Full Dataset (Continuous Sonde Measurements)

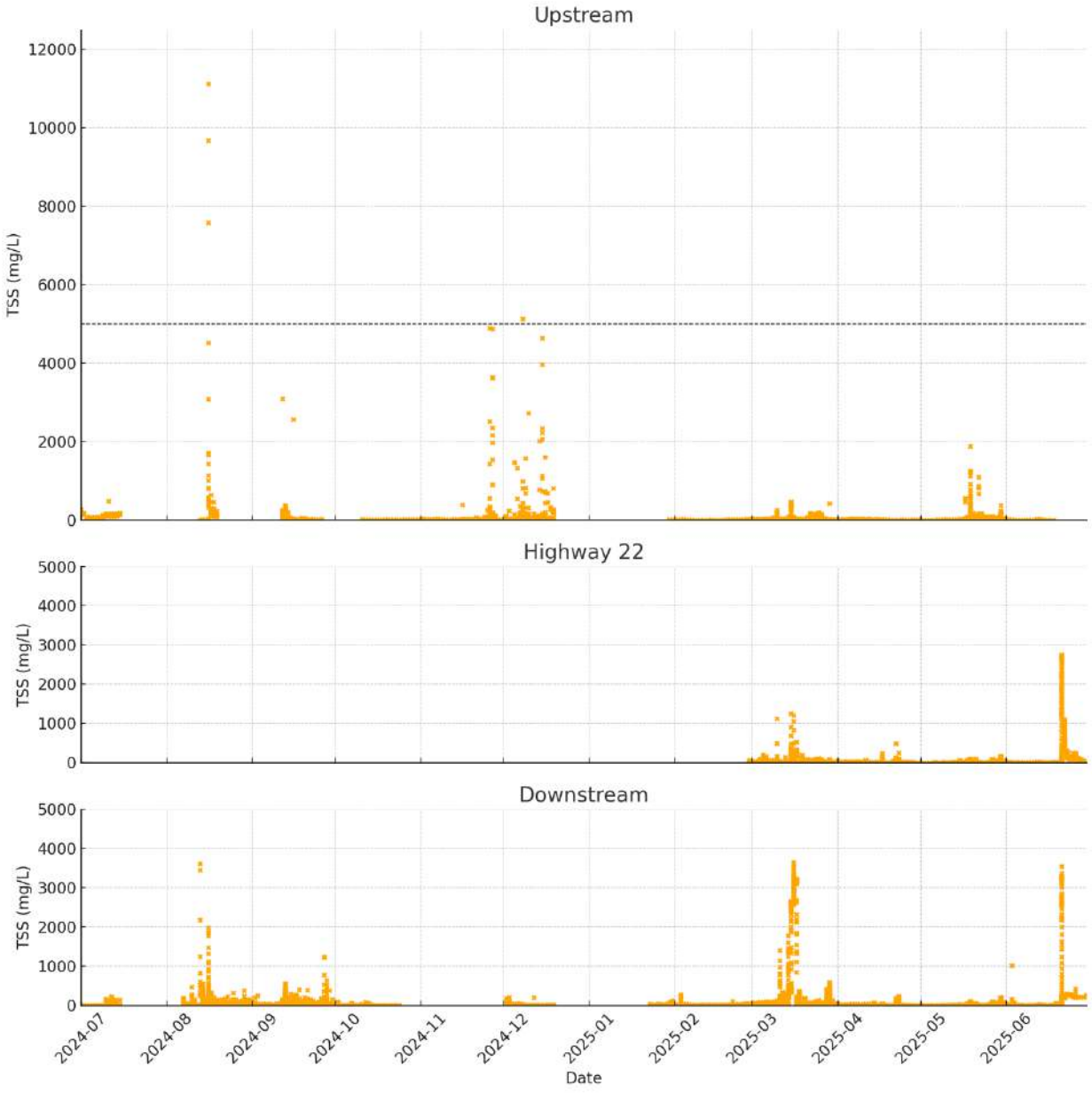


Figure 4.7 Elbow River TSS Concentrations Upstream of the Project Site, at Highway 22, and Downstream of the Project Site, Subset of Data Showing Concentrations up to 550 mg/L (Continuous Sonde Measurements)

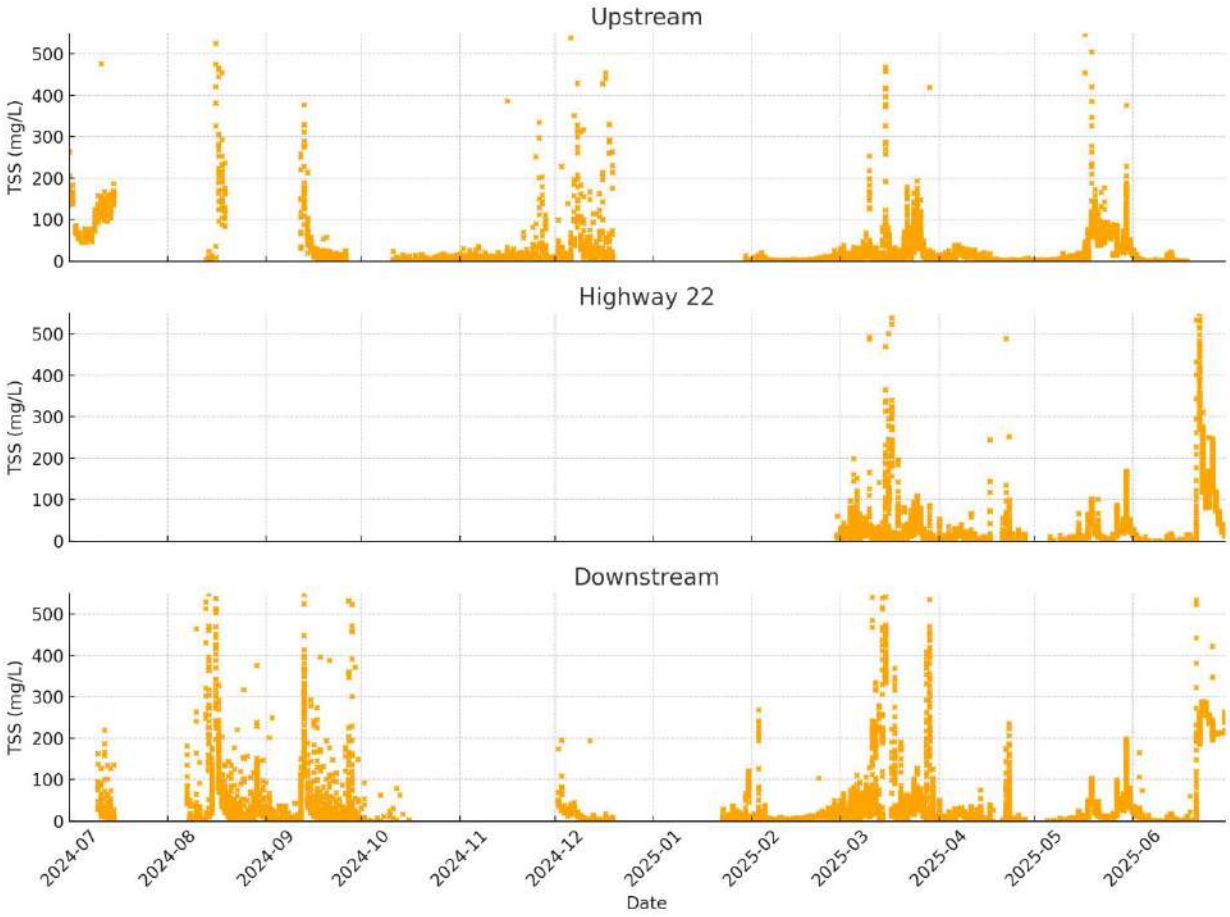
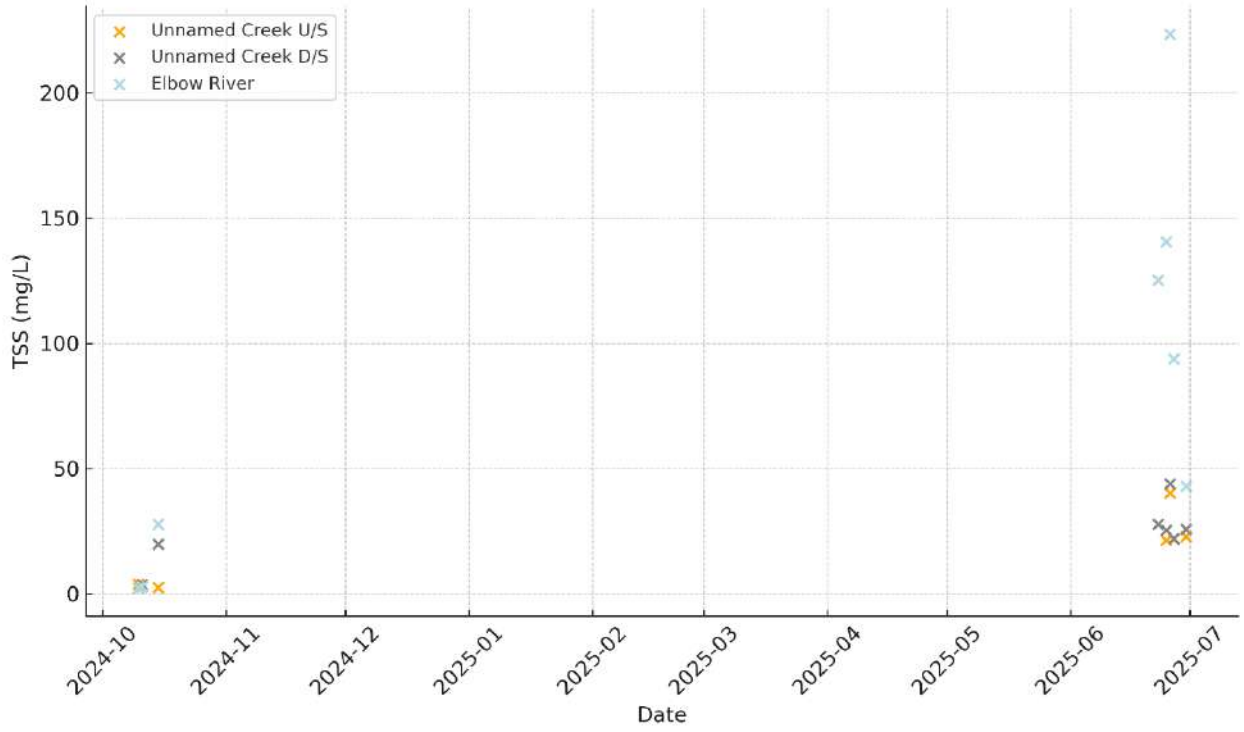


Figure 4.8 Unnamed Creek TSS Concentrations Near Confluence with the Elbow River and in Elbow River Immediately Downstream of the Confluence (Manual Measurements)



Far-Field Turbidity Monitoring

A commitment was made during the Project regulatory process and in the SWMP to install continuous turbidity sensors at the existing Water Survey of Canada (WSC) Elbow River hydrometric stations at Bragg Creek (WSC Station 05BJ004) and Sarcee Bridge (WSC Station 05BJ010) during all phases of the Project.

The near-field upstream Elbow River turbidity sonde was moved from immediately upstream of the construction location to Bragg Creek on June 19, 2025, ahead of flood season. The installation of this continuous turbidity sensor is temporary until the GoA confirms the exact permanent location of the continuous turbidity sensor. Installation of a continuous turbidity sensor at Sarcee bridge location did not occur in the 2024/2025 reporting year. A continuous turbidity sonde remained in place for the duration of construction immediately downstream of the confluence of Unnamed Creek and the Elbow River to monitor near-field conditions at the Project boundary. In addition, grab water samples for TSS measurements were collected at two locations (Griffith Woods Downstream and Bragg Creek Upstream) on May 9, 2025, and at one location (Griffith Woods Downstream) on June2025, 2025 during the 2024/2025 reporting year. Grab water samples for TSS measurements will continue until the continuous turbidity sondes are procured and installed at the SWMP-specified locations.

4.8.1.2 Reported Sediment Releases

Sediment releases into the Elbow River were documented on nine occasions during the 2024/2025 reporting year. These incidents were the result of improper de-watering activities in July 2024, during the move of the Elbow River from the temporary alignment back to its original alignment through the constructed service spillway in August 2024, and during the annual testing of the Service Spillway and Diversion Inlet in April 2025. Mitigation measures, such as stopping or moving de-watering locations, were implemented as required. Turbidity sampling and monitoring was conducted during each occasion and were reported to AEPA within the required reporting timelines.

- On July 29, 2024, a sediment plume was observed within the Elbow River as a result of improper de-watering at the diversion inlet. The discharge outlet for the de-watering was moved to a new location that would not infiltrate into the Elbow River. Turbidity sampling was completed during the time the plume was visible. The turbidity data identified that TSS values were within acceptable values; however, the plume was visible for more than 30 minutes and extended for 100 m Turbidity sampling continued over the course of four hours until no plume was identifiable, and turbidity values returned to normal conditions. The incident was short in duration and actioned immediately once identified. The incident was reported to AEPA on July 30, 2024, and corrective measures were implemented to prevent reoccurrence. The event was resolved with no further issues observed.

- On July 30 and July 31, 2024, a sediment plume was observed in the Elbow River, below the exposed hill slope, as a result of an unprotected pump discharge on top of a steep hill above the river. The incident was short in duration and actioned immediately upon discovery. The pump discharge outlet was relocated behind a silt fence installed on the hillside further away from the slope to disperse water and reduce the potential for flow down the slope. Erosion and sediment control measures were installed as corrective actions to prevent further sediment movement in the Elbow River. Turbidity samples were collected and were found to be non-compliance for seven hours. The pump discharge outlet was moved behind a silt fence installed on top of the hillside to redirect water away from the exposed hill side. Monitoring continued until the plume fully dissipated and no further exceedances were observed. The incident was reported to AEPA on July 30 and August 1, 2024, and the event was resolved with corrective measures implemented and no further concerns identified.
- On August 2, 2024, and on August 10, 2024, sediment plumes were observed outside of the sediment curtain installed downstream of works during the removal of an earthen berm between the settling pond and the Elbow River. These activities were directly related to moving the Elbow River from the temporary alignment back to its original alignment through the constructed service spillway. The plumes were short in duration and actioned immediately upon observation. The berm between the settling pond and the Elbow River was replaced, and erosion and sediment control measures were installed in the river downstream of berm to prevent further sediment movement. Turbidity samples were collected on both dates and were found to be non-compliance; however, works were stopped, and turbidity values returned to acceptable levels within approximately one hour. The incidents were reported to AEPA the following day, and both events were resolved with corrective measures implemented and no further issues observed.
- Moving Elbow River from temporary diversion channel to its original alignment:
  - August 13, 2024, a sediment plume was observed outside of the sediment curtains installed downstream of the works during the initial removal of the upstream berm isolating the original natural channel of the Elbow River from the temporary diversion channel. Turbidity samples were collected and were found to be non-compliance. Work was stopped for the day allowing turbidity to return to normal conditions. AEPA was contacted that day to notify them of the incident. Proactive measures were taken in advance of the work, and regulators were notified of the activity prior to commencement. The activity was carried out in accordance with project approvals, and exceedances were mitigated where possible. The work was of short duration, and no impacts on aquatic habitat or aquatic life were anticipated. The timing of the activity and related testing occurred outside of the Restricted Activity Period (RAP).

  - On August 14, 2024, sediment plume was observed shortly after excavations began during the commencement of the removal of the upstream berm isolating the original natural channel of the Elbow River from the temporary diversion channel. The source of sediment stemmed from both berm removal and the flush of fine sediment down the original channel. The plume persisted throughout the day. Work was halted upon discovery of the plume and mitigation measures were discussed and implemented the same day. Turbidity samples were collected. Proactive measures were taken in advance of the work, and regulators were notified of the activity prior to commencement. The work was carried out in accordance with project approvals, and exceedances were mitigated where possible. The activity was of short duration relative to the scope of works. The timing of the activity and related testing occurred outside of the RAP. The report to AEPA captured the duration of the activity and mitigation undertaken.

- Service Spillway and Diversion Inlet testing:
  - On April 22, 2025, a sediment plume was observed downstream of the diversion inlet gates during the testing. As the diversion inlet gates were raised alternately to the final elevation, sediment which had accumulated on one of the gate edges was released downstream. Exceedances (values above background level) were documented but due to the nature of the activity, stopping work or implementing mitigation measures was not possible. Alberta Environmental and Dangerous Goods Emergencies were contacted to discuss the activity and the exceedances and further communications with an Environmental Protection Officer (EPO) would be scheduled to discuss the reporting requirements.
  - On April 23, 2025, during the second day of the testing, exceedances above background levels were documented, during lowering of the gates. Following stabilization of the gates, turbidity levels returned to within acceptable limits by the end of the day. Communications with an EPO took place to discuss the activity and reporting requirements; the EPO confirmed that a single report at the completion of the testing would be required. On April 24, 2025, a sediment plume was observed downstream of the diversion inlet gates during the last day of the testing . During lowering of the Service Spillway gates, turbidity samples were collected and exceedances were documented. Following stabilization of the gates prior to midday, turbidity was back in compliance.
  - On April 25, 2025, the EPO was contacted to confirm the reporting reference numbers. A report to AEPA capturing the turbidity monitoring completed during the testing in its entirety was submitted on April 30, 2025.

4.8.2 Groundwater

Groundwater monitoring network development and groundwater monitoring activities were completed during the 2024/2025 reporting year and are described in detail in the Groundwater Monitoring Report in Appendix B.2. The groundwater monitoring was completed based on the GWMP.

The monitoring network includes three monitoring tiers that are summarized below and described in detail in Appendix B.2:

- Tier 1 monitoring wells consist of vibrating wire piezometers that are installed within the dam structure (also used for geotechnical monitoring) and shallow monitoring wells that will be installed in the fall of 2025 immediately downgradient of the dam.
- Tier 2 monitoring wells are shallow and within or very near the wetted perimeter of the off-stream reservoir and Diversion Channel. They are installed specifically for the Project in both the unconsolidated and shallow bedrock deposits. A subset of Tier 2a wells are also included specifically to monitor drawdown near the Diversion Channel during construction and dry operations to address NRCB approval condition 7 a[3]). The Tier 2a wells are domestic water wells and are based on voluntary participation (all landowners within the potential drawdown area were invited to participate).
- Tier 3 monitoring wells are situated beyond the area of predicted project effects at locations of some of the closest potential receptors to the Project. The main purpose of these monitoring wells is to provide early detection of potential effects on groundwater that are propagating outward from the LAA. Tier 3 wells are primarily domestic water wells where landowners wished to participate.

Monitoring well decommissioning activities were completed in May 2025 to remove the remaining wells from within the reservoir footprint that are completed in bedrock formations prior to the dry operations phase. Decommissioning was completed by pulling and/or drilling out the well casing, backfilling with bentonite, and hydrating the bentonite to create a seal. Decommissioning included one Tier 2 monitoring well which will be relocated outside of the reservoir footprint as well as four EIA project wells.

Groundwater monitoring and sampling was completed in September 2024 and June 2025. The monitoring and sampling included the Tier 2 monitoring wells, Tier 2a monitoring wells, Tier 3 domestic wells. The legacy EIA Project wells were also included in the September 2024 monitoring event prior to being decommissioned as noted above. The locations and descriptions of the monitoring tiers and additional Project and domestic wells are presented in Appendix B.2.

[3] "monitor water levels in domestic water wells west of the Diversion Channel to the boundary of the local assessment area that may be impacted by dewatering during the Project construction. During flood and dryland operation, monitoring of the wells should be continued by the Operator for a minimum of five years or until it can be demonstrated that permanent lowering of the water level does not significantly impact yields from the water wells,"

The monitoring programs included measurement of groundwater levels, field parameters (dissolved oxygen (DO), oxidation-reduction potential (ORP), pH, electrical conductivity (EC)) and downloading and calibration of data logging pressure transducers. The transducers are deployed to measure and record near continuous water level, temperature, and electrical conductivity at the Tier 2, Tier 2a, and Tier 3 monitoring wells. Groundwater samples were collected and submitted to an accredited laboratory for routine potability parameters, major ions, bacteriological parameters, dissolved organic carbon (DOC), dissolved metals, nutrients, benzene, toluene, ethylbenzene, xylenes (BTEX), and F1 to F2 fraction hydrocarbons.

Changes to groundwater levels were noted in some monitoring wells in the vicinity of the construction areas. Water level drawdown of up to 5 m was observed near the diversion channel. The changes in groundwater levels are similar in magnitude to those predicted in the EIA and no groundwater quantity triggers were reached (i.e., increases resulting in flowing artesian conditions or decreases such that existing wells are no longer useable).

Groundwater quality in the 2025 reporting year was generally consistent with historical results and, while there are numerous exceedances of the Guidelines for Canadian Drinking Water Quality (Health Canada 2024), exceedances were not attributed to Project effects. One exception was MW21-06-12 where increasing TDS and sulphate trends are noted. Sulphate increased from 270 mg/L in September 2024 to 430 mg/L in June 2025. The data logger at MW21-16-12 also indicates drawdown at this location along with increasing EC. The drawdown and water quality changes are interpreted to be a result of Project effects and resultant changes in groundwater flow. These types of Project related effects within the LAA were predicted in the EIA (Volume 3A). No correlation between the construction activities and the concentration trends was noted at the other monitoring wells.

The results of the monitoring and sampling events are presented in Appendix B.2.

4.8.3 Channel Morphology

Channel morphology will be monitored following flood operations as required by IAAC approval condition 3.20.

4.8.4 Fish and Fish Habitat

4.8.4.1 Construction

Construction associated with the Diversion Inlet and the Low-Level Outlet progressed during the 2024/2025 reporting year. These programs were overseen by a Qualified Aquatic Environment Specialist (QAES), who captured and moved fish before construction works. Fish rescues and relocations were undertaken to support instream work at the Unnamed Creek and the unnamed tributary associated with Low-Level Outlet channel. Construction activities were completed in accordance with the regulatory approvals associated with the Project. See Section 4.3.3 for details on fish rescue and relocations undertaken during the Diversion Inlet construction works.

4.8.4.2 Fish Passage

Construction of the fish passage v-weirs was completed in August 2024. Fish passage monitoring will be conducted in 2026 in the first year following the completion of construction and reclamation work in the Auxiliary Spillway area.

Baseline pre-construction fish passage data was collected in 2021 and the results presented in the 2021/2022 annual report. Future monitoring programs (IAAC approval condition 3.17) will evaluate post-construction Elbow River velocities in the context of the baseline results presented in the 2021/2022 annual report.

4.8.4.3 Fish Tissue

The results of the pre-construction surveys to meet IAAC approval conditions 7.8 were presented in Annual Report 2021/2022. No further work was required during 2024/2025 for these approval conditions.

Future iterations of the invertebrate and fish tissue sampling program will be conducted as required by IAAC approval condition 7.8 following a flood event and results of those future studies will consider the baseline data described in the 2021/2022 annual report.

4.8.4.4 Offsetting

Offset measures are required as part of the *Fisheries Act* Authorization (the Authorization) for the project. The Authorization outlines Project activities that may result in the harmful alteration, disruption, and destruction of fish habitat, including critical habitat for bull trout, a species at risk. The Authorization also outlines Project activities that may result in the death of fish, including bull trout, a species at risk (IAAC approval condition 3.9). Offset measures address effects of the Project through various habitat improvements, channel construction, and efforts to increase bull trout populations.

The Offset Measures Plan was driven by Project requirements, regulatory and fisheries management objectives, and stakeholder feedback, including feedback received from Indigenous groups and the AEPA fisheries management group. Offset measures are required in the Elbow River watershed to address provincial fisheries management objectives and objectives in the Recovery Strategy for the Bull Trout (*Salvelinus confluentus*), Saskatchewan-Nelson Rivers population, in Canada (DFO 2020a). In addition, an adaptive management plan that addresses uncertainty associated with the death of fish that may result from Project operation was committed to. The adaptive management approach outlined in the Authorization indicates that any potential fish mortality, based on the initial estimates proposed for the Project and retained in the Authorization, will be offset. Post-flood monitoring will confirm whether initial estimates were appropriate. If post-flood monitoring suggests that the initial death of fish estimates were appropriate, no additional offsetting measures would be required. If post-flood monitoring suggests that the initial death of fish estimates were underestimated, additional

offset measures will be instituted under authorization from Department of Fisheries and Oceans (DFO). Additional potential offsetting measures have been presented in the Application for *Fisheries Act* Authorization.

Three offset initiatives are currently in various stages of progress for the Project and are further discussed below:

- Elbow River Side Channels
- Bull Trout Recovery Program
- Elbow River Watershed Remediation Program

The Authorization was amended on March 13, 2025, to extend the expiry date to March 31, 2036. This amendment accounts for changes in the contracting requirements associated with the Elbow River Watershed Remediation Program. As well as additional tasks that will support the overall planning and implementation of the Bull Trout Recovery Program. The locations and general initiatives of the offsets remain consistent as they were described in the Offset Measures Plan.

Should the offsetting works differ from what has been provided to and discussed with Indigenous groups, additional engagement on potential environmental effects will be undertaken (IAAC approval condition 3.10)

Elbow River Side Channels

The Elbow River Side Channels as they were presented in the Offset Measures Plan and approved by DFO were constructed in August and September 2024. All required DFO reporting was completed and year 1 post construction monitoring, as required by the Authorization, will be completed in 2025. The Elbow River Side Channels Offsetting measure consists of two pre-historical side channels approximately 2 km downstream of the Diversion Inlet. The side channels were designed to provide spawning habitat and rearing habitat for juveniles of resident fish species. Fish habitat features were created as described in the Offsetting Measures Plan and included construction of instream cover (boulder features, riffle features, holding pools) and overhanging cover (riparian vegetation, wood debris). River flow was returned to the side channels following construction.

Bull Trout Recovery Program

The Bull Trout Recovery Program (the Program) is intended to eliminate invasive brook trout (*Salvelinus fontinalis*) from three waterbodies in the Elbow River watershed including Elbow Lake, Quirk Creek, and Prairie Creek such that bull trout populations can be re-established in these waterbodies. All three waterbodies, and their tributaries, are mapped critical habitat for bull trout (DFO 2020b; DFO 2025). In addition, Elbow Lake and Prairie Creek are mapped critical habitat for westslope cutthroat trout (*Oncorhynchus clarkii lewisi*; Alberta population; listed as threatened under Schedule 1 of SARA) (GOC 2025; DFO 2025), a species native to Alberta, will

benefit from the Program. The goal of the Program is to increase bull trout productivity and habitat availability. To support the Program, migration barriers are proposed near the downstream end of Quirk Creek and Prairie Creek prior to removal of brook trout to prevent immigration of brook trout into habitat that supports bull trout populations. A natural barrier (i.e., Edworthy Falls) exists approximately 3 km downstream of the outlet of Elbow Lake and, therefore, construction of a barrier to prevent immigration is not required. To support the planning stages, the GoA contracted Fish Control Solutions to complete a feasibility assessment and preliminary treatment plan for these three waterbodies. The GoA continues to assess the feasibility treatment plan considering both chemical or mechanical means with guidance from AEPA Fish and Wildlife Stewardship Branch. The removal method will be dependent on the technical planning components, as well as, the outcomes of public and Indigenous community engagement, and regulatory approval. The GoA will keep DFO informed as work progresses.

Elbow River Watershed Remediation Program

The Elbow River Watershed Remediation Program intends to improve riparian health and reduce sediment sources in the middle Elbow River watershed, in an area that provides known bull trout critical habitat. These measures provide an in-kind offset through improved habitat quality within the watershed and an out-of-kind offset for the death of fish. As presented in the Offset Measures Plan, six sites have been identified for riparian habitat remediation, and habitat assessments were completed in fall 2022. In 2024, the GoA contracted a third-party company to confirm the validity of the six sites before advancing the tender process. Following this third-party review, no changes to the sites were identified. The Elbow River Remediation Program, as required by the GoA's policy and process for projects that require construction, will be tendered in Q4 of 2025 with construction commencing in 2026.

4.9 AIR QUALITY, NOISE AND DUST

4.9.1 Air Quality and Dust

IAAC Approval Condition 6.1 – Vehicle Emissions

As per the AQMP, all vehicles and stationary equipment operating on the site meet or exceed the current emission standards. The construction contractor continued to regularly inspect the equipment used in the Project; they were regularly inspected and maintained according to manufacture specifications. This included all equipment being operated by sub-contractors and consultants involved in the Project.

IAAC Approval Condition 6.2 – No-Idling Policy

The Project no-idling policy remained in place during the 2024/2025 reporting year, and the construction contractor frequently reminded the employees of the policy and it required implementation.

IAAC Approval Condition 6.3 – Baseline Air Quality and CAAQS

Current State of the Air Quality Monitoring Network

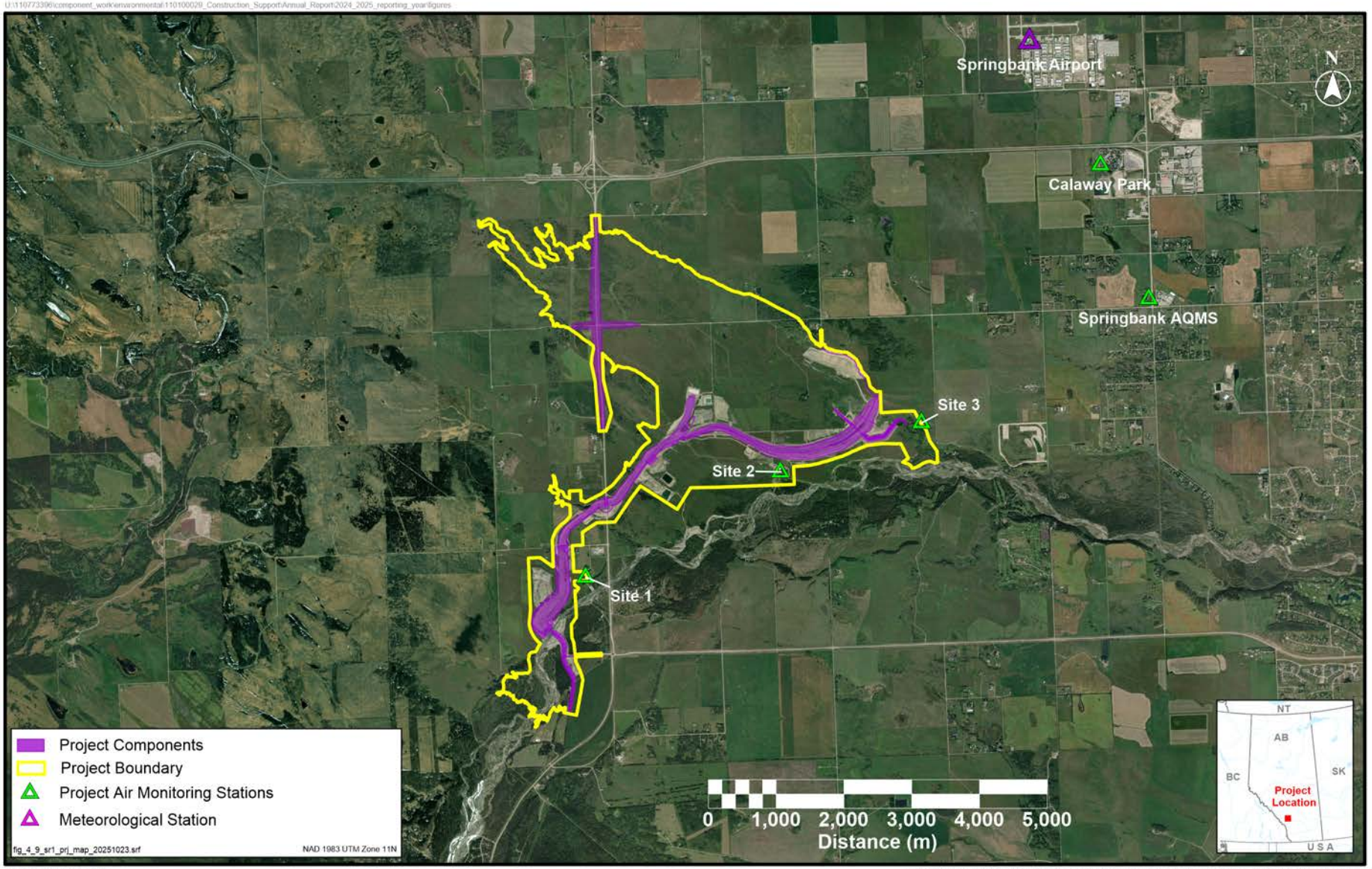
An air quality monitoring network was established starting in June 2022 to monitor the ambient air quality around the Project area and selected regional sites. Figure 4.9 shows the monitoring sites in proximity to the Project construction areas. The initial monitoring was established at the three sites designated in the AQMP to monitor the concentrations of $PM_{2.5}$, PM_{10}, TSP.

- Between the construction access road and the diversion channel excavation work (Station 1) — Figure 4.10.
- At the dam construction site (Station 2) — Figure 4.11.
- At any borrow source site used and at the parking areas (Station 3) — Figure 4.12.

Site 1, Site 2, and Site 3 continued to operate throughout the2024/2025 reporting year without changes to the location of the sites or major changes to the monitoring equipment. Table 4.4 shows the equipment specifications for the EBAM stations and meteorological instruments deployed at the sites. Figure 4.13 shows the typical site setup used at the sites.

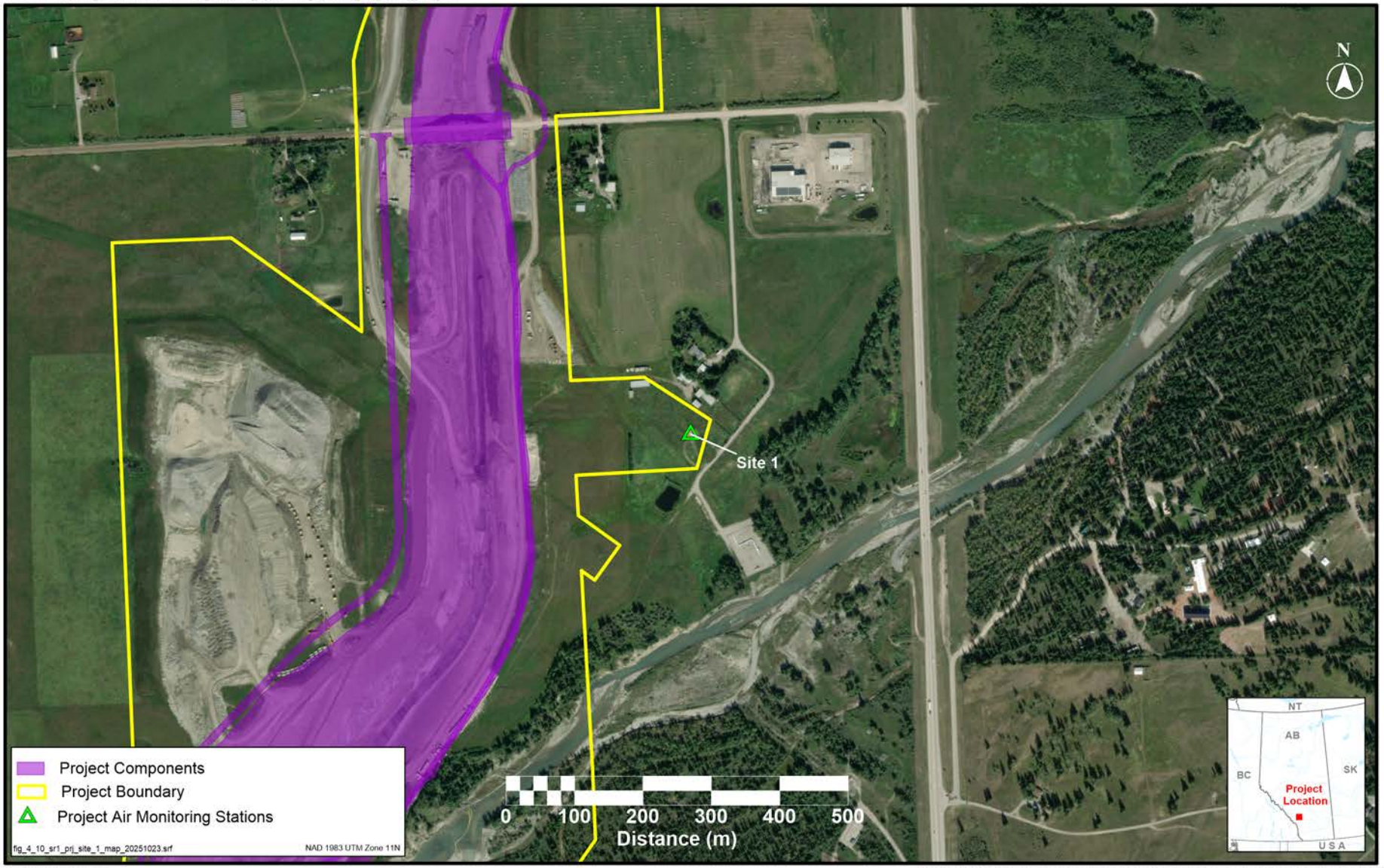
The three sites experienced some short power or communication issues during the July 2024 to June 2025 reporting year most of these were corrected through remote monitor restarts or using on-site Indigenous Monitors to manually restart the stations. Site 2 lost power from August 8 to 12, 2024 due to a power outage after a severe thunderstorm which resulted in a circuit breaker to trip. Site 2 also lost power from January 1 to 7, 2025 due to the power cable being disconnected due to wildlife on-site while the construction site was closed. Site 1 and Site 3 lost communications connection to the datacenter from August 2 to 7, 2024 which resulted in data loss at Site 3 during part of that period.

Some high concentrations for PM_{10} and TSP were invalidated as they were associated with high winds and blowing snow or rain during the monitoring period. The rain droplets and snow particles can be detected as particles which cause artificially high particle counts during these events. Some of the EBAM stations experienced pump failures during extreme cold weather events which resulted in replacement of some of the pumps during the monitoring period.



Springbank Off-stream Reservoir Project Area, Construction Areas, and Air Quality Monitoring Sites

Figure 4.9

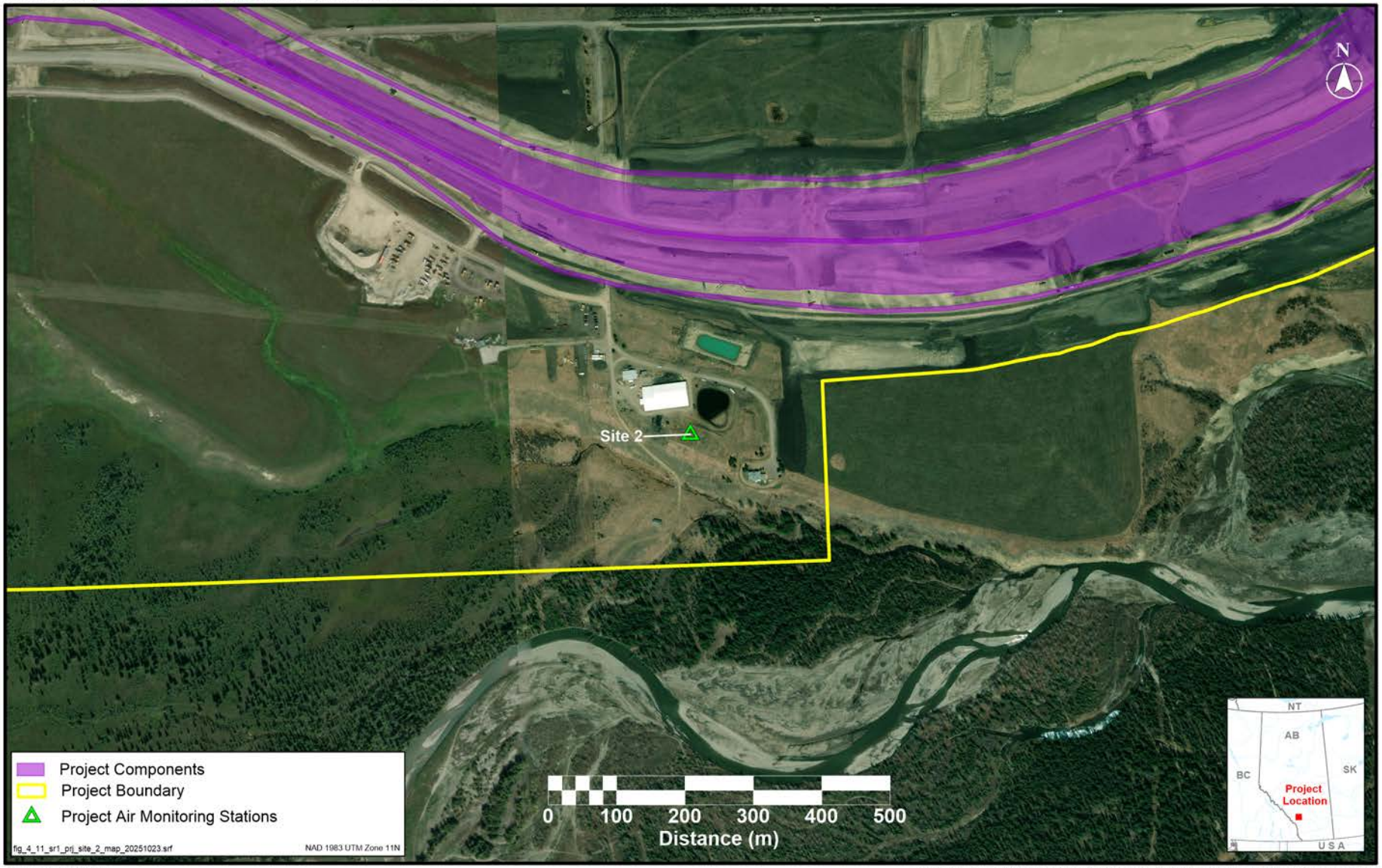


Air Quality Monitoring Site 1 — Three Environmental Beta-Attenuation Mass Monitor (EBAM) Stations Collecting $PM_{2.5}$, PM_{10}, TSP, and Meteorology

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Figure 4.10



Sources: ESRI World Imagery

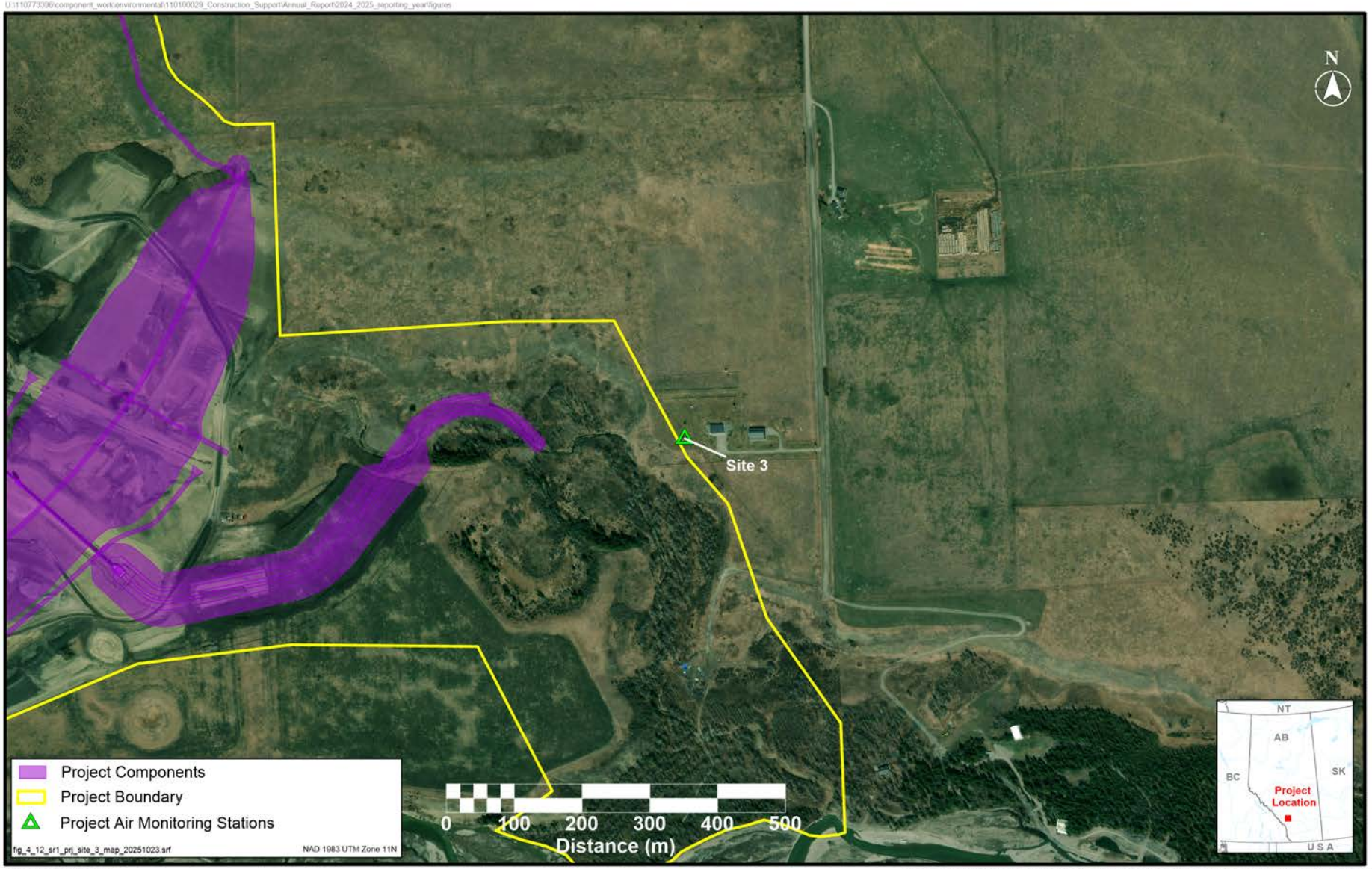
Disclaimer: This map is for illustrative purposes to support this Stantec project; questions can be directed to the issuing agency.

Air Quality Monitoring Site 2 — Three Environmental Beta-Attenuation Mass Monitor (EBAM) Stations Collecting $PM_{2.5}$, PM_{10}, TSP, and Meteorology

Stantec

Alberta Transportation Springbank Off-stream Reservoir Project

Figure 4.11



Air Quality Monitoring Site 3 — Three Environmental Beta-Attenuation Mass Monitor (EBAM) Stations Collecting $PM_{2.5}$, PM_{10}, TSP, and Meteorology

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Figure 4.12

Table 4.4 Ambient Air Quality and Meteorological Instruments Installed at Site 1, Site 2, Site 3, and Calaway Park

Instrument	Manufacture Name	Model	Units	Lower Range	Upper Range	Resolution
$PM_{2.5}$ / PM_{10} / TSP [a]	MetOne	EBAM-9805	$\mu g/m^3$ [b]	0	10,000	1 $\mu g/m^3$
Wind (WS & WD)	MetOne	AIO 2 [c]	m/s; deg. From N	0	75	0.1 m/s
Ambient Temperature			°C	-40	+60	0.1 °C
Relative Humidity			%	0	100	1 %
Barometric Pressure			hPa	500	1,100	0.1 hPa

Notes:

- Three EBAM stations are deployed to measure $PM_{2.5}$, PM_{10}, and TSP at Site 1, Site 2, and Site 3. Calaway Park has two EBAM stations deployed to measure $PM_{2.5}$ and TSP. Meteorological instruments are attached to the $PM_{2.5}$ EBAM station at each site.
- microgram per cubic metre ($\mu g/m^3$) is the mass of the substance in micrograms per cubic meter of air.
- AIO 2 is an all-in-one meteorological sensor equipped with a two-dimensional sonic anemometer with a starting wind threshold of 0.2 metres per second (m/s).

Figure 4.13 A Typical Site Setup Showing the Three EBAM Stations Equipped to Measure Fine Particulate Matter, Coarse Particulate Matter, Total Suspended Particulates, and Meteorology at Site 2.



The Calaway Park site EBAM stations ($PM_{2.5}$, TSP, and meteorology) were deployed on May 5, 2024, to October 15, 2024, for the 2024 season at the same location as it was deployed in 2023 on the west side of the park (Figure 4.14). The site was redeployed on May 15, 2025, for the 2025 season in the same location. The site had some intermittent communications issues in July and August of 2024 and some minor power outages during the 2024 deployment which were corrected by on-site Park staff. No issues were reported during the 2025 deployment.

The Springbank AQMS site is in the community of Springbank at the Lions Soccer Park near the intersection of Range Road 33 and Springbank Road (Figure 4.15). The site was operational during the 2024/2025 reporting year. Figure 4.16 shows a picture of the installed AQMS with the 10 m meteorological tower. Table 4.5 shows the ambient air quality and meteorological analyzers and sensors installed at the Springbank AQMS. The station only experienced some short power or communication failures during the monitoring period.

Table 4.5 Ambient Air Quality and Meteorological Instruments Installed at the Springbank Air Quality Monitoring Station

Instrument	Manufacture Name	Model	Units	Lower Range	Upper Range	Resolution
NO-NO_X-NO_2 [a]	Thermo Scientific	42i	ppb [b]	0	1,000	1 ppb
$PM_{2.5}$ [c]	Teledyne	T640	$\mu g/m^3$ [d]	0	10,000	1 $\mu g/m^3$
Wind (WS & WD)	RM Young	05305	km/h; deg. From N	1.8 km/h (0.5 m/s)	180 km/h (50 m/s)	0.1 km/h
Vertical Wind	RM Young	27106T	km/h	1.1 km/h (0.3 km/h)	90 km/h (25 m/s)	0.1 km/h
Ambient Temperature	Vaisala	HMP60	°C	-40	+60	0.1 °C
Relative Humidity	Vaisala	HMP60	%	0	100	1 %RH
Barometric Pressure	Vaisala	PTB120	mbar	500	1,100	1 mbar
Precipitation	RM Young	52202	mm	0	50 mm/h	0.1 mm
Shelter Temperature	Comet	T0310	°C	-30	+80	0.1 °C
Solar radiation	Apogee	SP-522	W/m^2	0	2,000	1 W/m^2

Notes:

[a] Nitrogen monoxide (NO), total nitrogen oxides (NO_X), and NO_2 analyzer.

[b] ppb is the volume of the substance (parts) per billion volumes of air.

[c] $PM_{2.5}$ analyzer.

[d] $\mu g/m^3$ is the mass of the substance in micrograms per cubic meter of air.

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Sources: ESRI World Imagery

Disclaimer: This map is for illustrative purposes to support this Stantec project; questions can be directed to the issuing agency.

Air Quality Monitoring Calaway Park Site — Two Environmental Beta-Attenuation Mass Monitor (EBAM) Stations Collecting $PM_{2.5}$, TSP, and Meteorology

Figure 4.14

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Springbank Air Quality Monitoring Station — Collecting $PM_{2.5}$, NO_2, and Meteorology

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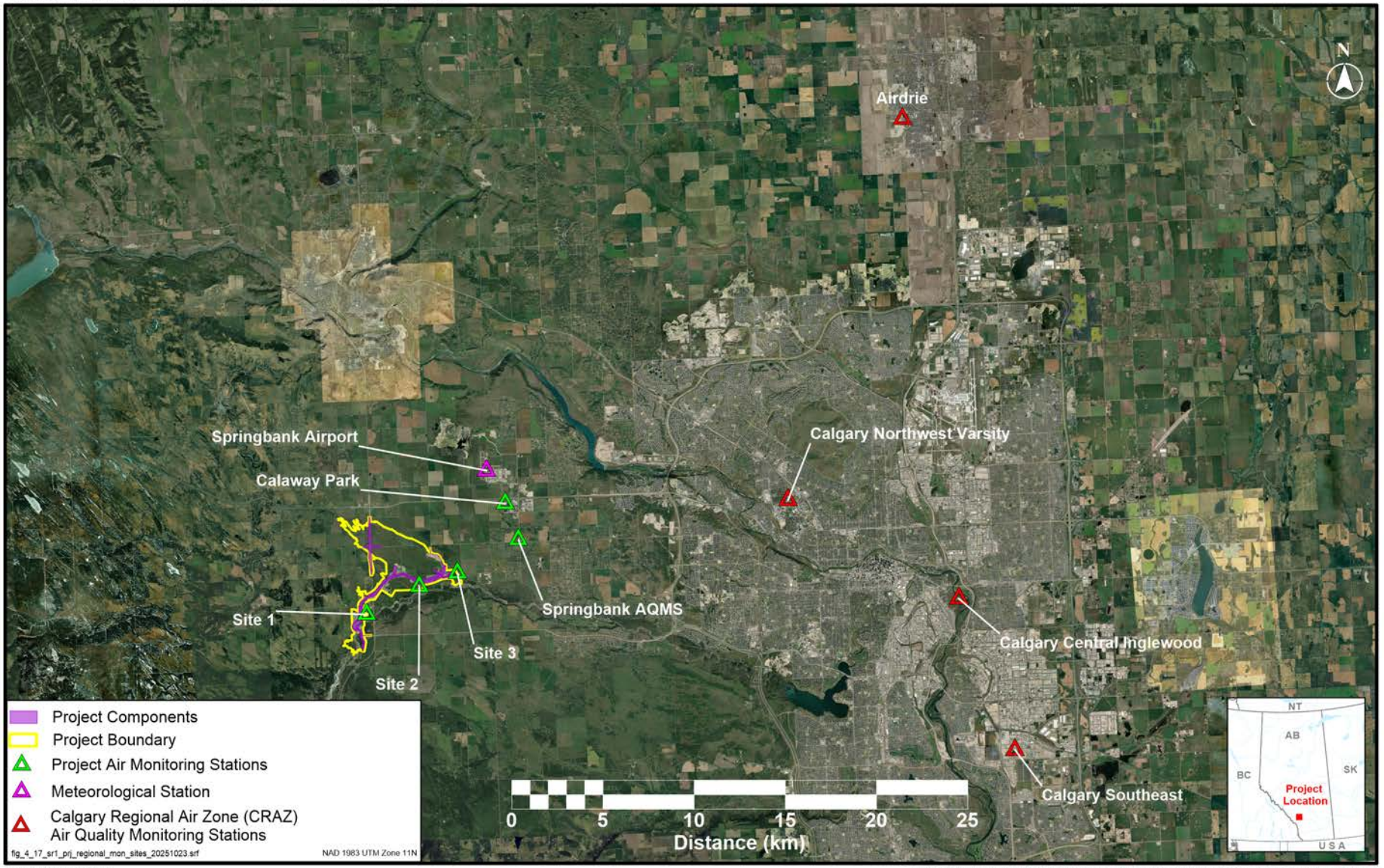
Figure 4.15

Figure 4.16 The Springbank Air Quality Monitoring Station (Looking East)



Meteorological data from the Springbank Airport was obtained from Environment Climate Change Canada (ECCC) from their historical climate data website. This data was used to compare to the meteorology parameters at the EBAM stations and the Springbank AQMS.

Regional air quality data was downloaded from the AEPA Alberta Air Data Warehouse for the Calgary Region Air Zone (CRAZ) Calgary and Airdrie. The regional data was used to compare the $PM_{2.5}$ and NO_2 concentrations measured at the EBAM Stations and the Springbank AQMS to determine if there were potential regional influences on the measured concentrations. Figure 4.17 shows the location of the regional air quality monitoring stations in relation to the Project monitoring stations.



Regional and Project Air Quality Monitoring Station Locations

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Figure 4.17

Monitoring Data Quality Assurance, Quality Control, and Storage

Data was provided by Bureau Veritas (BV) as daily and monthly data files of Microsoft Excel files of 1-hour averaged data for all the active sites during the 2024/2025 reporting year. A Level 0 quality assurance and quality control (QA/QC) process was completed by BV to identify any issues with the monitoring equipment, communications with the EBAM stations and AQMS, and any observed issues with the data. Additional quality assurance and quality control (QA/QC) of the data was completed as per Chapter 6 of the Air Monitoring Directive (AEP, 2016).

Monthly data from the CRAZ AQMS sites is downloaded from the AEPA Air Data Warehouse which has been quality reviewed by CRAZ as per Chapter 6 of the AMD (AEP, 2016). The downloaded data is stored in the project folder on Stantec's file servers.

Daily and monthly data from the ECCC Springbank Airport meteorological station was downloaded using the WeatherCan R package (LaZerte & Albers, 2018) from the ECCC Historical Weather Data website. This data was processed using ECCC's QA/QC procedures. All data was processed into Microsoft Excel files and stored in the project folders on Stantec's file servers.

Monthly and Ad-hoc Site Visits

All the sites are visited by BV monthly to conduct calibration audits as per Chapter 7 of the AMD (AEP, 2018) and manufacture guidance. The site visit includes inspection of the site and stations to ensure that the grounds are accessible, and the ground cover does not interfere with the EBAM stations.

Additional site visits were required during the 2024/2025 reporting year by BV or the Indigenous Monitors (IM) to restart the EBAM stations when they were not communicating with the datacenters or to investigate power loss at the sites. BV conducted all repairs required during these site visits. Site visits by IM occurred when BV was unable to travel to the site to conduct the investigations and was limited to restarting the EBAM stations.

Results from the Air Quality Monitoring Program

These sites have been operated and maintained to collect the $PM_{2.5}$, PM_{10}, TSP, and NO_2 concentrations around the Project and downwind of the Project. The ambient concentrations of these substances were compared to the applicable Alberta Ambient Air Quality Objectives and Guidelines (AAAQO and AAAQG; (AEPA, 2024)) and the Canadian Ambient Air Quality Standards (CAAQS; (CCME, 2025a)). Table 4.6 shows the current AAAQO and AAAQG and Table 4.7 shows the CAAQS. As Alberta does not have an applicable AAAQO or AAAQG for PM_{10} the 24-hour average of 50 µg/m^3 British Columbia Ambient Air Quality Objective (BC AQO; (BC ENV, 2019) was used to evaluate the PM_{10} concentrations.

Table 4.6 Summary of Current Alberta Ambient Air Quality Objectives and Guidelines for the Substance of Interest

Substance	Averaging Period	Concentration [1]	
		µg/m³ [2,3]	ppbv [4]
Nitrogen Dioxide (NO_2)	1-hour	300	159
	Annual	45	24
Fine Particulate Matter ($PM_{2.5}$)	1-hour [5]	80	—
	24-hour	29	—
Total Suspended Particulate Matter (TSP)	24-hour	100	—
	Annual [6]	60	—

Notes:
1. Alberta Ambient Air Quality Objectives and Guidelines Summary (AEPA, 2024)
2. µg/m³ is the mass of the substance in micrograms per cubic metre of air.
3. Standard conditions of 25°C and 101.325 kilopascals (kPa) are used to convert from µg/m³ to parts per billion volume (ppbv).
4. ppbv is the volume of the substance (parts) per billion volumes of air.
5. Guideline values are used for planning, management, general performance indicators, and to assess local concerns but not for regulatory enforcement.
6. Based on annual geometric mean.

Table 4.7 Summary of Current Canadian Ambient Air Quality Standards for the Substance of Interest

Substance	Averaging Period	Concentration [1]			
		µg/m³ [2,3]		ppbv [4]	
		2020	2025	2020	2025
Nitrogen Dioxide (NO_2)	1-hour [5]	113	79	60	42
	Annual [6]	32	23	17.0	12.0
Fine Particulate Matter ($PM_{2.5}$)	24-hour [7]	27	— [8]	—	—
	Annual [9]	8.8	— [8]	—	—

Notes:
1. CAAQS (CCME, 2025a; CCME, 2025b) for 2020 and 2025. The recently released 2030 $PM_{2.5}$ CAAQS were not included as the monitoring program will be completed before 2030.
2. µg/m³ is the mass of the substance in micrograms per cubic metre of air.
3. Standard conditions of 25°C and 101.325 kPa are used to convert from µg/m³ to ppbv.
4. ppbv is the volume of the substance (parts) per billion volumes of air.
5. The 3-year average of the annual 98th percentile of the daily maximum 1-hour average concentration (CCME, 2020).
6. The average over a single calendar year (CCME, 2020).
7. The 3-year average of the annual 98th percentile of the daily 24-hour average concentrations (CCME, 2012).
8. Currently under review by the Canadian Council of Ministers of the Environment (CCME).
9. The 3-year average of the annual average of the daily 24-hour average concentrations (CCME 2012).

The following sections summarize the ambient and meteorological monitoring data collected from the monitoring conducted from July 2024 to June 2025 at the Project sites. This is presented with the data collected from the CRAZ and AEPA regional monitoring stations for comparison. Tables and figures are in Appendix B.3.

Nitrogen Dioxide (NO_2)

Table B.3.1 (Appendix B.3) shows as summary of the measured NO_2 concentrations at the Springbank AQMS and the regional monitoring stations.

NO_2 concentrations were collected at the Springbank AQMS site during the 2024/2025 reporting year and there were no concentrations measured at the Springbank AQMS that were above the 1-hour average AAAQO of 159 ppb. The highest 1-hour average NO_2 concentration measured during the period was 38.0 ppb on November 19, 2024, at 17:00 and 18:00 and on December 3, 2024, at 17:00 which is 23.9% of the AAAQO. The 98th percentile of the daily 1-hour average maximum is 29.0 ppb which is below the 1-hour average 2020 CAAQS threshold of 60 ppb and the 2025 CAAQS threshold of 42 ppb.

Although the 2025 CAAQS of 42 ppb are in effect the 2020 CAAQS are being evaluated for this report as it covers the transition between the two effective periods with neither year being completely documented in this report. This is also to provide consistency with the previous reports, and that the project is materially complete and transitioning to the post construction and operational phases of the project. The air quality monitoring program for the construction phase is scheduled to end in December 2025.

Normally the annual average AAAQO is evaluated based on the calendar year. However, as the July 2024 to June 2025 NO_2 concentration data spans a nominal one-year period the annual average was calculated as 4.37 ppb measured at the Springbank AQMS during the July 2024 to June 2025 monitoring period which is 18.2% of the annual AAAQO and 25.7% of the annual CAAQS.

Similarly, the 1-hour average NO_2 concentrations measured at the regional monitoring stations were below the AAAQO with the highest 1-hour average NO_2 concentration of 72.3 ppb measured at the Calgary Central (Inglewood) Station on February 7, 2025, at 09:00. The Calgary Southeast Station measured the 98th percentile daily 1-hour average maximum NO_2 concentrations of 52.5 ppb which is below the 60 ppb CAAQS threshold. It should be noted that the data from the Springbank AQMS and CRAZ monitoring stations was not processed to remove any identified data periods influenced by exceptional events and transboundary flow so these values may differ from the annual air zone report and management level determination. The annual average NO_2 concentrations were below both the AAAQO and CAAQS at all the regional stations.

Figure B.3.1 and Figure B.3.2 (Appendix B.3) show the time series of the 1-hour average NO_2 concentrations measured at the Springbank AQMS and the regional stations from July 2024 to June 2025. These plots are showing that the measured NO_2 concentrations tend to be higher in the winter months (November through March) and lower in the summer months (June through August). Figure B.3.2 (Appendix B.3) shows that the NO_2 concentrations measured at the Springbank AQMS are lower than those measured at most of the regional stations.

Box-whisker plots (as used throughout this section) are useful to show the distribution of measured ambient air quality and meteorological data. The midline is the median value observed, and the 25% and 75% quartiles form the top and bottom of the box. The whiskers, lines above and below the quartiles box terminating in a horizontal line, show the interquartile range with a factor of 1.5 which indicates the amount of variability in the measurements. Measurements outside of the interquartile range are considered outlier values which would be measurements that would occur rarely or under specific conditions. Outliers are shown as dots outside of the whisker lines.

Figure B.3.3 (Appendix B.3) shows a box-whisker plot of the 1-hour average NO_2 concentrations measured at the Springbank AQMS and the regional air quality monitoring stations. This shows that the NO_2 concentrations measured at the Springbank AQMS during the 2024/2025 reporting year are similar to those measured in Airdrie with a lower average, median, and maximum concentrations. Overall, it shows that most of the NO_2 concentrations tend to be below 30% of the 1-hour average AAAQO of 159 ppb within the Calgary Region. The higher NO_2 concentrations tend to be in areas with higher density industrial development in Calgary Central (Inglewood) and Calgary Southeast.

Fine Particulate Matter ($PM_{2.5}$)

Table B.3.2 (Appendix B.3) shows the summary statistics of the 1-hour average $PM_{2.5}$ concentrations measured at the Springbank Project monitoring stations. Figure B.3.4 (Appendix B.3) shows a time series of the 1-hour average $PM_{2.5}$ concentrations measured at the Springbank Project monitoring stations. The highest 1-hour average $PM_{2.5}$ concentration of 372 µg/m^3 measured at the Springbank AQMS occurs on July 24, 2024, at 20:00. Overall, there were 10 to 26 hours where the 1-hour average $PM_{2.5}$ concentrations were above the AAAQG at the Springbank Project monitoring stations. The median 1-hour average at all the sites was 4.00 µg/m^3 except Calaway Park, which was 5.00 µg/m^3 during the monitoring period with the annual average ranging from 5.80 µg/m^3 to 8.01 µg/m^3. The Calaway Park station was not above the 75% completeness threshold due to only being deployed during the operational seasons, and therefore the annual average is only shown for informational purposes.

Table B.3.3 (Appendix B.3) shows the summary statistics of the 1-hour average $PM_{2.5}$ concentrations measured at the regional monitoring stations operated by CRAZ. Figure B.3.5 (Appendix B.3) shows a time series of the 1-hour average $PM_{2.5}$ concentrations measured at the Springbank Project monitoring stations and the regional monitoring stations. The highest 1-hour average $PM_{2.5}$ concentration of 557 µg/m^3 was measured at the Calgary-Northwest (Varsity) station on July 24, 2024, at 20:00. At the regional stations there were between 23 hours to

50 hours where the 1-hour average $PM_{2.5}$ concentrations were above the AAAQG. In most cases, the high 1-hour average $PM_{2.5}$ concentrations measured at the Springbank Project monitoring stations, and the regional station occur at similar times which indicates that these peaks are due to regional events.

Figure B.3.6 (Appendix B.3) shows the box-whisker plot for the 1-hour average $PM_{2.5}$ concentrations for the Project and Regional air quality monitoring stations. This figure shows that the measured $PM_{2.5}$ concentrations mainly were below the AAAQG for most of the 2024/2025 reporting year but there were $PM_{2.5}$ hourly averaged concentrations measured above the AAAQG for several hours during the period.

It should be noted that the data from the Springbank AQMS and CRAZ monitoring stations were not processed to remove any identified data periods influenced by exceptional events and transboundary flow so these values may differ from the annual air zone report and management level determination.

Table B.3.4 (Appendix B.3) shows the summary statistics of the 24-hour average $PM_{2.5}$ concentrations measured at the Project monitoring stations. Figure B.3.7 (Appendix B.3) shows the time series of the 24-hour average $PM_{2.5}$ concentrations measured at the Project stations for the 2024/2025 reporting year. The $PM_{2.5}$ concentrations collected at the three EBAM stations, Calaway Park, and the Springbank AQMS all measured 24-hour average $PM_{2.5}$ concentrations above the AAAQO between 4 days to 12 days during the monitoring period. The highest 24-hour average $PM_{2.5}$ concentration of 117 µg/m^3 was measured at the Springbank AQMS on July 24, 2024. The median 24-hour average $PM_{2.5}$ concentrations ranged from 3.46 µg/m^3 to 4.57 µg/m^3 with the annual average ranging from 5.71 µg/m^3 to 8.15 µg/m^3. The Calaway Park station was not above the 75% completeness threshold due to only being deployed during the operational season, and therefore the annual average is only shown for informational purposes.

The 98th percentile 24-average concentrations measured at the Calaway Park site, and the Springbank AQMS are above the 24-hour average CAAQS of 27 µg/m^3 based on the of data collected during the monitoring period. The 24-hour average CAAQS does require three full years of data to be properly evaluated for the management of regional air quality. The annual averages at the Springbank Project sites were below the annual average CAAQS of 8.8 µg/m^3.

Table B.3.5 (Appendix B.3) shows the summary statistics of the 24-hour average $PM_{2.5}$ concentrations measured at the CRAZ ambient air quality stations. Figure B.3.8 (Appendix B.3) shows the time series of the 24-hour average $PM_{2.5}$ concentrations measured at the Project and regional monitoring stations during the 2024/2025 reporting year. The maximum 24-hour $PM_{2.5}$ concentration of 142 µg/m^3 was measured at the Calgary Central (Inglewood) station on July 24, 2024. Overall, there were between 13 to 16 days with the 24-hour average $PM_{2.5}$ concentrations that were above the AAAQO. The time series shows that the peak values measured at the Project monitoring stations coincide with the peak values measured at the regional monitoring stations which suggest that these high $PM_{2.5}$ concentrations are a result of regional events that are occurring during the summer period (June to August).

Figure B.3.9 (Appendix B.3) shows the box-whisker plots of the 24-hour average $PM_{2.5}$ concentrations at the Project and Regional air quality monitoring stations. Like the 1-hour average statistics, these tables and box-whisker plot show that most of the measured concentrations were below the 24-hour average $PM_{2.5}$ AAAQO. There were several days when the 24-hour average $PM_{2.5}$ concentrations were above the AAAQO.

For the CAAQS 98th percentile 24-hour average, all the sites measured concentrations above the CAAQS limit of 27 µg/m^3. As with the NO_2 concentrations when compared to the CAAQS, the $PM_{2.5}$ data from the Project and CRAZ monitoring stations was not processed to remove any identified data periods influenced by exceptional events and transboundary flow so these values may differ from the annual air zone report and management level determination. The annual average of the 24-hour average $PM_{2.5}$ concentrations measured at the Calgary Central (Inglewood), Calgary Northwest (Varsity), and Calgary Southeast were above the CAAQS limit of 8.8 µg/m^3. As mentioned in the NO_2 results summary, the Calaway Park station did not collect enough data to properly evaluate the annual statistics.

Most of these high hourly and 24-hour average $PM_{2.5}$ concentrations can be attributed to the wildfire smoke that occurred in the region from February to October in 2024 and June and July in 2025 from several wildfires burning in Alberta, British Columbia, the Northwest Territories, and Northern Saskatchewan (CBC News, 2024; King, 2024; Shingler, 2024; CBC, 2025). The City of Calgary recorded 200 smoke hours during 2024 which were determined when smoke was observed, and the visibility was reduced to less than 9 km at the Calgary International Airport (City of Calgary, 2024). Only 51 smoke hours were measured in 2025 in June and July (CBC, 2025). The higher $PM_{2.5}$ concentrations measured at the Springbank Project air quality monitoring stations occurred at the same periods when high $PM_{2.5}$ concentrations were measured at the regional CRAZ stations, so they are not considered to be resulting from the construction activities at the Springbank Project.

Coarse Particulate Matter (PM_{10})

Table B.3.6 (Appendix B.3) shows the statistics of the 24-hour average PM_{10} concentrations measured at the three Project monitoring sites. Figure B.3.10 (Appendix B.3) shows the time series of the 24-hour average PM_{10} concentrations measured at the Project stations for the 2024/2025 reporting year. All three sites measured 24-hour average PM_{10} concentrations above the BC AQO with the highest concentration of 139 µg/m^3 at Site 1 on August 9, 2024. The median 24-hour average PM_{10} concentrations range from 10.6 µg/m^3 to 12.4 µg/m^3 with the annual average ranging from 14.3 µg/m^3 to 17.8 µg/m^3. Overall, there were 16 days at Site 1, 19 days at Site 2, and 5 days at Site 3 that were above the 24-hour BC AQO. The higher number of days where the daily average was above the BC AQO at Site 1 and Site 2 could be due to being located near the active Project construction areas, existing sources of coarse particulate matter, and wildfire smoke events.

The majority of these high PM_{10} 24-hour average concentrations occur in the summer, early fall, and spring periods. There was a period in late January where high PM_{10} concentrations were measured at the Project monitoring stations. It was noted during the monitoring program that some of the PM_{10} concentrations were elevated during precipitation events associated with high winds which may be the cause of some of the high 24-hour average PM_{10} concentrations measured during the monitoring period. Some of these events were removed from the data analyses but further investigation of other outlier events is ongoing.

Figure B.3.11 (Appendix B.3) shows the box-whisker plot of the 24-hour average PM_{10} concentrations measured at the three Project monitoring sites. Like the 24-hour average $PM_{2.5}$ concentrations, most of the 24-hour average PM_{10} concentrations were measured below the BC AQO of 50 µg/m^3.

The $PM_{2.5}/PM_{10}$ ratio can be a useful analysis to determine the source of particulate matter at each of the sites (Zhao, Chen, Yu, & Luo, 2019; Bamola, et al., 2024). High $PM_{2.5}/PM_{10}$ ratios (>0.7) indicate that there is a higher concentration of finer PM which is generally associated with combustion sources or secondary PM created by chemical reactions in the atmosphere. A low $PM_{2.5}/PM_{10}$ ratio (<0.3) is typically associated with higher concentrations of coarse PM from sources associated with earth works, road dust, and wind erosion. Between these ranges the source of PM can be associated with a mixture of the sources.

Figure B.3.12 (Appendix B.3) shows a scatter plot of the $PM_{2.5}/PM_{10}$ ratio as a function of the 24-hour average PM_{10} concentrations at Site 1. This plot is showing that there that the source of the PM_{10} emissions tends to be in the high and mid-level $PM_{2.5}/PM_{10}$ ratio indicating that most of the PM sources would likely be from combustion sources (i.e., wildfire smoke, home heating, or vehicle exhaust) and secondary PM generation. The low $PM_{2.5}/PM_{10}$ ratios associated with 24-hour PM_{10} concentrations are likely from earthworks, road dust, or wind erosion which are associated with the higher PM_{10} concentration measurements.

Figure B.3.13 (Appendix B.3) shows a scatter plot of the $PM_{2.5}/PM_{10}$ ratio as a function of the 24-hour average PM_{10} concentrations at Site 2. Like Site 1, most of the $PM_{2.5}/PM_{10}$ ratio was split between high and mid-level which indicates that the source of PM was from combustion or secondary formation. Some of the higher daily average PM_{10} concentrations were more strongly associated with the lower $PM_{2.5}/PM_{10}$ ratios indicating that these daily concentrations would be from earth works, road dust, erosion or possibly precipitation during high wind events. Site 2 is the closest monitoring location to the active Project construction activities.

Figure B.3.14 (Appendix B.3) shows a scatter plot of the $PM_{2.5}/PM_{10}$ ratio as a function of the 24-hour average PM_{10} concentrations at Site 3. Like the other sites, there is a split between the high and mid-level $PM_{2.5}/PM_{10}$ ratio for most of the 24-hour average data measured at Site 3. However, the higher daily average PM_{10} concentrations are associated more with combustion and secondary PM generation than to earthworks, road dust, wind erosion, or precipitation during high wind events. This site is the furthest monitoring site from active construction and other potential sources of PM_{10} in the region during 2023.

Total Suspended Particulate (TSP)

Table B.3.7 (Appendix B.3) shows the statistics of the 24-hour average TSP concentrations measured at the three Project and Calaway Park monitoring sites. All four sites measured 24-hour average TSP concentrations above the AAAQO with the highest concentration of 453 µg/m^3 at Site 1 on July 26, 2024. The median 24-hour average TSP concentrations range from 19.6 µg/m^3 to 32.9 µg/m^3 with the annual average ranging from 25.1 µg/m^3 to 46.0 µg/m^3. Overall, there were 27 days at Site 1, 39 days at Site 2, 13 days at Site 3, and 1 day at Calaway Park that were above the 24-hour AAAQO. The higher number of days where the daily average was above the AAAQO at Site 1 and Site 2 is likely due to being located near the active Project construction areas and existing sources of coarse particulate matter.

All the sites are below the annual average AAAQO of 60 µg/m^3. Because the Calaway Park site is only active when the park is open, the number of observations falls below the 75% completeness criteria so the annual average would not be considered valid but is shown for informational purposes. Site 2 had the highest annual average TSP concentration during the monitoring period at 46.0 µg/m^3.

Figure B.3.15 shows the time series of the 24-hour average TSP concentrations measured at the four Springbank Project monitoring stations in 2024. This shows that most of the higher TSP concentrations are measured over the summer and early fall in 2024 when most of the ground surface is exposed and the potential for regional wildfire smoke was higher. Some concentrations measured in the winter period were invalidated as they could be associated with blowing snow or ice fog events which were being detected as high TSP concentrations. There was a lower occurrence of high TSP concentration in the first half of 2025 compared to those in late 2024.

Figure B.3.16 (Appendix B.3) shows the box-whisker plot of the 24-hour average TSP concentrations measured at the three Project and Calaway Park monitoring sites. Most of the 24-hour average TSP concentrations were measured below the AAAQO of 100 µg/m^3. Site 1 and Site 2 had some measured concentrations in the upper inter quartile range that were above the AAAQO with the top of the interquartile range values of 109 µg/m^3 at Site 1 and 147 µg/m^3 at Site 2.

Figure B.3.17 to Figure B.3.19 (Appendix B.3) show a timeseries plot of all three particulate size fractions at Site 1, Site 2, and Site 3. These show that there is a strong relationship that the high particulate matter concentration events occur at the same time for all three fractions. Similarly, Figure B.3.20 (Appendix B.3) shows the relationship between $PM_{2.5}$ and TSP at the Calaway Park station.

To determine the potential source of the TSP concentrations at the sites the $PM_{2.5}$/TSP and PM_{10}/TSP ratios were calculated using the same methodology as was used for the $PM_{2.5}$/PM_{10} ratio. High $PM_{2.5}$/TSP ratios (>0.7) indicate that there is a higher concentration of $PM_{2.5}$ which is generally associated with combustion sources or secondary PM created by chemical reactions

in the atmosphere. A high PM_{10}/TSP ratio would indicate that more of the PM is below 10 micrometres (µm) aerodynamic diameter. A low $PM_{2.5}$/TSP ratio (<0.3) is typically associated with higher concentrations of PM from sources associated with earth works, road dust, and wind erosion. A low PM_{10}/TSP ratio would indicate that more of the PM is above 10 µm aerodynamic diameter and likely would be linked with more visible dust. Between these ranges the source of PM can be associated with a mixture of the sources.

Figure B.3.21 (Appendix B.3) shows a scatter plot of the $PM_{2.5}$/TSP (Orange) and PM_{10}/TSP (Blue) ratios as a function of the 24-hour average TSP concentrations at Site 1. This plot is showing that at lower 24-hour average TSP concentrations, the source of the TSP particles tends to be within the 2.5 µm to 10 µm particle size range with only a few of the TSP concentrations associated with particles with a size larger than 10 µm aerodynamic diameter. At the higher TSP 24-hour average concentrations, the particles tend to be in the upper end of the PM_{10} range and larger.

Figure B.3.22 (Appendix B.3) shows a scatter plot of the $PM_{2.5}$/TSP (Orange) and PM_{10}/TSP (Blue) ratios as a function of the 24-hour average TSP concentrations at Site 2. This plot is showing that there that the source of the TSP concentrations tends to be within the 2.5 µm to 10 µm particle size range when the 24-hour average TSP concentration was below 150 µg/m^3. Above this concentration, the 24-hour average TSP concentrations associated with particles with a size larger around 10 µm aerodynamic diameter or larger. This site is closer to the active construction activities than the other sites which may be attributed with the higher TSP concentrations but not necessarily resulting from the larger particle sizes.

Figure B.3.23 (Appendix B.3) shows a scatter plot of the $PM_{2.5}$/TSP (Orange) and PM_{10}/TSP (Blue) ratios as a function of the 24-hour average TSP concentrations at Site 3. This plot is showing that there that the source of the TSP concentrations tends to be within the 2.5 µm to 10 µm particle size range with TSP concentrations greater than 125 µg/m^3 are more associated with particles with a size larger than 10 µm aerodynamic diameter.

Figure B.3.24 (Appendix B.3) shows a scatter plot of the $PM_{2.5}$/TSP ratios as a function of the 24-hour average TSP concentrations at Calaway Park. This plot shows that most of the PM daily concentrations are in the PM_{10} and $PM_{2.5}$ particle size ranges. Although there are no PM_{10} measurements at the Calaway Park site, the days with 24-hour average concentrations near or above 50 µg/m^3 also have a high $PM_{2.5}$/TSP ratio this suggests that it was likely due to wildfire influences.

Results from the Meteorological Monitoring Program

Table B.3.8 to Table B.3.13 (Appendix B.3) shows the summary statistics for the meteorological parameters measured at Site 1, Site 2, Site 3, Calaway Park, Springbank AQMS, and the Springbank Airport. These statistics show that there is some variability between the sites that can be attributed to some micrometeorological conditions (i.e., elevation, local terrain, land cover, and proximity to structures and trees) as well as variability in the deployment of the instruments and the instruments themselves. For instance, the sites with EBAM Stations (Site 1, Site 2, Site 3,

and Calaway Park) have one of the EBAM Stations equipped with the meteorological instruments at instrument height approximately 2 m to 3 m above the ground surface. The Springbank AQMS and Springbank Airport have the wind instruments at the standard 10 m above the ground surface with the remaining instruments in the 2 m to 3 m above ground surface.

Wind Speed and Direction

Figure B.3.25 and Figure B.3.26 (Appendix B.3) show the joint frequency distribution commonly referred to as wind roses for each of the Project monitoring sites and the Springbank Airport. Figure B.3.27 (Appendix B.3) shows the histogram of the wind speed frequency distribution at the Project monitoring sites and the Springbank Airport.

At Site 1, the predominant wind directions during the July 2024 to June 2025 monitoring period were blowing from the west (12.9%), south southwest (11.1%), and east southeast (10.9%) with wind speeds between 0.2 m/s and 3.0 m/s (89.1%). Calm winds with wind speeds below 0.2 m/s occurred 4.71% during the 2024/2025 reporting year. The maximum 1-hour average wind speed of 10.0 m/s was measured on March 9, 2025, at 10:00 blowing from the south southwest.

At Site 2 the predominant wind directions during the July 2024 to June 2025 monitoring period were blowing from the northwest (11.5%), west (10.5%), and west southwest (9.37%) with wind speeds between 0.2 m/s and 3.0 m/s (83.9%). Calm winds with wind speeds below 0.2 m/s occurred 2.51% during the 2024/2025 reporting year. The maximum 1-hour average wind speed of 10.5 m/s was measured on March 9, 2025, at 13:00 blowing from the southwest.

At Site 3 the predominant wind directions during the July 2024 to June 2025 monitoring period were blowing from the west (22.3%), west northwest (11.6%), and west southwest (9.20%) with wind speeds between 0.2 m/s and 3.0 m/s (86.3%). Calm winds with wind speeds below 0.2 m/s occurred 1.67% during the 2024/2025 reporting year. The maximum 1-hour average wind speed of 10.6 m/s was measured on November 23, 2024, at 18:00, blowing from the north northeast.

At Calaway Park the predominant wind directions during the July 2024 to June 2025 monitoring period were blowing from the south southeast (16.5%), northwest (11.5%), and southeast (10.3%) with wind speeds between 0.2 m/s and 3.0 m/s (81.4%). Calm winds with wind speeds below 0.2 m/s occurred 4.82% during the 2024/2025 reporting year. The maximum 1-hour average wind speed of 8.94 m/s was measured on June 13, 2025, at 16:00 blowing from the west.

At the Springbank AQMS the predominant wind directions during the July 2024 to June 2025 monitoring period were blowing from the northwest (13.9%), north northwest (13.2%), and southeast (12.0%) with wind speeds between 0.5 m/s and 3.0 m/s (65.6%). Calm winds with wind speeds below 0.5 m/s occurred 16.9% during the 2024/2025 reporting year. The maximum 1-hour average wind speed of 11.8 m/s was measured on January 17, 2025, at 00:00 blowing from the north northwest.

At the Springbank Airport the predominant wind directions during the July 2024 to June 2025 monitoring period were blowing from the northwest (15.9%), north northwest (15.9%), and west (9.24%) with wind speeds between 0.5 m/s and 3.0 m/s (53.3%). Calm winds with wind speeds below 0.5 m/s occurred 3.65% of the time during the 2024/2025 reporting year. The maximum 1-hour average wind speed of 16.1 m/s was measured on January 17, 2025, at 00:00 blowing from the north. The Springbank AQMS and Springbank Airport show similar prevailing wind directions, but the wind speeds tend to be higher at the Springbank Airport.

Ambient Temperature

There is a bit less variability in the ambient temperature between the sites with the annual average ambient temperature being around 4.8°C at the sites that monitored for all twelve months. The lowest ambient temperature of -34.8°C was recorded at the Springbank AQMS on February 10, 2025, at 05:00. The maximum ambient temperature of 32.9°C was measured at Site 1 on July 23, 2024, at 15:00 hours.

Figure B.3.28 (Appendix B.3) shows the frequency distribution of the temperatures at each site over the July 2024 to June 2025 monitoring period. It should be noted that Calaway Park was deployed primarily during the late spring to middle of the fall so shows a bias to the higher temperature range. Overall, in the region the temperature tends to be between -5.0°C and 15.0°C (60.8%) during the 2024/2025 reporting year. The temperatures above 15.0°C (19.4%) occurred slightly more often than temperatures below -5.0°C (18.6%).

Relative Humidity

Like ambient temperature, there was small fluctuation of the relative humidity at the monitoring sites. The lowest relative humidity of 10.0% was measured at the Springbank AQMS on May 9, 2025, at 17:00 and the average relative humidity was measured at 66.0%. The relative humidity of greater than 90% occurred 15.7% of the valid monitoring hours at the sites. As shown in Figure B.3.29 (Appendix B.3), for 70.3% of the monitoring period the relative humidity was measured above 50%.

Atmospheric Pressure

Figure B.3.30 (Appendix B.3) shows the frequency distribution of the atmospheric pressure measured at the monitoring sites from July 2024 to June 2025. At Site 1 most of the atmospheric pressure occurred between 86.9 kPa to 88.4 kPa at Site 1 (74.9%), Site 2 (75.3%), Site 3 (74.1), and Calaway Park (82.0%). The average atmospheric pressure ranged from 87.4 at Site 1 to 87.8 at Calaway Park. At the Springbank AQMS the atmospheric pressure occurred between 87.0 kPa and 88.0 kPa for 77.4% of the monitoring period with an average pressure of 88.1 kPa. At the Springbank Airport 76.4% of the atmospheric pressure measurements occurred in the 86.6 kPa to 87.8 kPa range with an average atmospheric pressure of 87.7 kPa. The variation between the sites can be attributed to the different elevations of the instruments and the number of missing hours during the year.

Solar Radiation

Solar radiation was only monitored at the Springbank AQMS. Figure B.3.31 (Appendix B.3) shows a box whisker plot of the monthly solar radiation data. The solar radiation was highest in May 2025 and the lowest in December 2024 and followed the typical diurnal pattern of being highest at the local noon hour and the lowest from dusk until sunrise. The average solar radiation was 301 watts per square metre (W/m^2) during the July 2024 to June 2025 monitoring period.

Precipitation

Precipitation was measured at the Springbank AQMS and at the Springbank Airport for all the July 2024 to June 2025 monitoring period. There appeared to be some instrumentation errors at the Springbank Airport where the instrument was tending to record more precipitation than other regional climate stations. Figure B.3.32 (Appendix B.3) shows the time-series of the precipitation measured at the two sites and the cumulative precipitation measured during the monitoring period. Additional precipitation data was downloaded for the Calgary International Airport and Canada Olympic Park (Upper) regional stations to confirm the measurements at the Springbank Airport. As shown the cumulative precipitation at the Springbank AQMS followed a similar trend as the Calgary International Airport and Canada Olympic Park (Upper) stations.

The maximum amount of hourly precipitation of 6.2 mm was recorded at the Springbank AQMS on June 17, 2025, at 15:00. At that time the precipitation amount measured at the Springbank Airport, Calgary International Airport, and Canada Olympic Park (Upper) stations was 0.0 mm although those stations register precipitation amounts in subsequent hours. During the monitoring period the Springbank AQMS collected 170 mm of precipitation. The Springbank Airport station collected 519 mm, Calgary International Airport station collected 407 mm of precipitation, and the Canada Olympic Park (Upper) station collected 382 mm of precipitation during the monitoring period.

The difference in the amount of precipitation measured at the regional climate stations could be due to the use of a wind shield which slows down the wind speeds around the instrument to reduce the amount of precipitation that would be blown over the top of the collection container as well as using more sensitive instruments that can more accurately measure both the rain and snow (as rainfall equivalent) amounts. There would be some expected variation due to how the precipitation amounts were distributed during the specific precipitation events.

Results Summary

As shown in the previous section the measured NO_2 concentrations measured at the Springbank AQMS were less than the 1-hour and annual average NO_2 AAAQO. When compared to the regional stations operated by CRAZ the Springbank AQMS was below those stations located in the City of Calgary and was like the more rural regional monitoring station operating in the City of Airdrie.

The $PM_{2.5}$ concentrations measured at the Project did have some measured concentrations above the 1-hour average AAAQG and the 24-hour average AAAQO. This trend was similarly observed with the PM_{10} and TSP measured concentrations as discussed in the previous sections. The analysis tended to show that the primary source of particulate matter originated from combustion sources. There were several wildfires that were burning from July to October of 2004 as well as in June in 2025 in Alberta, British Columbia, the Yukon Territory, and the Northwest Territories that caused multiple wildfire smoke advisories in the Calgary Region and where the primary contributor to high measured $PM_{2.5}$ concentrations.

Figure B.3.33 (Appendix B.3) shows a pollution rose plot showing the 1-hour average $PM_{2.5}$ concentrations above the AAAQG associated with the wind direction (blowing from) measured at Site 1. This shows that the highest concentrations originated from sources located north and north northeast of the Springbank AQMS. The other high concentration events were occurring when the winds were blowing from the northwest, south southwest, and east southeast. The figure also shows a scatter plot of the wind speed and the 1-hour average $PM_{2.5}$ concentrations measured at the site. Most of the $PM_{2.5}$ concentrations measured above the AAAQG are associated with wind speeds from below 0.5 m/s and 2.6 m/s. The highest 1-hour average $PM_{2.5}$ concentration of 113 µg/m^3 is associated with a wind speed of 0.78 m/s with winds blowing from the north northeast on July 25, 2024, at 08:00. Most of the Project emission sources would be located to the east, north, and northeast of the site.

Figure B.3.34 (Appendix B.3) shows a pollution rose plot showing the 1-hour average $PM_{2.5}$ concentrations above the AAAQG associated with the wind direction (blowing from) measured at Site 2. This shows that the highest concentrations originated from sources located north northeast and east southeast of Site 2. The other high concentration events were split between sources located in the north, southeast, and northwest of Site 2. The figure also shows a scatter plot of the wind speed and the 1-hour average $PM_{2.5}$ concentrations measured at the site. Most of the $PM_{2.5}$ concentrations measured above the AAAQG are associated with wind speeds between 0.44 m/s and 3.08 m/s. The highest 1-hour average $PM_{2.5}$ concentration of 104 µg/m^3 is associated with a wind speed of 2.22 m/s with winds blowing from the north northeast on July 25, 2024, at 08:00. This site is the closest site to active construction activities, so it also has the highest probability of detecting concentrations of $PM_{2.5}$ originating from the Project sources operating west, north, and northeast of the monitoring site.

Figure B.3.35 (Appendix B.3) shows a pollution rose plot showing the 1-hour average $PM_{2.5}$ concentrations above the AAAQG associated with the wind direction (blowing from) measured at Site 3. This shows that the highest concentrations originated from sources located north, south southeast, south, and west southwest of Site 3. Other high concentration events were split between sources located in the north northeast, northeast, east, and east southeast of Site 3. The figure also shows a scatter plot of the wind speed and the 1-hour average $PM_{2.5}$ concentrations measured at the site. Most of the $PM_{2.5}$ concentrations measured above the AAAQG are associated with wind speeds from below 0.2 m/s to 3.83 m/s. The highest 1-hour average $PM_{2.5}$ concentration of 167 µg/m^3 is associated with a wind speed of 0.36 m/s blowing

from the north on July 24, 2024, at 20:00. The Project emission sources would be located to the east and southeast of the site.

Figure B.3.36 (Appendix B.3) shows a pollution rose plot showing the 1-hour average $PM_{2.5}$ concentrations above the AAAQG associated with the wind direction (blowing from) measured at Calaway Park. This shows that the highest concentrations originated from sources located south southeast, south, and southeast of Calaway Park. The other high concentration events were split between sources located in the north, north northeast, east, and east southeast of Calaway Park. The figure also shows a scatter plot of the wind speed and the 1-hour average $PM_{2.5}$ concentrations measured at the site. Most of the $PM_{2.5}$ concentrations measured above the AAAQG are associated with wind speeds between 0.1 m/s and 2 m/s. The highest 1-hour average $PM_{2.5}$ concentration of 212 µg/m^3 is associated with a winds speed of 0.61 m/s blowing from the south southeast on July 24, 2024, at 20:00. The Project emission sources would be located approximately 4.5 km southwest of the Calaway Park site so likely these measured concentrations are not associated with particulate matter sources from the Project.

Figure B.3.37 (Appendix B.3) shows a pollution rose plot showing the 1-hour average $PM_{2.5}$ concentrations above the AAAQG associated with the wind direction (blowing from) measured at the Springbank AQMS. This shows that the highest concentrations originated from sources located east southeast, southeast, north northeast, north, south, and south southeast of the Springbank AQMS. The other high concentration events occured when the winds were blowing from the west southwest, southwest, east, and east northeast. The figure also shows a scatter plot of the wind speed and the 1-hour average $PM_{2.5}$ concentrations measured at the site. Most of the $PM_{2.5}$ concentrations measured above the AAAQG are associated with wind speeds from below 0.5 m/s to 5.83 m/s. The highest 1-hour average $PM_{2.5}$ concentration of 372 µg/m^3 is associated with a wind speed of 0.53 m/s with winds blowing from the east southeast on July 24, 2024, at 20:00. The Project emission sources would be located approximately 4.2 km west southwest of the Springbank AQMS site so likely these measured concentrations are not associated with particulate matter sources from the Project.

Overall, the particulate matter concentrations measured at the project sites are more related to regional events like long-range transport of wildfire smoke from northern Alberta, British Columbia, Yukon Territory, the Northwest Territories, and southwestern United States during the wildfire seasons in 2024 and 2025. There were likely some particulate emissions in the area around the Project that could be associated with construction activities occurring near Site 1 and Site 2 as well as other sources of particulate located in the region. The Calaway Park and Springbank AQMS sites were likely more influenced by emissions occurring in the region from agricultural and other activities occurring near the sites with the majority likely from the wildfire smoke events.

IAAC Approval Condition 6.4 & 7.10 – Verification of the Accuracy of the Environmental Assessment

The AQMP was designed to collect the information for a verification study and was reviewed by ECCC and Health Canada. Specific to each sub-condition:

- Monitoring locations were located at the perimeter of the planned Project area as per the AQMP. These three sites around the Project area are being operated throughout the construction phase and are equipped with three EBAM stations to monitor $PM_{2.5}$, PM_{10}, and TSP and have been operating since June 2022. Specifically, these sites are located at:
  - Site 1: between the permanent access road and diversion channel.
  - Site 2: south of the dry dam construction site.
  - Site 3: east side of dry dam area near borrow source sites.
- The Calaway Park station was established at the west side of the park in consultation with the owner and operator Calalta. The site is equipped with two EBAM stations to monitor $PM_{2.5}$ and TSP while the park is open to the public. The 2024 monitoring program started on May 3 and was removed on October 15. The 2025 monitoring program was started on May 15 and is scheduled to be removed in mid to late October. This site has operated each subsequent year from early May to early October.
- Meteorological parameters of wind speed, wind direction, ambient temperature, relative humidity, and atmospheric pressure are collected at each of the three monitoring sites and the Calaway Park site at instrument height (i.e., approximately 2 m above ground surface).
- The location of the Springbank AQMS site at the Lions Soccer Park was discussed with Rocky View County and Springbank Park for all Seasons prior to deployment and commissioning in July 2023. The AQMS is equipped with ambient air quality analyzers to monitor NO_2 and $PM_{2.5}$. The meteorological parameters of wind speed, vertical wind speed, and wind direction are measured at 10 m above ground level. The other meteorological parameters of ambient temperature, relative humidity, atmospheric pressure, solar radiation, and precipitation at approximately 3 m above ground level.
- Meteorological data is being collected from the Springbank Airport site is operated by Navigation Canada and ECCC and has been downloaded from the ECCC historical weather website to supplement the monitoring program. Additional meteorological data was obtained for the Calgary International Airport and Canada Olympic Park (Upper) stations operated by Navigation Canada and ECCC.

- $PM_{2.5}$ and NO_2 hourly average concentrations from the regional stations operated by CRAZ have been downloaded from the Alberta Data Management Platform – Alberta Air Quality Data for comparison to the Project monitoring data.
- The 1-hour average $PM_{2.5}$ concentrations are being evaluated with the AAAQG (80 µg/m^3). The 24-hour average $PM_{2.5}$ and TSP concentrations are being evaluated with the AAAQO (29 µg/m^3 and 100 µg/m^3 respectively. The annual average TSP concentrations are evaluated using the AAAQO (60 µg/m^3). The 1-hour and annual average NO_2 concentrations are being evaluated using the AAAQO of 159 ppb and 24 ppb respectively.
- As there are no Alberta objective or guidelines or CAAQS for PM_{10}, a 24-hour average concentration of 50 µg/m^3 is being used to evaluate the PM_{10} concentrations. This value is used by other jurisdictions in Canada. It will not be used as an enforceable criterion but to determine whether the concentrations are considered elevated.
- CAAQS are part of the evaluation of the $PM_{2.5}$ and NO_2 ambient air quality data collected by the EBAM stations and Springbank AQMS.
- The results of the evaluation of the AAAQO, AAAQG, or CAAQS are used to determine the application of mitigation strategies or changes to the air quality monitoring network using adaptive management.
- Monthly site visits are being conducted for all the Project sites to conduct calibration and maintenance activities. Additional site visits are conducted as needed to address any power, communication, or instrumentation issues.
- Data collected at project monitoring sites undergoes initial QA/QC to identify any quality issues. The data undergoes further QA/QC processing prior to reporting as per the AMD Chapter 6.
- Raw and Level 0 QA/QC data is stored at the Bureau Veritas (BV) data center. Data is sent via email to Stantec daily and monthly over the course of the monitoring program. The original data files, status updates from BV, and processed data files are stored on Stantec's fileservers.

IAAC Approval Condition 6.5 & 7.11 – Indigenous Group Plain Language Bi-Annual Reporting

The twice annual air quality report, capturing the January 2024 to December 2024 period, was distributed to Indigenous groups on August 29, 2025.

IAAC Approval Condition 7.5 – Fugitive Dust Emission Mitigation

Speed limits were implemented as per the AQMP on roads within the Project construction areas. Volker Stevin regularly cleans the highway to remove dirt and dust using street sweepers.

The heavy haul roads have a speed limit of 50 km/h except during extreme hot, dry, and windy conditions or wet conditions after rain and snowmelt events where the haul road speed limit is reduced. The speed limits were monitored by the Contractor's safety team and the foreman on site. Haul truck speed limits were reduced to 5 km/h when passing people working near the haul roads.

Light duty vehicle service roads had a speed limit of 50 km/h with speed reductions in areas surrounding active work areas. Areas passing equipment working near the service roads the speeds were reduced to 30 km/h to reduce dust. Speeds were further reduced to 15 km/h in areas where people were working adjacent to the service roads.

Water trucks apply water on the project roads 24 hours a day, seven days a week during the warm months. During high winds or if increased generation of dust is observed, additional water mitigation is applied, and vehicle speed limits are imposed. Table 4.8 shows the volume of water applied to the Project roads between July 2024 to June 2025. Water was not applied if the ground was frozen, or snow covered or if the air temperature was below 0°C.

Table 4.8 Summary of Monthly Water Mitigation Applied to Haul and Light-duty Roads

Month	Volume of Water Applied (m^3)
July 2024	15,390
August 2024	7,763
September 2024	7,160
October 2023	6,814
November 2023 [1]	714
December 2024 [1]	0
January 2025 [1]	0
February 2025 [1]	0
March 2025 [1]	0
April 2025 [1]	0
May 2025	1,197
June 2025	747

Note:
1. Roads were frozen or snow covered for most or all of the month.

Dugouts were used to store water in the Project construction area for soil conditioning and dust mitigation. This water is sourced from the Elbow River, groundwater wells, precipitation, and overland water flow; see Section 4.3.4 for details on the dugouts.

Stockpiles and other disturbed surfaces were monitored for dust generation and when necessary re-contoured and track-packed to limit wind erosion, silt fencing was also used to limit dust generation from disturbed soils. These areas have been left to naturally re-vegetate to minimize erosion and suppress dust generation from the loose sediment.

A dust complaint was made in February 27, 2025, regarding dust observed on Range Road 41. Upon investigation, it was determined that the dust complaint was associated with windy dry conditions that occurred in the region. Due to the low temperatures and potential for overnight freezing, watering of the Project and associated Range Roads was not done due to safety reasons. The speed limits on Range Road 41 were reduced to limit the dust generation of vehicles on the road during the high wind event.

The construction office is powered by the local power grid, and all light towers were switched to solar power in May 2023. The generators and other equipment at the Diversion Inlet were switched from diesel fuel to propane in October 2022. All this equipment is now electrically powered. Two diesel generators were stored as back-up in the event the propane generators failed; however, they were never used.

4.9.2 Noise

During the 2024/2025 reporting year, no noise complaints were received by the GoA. In line with the noise complaint protocol (IAAC condition 7.3), procedures remain in place to acknowledge and respond to all complaints within 48 hours, with monitoring and communication of findings as required. As no complaints were submitted, no corrective actions or additional mitigation measures were necessary. The Project continues to implement its noise management measures and complaint protocol to ensure timely response and compliance with IAAC conditions.

There were no blasting activities during the 2024/2025 reporting year.

4.10 ARCHAEOLOGICAL AND HERITAGE RESOURCES

4.10.1 *Historical Resources Act* Section 31 Chance Finds

During the 2024/2025 reporting year, the Archaeological and Heritage Management Plan was adhered to. As required and detailed in the Archaeological and Heritage Management Plan, the HRA Section 31 Find procedure was initiated and followed for all potential finds. This continued until it was determined whether the find was historical (archaeological), palaeontological, or cultural in nature. If the find fell into one of the above categories, it would trigger notification to Indigenous groups and relevant authorities, along with avoidance measures. If the find was not historical (archaeological), palaeontological, or cultural in nature, notification or avoidance was not required. Buffers were erected for all potential finds and maintained for the duration of the HRA Section 31 Find procedure.

A total of four (4) potential *Historical Resources Act* Section 31 Finds (HRA Section 31 Finds) were identified by the Indigenous Monitors and/or the Prime Contractor during the 2024/2025 reporting year. Based on a desktop identification conducted by a senior archaeologist, one of these finds was determined not to be historical (archaeological), palaeontological, or cultural in nature and, therefore, a field assessment was not necessary. The remaining three (3) finds, identified on July 12, 2024, March 27, 2025, and April 23, 2025, respectively, were investigated through a field assessment conducted by a senior archaeologist to determine the nature of the finds.

The potential HRA Section 31 finds identified by Indigenous Monitors on July 12, 2024, was subject to a field assessment conducted by a senior archaeologist with Indigenous Monitors in attendance to participate in identifying additional items of interest. The finds were deemed to be historical (archaeological) in nature; however, due to the disturbed context (area of heavy construction and clearing), no further assessment was required by AACSW. The results of the assessment were outlined in a letter sent to Indigenous groups per the procedures detailed in the Archaeological and Heritage Management Plan as well as in the annual report.

The potential HRA Section 31 find identified by the Prime Contractor on March 27, 2025, was subject to a field assessment conducted by a senior archaeologist with Indigenous Monitors in attendance to participate in identifying additional items of interest. Additional items of the same artifact type were identified by the senior archaeologist and Indigenous Monitors during the assessment. A sample of artifacts were collected for lab analysis, and it was determined that the potential finds were not historical (archaeological) in nature and, therefore, not protected by the HRA. No further assessment was required by the AACSW and the buffer was removed by the Indigenous Monitors. The results of the assessment were included in the monthly Indigenous Monitor Observation Report as well as the annual report.

The potential HRA Section 31 find identified by Indigenous Monitors on April 23, 2025, was subject to a field assessment conducted by a senior archaeologist with Indigenous Monitors in attendance to participate in identifying additional items of interest. Additional items of the same artifact type were identified during the assessment. These finds were determined to be historical (archeological) in nature but due to the disturbed context (recently moved/pushed topsoil pile that was previously disturbed), no further assessment was required by AACSW. The results of the assessment were included in the monthly Indigenous Monitor Observation Report as well as the Annual Report.

4.10.2 Cultural Awareness Training

The Prime Contractor, who is responsible for the provision of all labor and materials, construction, and commissioning of SR1, as part of their Construction contract, are required to organize cultural awareness sessions to comply with IAAC approval condition 9.4. In order for new hires and existing staff who have not attended a previous session to attend Indigenous Cultural Awareness sessions, the Prime Contractor, throughout construction, have worked collaboratively with Community Futures Treaty 7, Tsuut'ina Nation (due to proximity to the Project), Treaty 6 Nations and Métis Nation of Alberta District 4 (formally recognized as Region 3), to schedule several sessions each year. To date, Community Futures Treaty 7, Tsuut'ina Nation, Treaty 6 Nations, and Métis Nation of Alberta District 4 have been provided opportunities to facilitate or provide the training). Six sessions have been held since the start of construction, two of which were in 2024. With construction activities decreasing in 2025 and, as a result, less employees working at the Project site, no sessions were held. An Indigenous awareness section is included in the employee orientation, which is provided to new or returning employees working at the Project site and annually during the employee orientation refresher.

4.10.3 Palaeontology

As per IAAC approval condition 9.7 and as required by AACSW, palaeontological construction monitoring was completed where required during the 2024/2025 reporting year by a qualified palaeontologist. As per IAAC approval condition 9.7.1 and 9.7.2, monitoring occurred during bedrock excavation of the Diversion Inlet (including the Debris Deflection Barrier) and Diversion Channel (including the Emergency Spillway and Diversion Outlet), together with exposures close to the Low Level Outlet. Monitoring of excavations in postglacial fluvial sediments was undertaken at the low-level outlet, Diversion Channel, and Emergency Spillway.

During the 2024/2025 reporting year, four fossil sites and four sites of geological significance were reported to the Royal Tyrrell Museum of Palaeontology. No additional site mitigation was required by the Royal Tyrrell Museum of Palaeontology.

4.11 LAND USE PLANNING

The following is an update on the work completed during the 2024/2025 reporting year specific to conditions 8.8, 8.11, 8.12 and 8.14. The SR1 Land Use Plan was approved and made public in February 2025 (Springbank Off-stream Reservoir land use plan - Open Government).

Background

- SR1 Project was subject to several federal approval conditions.
- IAAC requires an annual report submitted on these conditions. This is year four of that reporting condition.
- EPA have been providing the summary of the land-use planning process annually to Transportation and Economic Corridors (the proponent) to satisfy the conditions associated with the land use planning process.
- SR1 became operational in spring 2025 and the dry off-stream reservoir will be available for access after at least two-years of rest (as early as 2027), in accordance with the approved land use plan.

Condition 8.8 Develop a Land-Use Plan

- Condition 8.8 required the proponent to submit the final plan to the First Nations Land Use Advisory Committee First Nations and the Agency within seven days of its finalization.
  - Alberta's Minister of EPA approved the final land use plan on January 23, 2025.
  - The First Nations Land Use Collaboration Committee (formerly the advisory committee) and IAAC were provided copies of the final land use plan and an additional engagement summary document on January 29, 2025.
- Alberta EPA Minister additionally sent thank-you letters (with the land use plan and engagement summary attached) to all the representatives on the First Nations Land Use Collaboration Committee and Indigenous groups included on the Joint Land Use Advisory Committee on March 5, 2025.
- The land use plan and engagement summary were also published on Alberta.ca on February 14, 2025.
- Alberta Agriculture and Irrigation (AGI), as owner and operator of SR1, will implement the approved land use plan.
  - EPA will remain as subject matter experts on the implementation committee.

Condition 8.11 Establish a First Nations Land Use Advisory Committee (FNLUAC)

Condition 8.12 requires the proponent to include any Indigenous groups with Treaty rights recognized by the Government of Alberta. As previously reported:

- 11 Treaty 7 First Nations and Treaty 6 First Nations identified in the IAAC Decision Statement participated on the First Nations Land Use Collaboration Committee.
- Alberta also invited two additional Treaty 6 First Nations (Sunchild and O'Chiese).
  - They continued to not participate in the process but were provided updates and information on the land use plan.
- IAAC identified four additional Indigenous communities for inclusion in the land-use planning process (Ktunaxa Nation Council, Foothills Ojibway First Nation, Métis Nation of Alberta - Region 3, Métis Nation of British Columbia).
  - These communities were invited to participate in the Joint Land Use Advisory Committee consisting of representatives from Indigenous communities (including the First Nations Land Use Advisory Committee), local municipal governments, non-governmental organizations, local landholders, and other stakeholders.
  - They were provided an electronic copy of the final land use plan, the engagement summary and a thank-you letter from the Minister of EPA on March 5, 2025.

Condition 8.12 Include Indigenous Groups

- Condition 8.12 requires the proponent to include any Indigenous groups with Treaty rights recognized by the Government of Alberta.
- As previously reported:
  - 11 Treaty 7 First Nations and Treaty 6 First Nations identified in the IAAC Decision Statement participated on the First Nations Land Use Collaboration Committee.
    - Alberta also invited two additional Treaty 6 First Nations (Sunchild and O'Chiese). They continued to not participate in the process but were provided updates and information on the land use plan.
  - IAAC identified four additional Indigenous communities for inclusion in the land-use planning process (Ktunaxa Nation Council, Foothills Ojibway First Nation, Métis Nation of Alberta - Region 3, Métis Nation of British Columbia).
    - These communities were invited to participate in the Joint Land Use Advisory Committee consisting of representatives from Indigenous communities (including the First Nations Land Use Advisory Committee), local municipal governments, non-governmental organizations, local landholders, and other stakeholders.
    - They were provided an electronic copy of the final land use plan, the engagement summary and a thank-you letter from the Minister of EPA on March 5, 2025.

Condition 8.14 Develop a Follow-Up Program

- Condition 8.14 required the proponent, prior to construction and in consultation with Indigenous groups, to develop a follow up program to verify the accuracy of the environmental assessment and to determine the effectiveness of mitigation measures pertaining to the adverse environmental effects of SR1 on current land use and resources for traditional purposes.
  - The Preliminary Approach for Monitoring and Evaluation of the land use plan was submitted to IAAC in May 2022 and will be refined where necessary as the plan is implemented.

5.0 REFERENCES

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APPENDIX A
IAAC APPROVAL CONDITIONS CONCORDANCE TABLE

Table A.1 IAAC Approval Conditions Concordance Table

	Condition #	Summary of Condition	Annual Report Section
Definitions	**1.1 to 1.37**	Definitions	Definitions were reviewed and adhered to in the 2024/2025 Annual Report
General Conditions	**2.1 to 2.2**	General conditions	General conditions were reviewed and adhered to in the 2024/2025 Annual Report
Consultation	**2.3**	2.3 The Proponent shall, where consultation is a requirement of a condition set out in this Decision Statement: 2.3.1 provide a written notice of the opportunity for the party or parties being consulted to present their views and information on the subject of the consultation; 2.3.2 provide all information available and relevant to the scope and the subject matter of the consultation and a period of time agreed upon with the party or parties being consulted, not to be less than 30 days for consultation pertaining to Current use of lands and resources for traditional purposes, Physical and cultural heritage and structures, sites or things of historical, archaeological, paleontological or architectural significance, and Species at risk, and not less than 15 days for other consultation activities, to prepare their views and information; 2.3.3 undertake an impartial consideration of all views and information presented by the party or parties being consulted on the subject matter of the consultation; and 2.3.4 advise in a timely manner the party or parties being consulted on how the views and information received have been considered by the Proponent, including a rationale for why the views have, or have not, been integrated.	3.1, 4.11
	2.4	The Proponent shall, where consultation with Indigenous groups is a requirement of a condition set out in this Decision Statement, communicate with each group with respect to the manner to satisfy the consultation requirements referred to in condition 2.3, including methods of notification, the type of information and the period of time to be provided when seeking input, the process to be used by the Proponent to undertake impartial consideration of all views and information presented on the subject of the consultation, and the period of time and the means to advise groups of how their views and information were considered by the Proponent.	3.1, 4.11
Follow-up requirements	**2.5**	The Proponent shall, where a follow-up program is a requirement of a condition set out in this Decision Statement, determine, as part of the development of each follow-up program and in consultation with the party or parties being consulted during the development, the following information: 2.5.1 the methodology, location, frequency, timing and duration of monitoring associated with the follow-up program; 2.5.2 the scope, content and frequency of reporting of the results of the follow-up program; 2.5.3 the frequency at which the follow-up program must be updated; 2.5.4 the levels of environmental change relative to baseline that would require the Proponent to implement modified or additional mitigation measure(s), including instances where the Proponent may require Designated Project activities to be stopped; and 2.5.5 the technically and economically feasible mitigation measures to be implemented by the Proponent if monitoring conducted as part of the follow-up program shows that the levels of environmental change referred to in condition 2.5.4 have been reached or exceeded.	The GoA has reviewed and is in compliance with condition 2.5 (2.5.1 through 2.5.5). The GoA developed monitoring programs and will revise them, as required (i.e., if there is an operation event and/or every 10 years)
	2.6	The Proponent shall update the information determined for each follow-up program pursuant to condition 2.5 during the implementation of each follow-up program, at the minimum frequency determined pursuant to condition 2.5.3 and in consultation with the party or parties being consulted during the development of each follow-up program.	Condition acknowledged. Follow-up programs were not updated during this reporting year. Follow-up programs will be updated as per the timing in each plan.
	2.7	The Proponent shall provide the follow-up programs referred to in conditions 3.17, 3.18, 3.19, 3.20, 4.11, 6.4, 7.8, 7.9, 7.10, 8.13, 8.14 and 9.9 to the Agency and to the party or parties being consulted during the development of each follow-up program prior to the implementation of each follow-up program. The Proponent shall also provide any update made pursuant to condition 2.6 to the Agency and to the party or parties being consulted during the development of each follow-up program within 30 days of the follow-up program being updated.	Condition acknowledged. Follow-up programs were not updated during this reporting year. Follow-up programs will be updated as per the timing in each plan; 3.1

	Condition #	Summary of Condition	Annual Report Section
Follow-up requirements (cont'd)	**2.8**	The Proponent shall, where a follow-up program is a requirement of a condition set out in this Decision Statement: 2.8.1 implement the follow-up program according to the information determined pursuant to condition 2.5; 2.8.2 conduct monitoring and analysis to verify the accuracy of the environmental assessment as it pertains to the particular condition and/or to determine the effectiveness of any mitigation measure; 2.determine whether modified or additional mitigation measure(s) are required based on the monitoring and analysis undertaken pursuant to condition 2.8.2; and 2.8.4 if modified or additional mitigation measures are required pursuant to condition 2.8.3, develop and implement these mitigation measure(s) in a timely manner and monitor them pursuant to condition 2.8.2.	Condition acknowledged. Follow-up programs will be implemented according to the information determined pursuant to condition 2.5, monitoring and analysis conducted to verify accuracy of the environmental assessment as it pertains to the condition(s). If modified or additional mitigation measures are required pursuant to condition 2.8.3, mitigation measure(s) will be reviewed and revised in a timely manner and monitored pursuant to condition 2.8.2.
	2.9	Where consultation with Indigenous groups is a requirement of a follow-up program, the Proponent shall discuss the follow-up program with each group and shall determine, in consultation with each group, opportunities for their participation in the implementation of the follow-up program, including the conduct of monitoring, the analysis and reporting of follow-up results and whether modified or additional mitigation measure(s) are required, as set out in condition 2.8.	Condition 2.9 has been reviewed and where possible, Indigenous labour will be recruited to assist with efforts to conduct regulatory follow-up monitoring for the Project. Indigenous monitors that were retained during the 2024/2025 reporting year is provided in Section 4.5.1.
Annual reporting	**2.10**	The Proponent shall prepare an annual report that sets out for that reporting year 2.10.1the activities undertaken by the Proponent to comply with each of the conditions set out in this Decision Statement; 2.10.2 how the Proponent complied with condition 2.1; 2.10.3 for conditions set out in this Decision Statement for which consultation is a requirement, how the Proponent considered any views and information that the Proponent received during or as a result of the consultation; 2.10.4 the information referred to in conditions 2.5 and 2.6 for each follow-up program; 2.10.5 the results of the follow-up program requirements identified in conditions 3.17, 3.18, 3.19, 3.20, 4.11, 6.4, 7.8, 7.9, 7.10, 8.13, 8.14 and 9.9; 2.10.6 for any plan that is a requirement of a condition set out in this Decision Statement, any updates to the plan that have been made during the reporting year; and 2.10.7 any modified or additional mitigation measure implemented or proposed to be implemented by the Proponent, as determined pursuant to condition 2.8;	See IAAC Annual Report 2024/2025; 1.1, 3.0, Table 3.1, 3.1, 4.8.2, 4.11
	2.11	The first reporting year for which the Proponent shall prepare an annual report pursuant to condition 2.10 shall start on the day the Minister of the Environment issues the Decision Statement to the Proponent pursuant to subsection 54 (1) of the *Canadian Environmental Assessment Act, 2012*.	The condition was adhered to in the first annual report (2021/2022) submitted to the Agency on October 31, 2022.
	2.12	The Proponent shall submit to the Agency and the First Nation Land Use Committee referred to in condition 8.11 the annual report referred to in condition 2.10, including a plain language executive summary in both official languages, no later than April 30 following the reporting year to which the annual report applies.	3.1

	Condition #	Summary of Condition	Annual Report Section
Information Sharing	**2.13**	The Proponent shall publish on the Internet, or any medium which is publicly available, the annual reports and the executive summaries referred to in conditions 2.10 and 2.12, the final offsetting plan(s) referred to in condition 3.9, the protocol to rescue fish referred to in condition 3.16, the migratory bird protocol referred to in condition 4.9, the protocol to prevent the mortality of amphibians referred to in condition 5.5, the communication plan referred to in condition 7.4, the archaeological and heritage management plan referred to in condition 9.3, the accident and malfunction response plan referred to in condition 11.3, the reports related to accidents and malfunctions referred to in conditions 11.5.3 and 11.5.4, the accident and malfunction communication plan referred to in condition 11.6, the schedules referred to in conditions 12.1 and 12.2, and any update or revision to the above documents, upon submission of these documents to the parties referenced in the respective conditions. The Proponent shall keep these documents publicly available for 15 years following their publication. The Proponent shall notify the Agency, Indigenous groups, the First Nation Land Use Committee referred to in condition 8.11 and potentially affected parties of the availability of these documents within 48 hours of their publication.	3.1; The documents will be publicly available for 15 years, following their publication.
	2.14	When the development of any plan is a requirement of a condition set out in this Decision Statement, the Proponent shall submit the plan to the Agency prior to construction, unless otherwise required through the condition.	Condition acknowledged. The GoA developed and provided the plans required prior to the start of construction to IAAC in advance of construction. One additional plan for operation was provided during the 2024/2025 reporting year; 3.1
Change in Proponent	**2.15**	The Proponent shall notify the Agency and Indigenous groups in writing no later than 30 days after the day on which there is any transfer of ownership, care, control of Management of the Designated Project in whole or in part.	The care and control of the SR1 Project was transferred from TEC to Alberta Agriculture and Irrigation on May 1, 2025. IAAC and Indigenous groups were notified of this change within 30 days.
Change to the Designated Project	**2.16**	If the Proponent is proposing to carry out the Designated Project in a manner other than described in condition 1.5, the Proponent shall notify the Agency in writing in advance. As part of the notification, the Proponent shall provide: 2.16.1 a description of the proposed change(s) to the Designated Project and the environmental effects that may result from the change(s); 2.16.2 any modified or additional measure to mitigate any environmental effect that may result from the change(s) and any modified or additional follow-up requirement; and 2.16.3 an explanation of how, taking into account any modified or additional mitigation measure referred to condition 2.16.2, the environmental effects that may result from the change(s) may differ from the environmental effects of the Designated Project identified during the environmental assessment.	This condition is acknowledged. The Agency will be notified in writing, in advance, should the Designated Project be proposed to be carried out in a manner other than described in condition 1.5. and will provide information as described in condition 2.16.1 through 2.16.3
	2.17	The Proponent shall submit to the Agency any additional information required by the Agency about the proposed change(s) referred to in condition 2.16, which may include the results of consultation with Indigenous groups and relevant authorities on the proposed change(s) and environmental effects referred to in condition 2.16.1 and the modified or additional mitigation measures and follow-up requirements referred to in condition 2.16.2	This condition is acknowledged. The Agency will be provided any additional information regarding proposed change(s) referred to in condition 2.16, which may include the results of consultation with Indigenous groups and relevant authorities on the proposed change(s) and environmental effects referred to in condition 2.16.1 and the modified or additional mitigation measures and follow-up requirements referred to in condition 2.16.2

	Condition #	Summary of Condition	Annual Report Section
Fish and fish habitat	**3.1**	The Proponent shall develop, prior to construction, and implement and maintain during all phases of the Designated Project, measures to control erosion and sedimentation within the project development area in a manner consistent with the *Fisheries Act* and its regulations. The Proponent shall submit these measures to the Agency before implementing them. In doing so, the Proponent shall: 3.1.1 manage surface water around stockpiles; 3.1.2 not stockpile any excavated material within 50 metres of the top of the bank of the Elbow River; 3.1.3 install and maintain sediment fences and turbidity barriers during construction and operation; 3.1.4 install riprap material along the diversion channel bottom and side slopes where the channel is excavated through soil, near the low-level outlet and where the approach channel meets the intake structure to reduce the risk of erosion; 3.1.5 implement measures to allow sediment to settle out before returning dewatering discharge into the Elbow River, including by removing downstream barriers first when removing isolation barriers during construction and post-flood operation; and 3.1.6 implement energy dissipation measures to control flows and erosion in the diversion channel and low-level outlet channel.	4.1.1, 4.2, 4.3.1, 4.3.2, 4.3.4; Rip rap have been places in multiples areas within the Diversion Channel and in the Low-Level Outlet
	3.2	The Proponent shall inspect all erosion and sediment control measures installed within the project development area pursuant to condition 3.1 including during flood operation and post flood operation, except when not feasible for safety reasons, and document and repair any defective or damaged control measure as soon as technically feasible such that any impacts to fish and fish habitat resulting from the defective or damaged control measures are minimized or avoided.	4.2
	3.3	The Proponent shall isolate in-water construction activities and shall use temporary access structures for any in-stream construction activity.	4.3
	3.4	The Proponent shall maintain machinery and construction equipment in working order and inspect all machinery and construction equipment for the presence of drips and leaks daily. If the presence of drips or leaks is found on any machinery or equipment, the Proponent shall remove the equipment or machinery from service immediately and not return it to service until the repairs have been completed by a certified mechanic.	4.1, 4.4; machinery or equipment that were in need of repairs were sent to a maintenance yard for repairs and only returned for use following an inspection.
	3.5	The Proponent shall inspect all vehicles machinery and construction equipment before it enters the project development area for the presence of invasive alien species and noxious weeds, taking into account Alberta's Decontamination protocol for work in or near water: quick reference guide. The Proponent shall remove all invasive alien species or noxious weeds found on any machinery or equipment before it enters the project development area.	4.1, 4.7.1.1
	3.6	The Proponent shall not deposit any debris in watercourses that may cause adverse environmental effects on fish and fish habitat during all phases of the Designated Project and shall remove, after each flood, debris accumulated at the debris deflector identified in Figure 5 of the environmental assessment report.	4.2, 4.3.1, 4.3.3, 4.8.1.2
	3.7	The Proponent shall implement measures to allow sediment to settle before releasing dewatering discharge from construction and post-flood maintenance activities into a water body.	4.2, 4.3.2
	3.8	The Proponent shall remove, during construction, the topsoil from the diversion channel and store it for later use in the restoration of the diversion channel prior to operation.	4.1.1.1; Condition acknowledged, topsoil from the diversion channel will placed back along the diversion channel
	3.9	The Proponent shall finalise, prior to construction, in consultation with Indigenous groups and to the satisfaction of Fisheries and Oceans, an offsetting plan related to the bull trout (*Salvenlinus confluentus*) and the fish population of the Elbow River. When finalising the plan, the Proponent shall include the adaptive offset measures approach proposed in its Conceptual Offset Measures Plan (Canadian Impact Assessment Registry Reference Number 80123, Document Number 1366). The Proponent shall implement the plan. The Proponent shall submit any approved offsetting plan(s) to the Agency prior to implementation.	4.8.4.4
	3.10	The Proponent shall, for any fish habitat offsetting measure(s) proposed in any offsetting plan(s) referred to in condition 3.9 that may cause adverse environmental effects not considered in the environmental assessment, develop and implement measures to mitigate those effects. The Proponent shall submit these measures to the Agency before implementing them.	4
	3.11	The Proponent shall conduct in-water project activities, including debris removal from the water diversion system, outside of the Government of Alberta restricted activity periods, unless required for safety or emergency reasons. If in-water project activities are required during of the Government of Alberta restricted activity periods for safety or emergency reasons, the Proponent shall develop additional mitigation measures.	Permission was received from DFO and the GoA to work in the RAP at Unnamed Creek (Low-Level Outlet channel and erosion check structures) during the 2024/2025 reporting year to advance construction work in this area.

	Condition #	Summary of Condition	Annual Report Section
Fish and fish habitat (cont'd)	**3.12**	The Proponent shall maintain fish passage in the Elbow River during all phases of the Designated Project. In doing so, the Proponent shall maintain flows downstream of the bypass channel.	3.0, Table 3.1, and 4.8.4.2. Fish passage will continue to be maintained during all phases of the Project.
	3.13	The Proponent shall install, prior to operation and in consultation with Transport Canada and Fisheries and Oceans Canada, rock v-weirs between the service spillway and low-level outlet to mitigate the effects of the Designated Project on fish passage in the Elbow River stream.	4.8.4.2
	3.14	The Proponent shall design, install and operate the temporary water intake system used during construction in fish-bearing waterbodies in a manner which mitigates the incidental capture of fish by entrainment and impingement of fish through the use of an appropriately sized fish screen, taking into account Fisheries and Oceans Canada's Interim code of practice: End-of-pipe fish protection screens for small water intakes in freshwater and in a manner consistent with the Fisheries Act and its regulations.	Not applicable during the 2024/2025 reporting year. This condition will be adhered to during post-flood operation, as necessary.
	3.15	The Proponent shall construct and maintain graded drainage areas within the reservoir during post-flood operation to prevent stranding of fish during release of stored floodwater from the reservoir. In doing so, the Proponent shall re-grade areas of the reservoir during post-flood operation as necessary.	Not applicable during the 2024/2025 reporting year. This condition will be adhered to during post-flood operation, as necessary.
	3.16	The Proponent shall develop and implement, prior to operation, a protocol to rescue juvenile and adult fish during post-flood operation. See 3.16.1 to 3.16.4 for conditions specific to the protocol.	Not applicable during the 2023/2024 reporting year. This condition will be adhered to during post-flood operation, as necessary.
	3.17	The Proponent shall develop and implement, in consultation with Indigenous groups, Fisheries and Oceans Canada and other relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and the effectiveness of the mitigation measures as it pertains to fish passage in the Elbow River. See 3.17.1 to 3.17.3 for conditions to be included in the program.	Table 3.1, 3.1, 4.8.4.2
	3.18	The Proponent shall develop and implement, in consultation with Indigenous groups and Fisheries and Oceans Canada, a follow-up program to verify the accuracy of the environmental assessment and the effectiveness of the mitigation measures as it pertains to fish rescue. See 3.18.1 to 3.18.2 for conditions to be included in the program.	Table 3.1, Not applicable during the 2024/2025 reporting years as this condition pertains to flood operations.
	3.19	The Proponent shall develop and implement, in consultation with Indigenous groups, Fisheries and Oceans Canada, Environment and Climate Change Canada and other relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and the effectiveness of the mitigation measures as it pertains to water quality. See sub-sections 3.19.1 to 3.19.6 for conditions to be included in the program.	Table 3.1, 4.8.1
	3.20	The Proponent shall develop and implement, in consultation with Indigenous groups, Fisheries and Oceans Canada and other relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and the effectiveness of the mitigation measures as it pertains to channel morphology. As part of the follow-up program, the Proponent shall monitor channel morphology of the Elbow River and outlet channel during post-flood operation.	4.8.3; Not applicable during the 2024/2025 reporting year. This condition will be adhered to during post-flood operation, as necessary.
Migratory Birds	**4.1**	The Proponent shall carry out the Designated Project in a manner that protects migratory birds and avoids harming, killing or disturbing migratory birds or destroying, disturbing or taking their nests or eggs. In this regard, the Proponent shall take into account Environment and Climate Change Canada's *Guidelines to reduce risk to migratory birds*. The Proponent's actions when carrying out the Designated Project shall be in compliance with the *Migratory Birds Convention Act, 1994, the Migratory Birds Regulations and with the Species at Risk Act.*	
	4.2	The Proponent shall give preference to the use of existing access roads and disturbed areas for temporary workspaces and transportation activities over building new access roads and temporary workspace in undisturbed areas, and shall revegetate any area where native vegetation was removed for temporary workspace.	This condition is acknowledged, existing roads and trails have been utilized to the extent possible. Approved construction areas were also utilized for work areas and temporary workspaces.
	4.3	The Proponent shall control the lighting required for Designated Project activities throughout all phases of the Designated Project, including its direction, duration of use, intensity, spectrum colour and brightness, to mitigate the adverse effects of the Designated Project on migratory birds and species at risk caused by sensory disturbances due to light, while complying with operational health and safety requirements.	4.1

	Condition #	Summary of Condition	Annual Report Section
Migratory Birds (cont'd)	**4.4**	The Proponent shall identify, in consultation with Indigenous groups and relevant authorities, dates of breeding season for migratory birds and notify the Agency of these dates prior to construction.	Condition is acknowledged and captured in the WMMP
	4.5	The Proponent shall develop, prior to construction, in consultation with Environment and Climate Change Canada and taking into account Environment and Climate Change Canada's *Description of Residence for bank swallow (Riparia riparia) in Canada*, measures to mitigate the adverse environmental effects on bank swallow (*Riparia riparia*) attributed to the Designated Project. The Proponent shall establish a schedule for the implementation of the measures and shall, as part of these measures: 4.5.1 maintain foraging habitat within 500 metres of bank swallow (*Riparia riparia*) residences. If it is not technically feasible for the Proponent to maintain a distance of 500 metres, the Proponent shall provide a rationale to relevant authorities and develop and implement additional mitigation measures, in consultation with relevant authorities, to avoid effects on bank swallow (*Riparia riparia*). The Proponent shall submit these measures to the Agency prior to implementing them; 4.5.2 install, prior to construction, and in consultation with Environment and Climate Change Canada, artificial nesting structures in suitable habitat to compensate for the loss of nesting sites within the project development area and identified in Appendix H, Figure 3-1, of the environmental impact statement. The Proponent shall perform maintenance on the nesting structures annually and maintain their accessibility and integrity during all phases of the Designated Project and shall ensure the presence of foraging habitat within 500 metres of the artificial nesting structures. If it is not technically feasible for the Proponent to ensure the presence of foraging habitat within a distance of 500 metres, the Proponent shall provide a rationale to relevant authorities and develop and implement additional mitigation measures, in consultation with relevant authorities, to avoid effects on bank swallow (*Riparia riparia*). The Proponent shall submit these measures to the Agency prior to implementing them; 4.5.3 maintain the slope of topsoil, soil and sediment stockpiles located within the project development area and not used as artificial nesting structures in accordance with condition 4.5.2 at less than 70 degrees; and 4.5.4 demonstrate how any other offsetting measures implemented by the Proponent will compensate for the adverse environmental effects on bank swallow (*Riparia riparia*) attributed to the Designated Project within the project development area.	Table 3.1; 4.7.2.4
	4.6	The Proponent shall conduct vegetation removal, and any other activity that could potentially disturb migratory birds, within the project development area outside of the breeding season(s) for migratory birds identified in condition 4.4. If vegetation removal or the conduct of any other disturbance activity outside of the breeding season(s) is not technically feasible during any given year, the Proponent shall develop and implement additional mitigation measures, in consultation with relevant authorities, to avoid harm to migratory birds and their nests or eggs. The Proponent shall submit these measures to the Agency prior to implementing them.	
	4.7	The Proponent shall remove debris in the off-stream reservoir within seven days after the draining of the reservoir. If it is not technically feasible for the Proponent to remove debris within seven days after the draining of the reservoir, the Proponent shall provide a rationale to Indigenous groups and relevant authorities and develop and implement additional mitigation measures, in consultation with relevant authorities, to avoid harm to migratory birds and their nests or eggs. The Proponent shall submit these measures to the Agency prior to implementing them.	Not applicable during the 2024/2025 reporting year. Following operation, condition 4.7 will be complied with.
	4.8	For any active migratory bird nests identified during construction or operation, the Proponent shall establish and implement, in consultation with relevant authorities, mitigation measures to avoid destroying, disturbing or taking the nest(s), including by implementing a disturbance setback buffer during construction and dry operation and by following the approach outlined in the Response to Information Request Round 2 Package 4 -01 to -04, IR4-03 (Canadian Impact Assessment Registry Reference Number 80123, Document Number 1311) during flood operation.	4.7.2.1
	4.9	The Proponent shall develop and implement, in consultation with Indigenous groups and relevant authorities, a protocol to prevent harm to migratory birds, including migratory birds species at risk identified in Table 3 of the environmental assessment report, within the project development area. The Proponent shall develop the protocol prior to construction and implement it prior to flood operation. The protocol shall include: 4.9.1 flood forecasting undertaken prior to inventories conducted in accordance with condition 4.10; and 4.9.2 measures to rescue migratory birds chicks and eggs.	Not applicable during the 2024/2025 reporting year; protocol captured in the WMMP.
	4.10	The Proponent shall conduct, in consultation with Indigenous groups, inventories of potential migratory bird habitat, including the collection of information on breeding bird densities and the presence of ground-nesting birds, as well as mapping of important habitat features, shrub lands, wetlands and grassland within the project development area every five years starting the first year of operation, and update the migratory bird protocol referred to in condition 4.9 based on the results of the inventories.	Not applicable during the 2024/2025 reporting year; protocol captured in the WMMP

	Condition #	Summary of Condition	Annual Report Section
Migratory Birds (cont'd)	**4.11**	The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and to determine the effectiveness of all mitigation measures to avoid harm to migratory birds, including migratory birds that are listed species at risk, their eggs and nests. The follow-up program shall include the mitigation measures used to comply with conditions 4.1 to 4.10. As part of the development of the follow-up program, the Proponent shall identify performance indicators that shall be used by the Proponent to evaluate the effectiveness of mitigation measures. The Proponent shall implement the follow-up program during all phases of the Designated Project. As part of the follow-up program, the Proponent shall: 4.11.1 monitor, annually during construction, for the first three years of operation and every five years thereafter, bank swallow (*Riparia riparia*) use of the project development area.	Condition is acknowledged and captured in the WMMP; 4.7.2.5
Species at Risk	**5.1**	The Proponent shall conduct pre-construction surveys to determine the presence of little brown myotis (*myotis lucifugus*) roosting sites in the project development area. The Proponent shall establish, in consultation with Indigenous groups and relevant authorities, buffer zones around little brown myotis (*myotis lucifugus*) active roosts identified during the pre-construction surveys or found by the Proponent or brought to the attention of the Proponent by an Indigenous group during any phase of the project. The Proponent shall maintain the buffer zones until it is determined the roosts are no longer active.	The results of the pre-construction surveys to meet IAAC approval conditions 5.1were presented in 2021/2022 Annual Report. No further work is required for these approval conditions.
	5.2	The Proponent shall conduct, prior to construction breeding habitat surveys for the northern leopard frog (*Lithobates pipiens*), western toad (*Anaxyrus boreas*), and western tiger salamander (*Ambystoma mavoritium*) within the project development area.	The results of the pre-construction surveys to meet IAAC approval conditions 5.2 were presented in 2021/2022 Annual Report. No further work is required for these approval conditions.
	5.3	For any construction activity within 100 metres of breeding habitat identified under condition 5.2 for the northern leopard frog (*Lithobates pipiens),* western toad (*Anaxyrus boreas),* or western tiger salamander (*Ambystoma mavoritium)* during the breeding season, the Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, measures to prevent northern leopard frog (*Lithobates pipiens),* western toad (*Anaxyrus boreas),* and western tiger salamander (*Ambystoma mavoritium)* from accessing the active construction areas. Measures shall include: 5.3.1 the installation of fencing prior to construction; and 5.3.2 the monitoring, during construction and by a qualified individual, of the presence of northern leopard frog (*Lithobates pipiens),* western toad (*Anaxyrus boreas),* or western tiger salamander (*Ambystoma mavoritium)* in active construction areas within 100 metres of their breeding habitat.	Not applicable during the 2024/2025 reporting year; no breeding wetlands for the three species were identified during pre-construction surveys
	5.4	If the results of the monitoring conducted in accordance with condition 5.3.2 identify the presence of northern leopard frog (*Lithobates pipiens),* western toad (*Anaxyrus boreas),* or western tiger salamander (*Ambystoma mavoritium)* in active construction areas within 100 metres of their breeding habitat, the Proponent shall implement additional species-specific mitigation measures in consultation with Indigenous groups and relevant authorities.	Not applicable during the 2024/2025 reporting year; no breeding wetlands for the three species were identified during the 2023/2024 reporting year
	5.5	The Proponent shall develop and implement, in consultation with Indigenous groups and relevant authorities, a protocol to prevent the mortality of amphibians, including northern leopard frog (*Lithobates pipiens*), western toad (*Anaxyrus boreas*), and western tiger salamander (*Ambystoma mavoritium*) during flood operation within the reservoir footprint. The Proponent shall develop the protocol prior to construction, taking into account the flood forecasting undertaken in accordance with condition 4.9.1. The protocol shall include measures to rescue and relocate northern leopard frog (*Lithobates pipiens*), western toad (*Anaxyrus boreas*), and western tiger salamander (*Ambystoma mavoritium*) to suitable habitat outside the reservoir footprint.	Not applicable during the 2024/2025 reporting year; protocol captured in the WMMP
	5.6	The Proponent shall implement the Designated Project in a manner that avoids adverse environmental effects of the Designated Project on wetlands and wetland functions. To avoid adverse effects, the Proponent shall maintain wetlands and their functions over minimizing adverse effects on wetlands and their functions. When the loss of wetlands and their functions cannot be avoided, the Proponent shall mitigate the adverse effects on wetlands and their functions instead of compensating for affected wetlands and their functions.	Not applicable during the 2024/2025 reporting year. The loss of wetlands or their function were not observed during the 2023/2024 reporting year; 4.7.1.3
	5.7	In the case of the adverse environmental effects of the Designated Project on wetlands and their functions located in the project development area that cannot be avoided or mitigated pursuant to condition 5.6, the Proponent shall develop, in consultation with Indigenous groups, Environment and Climate Change Canada and other relevant authorities, and taking into account the *Alberta Wetland Policy,* a wetland replacement plan to compensate for the loss of wetlands and their functions.	Not applicable during the 2024/2025 reporting year. The loss of wetlands or their function were not observed during the 2024/2025 reporting year
	5.8	The Proponent shall direct during construction any drainage pathway, constructed or modified as part of the Designated Project, away from wetlands and shall identify prior to construction wetlands where drainage pathway should not be directed during operation. The Proponent shall provide a map of the wetlands to be avoided to the Agency prior to construction.	Condition acknowledge; 4.3.1; 4.7.1.3

	Condition #	Summary of Condition	Annual Report Section
Species at Risk (cont'd)	**5.9**	The Proponent shall submit to the Agency, prior to construction, a map of all wetlands that will be permanently removed for the construction of the Designated Project and shall not grub vegetation when undertaking construction work in wetlands except for those wetlands that will be permanently removed.	4.7.1.3
	5.10	The Proponent shall maintain a distance of 100 metres from any water body and wetland when undertaking vehicle, machinery, and equipment cleaning, fueling, and maintenance, when storing substances with the potential to cause harmful effects to the receiving environment, including fuel and lubricant storage tanks, and when undertaking maintenance activities in the off-stream reservoir. If it is not technically feasible for the Proponent to maintain a distance of 100 metres, the Proponent shall provide a rationale to relevant authorities and develop and implement additional mitigation measures, in consultation with relevant authorities, to avoid effects on species at risk. Additional mitigation measures shall include the use of secondary containment. The Proponent shall submit these measures to the Agency prior to implementing them.	4.1.1.3, 4.7.1.3
Atmospheric Environment	**6.1**	The Proponent shall ensure that all vehicles required for construction of the Designated Project meet or exceed emission standards applicable at time of introduction, and are operated, inspected and maintained in accordance with any applicable engine instructions provided by the manufacturer to meet the emissions standards.	4.9.1
	6.2	The Proponent shall develop, prior to construction, and implement, during construction, a no-idling policy for all vehicles within the project development area. The Proponent shall require that all persons abide by this policy, unless not technically feasible or not feasible for health or safety reasons. The Proponent shall submit the policy to the Agency prior to construction.	4.9.1
	6.3	The Proponent shall develop, prior to construction and in consultation with relevant authorities, and implement during all phases of the Designated Project, measures to maintain baseline air quality and prevent exceedance of the Canadian Council of Ministers of the Environment's Canadian Ambient Air Quality Standards.	4.9.1
	6.4	The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada and Health Canada, and implement during all phases of the Designated Project, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of mitigation measures as it pertains to adverse changes to air quality attributed to the Designated Project. 6.4.1 As part of the follow-up program, the Proponent shall: 6.4.2 identify, in consultation with the parties involved in the development of the follow-up program, the locations for the monitoring referred to in conditions 6.4.2 and 6.4.3, including a minimum of one location within the community of Springbank; 6.4.3 monitor nitrogen dioxide continuously during construction; 6.4.4 monitor total suspended particulate (TSP), coarse particulate matter (PM10) and fine particulate matter (PM2.5) continuously during construction, flood operation, post-flood operation and for 16 months after post-flood operation. Monitoring of total suspended particulate and fine particulate matter shall be done at one location between the permanent access road and the diversion channel excavation work, one location at the dam construction site, one location at any borrow source site used and at the parking areas, and shall include: 6.4.3.1 visual observation during construction; and 6.4.3.2 monitoring, other than through visual observation, during construction, flood operation and post-flood operation. 6.4.4 meteorological factors, including wind speed, wind direction and temperature during construction, flood operation, post-flood operation and for 16 months after post flood operation; 6.4.5 into account during construction the Canadian Council of Ministers of the Environment's Canadian Ambient Air Quality Standards management levels for nitrogen dioxide and fine particulate matter (PM2.5) and Air Zone Management Framework when determining if modified or additional mitigation measures are required based on the results of monitoring conducted in accordance with conditions 6.4.2 and 6.4.3; 6.4.6 use the Alberta Ambient Air Quality Objectives during operations to determine if modified or additional mitigation measures are required based on the results of monitoring conducted in accordance with condition 6.4.3.	4.9.1
	6.5	The Proponent shall provide Indigenous groups with the results of the follow-up program referred to in condition 6.4 in plain language at a minimum twice annually, at a time determined in consultation with Indigenous groups.	The twice annual air quality report, capturing the January 2024 to December 2024 period, was distributed to Indigenous groups on August 29, 2025; 4.9.1

	Condition #	Summary of Condition	Annual Report Section
Human Health	**7.1**	The Proponent shall not exceed the noise limits set out in the U.S. Environmental Protection Agency Office of Noise Abatement and Control document titled *Information on levels of environmental noise requisite to protect public health and welfare with an adequate margin of safety* for short-term noise exposure during construction.	4.9.2
	7.2	For any blasting activities required for the Designated Project, the Proponent shall take into account Environment and Climate Change Canada's *Environment Code of Practice for Metal Mines* for the control of noise and vibration from blasting and thresholds and mitigation measures for blasting noise identified in Health Canada's *Guidance for Evaluating Human Health Impacts in Environmental Assessment: Noise*.	4.9.2; There were no blasting activities during the 2024/2025 reporting year.
	7.3	The Proponent shall develop, prior to construction and in consultation with Indigenous groups, a protocol for receiving complaints related to exposure to noise attributable to the Designated Project. The Proponent shall provide the protocol to the Agency prior to construction and shall implement it during construction. As part of the implementation of the protocol, the Proponent shall respond to any noise complaint attributed to any component of the Designated Project within 48 hours of the complaint being received and shall implement any corrective action, if required to reduce exposure to noise, in a timely manner.	This condition was complied with, and the protocol provided to the Agency prior to construction.
	7.4	The Proponent shall develop a communication plan in consultation with Indigenous groups. The Proponent shall develop the communication plan prior to construction and shall implement and keep it up to date during all phases of the Designated Project. See 7.4.1 - 7.4.3 for conditions to include in the plan.	This condition was complied with, and the plan provided to the Agency prior to construction.
	7.5	The Proponent shall implement, during all phases of the Project, measures to mitigate fugitive dust emissions attributable to the Designated Project. As part of the measures, the Proponent shall: 7.5.1 establish speed limits on Designated Project roads during all phases of the Designated Project and require that all persons abide by these speed limits; and 7.5.2 apply dust suppressant on the Designated Project permanent access roads and parking areas during all phases of the Designated Project. The Proponent shall select, in consultation with relevant authorities, dust suppressants with the least potential effects on human health and the environment.	4.9.1
	7.6	The Proponent shall decommission and plug off water wells located within the project development area that are not used to monitor groundwater quality pursuant to condition 7.9.1, prior to the start of operation.	This condition was complied with; 4.8.2
	7.7	The Proponent shall monitor, at a minimum twice prior to construction and weekly during flood operation, total mercury and methylmercury levels in the Elbow River upstream of the diversion system, in the off-stream reservoir, and in the low-level outlet downstream of the off-stream reservoir outlet gate, unless not feasible for safety reasons. The Proponent shall measure total mercury and methylmercury levels in accordance with the Response to the IAAC Information Request Technical Review Round 2 Package 4 - 01 to 04, IR4-02 (Canadian Impact Assessment Registry Reference Number 80123, Document Number 1311) and shall determine, in consultation with Environment and Climate Change Canada, if modified or additional mitigation measures are required based on the results of the monitoring.	Monitoring prior to construction was complied with, and an update was provided in the 2021/2022 annual report; monitoring will be completed following flood operation.
	7.8	The Proponent shall develop, in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and the effectiveness of the mitigation measures as it pertains to contamination of country food. As part of the follow-up program, the Proponent shall: 7.8.1 monitor, concurrently and prior to flood operation, total mercury, methylmercury, carbon-13 and nitrogen-15 stable isotopes concentration, fish age and morphometric dates in fish muscle. As part of the monitoring, the Proponent shall sample a minimum of 12 adult fish of a top predatory fish species at each site and shall co-locate fish sampling with sampling for mercury in water at two sites downstream and upstream the project development area; 7.8.2 monitor for muscle or whole body total mercury and methylmercury, carbon-13, nitrogen 15- stable isotopes, and morphometric data in one lower food web fish species; 7.8.3 monitor total mercury and methylmercury, carbon-13 and nitrogen 15- stable isotopes in invertebrates that are key fish food sources in the Elbow River; 7.8.4 the Proponent shall undertake the monitoring referred to in conditions 7.8.1, 7.8.2 and 7.8.3 after flood operation.	Table 3.1
	7.9	The Proponent shall develop prior to operation, and implement, in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and the effectiveness of the mitigation measures as it pertains to drinking water quality. See 7.9.1 to 7.9.3 for conditions that need to be included in the plan.	4.8.2; Appendix B.2
	7.10	The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and to determine the effectiveness of all measures to mitigate fugitive dust emissions attributable to the Designated Project. The Proponent shall implement the follow-up program during all phases of the Designated Project.	The GoA developed and provided the plans required prior to the start of construction to IAAC in advance of construction ; 4.9.1

	Condition #	Summary of Condition	Annual Report Section
Human Health (cont'd)	**7.11**	The Proponent shall provide Indigenous groups with the results of the follow-up program referred to in condition 7.10 in plain language at a minimum twice annually, at a time determined in consultation with Indigenous groups.	The twice annual air quality report, capturing the January 2024 to December 2024 period, was distributed to Indigenous groups on August 29, 2025; 4.9.1
Current use of lands and resources for traditional purposes	**8.1**	The Proponent shall undertake, in consultation with Indigenous groups and relevant authorities, progressive reclamation of areas disturbed by the Designated Project, including bank and riparian areas. In doing so, the Proponent shall: 8.1.1 identify agronomic plant species and plant species native to the regional assessment area to use for revegetation, including plant species suitable as habitat for migratory birds and native seed mix suitable for wetlands; 8.1.2 revegetate the portions of the diversion channel excavated through soil and the earthen dam embankment free of rip rap; 8.1.3 reclaim non-native plant areas to equivalent baseline land functions after construction and during post flood operation; and 8.1.4 reclaim the surface drainage patterns of the area after construction.	3.1, 4.7.1.2; The seed mixes are identified in the Vegetation and Wetland Mitigation, Monitoring and Revegetation Plan.
	8.2	The Proponent shall manage noxious weeds and invasive alien species as necessary to promote successful revegetation that includes traditional plant establishment and growth. In doing so, the Proponent shall not use herbicide within 30 metres of wetlands and waterbodies in the project development area.	4.7.1.1; herbicide was not used as a form of weed management during the 2024/2025 reporting year
	8.3	The Proponent shall conduct pre-construction surveys to determine the presence of grizzly bear (*Ursus arctos*) western population active dens in the project development area. The Proponent shall establish, in consultation with Indigenous groups and relevant authorities, no-work buffer zones around grizzly bear (*Ursus arctos*) western population active dens identified during the pre-construction surveys or found by the Proponent or brought to the attention of the Proponent by an Indigenous group during any phase of the Designated Project. The Proponent shall maintain the buffer zones from their establishment and until the active den is no longer occupied.	The results of the pre-construction surveys to meet IAAC approval conditions 8.3 were presented in 2021/2022 Annual Report. No further work is required for these approval conditions.
	8.4	The Proponent shall follow the timing restrictions on industrial activities identified in the Alberta's *Recommended Land Use Guidelines: Key Wildlife and Biodiversity Zones* when undertaking construction and maintenance activities in the Key Wildlife and Biodiversity Zone identified along the Elbow River. 8.4.1 If it is not economically or technically feasible for the Proponent to follow the timing restrictions on industrial activities identified in the Alberta's *Recommended Land Use Guidelines: Key Wildlife and Biodiversity Zones*, develop and implement additional mitigation measures, in consultation with Environment and Climate change Canada and other relevant authorities. The Proponent shall submit these measures to the Agency prior to implementing them.	Table 4.3, Appendix B.1
	8.5	The Proponent shall implement measures to mitigate effects of the Designated Project on the movement of grizzly bear western population (*Ursus arctos*) and ungulates, including: 8.5.1 installing and maintaining during construction and operation, an underpass under Highway 22 where it crosses the diversion channel to allow safe passage for grizzly bear western population (*Ursus arctos*) and ungulates; and 8.5.2 wildlife-friendly fencing for all fencing required for the Designated Project, unless otherwise required for safety reasons or if the fencing is in locations that are not in the care and control of the Proponent, taking into account Alberta Conservation Association *Landholder's Guide to Wildlife Friendly Fencing.* As part of the annual report for the Designated Project referred to in condition 2.10, the Proponent shall provide the Agency with a current map of Designated Project fencing. The Proponent shall maintain the fencing during all phases of the Designated Project.	4.7.2.2; Underpass under Highway 22 has been constructed
	8.6	The Proponent shall maintain navigation on the Elbow River during all phases of the Designated Project. In doing so, the Proponent shall establish and maintain, in consultation with Indigenous groups and Transport Canada, a portage route around the diversion system gate and the service spillway locations to maintain navigation on the Elbow River during construction of these project components and install safety signage to signal the presence of the diversion system gate and location of the portage route until such time that the portage route is no longer required to maintain navigation on the Elbow River.	This condition is acknowledged. The creation of a temporary portage route on the Elbow River (for the duration of construction), including the installation of signage was established during the 2022/2023 Annual Reporting Year and remains in place. Updates to the temporary portage are shared directly with IAAC and Indigenous groups as required.

	Condition #	Summary of Condition	Annual Report Section
Current use of lands and resources for traditional purposes (cont'd)	**8.7**	The Proponent shall provide the Agency and Indigenous groups with the final project design within seven days of its finalization and shall consult with Indigenous groups at least 60 days in advance of construction activities to understand locations and timing needed to allow Indigenous groups to catalogue, harvest and transplant traditional and medicinal plants present within the project development area, in a culturally appropriate way. The Proponent shall identify and implement, in consultation with Indigenous groups, time periods during which maintenance activities shall not occur within the project development area to accommodate Indigenous harvesting activities, unless if maintenance activities are necessary for safety reasons.	This condition was complied with and reported on in the 2021/2022 annual report.
	8.8	The Proponent shall start developing, prior to construction and complete at the latest 1 year prior to start of operation, in consultation with Indigenous groups, a Land Use Plan to support Indigenous groups' use of the project development area, and implement the plan during all phases of the Designated Project. The Proponent shall submit the final plan to the First Nation Land Use Advisory Committee referred to in condition 8.11, First Nations and the Agency within seven days of its finalization. 8.8.1 First Nations have priority over other users of the land to areas within the project development area to support traditional use activities, including hunting, fishing and trapping for food, plant gathering and access to cultural sites; 8.8.2 maps of the areas identified pursuant to condition 8.8.1 to the Agency and Indigenous groups prior to construction; 8.8.3 install, prior to operation, signage at the limits of the land use areas identified pursuant to condition 8.8.1 encouraging low noise level use of the land and indicating the potential presence of First Nations undertaking traditional activities including hunting and the use of hunting weapons; 8.8.4 provide access to Indigenous groups to the land use areas identified pursuant to condition 8.8.1 during all phases of the Designated Project, to the extent that such access is safe. The Proponent shall notify Indigenous groups in a timely manner if access must be prohibited for safety reasons.	Details on the fulfillment of Condition 8.8.1, 8.8.3 and 8.8.4 are contained in the Springbank Off-stream Reservoir Land Use Plan. Signage will be installed prior to the SR1 area being open to the public; 4.11
	8.9	The Proponent shall establish, in consultation with First Nations, a staging area for traditional use activities in close proximity to the land use areas identified in condition 8.8. The Proponent shall allow and provide sufficient space within the staging area for the construction of semi-permanent structures. The Proponent shall provide maps to the Agency and First Nations of the staging area prior to construction.	This condition was completed, and the maps were sent directly to First Nations and IAAC prior to the start of construction.
	8.10	The Proponent shall provide unimpeded access for First Nations to the staging area identified in condition 8.9, except during the flood operation, when access to the staging area may be prohibited for safety reasons and if not possible for maintenance purposes. The Proponent shall communicate to First Nations the closure of the staging area when required for safety reasons and during flood season.	This condition is acknowledged; First Nations will have unimpeded access to the staging area unless access to the staging area is impeded by flood operations.
	8.11	The Proponent shall establish, prior to construction and in consultation with First Nations, and maintain, throughout construction and operation, a First Nation Land Use Advisory Committee (the committee) to support the development and implementation of the plan identified in condition 8.8. When establishing the committee, the Proponent shall consult with each First Nation with respect to whether they wish to participate as members of the committee and shall prioritize the selection of representatives from First Nations who wish to participate as members in the committee. As part of the establishment of the committee, the Proponent shall co-develop Terms of Reference for the committee with First Nations and update the Terms of Reference every 10 years. The Proponent shall provide the completed Terms of Reference to the Agency prior to construction and any update within 30 days of the Terms of Reference being updated. See sub-sections 8.11.1 - 8.1.11-7 for Terms of Reference conditions.	This condition is complete; 4.11
	8.12	The Proponent shall include any Indigenous groups for which Aboriginal or Treaty Rights under section 35 of *The Constitution Act, 1982* are recognized by the Government of Alberta after the issuance of this Decision Statement in the Land Use Plan, the staging area and the First Nations Land Use Advisory Committee referred to in conditions 8.9, 8.10 and 8.11.	This condition is complete; 4.11
	8.13	The Proponent shall develop, prior to operation, and in consultation with Indigenous groups, a follow-up program to verify the accuracy of the environmental assessment as it pertains to natural revegetation of the drained reservoir during post-flood operation. As part of the development of the follow-up program, the Proponent shall identify objectives that shall be used by the Proponent to evaluate the success of revegetation. The Proponent shall implement the follow-up program during operation. As part of the implementation of the follow-up program, the Proponent shall: 8.13.1 monitor the composition and abundance of natural revegetation occurring in the drained reservoir, for the first 12 months of post-flood operation; and 8.13.2 develop and implement additional mitigation measures if the results of the monitoring referred to in condition 8.13.1 demonstrate that additional mitigation measures are required to promote successful re-vegetation of the drained reservoir. As part of these measures, the Proponent shall mitigate wind erosion through measures such as hydroseeding or the application of a tackifier.	The follow-up program is contained in the Vegetation and Wetland Mitigation, Monitoring and Revegetation Plan and was provided to the Agency prior to construction.

	Condition #	Summary of Condition	Annual Report Section
Current use of lands and resources for traditional purposes (cont'd)	**8.14**	The Proponent shall develop, prior to construction and in consultation with Indigenous groups, a follow-up program to verify the accuracy of the environmental assessment and to determine the effectiveness of mitigation measures as it pertains to the adverse environmental effects of the Designated Project on the current use of lands and resources for traditional purposes. The Proponent shall implement the follow-up program during all phases of the Designated Project to monitor: 8.14.1 the effectiveness of progressive reclamation; 8.14.2 the effectiveness of the Land Use Plan identified in condition 8.8 in supporting and prioritizing First Nation's practice of traditional activities within the project development area; 8.14.3 the effectiveness of the staging area identified in condition 8.9 and the adequacy of its size in supporting First Nation's practice of traditional activities within the project development area within five years of its implementation; 8.14.4 the effectiveness of the First Nation Land Use Advisory Committee in addressing views and information received pursuant to condition 8.11.4; and 8.14.5 that the availability and quality of resources for traditional use activities are as predicted in the environmental assessment.	4.11 Details on the fulfillment of Condition 8.14 are contained in the Springbank Off-stream Reservoir Land Use Plan (February 2025). The plan establishes a performance management framework (Section 9.0) that addresses sub-conditions 8.14.1 through 8.14.5. It sets out monitoring methodologies, reporting frequency, adaptive management triggers, and mitigation measures, and provides for ongoing Indigenous participation through the First Nations Land Use Plan Implementation Committee. These provisions demonstrate how the proponent will verify the accuracy of the environmental assessment and the effectiveness of mitigation measures related to land use and resources for traditional purposes.
Physical and cultural heritage and structures, sites or things of historical, archaeological, paleontological or architectural significance	**9.1**	The Proponent shall retain, prior to construction, the services of Indigenous monitors to observe, record, and report to the Proponent and Indigenous groups on the implementation, throughout construction, of requirements set out in this Decision Statement including the archaeological and heritage management plan referred to in condition 9.3. Prior to retaining the services of Indigenous monitors, the Proponent shall consult with each Indigenous group with respect to whether they wish to participate as Indigenous monitor. When retaining the services of Indigenous monitors from each Indigenous group who wishes to participate, the Proponent shall determine, in consultation with these Indigenous groups, the scope, purpose and objectives of the participation of each Indigenous monitor and shall provide that information to the Agency prior to construction.	4.5.1
	9.2	The Proponent shall develop and implement, prior to construction and in consultation with Indigenous groups and Alberta Ministry of Culture, Multiculturalism and Status of Women, a historic resource impact assessment of the project development area. The Proponent shall apply the archaeological and heritage management plan pursuant to condition 9.3 to structures, sites, or things of historical, archaeological, paleontological, or architectural significance or physical or cultural heritage resources identified as part of the historic resource impact assessment.	4.10
	9.3	The Proponent shall develop, prior to construction and in consultation with Indigenous groups, Alberta Ministry of Culture, Multiculturalism and Status of Women, and implement, during construction and operation, an archaeological and heritage management plan for any structures, sites, or things of historical, archaeological, paleontological, or architectural significance or physical or cultural heritage resources within the project development area, including, but not limited to sites and things subject to the *Alberta Historical Act*. See sub-sections 9.3.1 - 9.3.4 for conditions to include in the plan.	4.10.1
	9.4	The Proponent shall develop, prior to construction and in consultation with Indigenous groups, cultural awareness training for all employees associated with the Designated Project. The Proponent shall implement the training prior to the start of construction and during all phases of the Designated Project.	4.10.2
	9.5	The Proponent shall, prior to construction and in consultation with Indigenous groups, provide access to Indigenous groups to the project development area for the purpose of conducting ceremonies, to the extent that such access is safe. At the request of Indigenous groups, the Proponent may participate in any ceremony held by Indigenous groups, including for the purpose of making offerings.	This condition is acknowledged; access was and will be granted when access to the Project Development Area is safe.
	9.6	The Proponent shall provide the Agency and Indigenous groups with a map of the final construction site within seven days of its finalization and shall not undertake any construction activity outside of the final construction site, to the extent that it is technically feasible or unless required to meet safety requirements. In the event that the Proponent shall conduct any construction activity outside of the final construction site, the Proponent shall apply the requirements set out in condition 9.3.4 for any previously unidentified structures, sites, or things of historical, archaeological, paleontological, or architectural significance or physical or cultural heritage resources discovered outside of the final construction site.	This condition was complied with, and a map of construction was provided to Agency and Indigenous groups prior to the start of construction in December 2021.

	Condition #	Summary of Condition	Annual Report Section
Physical and cultural heritage and structures, sites or things of historical, archaeological, paleontological or architectural significance (cont'd)	**9.7**	The Proponent shall have a qualified individual conduct paleontological monitoring during construction when: 9.7.1 excavating bedrock for the diversion system; 9.7.2 excavating 4 metres of bedrock or greater, including for the emergency spillway; 9.7.3 excavating bedrock for new road alignments including on Highway 22; and 9.7.4 pipeline operators are using open cut methods for relocation of pipelines and utilities under the diversion channel.	4.10.3
	9.8	The Proponent shall strip and stockpile topsoil during construction and shall prevent mixing of topsoil with other soil horizons. The Proponent shall replace the topsoil during progressive reclamation pursuant to condition 8.1.	4.1.1.1; 4.7.1.2
	9.9	The Proponent shall develop, prior to construction and in consultation with Indigenous groups and Alberta Ministry of Culture, Multiculturalism and Status of Women, a follow-up program to verify the accuracy of the environmental assessment and to determine the effectiveness of all mitigation measures for effects to any structures, sites, or things of historical, archaeological, paleontological, or architectural significance or physical or cultural heritage resources. The Proponent shall implement the follow-up program during all phases of the Designated Project and submit the results of the follow-up program to Alberta Ministry of Culture, Multiculturalism and Status of Women.	4.10
Independent Environmental Monitor	**10.1**	The Proponent shall retain, prior to construction, the services of a third-party independent environmental monitor, who is a qualified individual as it pertains to environmental monitoring in Alberta, to independently observe and record on the implementation of the conditions set out in this Decision Statement during construction and to report findings to the Proponent and the Agency.	4.5.2
	10.2	The Proponent shall require the independent environmental monitor to report to the Proponent, in writing, about the implementation of any condition set out in this Decision Statement during construction. The Proponent shall also require the independent environmental monitor to recommend to the Proponent, in writing, which action(s) in their view should be taken by the Proponent with respect to the implementation of conditions set out in this Decision Statement during construction.	4.5.2
	10.3	The Proponent shall require the independent environmental monitor to provide to the Agency, at a frequency to be determined in consultation with the Agency, the information reported to the Proponent pursuant to condition 10.2 at the same time that the Proponent receives that information.	4.5.2
	10.4	The Proponent shall require the independent environmental monitor to retain the information reported to the Proponent pursuant to condition 10.2 for five years following submission to the Agency pursuant to condition 10.3.	The independent environmental monitor's reports referenced in condition 10.2 are and will be maintained for five years following submission to the Agency.
Accidents and Malfunctions	**11.1**	The Proponent shall take all reasonable measures to prevent accidents and malfunctions that may result in adverse environmental effects and to mitigate any adverse environmental effect from accidents and malfunctions that do occur. As part of these measures, the Proponent shall: 11.1.1 store hazardous materials, including lubricating oil in designated areas with primary and secondary containment and in accordance with appropriate federal, provincial and municipal safety procedures and requirements; 11.1.2 store combustible and flammable materials in designated areas at least six metres away from the project development area limits; 11.1.3 locate spill containment kits in designated locations within the project development area where there is a higher risk of spills; 11.1.4 conduct annual testing of all equipment and project components and implement any corrective measures required based on the result of the annual testing prior to flood operation; and 11.1.5 ensure that all electrically powered components of the Project have backup generators or can be manipulated manually or by alternated means, if required.	This condition is acknowledged and was adhered to during the 2024/2025 reporting year.
	11.2	The Proponent shall consult, prior to construction, Indigenous groups on the measures to be implemented to prevent accidents and malfunctions.	4.4
	11.3	The Proponent shall develop an accident and malfunction response plan in relation to, and for the construction of the Designated Project and an accident and malfunction response plan in relation to, and for the operation of the Designated Project. The Proponent shall develop the accident and malfunction response plan in relation to, and for construction of the Designated Project prior to construction and the accident and malfunction response plan in relation to, and for the operation of the Designated Project prior to the first flood operation. See 11.3.1 to 11.3.6 for conditions that need to captured in the plan.	This condition was completed, and the plan was sent directly to First Nations and IAAC prior to the start of construction.

	Condition #	Summary of Condition	Annual Report Section
Accidents and Malfunctions (cont'd)	**11.4**	The Proponent shall maintain the accident and malfunction response plan referred to in condition 11.3 up-to-date during all phases of the Designated Project. The Proponent shall submit any updated accident and malfunction response plan to the Agency and to the parties being consulted during the development of the plan within 30 days of the plan being updated	This condition is acknowledged; an up-to-date plan will be maintained, and any updated plan will be provided to IAAC and Indigenous groups
	11.5	In the event of an accident or malfunction with the potential to cause adverse environmental effects, the Proponent shall immediately implement the measures appropriate to the accident or malfunction referred to in condition 11.3.2. See sub-sections 11.5.1 - 11.5.4 for measures.	This condition is acknowledged and complied with during the 2024/2025 reporting year; 4.4
	11.6	The Proponent shall develop, in consultation with Indigenous groups and potentially affected parties, a communication plan for accidents and malfunctions occurring in relation to the Designated Project, including accidents and malfunctions occurring within the project development area which may affect area(s) outside of the project development area. The Proponent shall develop the communication plan prior to construction and shall implement and keep it up-to-date during all phases of the Designated Project. See sub-section 11.6.1 to 11.6.3 for plan specifics.	This condition was completed, and the communication plan was sent directly to First Nations and IAAC prior to the start of construction.
Schedules	**12.1**	The Proponent shall submit to the Agency a schedule for all conditions set out in this Decision Statement no later than 60 days prior to the start of construction. This schedule shall detail all activities planned to fulfill each condition set out in this Decision Statement and the commencement and estimated completion month(s) and year(s) for each of these activities.	4.6
	12.2	The Proponent shall submit to the Agency a schedule outlining all activities required to carry out all phases of the Designated Project no later than 60 days prior to the start of construction. The schedule shall indicate the commencement and estimated completion month(s) and year(s) and duration of each of these activities.	Schedules required under IAAC approval conditions 12.1 (schedule for the IAAC approval conditions), and IAAC approval condition 12.2 (activities required to carry out the Project) were prepared and submitted to the Agency and Indigenous groups on December 14, 2021,
	12.3	The Proponent shall submit to the Agency in writing an update to schedules referred to in conditions 12.1 and 12.2 every year no later than April 30 until the completion of all activities referred to in each schedule.	As per condition 12.3, an update to the schedules referred to in conditions 12.1 and 12.2 will be provided to the Agency every year no later than April 30; Appendix C
	12.4	The Proponent shall provide Indigenous groups with the schedules referred to in conditions 12.1 and 12.2, and any update to the initial schedule made pursuant to condition 12.3 at the same time the Proponent provides these documents to the Agency.	As per condition 12.4, the schedules identified in conditions 12.1 and 12.2 will also be provided to the Indigenous groups at the same time they are sent provided to the Agency Appendix C
Record Keeping	**13.1**	The Proponent shall maintain all records relevant to the implementation of the conditions set out in this Decision Statement. The Proponent shall provide the aforementioned records to the Agency upon demand within a timeframe specified by the Agency.	This condition is acknowledged. All records relevant to condition 13.1 will be provided to the Agency upon request.
	13.2	The Proponent shall retain all records referred to in condition 13.1 at a facility in Canada and shall provide the address of the facility to the Agency. The Proponent shall notify the Agency at least 30 days prior to any change to the physical location of the facility where the records are retained, and shall provide to the Agency the address of the new location.	This condition is acknowledged. All records referred to in condition 13.1 will be retained as per condition 13.2.
	13.3	The Proponent shall notify the Agency and Indigenous groups of any change to the contact information of the Proponent included in this Decision Statement.	The care and control of the SR1 Project was transferred from TEC to Alberta Agriculture and Irrigation on May 6, 2025. IAAC and Indigenous groups were notified of this change.

APPENDIX B
TECHNICAL MEMOS

B.1
Summary of 2024/2025 Remote Camera Monitoring Program

Springbank Off-Stream Reservoir Project
Remote Camera Monitoring Program - 2024/2025

October 2025

Prepared for:
Alberta Transportation and Economic Corridors

Prepared by:
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Appendix A Photos

Acronyms / Abbreviations

BA	before-after
EIA	environmental impact assessment
Hwy	Highway
IAAC	Impact Assessment Agency of Canada
LAA	local assessment area
PDA	Project development area
The Project	Springbank Off-Stream Reservoir Project
WMMP	Wildlife Mitigation and Monitoring Plan

1 Remote Camera Monitoring Program

1.1 Objectives

As stated in the Wildlife Mitigation and Monitoring Plan (WMMP) for the Springbank Off-Stream Reservoir Project (the Project), the objectives of the remote camera monitoring program are to evaluate potential Project effects on wildlife habitat use and movement as well as to evaluate the effectiveness of mitigation measures. Overall, the remote camera monitoring program is designed to monitor focal wildlife species, which included large and medium-sized mammals as well as species of cultural importance (e.g., deer [*Odocoileus* spp.], elk [*Cervus canadensis*], grizzly bear [*Ursus arctos*], coyote [*Canis latrans*], red fox [*Vulpes vulpes*]).

The remote camera monitoring program has been designed to answer two key questions:

1. Is there a measurable change in the relative abundance (photographic rate) of large and medium-sized mammals in the Local Assessment Area (LAA) during construction and dry operations compared to baseline/pre-construction?
2. What is the wildlife crossing success or crossing rate for permanent Project structures including the Highway (Hwy) 22 underpass, Hwy 22 culvert, diversion channel, floodplain berm, wildlife-friendly fencing, off-stream dam, and low-level outlet? (i.e., do mitigation measures facilitate wildlife movement in the LAA?)

The results presented in this annual report were collected during the 2024-2025 construction period and include data collected during all four seasons: spring 2024 (April 1 to May 31); summer 2024 (June 1 to August 31); fall 2024 (September 1 to November 30); and winter 2024/2025 (December 1 to March 31). The remainder of the 2025 data (spring, summer, fall) will be presented in the next IAAC Annual Report.

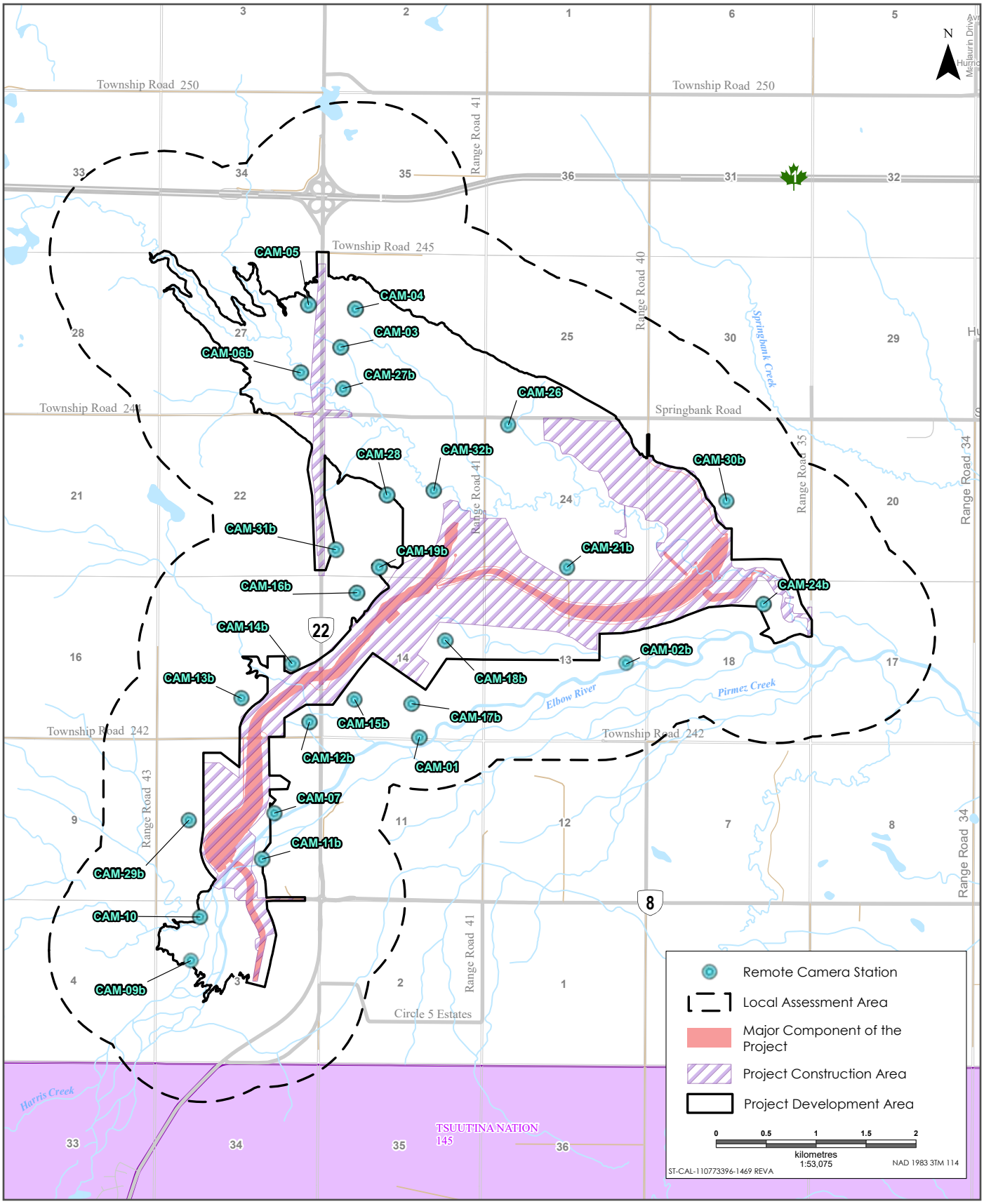
Mitigation measures proposed to reduce potential Project effects on wildlife movement due to Project permanent structures including the installation of wildlife-friendly fencing (key question 2) have yet to be implemented and analyses addressing key question 2 are not included in this annual report. It is anticipated that the construction phase will be completed later in 2025, which will begin the dry operations phase where the focus will turn to addressing key question 2.

2 Methods

2.1 Site Selection

The remote cameras (Reconyx Hyperfire 2™) deployed during the 2021 pre-construction monitoring period were placed within the Project Construction Area (i.e., permanent Project structure footprint and temporary workspaces) and subsequently moved outside of the Project Construction Area during 2022 to avoid potential damage and excessive numbers of human/equipment detections during construction activities. Cameras were redeployed in similar habitat types outside the Project Construction Area where land access permitted. The locations and habitat types of 31 remote cameras initially deployed during the pre-construction period are described in Impact Assessment Agency of Canada (IAAC) 2021/2022 Annual Report (Year 1). Of the 31 remote cameras deployed during the 2021 pre-construction period, four remote cameras were not deployed during construction for various reasons including one due to elk damage, one due to suspected elk damage and/or vandalism and two remote cameras (CAM-20 and CAM-25) were not relocated outside the Project Construction Area because other suitable (i.e., similar habitat type) locations were not available. As such, 27 remote camera stations were deployed to collect wildlife monitoring data during the 2022 construction period (Year 1 construction). The locations of 27 remote camera monitoring stations have remained the same throughout the construction phase as those reported in the IAAC 2022/2023 Annual Report (Year 2, Figure 1). However, CAM-2b was temporarily moved approximately 275 m east along Elbow River (CAM-2c) to accommodate construction activities along Elbow River side channel during summer 2024 but moved back to original location by fall 2024.

Cameras were deployed to maximize the probability of animal detection (habitat use, movement) in the Project Development Area (PDA) and LAA by installing them on wildlife and/or human trails, where possible. The cameras were installed on trees or fence posts in steel security enclosures, using swivels, lag bolts and cable locks, and were approximately 1.0 -1.5 m above ground with an unobstructed view of targeted field of view (e.g., wildlife trail). Remote cameras were set to high sensitivity to take five pictures per trigger with no delay between triggers. The location of each camera was recorded as well as surrounding vegetation, aspect, height, and presence of wildlife sign, including trails, tracks, and scat. Maintenance visits to clear vegetation around cameras, collect data and assess functionality (e.g., battery, memory cards, locks, trigger function) were completed approximately every three to four months.



Sources: Base Data - Government of Canada. Thematic Data - Government of Alberta

Disclaimer: This map is for illustrative purposes to support this Stantec project; questions can be directed to the issuing agency.
10/22/2025

Stantec

ALBERTA TRANSPORTATION SPRINGBANK OFF-STREAM RESERVOIR PROJECT

Remote Camera Monitoring Stations
2024-2025 Construction

Figure 1

2.2 Data Analysis

All images collected during the 2024/2025 construction period were reviewed and classified to identify wildlife species using Timelapse version 2.3.0.9 (Greenberg 2021). Each image was manually classified by experienced observers to determine wildlife species as well as age (e.g., adult, juvenile, calf/fawn) and sex class when possible. False triggers (images without an animal present) (e.g., wind moving a tree branch) and construction equipment and/or vehicles were not included in the data analyses.

Wildlife observations were compiled into independent detection events, which were defined as any image or series of images of each species (individual animal or group of animals) occurring greater than two minutes after the last image of the same species (ABMI 2024). Other domestic livestock (i.e., cows, horses) as well as humans (e.g., hiker, hunter, dog walkers, construction personnel) were recorded as events but not analyzed further.

Some of the remote cameras malfunctioned due to battery failure, which reduced the number of operational days at certain monitoring stations. However, images were retained for analysis if there was a minimum of 30 monitoring days at a monitoring station within each seasonal period, based on Kays et al. (2020) who reported detection rates stabilized between three to five weeks for most species and around 30 days for common wildlife species. Otherwise, the data were omitted for camera monitoring stations with less than 30 days of images during a seasonal period.

Naïve occupancy, defined as the proportion of sites with at least one species detection (Mackenzie et al. 2002, 2006) was calculated. In addition, a relative abundance index (i.e., photographic rate) was calculated by summing the count for each species over all independent events and dividing by the number of days the camera was operational and calculated as the number of detections per 100 camera-days (Palmer et al. 2018, Burton et al. 2021, Ferretti et al. 2023). Photographic rates (detections/100 camera-days) were calculated for all focal wildlife species detected within each season to account for potential seasonal differences in detection rates (Kays et al. 2020) including 95% confidence intervals using non-parametric bootstrapping (Palmer et al. 2018, Ferretti et al. 2023). Specifically, this annual report includes an analysis of photographic rates for all four seasons including spring (April 1 to May 31), summer, (June 1 to August 31), fall (September 1 to November 30) and winter (December 1 to March 31).

A comparison of photographic rates between pre-construction and three annual construction periods was limited to fall and winter because there were no spring and summer pre-construction remote camera data collected during 2021 for comparison. The non-parametric Friedman test was used to determine if there were significant differences ($P < 0.05$) between relative abundance estimates (photographic rates) calculated for four time periods including 2021 pre-construction, 2022-2023 construction, 2023-2024 and 2024-2025 construction. Kendall's W was used as a measure of effect size based on Cohens guidelines: <0.1 (trivial effect), 0.1 - < 0.3 (small effect), 0.3 - < 0.5 (moderate effect) and ≥ 0.5 (large effect). The Friedman test was used because the remote cameras were considered repeated measures and dependent samples. The construction phases (time periods) were considered the treatment groups (Year-Phase). The Friedman test requires a balanced design; and therefore, only those remote cameras that were operational across all four time periods were used in the analysis, which resulted in a reduced sample size of n=17 (fall) and n=20 (winter). The Friedman test was used to determine significant

differences in photographic rates for the three most abundant focal species including elk, white-tailed deer and coyote. If the Friedman test indicated a significant difference among the four time periods, Wilcoxon pair-wise comparisons were used to determine which groups (Year-Phase) differed ($P<0.05$). Statistical tests were completed using R version 4.1.3 (R Core Team 2022).

Only medium to large terrestrial mammals were included in the analysis of photographic rates. All other wildlife observations detected by remote cameras were recorded as incidentals (e.g., birds, raptors, skunk) and not included in the analysis of photographic rates. Mean elk group size was estimated for each season using the total number of elk observed at each camera station divided by the number of elk independent events.

3 Results

3.1 Survey Effort

Twenty-seven remote cameras were monitored in the LAA during the 2024-2025 construction period (April 1, 2024 to March 31, 2025). Construction activities that had potential to result in sensory disturbance (e.g., noise, artificial light) and wildlife displacement occurred throughout the Project Construction Area during the 2024-2025 monitoring period. Specifically, earthworks (e.g., topsoil stripping and excavation) were completed at major Project components (e.g., diversion inlet structure along Elbow River, diversional channel and dam) as well as borrow pits during between June and December 2024. Civil works were focused on Hwy 22 bridge and Township Road 242 bridge and structural construction activities continued at the diversion structure (rip-rap installation), low-level outlet, grade control structure, auxiliary spillway and emergency spillway, which occurred throughout the year including winter. Section 4.1 of the IAAC 2024/2025 Annual Report provides a detailed description of construction activities.

As stated previously, some of the remote cameras malfunctioned (e.g., battery failure) during the 2024-2025 construction period, which resulted in reduced seasonal survey effort at specific monitoring stations. All 27 (100%) remote cameras were operational during the entire 61-day spring monitoring period (Table 1). During summer, 26 of 27 remote cameras (96.3%) were operational during the 92-day monitoring period with one camera operational for 70 days. During fall, 24 of 27 cameras (88.9%) were operational for the 91-day monitoring period with three remaining cameras operational for 86, 74 and 61 days. During the winter monitoring period, 25 of 27 cameras (92.6%) remained operational, as two units malfunctioned and failed to collect data. Of the 25 operational cameras, 22 functioned continuously throughout the 121-day monitoring period. The remaining three were active for 77, 64, and 48 days, respectively (Table 1).

Remote cameras detected 9,245 independent events over 8,992 camera-days across all four seasons during the 2024-2025 construction period (April 1, 2024 to March 31, 2025) (Table 1). Of those, 89.2% of total detections were comprised of three species, including elk (43%), white-tailed deer (*Odocoileus virginianus*) (35.2%), and coyote (11%). Other focal wildlife species detected included mule deer (*Odocoileus hemionus*) (3.6%) as well as unidentified deer (*Odocoileus* spp.) red fox, moose (*Alces alces*), black bear (*Ursus americanus*), and cougar (*Puma concolor*) each comprising less than 1% of independent events. The remainder of independent events included other wildlife (2.9%) such as birds and small mammals (e.g., white-tailed jackrabbit [*Lepus townsendii*]), humans including vehicles and construction equipment (1.5%), cows (0.3%), as well as unknown (unidentified) animals (0.7%).

Table 1 Summary of Seasonal Sampling Effort and Number of Independent Events Detected during 2024-2025 Construction

Season	Number of Cameras Operational[1]	Total Camera-Days[2]	Number of Independent Events[3]
Spring (April 1 to May 31)	27 (27)	1,624	2,052
Summer (June 1 to August 31)	27 (26)	2,385	4,282
Fall (September 1 to November 30)	24 (21)	2,132	1,488
Winter (December 1 to March 31)	25 (22)	2,851	1,423
Total		**8,992**	**9,245**

Notes:

1 Number of remote cameras operational for a minimum of 30 days in each season. Number in brackets represents the number of camera operational for the entire season (i.e., with no malfunctions).

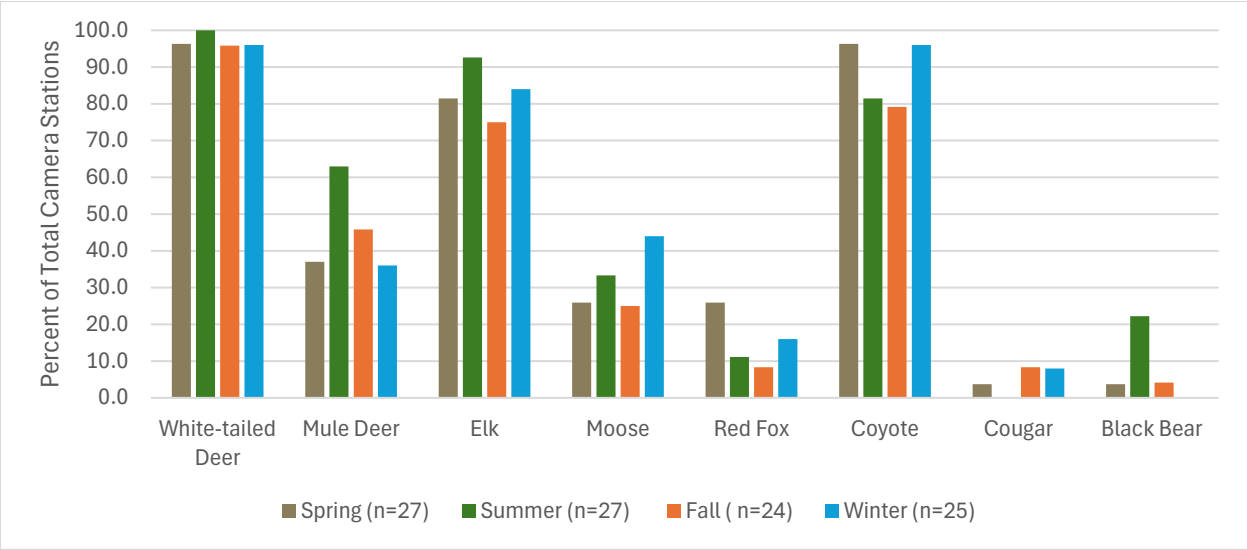
2 Total number of days cameras were active and operational (i.e. summed across cameras).

3 Total number of independent events (detections) defined as any image or series of images of each species (individual animal or group of animals) occurring greater than two minutes after the last image of the same species.

3.2 Seasonal Naïve Occupancy

White-tailed deer were detected at more than 95% of remote camera stations during all seasons (Figure 2). Elk were detected at 82% of the camera stations during spring, with naïve occupancy peaking at 93% during summer (Figure 2). Elk naïve occupancy declined slightly during fall (75%) with occupancy increasing again during winter (84%) (Figure 2). Mule deer, moose and black bear naïve occupancy was also highest during summer compared to other seasons. Naïve occupancy for coyote was relatively high during spring and winter (96%), with relatively lower occupancy during summer (82%) and fall (79%) (Figure 2). Similar to other years, cougar was detected during all seasons except summer; however, naïve occupancy was low (<10%) compared to other species (Figure 2).

Figure 2 *Naïve Occupancy Estimates for Focal Wildlife Species Detected during the Remote Camera Monitoring Program: 2024-2025 Construction*



Note: n = number of remote cameras operational during each season.

3.3 Relative Abundance and Distribution

3.3.1 Summary of Seasonal Photographic Rates

Eight focal wildlife species were detected during the 2024-2025 construction period (Table 2). Overall, elk had the highest relative abundance (photographic rate) across all seasons followed by white-tailed deer and coyote (Table 2). Similar to previous years, elk relative abundance was highest during spring and summer with relatively lower photographic rates during fall and winter (Table 2). Similarly, white-tailed deer and mule deer photographic rates were also relatively higher during spring and summer compared to fall and winter. Coyote photographic rates were highest during spring and winter compared to other seasons. Red fox was detected during all seasons; however, photographic rates were relatively higher during spring compared to other seasons (Table 2). Although black bear was detected during spring and fall, they were detected most frequently during summer. Cougar was detected infrequently during spring, fall and winter, with no detections during summer (Table 2).

Table 2 Relative Abundance of Wildlife Species by Season during 2024-2025 Construction

Season[1]	Photographic Rate (Number of Detections/100 Camera-Days)[2, 3]								
	Black Bear	**Cougar**	**Coyote**	**Red Fox**	**Moose**	**Elk**	**Mule Deer**	**White-tailed Deer**	**Unidentified Deer**
Spring 2024 (n=27)	0.06 (0-0.2)	0.06 (0-0.18	16.6 (11.0-22.9)	0.7 (0.2-1.3)	0.8 (0.4-1.3)	215.8 (123.0-332.0)	7.4 (2.7-13.5)	72.0 (43.9-110.0)	0.6 (0.1-1.1)
Summer 2024 (n=27)	0.8 (0.1-2.0)	0.0	10.5 (6.5-13.6)	0.2 (0-0.4)	1.2 (0.4-2.3)	309.9 (118.0-435.0	8.3 (3.1-15.5)	74.4 (55.9-91.0)	1.7 (1.1-2.4)
Fall 2024 (n=24)	0.05 (0-0.1	0.1 (0-0.24)	9.2 (4.6-11.9)	0.2 (0-0.6)	1.4 (0.2-2.7)	68.1 (29.3-119.0)	6.5 (2.6-11.5)	44.6 (30.8-54.6)	0.7 (0.3-1.1)
Winter 2024-2025 (n=25)	N/A	0.1 (0-0.17)	15.9 (10.0-28.8)	0.2 (0.03-0.4)	1.4 (0.4-2.4)	91.7 (47.3-152.0)	2.9 (0.5-2.0)	35.6 (22.0-53.2)	0.4 (0.2-0.9)

Notes:

[1] n=number of remote cameras operational during each season

[2] Photographic rates represent the number of individuals summed across all independent events/100 camera-days

N/A - not applicable

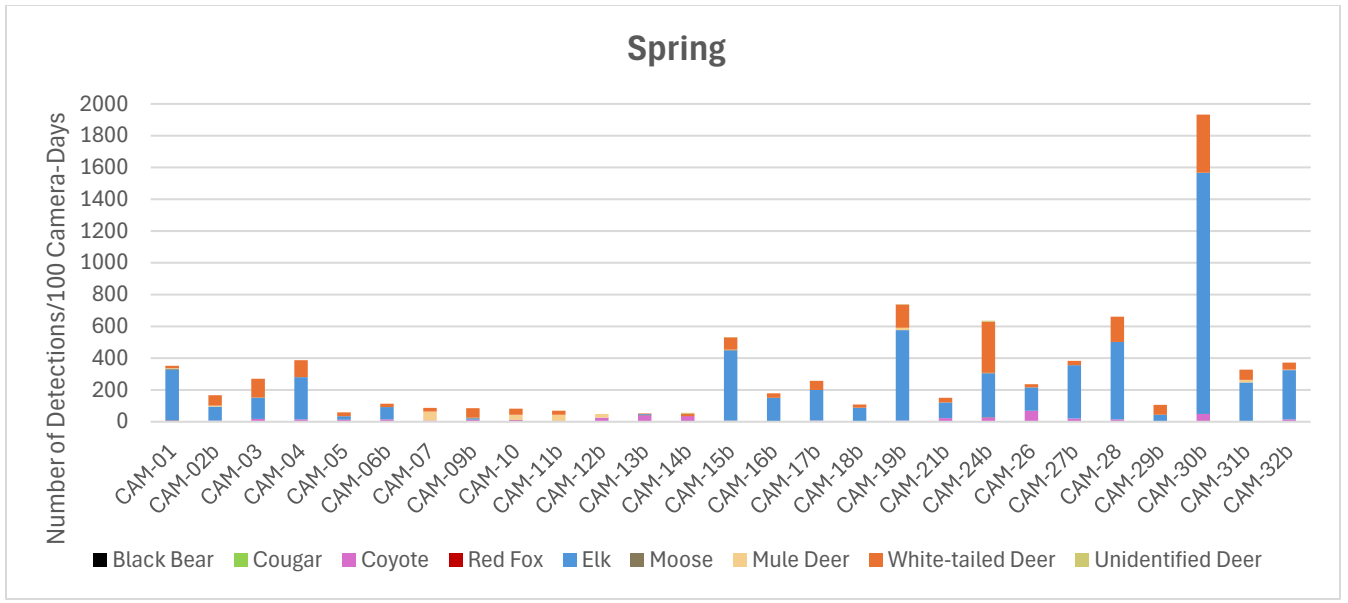
[3] Numbers in brackets represent 95% confidence intervals

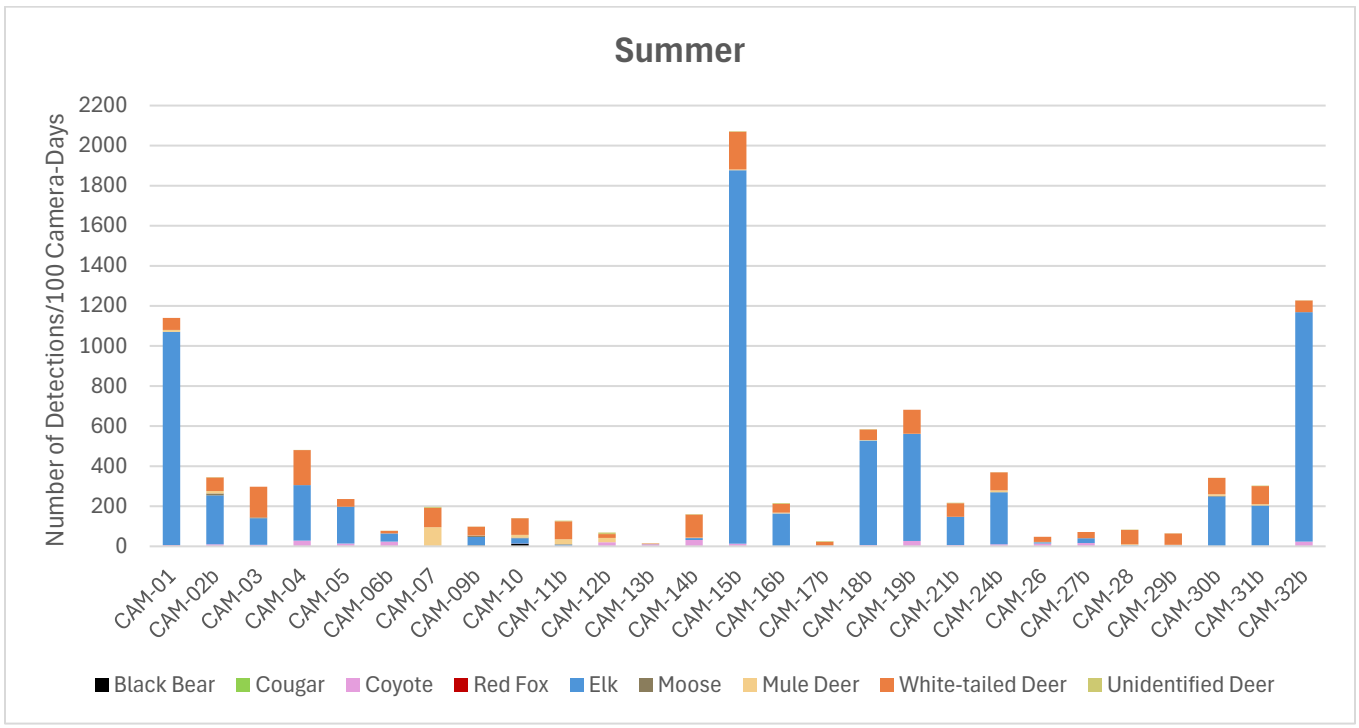
3.3.2 Summary of Photographic Rates by Season and Remote Camera Monitoring Station

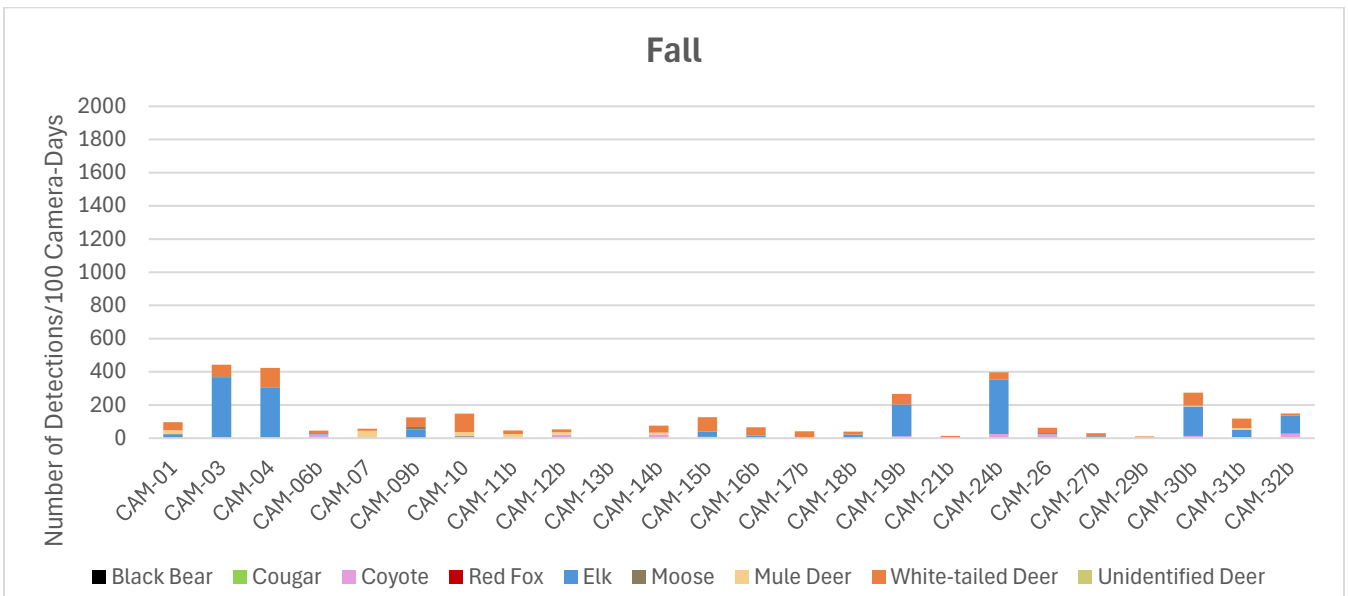
3.3.2.1 Spring

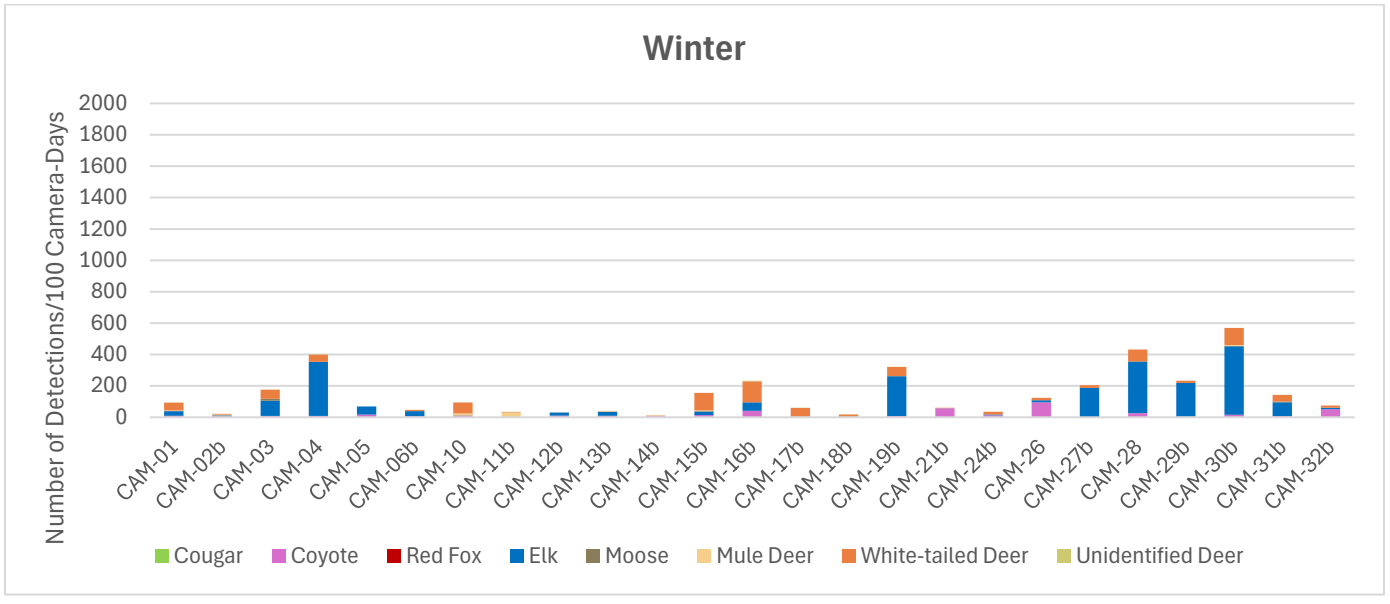
During spring, photographic rates of white-tailed deer and elk were highest at CAM-30b located east of the large borrow pit and dam embankment as well as at CAM-19b located northwest of the diversion channel. Both species were also detected at high rates at CAM-24b north of the Elbow River and CAM-28 east of Hwy 22 (Figure 3). Elk were detected occasionally along Elbow River (CAM-01 and CAM-2b) but infrequently near diversion channel construction activities west of Hwy 22 (CAM-12, CAM-13b, CAM-14b) (Figure 3). During spring, cougar and black bear were detected along Elbow River at CAM-10 and CAM-9b (Appendix A, Photo A.1, A.2), respectively. Red fox photographic rates were relatively higher during spring compared to other seasons, where they were detected most frequently along Elbow River at CAM-01 and CAM-11b (Figure 3).

Figure 3 *Relative Abundance (Number of Detections/100 Camera-Days) of Wildlife Species by Season at each Remote Camera Station during 2024-2025 Construction*









3.3.2.2 Summer

During summer, photographic rates for black bear and ungulates (e.g., elk, moose, mule deer) generally increased whereas coyote was detected less frequently compared to spring (Table 2). Although elk and white-tailed deer were detected less frequently at CAM-30b compared to spring, there was a substantial increase in elk activity at CAM-01 during summer along Elbow River, and CAM-15b east of Hwy 22 near the diversion channel construction activity and CAM-32b south of Springbank Road (Figure 3). CAM-01 detected mixed groups of elk including calves moving north and south at this location whereas CAM-15b and CAM-32b detected mixed groups of elk travelling and feeding in willow shrublands and grasslands.

Female elk and their calves (young of the year) were detected at 19 of 26 (73%) remote camera stations during late May to early July but were most frequently detected at CAM-15b, CAM-01, CAM-28 and CAM-32b. Female elk and their calves were frequently detected at CAM-15b near the diversion channel construction activities (Appendix A, Photo A.3) as well as at stations farther (> 500 m) from construction activities at CAM-28 (Appendix A, Photo A.4).

During summer, black bear was detected along Elbow River at CAM-01, CAM-9b and CAM-10 as well as at monitoring stations near the diversion channel construction activities (CAM-14b) and low level outlet (CAM-24b; Appendix A, Photo A.5)(Figure 3).

3.3.2.3 Fall

During fall, photographic rates for elk and white-tailed deer decreased compared to spring and summer, especially at CAM-01, CAM-15b, CAM-30b and CAM-32b (Table 2; Figure 3, Appendix A, Photo A.6)). Elk herds were detected most frequently at CAM-03, CAM-04, and CAM-24b during fall 2024 (Figure 3). Mule deer photographic rates decreased slightly during fall (Table 2) but were detected at similar locations as spring and summer along Elbow River (CAM-07, CAM-10,CAM-11b) and CAM-12b and CAM-14b west of Hwy 22 near diversion channel construction and haying activities (Figure 3; Appendix A, Photo A.7). Black bear was detected along Elbow River during fall at CAM-10.

3.3.2.4 Winter

During winter, photographic rates for white-tailed deer and mule deer were relatively low compared to other seasons (Table 2). Elk photographic rates increased during winter compared to fall but were still lower compared to the relatively higher rates detected during spring and summer (Table 2; Figure 3). Except for CAM-01 and CAM-2c, elk were not detected along Elbow River during winter but rather used upland areas (grassland/shrublands) most notably at CAM-04, CAM-19b, CAM-28, and CAM-30b (Figure 3). Although elk photographic rates were relatively higher at CAM-30b compared to other camera locations (Figure 3) when they were detected travelling through the adjacent aspen forest and feeding in grassland/tame pasture elk relative abundance during the 2024-2025 winter was substantially lower compared to other years (e.g., 2023/2024 Annual Report). Overall, coyote photographic rates increased during winter (Table 2) with notable increases in upland areas near the dam embankment at CAM-21b (Appendix A, Photo A.8) as well as south of Springbank Road near CAM-26 and CAM-32b (Figure 3). Moose photographic rates also increased during winter (Table 2), especially in areas that contained

willow shrublands (e.g., CAM-03) (Appendix A, Photo A.9). Although red fox was detected less frequently during winter compared to spring, they continued to use areas along Elbow River (e.g., CAM-01, CAM-11b; Appendix A. Photo A.10).

Mean group size of elk was 4.0, 3.1 and 3.1 during spring, summer and fall respectively. During winter, average groups size increased to 9.2; however, there was considerable variation among cameras (Table 3). Overall, the largest elk group sizes (> 80 individuals) within all seasons were detected at CAM-03, CAM-04, CAM-30b wand CAM-32b where there are large open upland areas that provide preferred foraging opportunities (willow shrubland and grasslands). The maximum elk group size was also large at CAM-01 during summer (116) where elk appear to move along Elbow River.

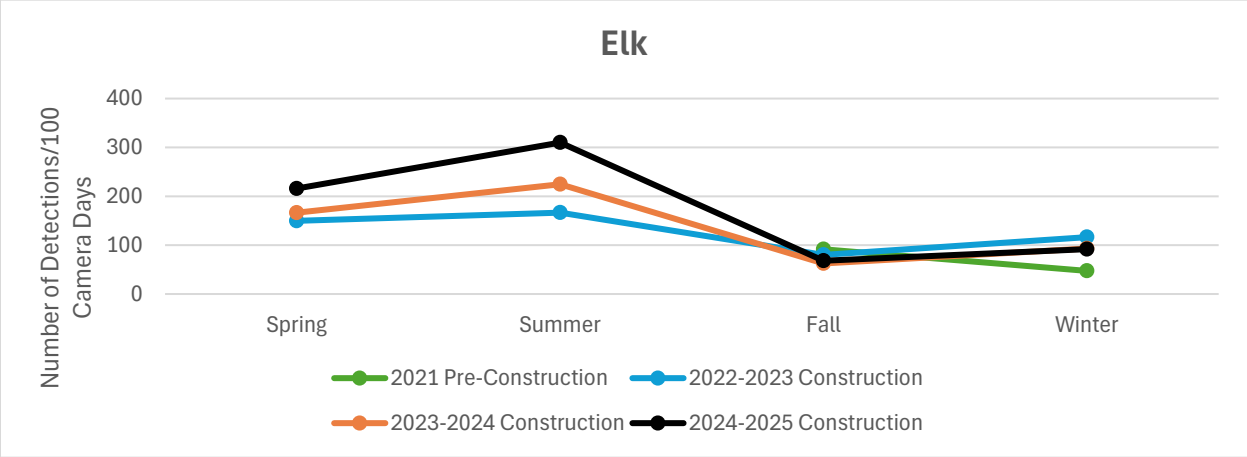
Table 3 Summary of Elk Group Size by Season during 2024-2025 Construction

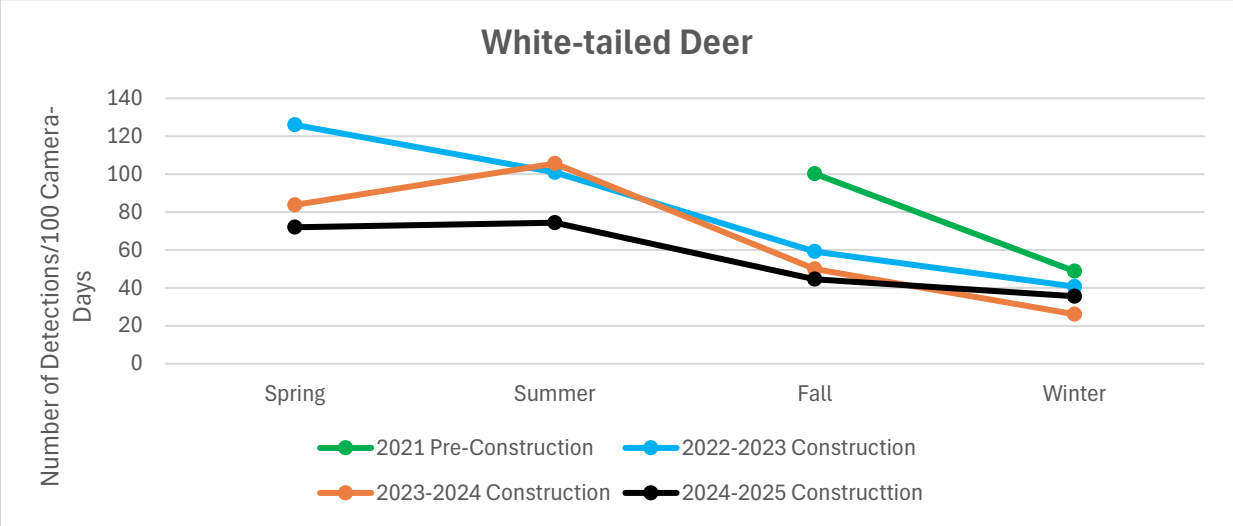
	Number of Groups Detected (Independent Events)	**Number of Individuals Detected**	**Mean Group Size (±1SD)**	**Range (min-max)**
Spring 2024	867	3,504	4.0 (6.9)	1-77
Summer 2024	2,365	7,391	3.1 (6.0)	1-116
Fall 2024	470	1,451	3.1 (6.5)	1-90
Winter 2024-2025	285	2,613	9.2 (16.4)	1-108

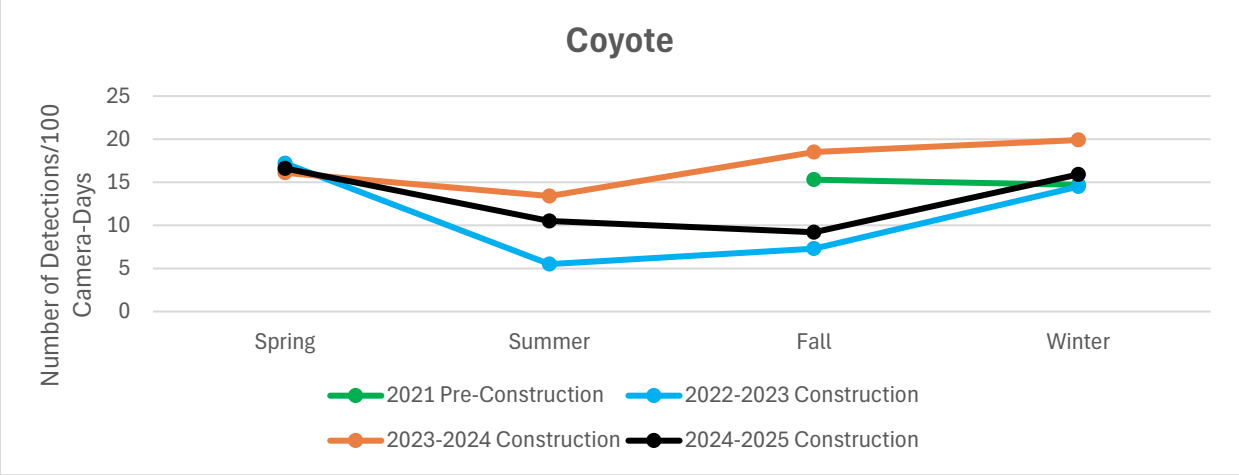
3.4 Seasonal Trends in Photographic Rates during Pre-Construction and Construction

A comparison of seasonal trends in relative abundance (photographic rates) for elk, white-tailed deer and coyote during one year of pre-construction and three years of construction are provided in Figure 4. Overall, photographic rates during the 2021 pre-construction period indicated a relative decrease in winter abundance for both elk and white-tailed deer whereas coyote abundance was similar between fall and winter during the 2021 pre-construction period (Figure 4). Elk photographic rates during the 2024/2025 reporting year increased during spring and summer compared to previous construction monitoring years. Although elk photographic rates decreased during fall and winter construction periods compared to spring and summer, fall photographic rates have remained similar to pre-construction estimates whereas winter photographic rates have increased compared to pre-construction (Figure 4). White-tailed deer photographic rates during the 2024/2025 reporting year were lower during spring and summer compared to previous construction monitoring years. Although white-tailed deer fall and winter photographic rates were lower compared to 2021 preconstruction, they have remained similar during each reporting year (Figure 4). Coyote relative abundance has shown more variability with fall photographic rates higher for one reporting year (2023/2024) but lower during two other years (2022/2023 and 2024/2025) compared to pre-construction. Overall, coyote photographic rates have shown a relative increase during winter with the 2024/2025 relative abundance estimates similar to pre-construction levels (Figure 4).

Figure 4 *Seasonal Trends in Relative Abundance (Number of Detections/100 Camera-Days) for Three Focal Wildlife Species Monitored during Pre-Construction and Construction Periods*







3.4.1 Comparison of Fall and Winter Photographic Rates by Project Phase

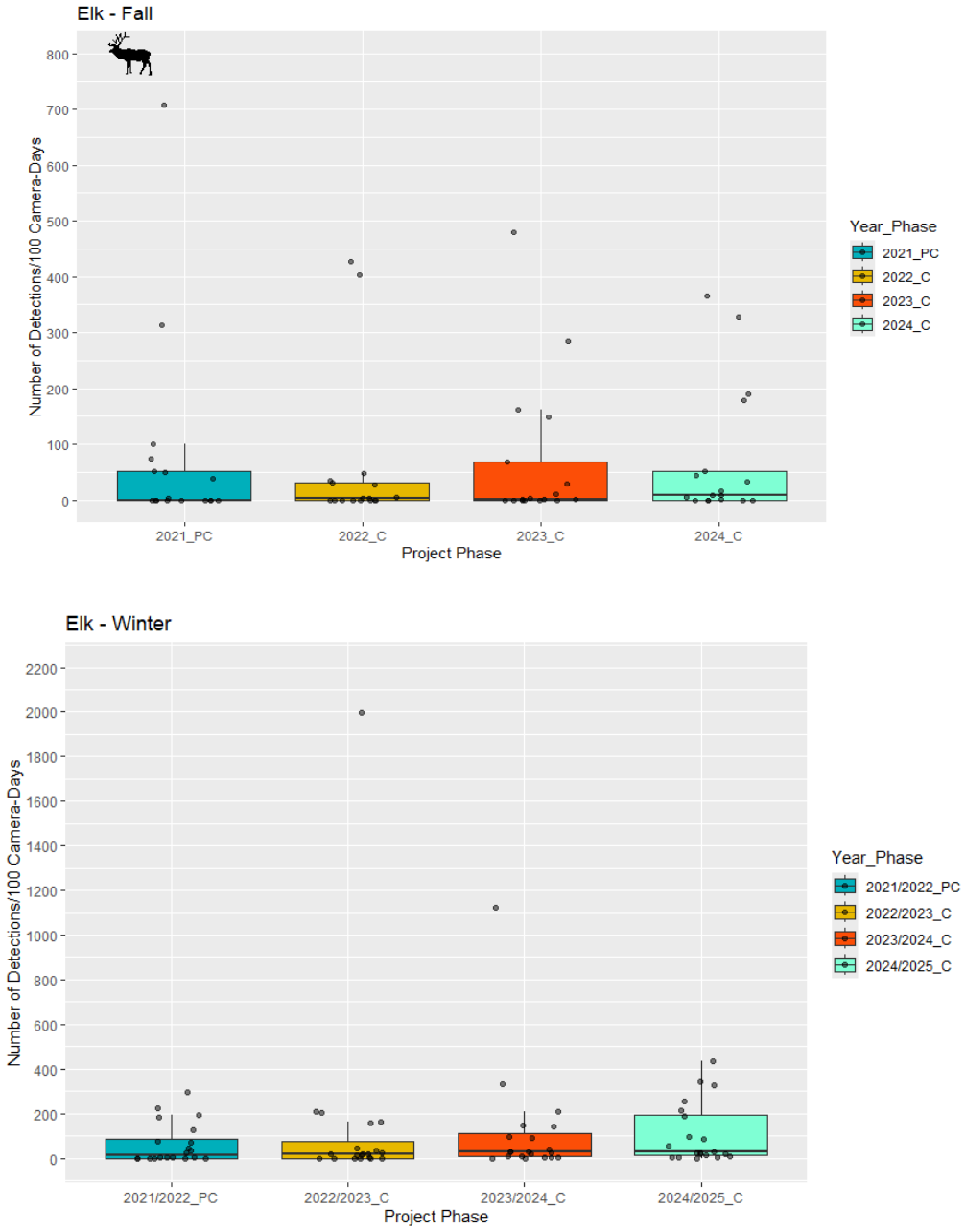
3.4.1.1 Fall

Based on the non-parametric Friedman test, a comparison of photographic rates before and after construction indicated there was no significant difference in fall photographic rates for elk between 2021 pre-construction and, 2022, 2023 and 2024 construction periods (P=0.469; Figure 5). The magnitude of the effect sizes (Kendall W) was <0.1 indicating the differences were very small (trivial). Although photographic rates for white-tailed deer were lower and varied more widely during 2021 pre-construction compared all other construction years, there was no significant difference in fall photographic rates between 2021 pre-construction and any of the construction phase-years (P=0.9; Figure 6). The photographic rate for coyote declined during the 2022-2023 construction period compared to 2021 pre-construction. However, coyote detections increased during 2023-2024 construction to photographic rates slightly above 2021 pre-construction levels but then declined again during 2024-2025. Overall, there was annual variation in coyote photographic rates during fall, however, the differences were not significant among project phase-years (P= 0.1; effect size = 0.124 [small effect]; Figure 7).

3.4.1.2 Winter

During winter, although elk relative abundance increased during construction compared to pre-construction, there was no significant difference in elk photographic rates between pre-construction and construction phase-years (P=0.06; effect size = 0.124) (Figure 5). White-tailed deer abundance also increased slightly during winter construction, however, there was no significant difference in winter photographic rates (P=0.255; effect size = 0.07 [trivial effect]; Figure 6) between pre-construction and construction phases. Although coyote photographic rates declined during winter 2024-2025 relative to the previous year, there was no significant difference between pre-construction and construction phases (P=0.1; effect size = 0.105 or small effect; Figure 7).

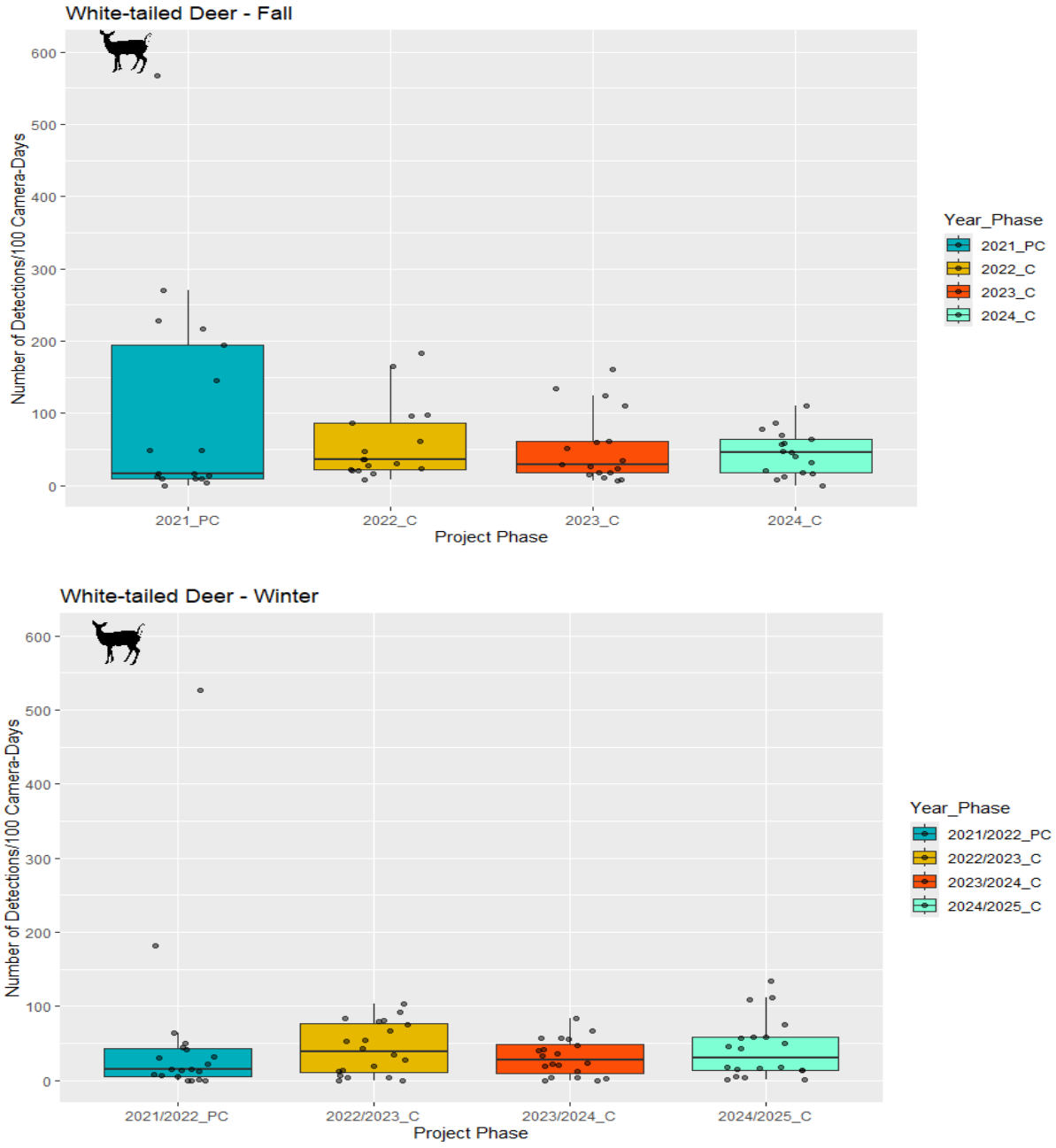
Figure 5 *Fall and Winter Photographic Rates for Elk during Pre-Construction (PC) and Construction (C) – Springbank Off-Stream Reservoir Project*



Note:

The bottom and top of the boxplot represents the 25th and 75th percentiles, the black line represents the median (middle) value, and the vertical bars represent the highest and lowest values excluding outliers. Points above or below vertical bars are outliers.

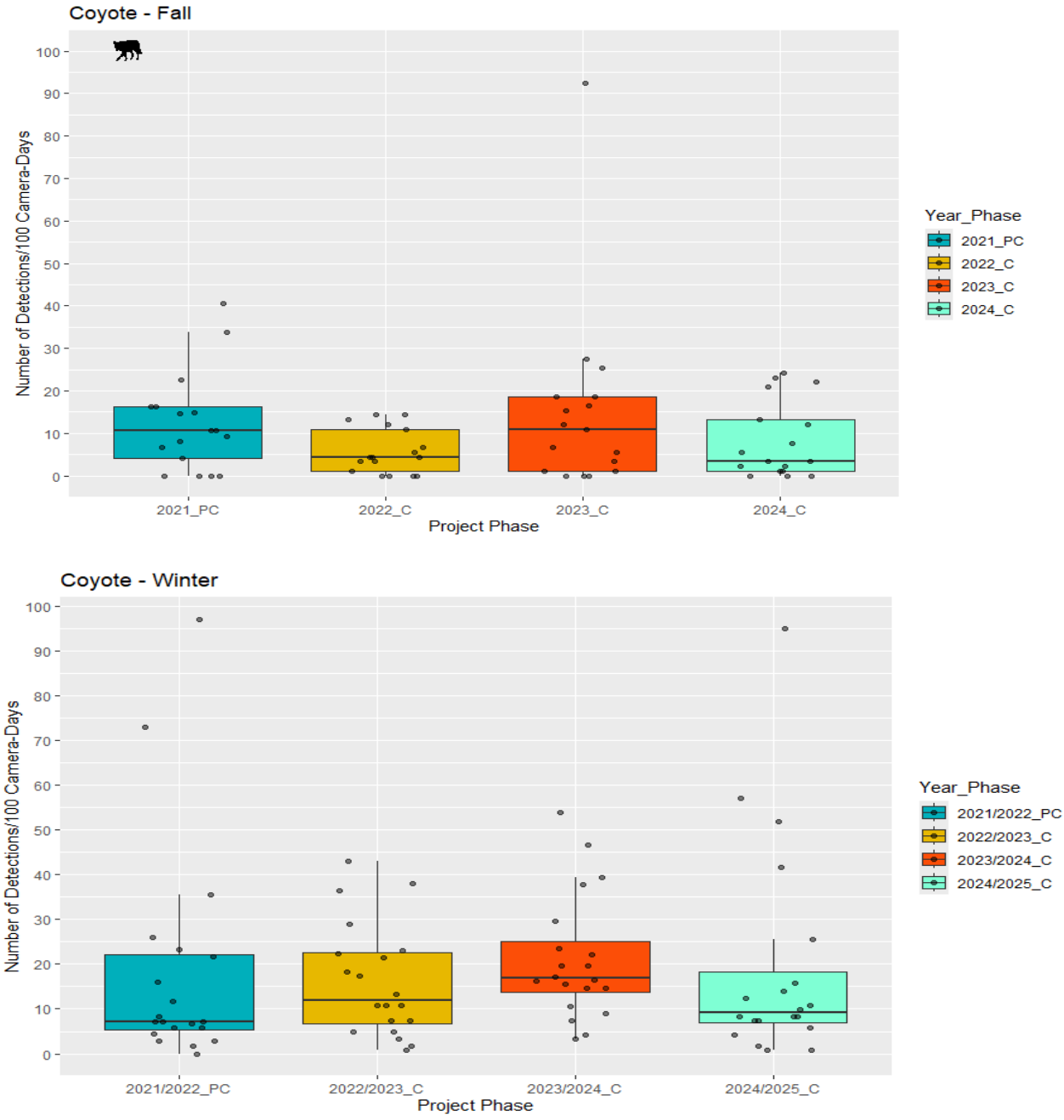
Figure 6 *Fall and Winter Photographic Rates for White-tailed Deer during Pre-Construction (PC) and Construction (C) – Springbank Off-Stream Reservoir Project*



Note:

The bottom and top of the boxplot represents the 25th and 75th percentiles, the black line represents the median (middle) value, and the vertical bars represent the highest and lowest values excluding outliers. Points above or below vertical bars are outliers.

Figure 7 *Fall and Winter Photographic Rates for Coyote during Pre-Construction (PC) and Construction (C) – Springbank Off-Stream Reservoir Project*



Note:

The bottom and top of the boxplot represents the 25th and 75th percentiles, the black line represents the median (middle) value, and the vertical bars represent the highest and lowest values excluding outliers. Points above or below vertical bars are outliers.

4 Discussion

Overall, the relatively high seasonal (naïve) occupancy estimates for white-tailed deer (>95%), elk (74-92%) and coyote (79-96%) indicated these three focal wildlife species remained relatively well distributed throughout the LAA during the 2024-2025 construction period. Similar to other years, there was seasonal variation in naïve occupancy for each species where white-tailed deer and elk were detected at the highest number of remote camera stations during spring and summer with lower occupancy during fall and winter and coyote occupancy was highest during spring and winter and relatively lower during spring and summer.

The highest photographic rates for elk and white-tailed deer occurred at CAM15b, CAM-19b, CAM-24b, CAM-28, CAM-30b and CAM-32b during spring and summer. Relatively high photographic rates at these monitoring stations is consistent with previous monitoring years (TEC 2024) and likely reflect the preferred forage and cover present at these locations that are varying distances from construction activities. However, photographic rates of white-tailed deer and elk at CAM-30b were lower during the 2024-2025 winter compared to other years. There were no construction activities near the borrow pit located to the west of CAM-30b during winter. In addition, other activities that did occur over the winter months such as rip-rap placement along the approach channel and exit channel of the low-level outlet were more than 500 m away. Therefore, it is unlikely reduced ungulate use at this monitoring station was due to potential sensory disturbance associated with construction activities and likely reflect other (unknown) factors.

Although elk were not detected frequently along Elbow River, elk photographic rates during summer at CAM-01 along Elbow River were relatively high compared to other seasons. The relatively high number of elk detected at this monitoring station was similar to the 2023/2024 construction period. The relatively high percentage of cameras that detected elk calves (young of the year) (73%) between late May and early July indicated elk continued to use the LAA during the calf rearing period while construction activities occurred.

Similar to naïve occupancy estimates, elk photographic rates (relative abundance) increased in the LAA during spring and summer and declined during fall and winter. Although there were fewer elk detected during winter, elk group sizes were larger during winter compared to other seasons, which is consistent with grouping behaviour reported in other studies (Hebblewhite and Pletscher 2002, Flowers 2019).

Although winter coyote photographic rates were lower during 2024-2025 compared to previous construction years, there was no significant difference among construction years or 2021 pre-construction. Similarly, photographic rates of elk and white-tailed deer have varied by season and project phase, however, a comparison of relative abundance indicated the differences were not statistically significant.

Overall, the number of focal wildlife species detected (species richness) during the 2024-2025 construction period (8) was similar to 2021 pre-construction period (7), 2022-2023 (8) and 2023-2024 (9) construction periods. Overall, eight wildlife species including cougar, black bear, coyote, red fox, elk,

moose, white-tailed deer and mule deer continued to use the LAA. Although grizzly bear was detected along Elbow River during the 2016 pre-construction monitoring program (Stantec 2018), grizzly bear was not detected during the 2021 pre-construction monitoring period or during any of the construction monitoring years including 2024-2025. Wolf was detected for the first time during the previous monitoring year (2023-2024) but was detected during 2024-2025.

4.1 Data Limitations

The distribution and total number of remote cameras deployed to monitor wildlife use in the LAA during 2024-2025 construction is considered adequate to determine trends in focal wildlife species annual naïve occupancy and relative abundance during project phases (Shannon et al. 2014). Although there was spatial and temporal (seasonal) variation in naive occupancy as well as estimates of relative abundance, there were no significant differences in species-specific photographic rates among years for elk, white-tailed deer or elk.

However, the 2021 pre-construction period was limited to fall and winter, which will continue to limit the ability to detect changes in wildlife relative abundance during other seasons. In addition, the before-after (BA) study design does not account for temporal changes due to other confounding factors, which hampers interpretation of potential changes in wildlife use (Morrison et al. 2010). Nonetheless, the trends over three years of construction activities indicate focal wildlife species (i.e., white-tailed deer, elk and coyote) continue to use the LAA and other large carnivores (e.g., cougar, black bear) have also been detected albeit less frequently.

The distribution of remote camera monitoring stations identified where elk and white-tailed deer have been detected in the LAA, however, the spacing of the cameras does not allow identification of specific movement paths between or among survey stations. Therefore, it is difficult to determine daily/seasonal movement patterns and whether any of the existing construction activities are creating potential physical or sensory barriers to movement. However, because elk and white-tailed deer were detected at a relatively high proportion of total remote camera stations in the LAA (>70%, > 90% respectively), this suggests elk and white-tailed deer were able to access seasonal habitats within the LAA as evidenced by detections both north and south of the diversion channel, low-level outlet, dam embankment construction activities as well as along Elbow River at CAM-01.

Photographic rates of species should be interpreted with caution because they do not account for probability of detection (Burton et al. 2015, Caravaggi et al. 2020). However, the relatively open habitat conditions (agricultural land, grassland, open shrub) and camera placement along trails provided relatively consistent conditions across the majority of camera stations, which would reduce potential bias in detectability. Nonetheless, it is recognized there are species-specific differences in home range sizes, behaviour and movement patterns that can affect relative abundance indices (Burton et al. 2015, Broadley et al. 2019). Overall, photographic rates were considered adequate to determine species occurrence at multiple cameras sites during the same monitoring period and study area (Muhly et al. 2011).

4.2 Future Monitoring

Overall, the results of the remote camera monitoring program during 2024-2025 indicated focal wildlife species continue to use the LAA during construction activities.

The remote camera monitoring program will continue to use the existing camera stations to provide monitoring results during 2025/2026 as the project transitions from construction to dry operations. Once reclamation activities have been completed, remote cameras that were moved out of the construction footprint in 2022 will be re-installed at pre-construction locations to monitor wildlife use during dry operations for the next three years. In addition, additional cameras will be considered to monitor wildlife response to wildlife-friendly fencing as fencing installation progresses. As the Project enters the dry operations phase, the remote camera monitoring results will be used to determine the effectiveness of mitigation measures designed to facilitate movement in the LAA by evaluating wildlife crossing success at permanent Project structures including Hwy 22 and Township Road 242 bridges over the diversion channel (i.e., underpasses), the diversion channel, dam embankment, low-level outlet and wildlife friendly fencing (see Key Question 2 Section 1.1). As monitoring continues over the next 3 years during dry operations, there will be opportunities to evaluate crossing success at Project structures in accordance with the WMMP but also quantitatively compare potential changes in photographic rates during all Project phases. Specifically, a modelling approach will be considered to account for seasonal and annual variation in photographic rates and/or occupancy using a generalized linear model that accounts for random effects (e.g. camera station) and offsets (camera-days) (Sollmann 2018, Klees van Bommel et al. 2022). Image recognition and classification software (e.g., MegaDetector [Microsoft Inc]) are also being explored to increase data processing efficiency.

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Appendices

Appendix A Photos

Photo A.1 Cougar detected at CAM-10b along Elbow River during spring (May) 2024



Photo A.2 Black bear detected at CAM-09b along Elbow River during spring (May) 2024



Photo A.3 Female elk and calf detected at CAM- 15b during summer (June) 2024



Photo A.4 Two female elk and their calves detected at CAM-28 during summer (June) 2024



Photo A.5 Cinnamon-colored black bear detected at CAM-24b near low-level outlet during summer (July) 2024

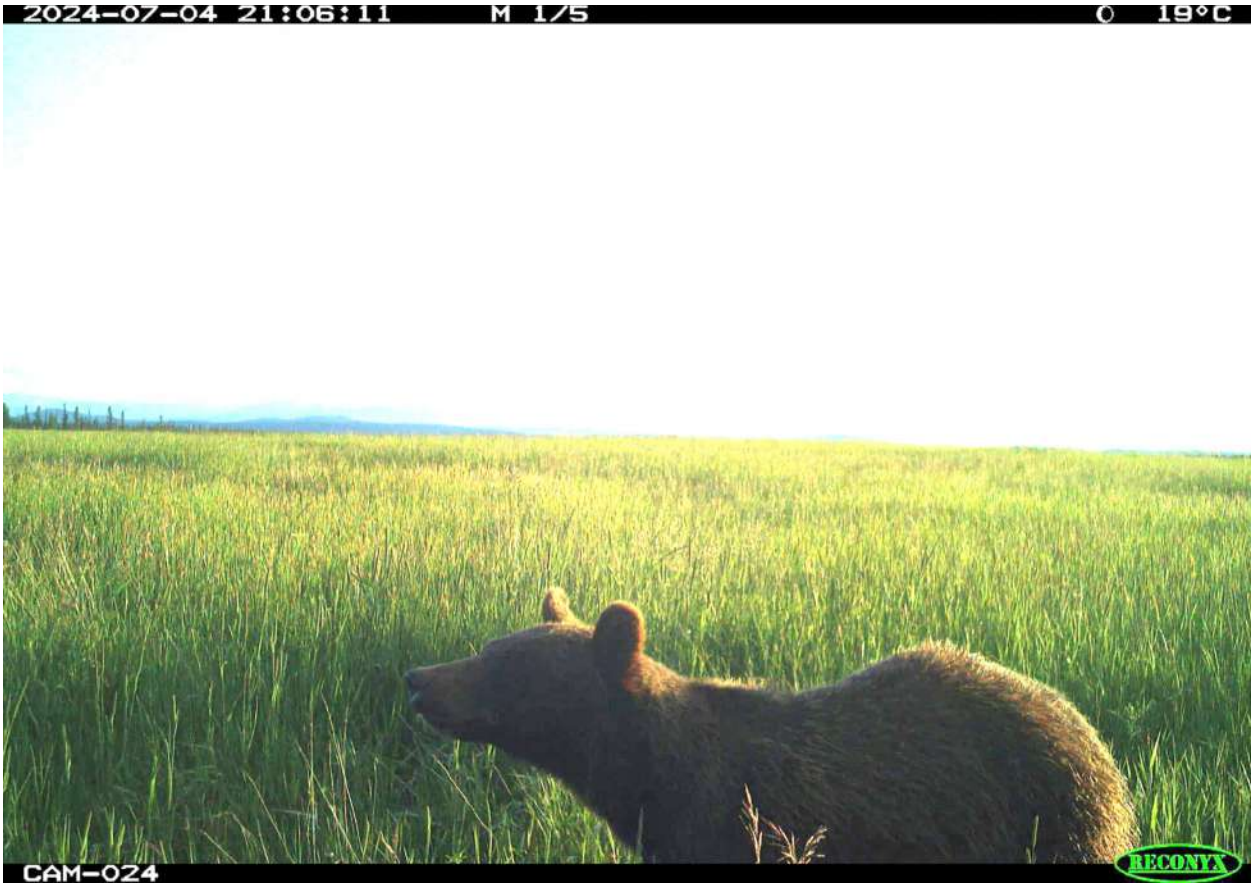


Photo A.6 White-tailed deer detected at CAM-30b during fall (October) 2024



Photo A.7 Mule deer detected at CAM-14b west of Hwy 22 near the diversion channel during fall (October) 2024



Photo A.8 Coyote detected at CAM-21b north of the dam embankment during winter (December) 2024



Photo A.9 *Cow moose detected at CAM-03 in willow shrublands east of Hwy 22 during winter (March) 2025*



Photo A.10 Red Fox detected at CAM-01 along Elbow River during winter (December) 2024



B.2
Groundwater

Springbank Off-Stream Reservoir Project
2025 Groundwater Monitoring Report

October 2025

Prepared for:
Alberta Transportation and Economic Corridors

Prepared by:
Stantec Consulting Ltd.

Project/File:
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Stantec

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Acronyms / Abbreviations

%	percent
<	less than
>	greater than
°C	degrees Celsius
3D CSM	three-dimensional conceptual site model
AD	absolute difference
AEPA	Alberta Environment and Protected Areas
Alberta Tier 1 Guidelines	Alberta Tier 1 Soil and Groundwater Remediation Guidelines
AWWID	Alberta Water Well Information Database
BGP	base of groundwater protection
BTEX	benzene, toluene, ethylbenzene, xylenes
CALA	Canadian Association for Laboratory Accreditation
CCME	Canadian Council of Ministers of the Environment
cfu	colony forming unit
CGDWQ	Guidelines for Canadian Drinking Water Quality
Cv	coefficient of variation
DEM	digital elevation model
DO	dissolved oxygen
DOC	dissolved organic carbon
E. Coli	Escherichia coli
EC	electrical conductivity
EIA	environmental impact assessment
GCDWQ	Guidelines for Canadian Drinking Water Quality
GWMP	Groundwater Monitoring Plan
HPC	heterotrophic plate counts
IAAC	Impact Assessment Agency of Canada
LAA	local assessment area
LTC	level, temperature and conductivity
m	metre

m ASL	metres above sea level
m BGL	metres below ground level
m/s	metres per second
m/year	metres per year
m^3/day	cubic metres per day
mg/L	milligrams per litre
mL	millilitre
mpn	most probable number
NRCB	Natural Resources Conservation Board
ORP	oxidation-reduction potential
PDA	Project development area
PS1	Parameter Suite 1
PS2	Parameter Suite 2
PS3	Parameter Suite 3
Q2	second quarter
QA/QC	quality assurance/quality control
RAA	regional assessment area
RPD	relative percent difference
SR1; the Project	Springbank Off-stream Reservoir Project
Stantec	Stantec Consulting Ltd.
TDR	Technical Data Report
TDS	total dissolved solids
TSS	total suspended solids
UCL	upper confidence limit
US EPA	United States Environmental Protection Agency
VWP	vibrating wire piezometer

1 Introduction

This document describes the activities completed and results of the Groundwater Monitoring Program for the Springbank Off-stream Reservoir Project (SR1; the Project) in 2024 and 2025. This scope of the Groundwater Monitoring Program is based on the Stantec Consulting Ltd. Groundwater Monitoring Plan (GWMP) for the Project (Stantec 2021) and covers the monitoring period between July 1, 2024 and June 30, 2025.

The GWMP provides a summary of the Project, the hydrogeological framework, the potential interactions between groundwater and the Project and mitigation measures identified to provide context for the plan. A summary of the hydrogeological setting of the Project is provided in previous annual reports including the 2023/2024 IAAC Annual Report (TEC 2024). The GWMP was developed using a tiered approach that considers the potential Project interactions that could lead to effects on groundwater resources, which vary depending upon the specific location within the Project area and the lifecycle phase. The timing and level of comprehensiveness involved in the GWMP vary accordingly. Monitoring results are compared to relevant water quality guidelines and trigger values established in the GWMP including quantitative control limits and temporal trend analyses to identify potential Project effects.

Should the GWMP results exceed groundwater quantity or quality triggers, a conceptual groundwater response plan is also included in the GWMP that describes the actions that would be taken.

2 Background

The Project consists of the construction and operation of an off-stream reservoir to divert and retain a portion of Elbow River flows during a flood. The diverted water will be released back to Elbow River in a controlled manner after the flows in Elbow River decrease sufficiently to accommodate the release of water from the reservoir. The off-stream reservoir will not hold a permanent pool of water.

2.1 Project Components

The primary Project components include:

- diversion structure on the main channel and floodplain of Elbow River
- a diversion channel to transport diverted floodwater from Elbow River to the off-stream reservoir
- a dam to temporarily retain the diverted floodwater in the reservoir
- a low-level outlet in the dam to return retained water through the existing unnamed creek and back to Elbow River when the operator determines conditions are appropriate

2.2 Construction and Groundwater Effects Mitigation

The primary Project components have now been constructed. Several construction activities with potential to affect either groundwater quality or quantity occurred during the current reporting period, including:

- the interception of the water course at SE15-24-4-W5M resulting in the ponding of water on the upgradient side with potential for increased infiltration/groundwater recharge upgradient and reduced infiltration and recharge downgradient
- dewatering areas where water pooled as a result of groundwater seeping into the construction area from the construction of the diversion channel (potential to decrease groundwater level) was ongoing at a number of locations throughout the current reporting period. Note that not all pumping was related to dewatering, as pumps at these locations were also used to pump water from precipitation or snowmelt.
- diversion of surface water and groundwater from dugouts until the fall of 2024. Dugouts were decommissioned starting in December 2024 and continued into early 2025. Backfilling of the dugouts is underway, with full reclamation scheduled for completion by fall 2025
- diversion of water from water wells for soil conditioning/compaction, equipment cleaning and dust control (potential to decrease groundwater level)
- dam construction (potential to increase pore pressures/groundwater levels)

The dewatering activities have the potential to affect groundwater levels in the vicinity of the activities; however, the water is being managed within the construction footprint and reinfiltrates into the subsurface through retention ponds or through silt bags.

The Project involves four lifecycle phases (baseline period, construction, dry operations and flood operations). The groundwater monitoring program results presented in this report covers two of these lifecycle phases: a portion of the pre-construction baseline period, and construction which are now nearing completion.

Construction dewatering of groundwater, where/when required, was done locally and according to the terms and conditions of licences issued by AEPA (where applicable and if required) and best management practices. Best management practices included, but are not limited to, the following:

- Water is discharged in a manner to avoid erosion using turbidity barriers, containment berms and settling ponds. Construction dewatering is done in accordance with the terms and conditions of *Water Act* approval and the federal *Fisheries Act* and *Canadian Navigable Waters Act*.
- Total suspended solids (TSS) levels are controlled using silt fences and turbidity barriers. TSS levels are monitored by carrying out frequent water quality testing.
- Construction dewatering is limited through construction planning.
- Existing water wells within the construction footprint have been decommissioned and plugged off to prevent groundwater contamination and additional wells within the reservoir footprint will be decommissioned prior to operation.
- Regional-scale effects on groundwater quantity can be mitigated by allowing seepage in the diversion channel (when it is dry) to infiltrate back into the subsurface, or flow back into Elbow River through existing surface water drainage pathways.

Effects on groundwater quantity from construction dewatering could not be entirely mitigated at a local scale because dewatering deliberately lowers the groundwater table temporarily in the Project development area (PDA) to facilitate construction. The amount of time required for construction dewatering was minimized through construction planning. Groundwater that was collected during dewatering was returned to the local watershed to mitigate regional-scale effects on groundwater quantity.

Groundwater that seeps into the diversion channel (when dry) remains within the watershed, although potentially travelling through a more tortuous route back to its discharge area. Regional-scale effects on groundwater quantity can be mitigated by allowing seepage in the diversion channel to infiltrate back into the subsurface, or flow back into Elbow River through surface water drainage pathways.

The secondary effects on groundwater quality related to changes in groundwater flow patterns may not be entirely mitigated because dewatering activities deliberately seek to lower the water table (and in turn affect groundwater flowpaths, potentially resulting in changes in groundwater quality). The amount of time required for construction dewatering was minimized through construction planning which in turn limited the duration of the potential residual effects. Dewatering occurred in several areas during the current reporting period. The water was either pumped to dugouts or infiltration ponds, into silt bags or to ground surface with erosion and sediment controls in place.

2.3 Groundwater Monitoring Well Network

2.3.1 Tiered Groundwater Monitoring Locations

The groundwater monitoring well completion details are presented in Table 2.1 and Figure 2.1 presents the layout of the current groundwater monitoring network. The density and distribution of groundwater monitoring wells is based on the need to detect potential changes to groundwater levels and quality that could arise from interactions between the Project and groundwater resources. The siting of monitoring wells considered the expected extent of effects on groundwater for construction as well as dry and flood operations.

Simulation results from the numerical groundwater modeling completed as part of the environmental impact assessment (EIA) were reviewed to understand the potential areas over which effects on groundwater could be expected. Under dry operations, the simulated extent of potential effects will be limited to areas near the diversion channel, due to drawdown caused by incision of the channel through the water table. Under flood operations, effects on groundwater are expected to be limited to areas near the diversion channel and off-stream reservoir. In the case of both dry and flood operations, potential effects on groundwater are predicted to be limited to within the EIA local assessment area (LAA), with the potential exception of the area west of the diversion channel. Thus, monitoring wells sited within the LAA and west of the diversion channel will be able to detect change related to potential Project effects, should they occur.

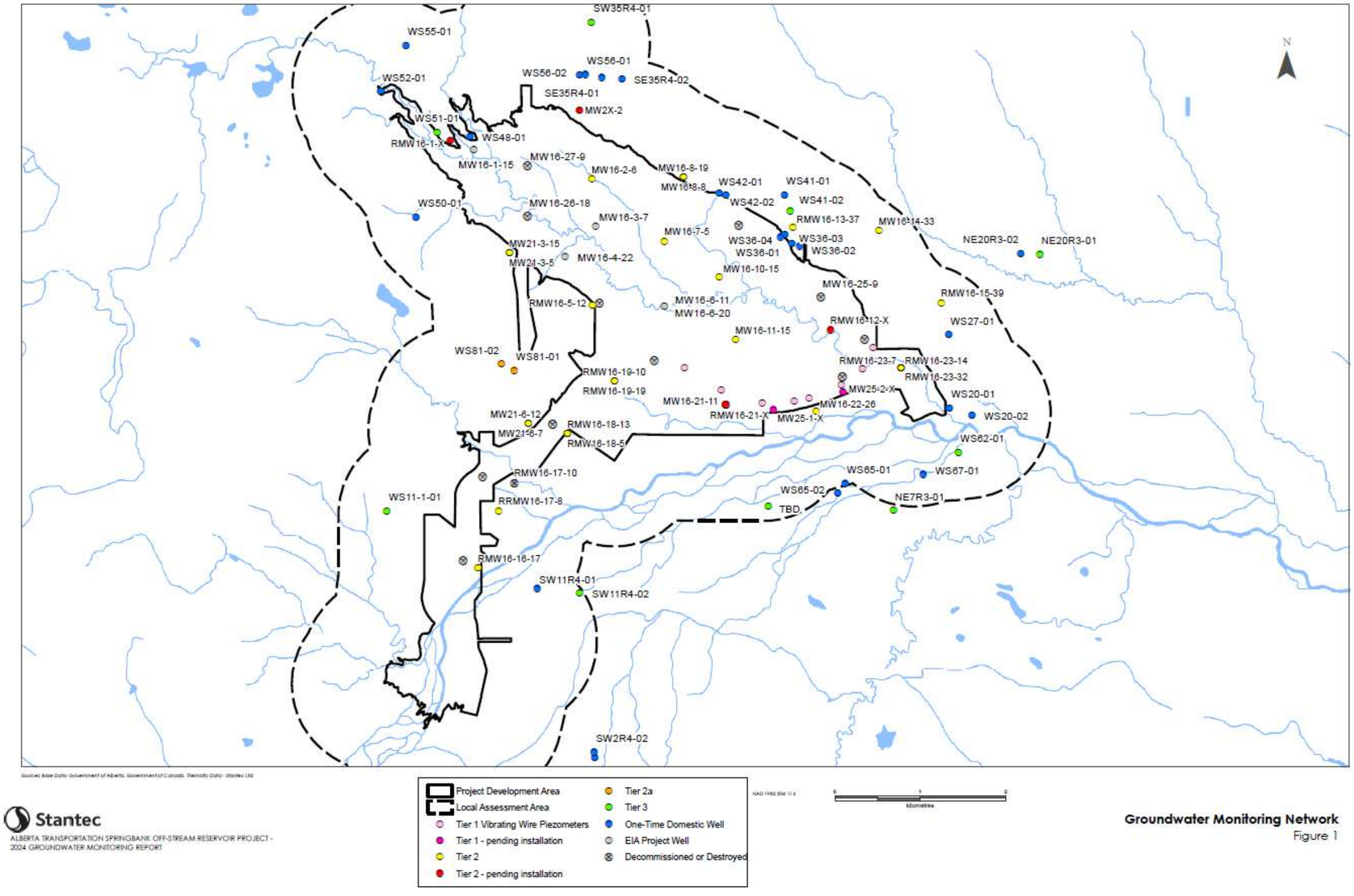
Groundwater monitoring well locations were also selected to allow for characterization of “background” water quality in areas anticipated to be unaffected by Project interactions depending on the stage of Project. For example, Tier 2 and Tier 3 wells that are far removed from construction activities will continue to provide background data during the construction phase and operation phase up until the first operational flood event. Monitoring well locations were also selected based on the location of existing users of groundwater, such that some locations can provide “early warning” for changes in groundwater prior to those effects reaching existing groundwater users.

Table 2.1 Monitoring Well Completion Details

Monitoring Well	Northing[1]	Easting[1]	Hydrostratigraphic Unit	Tier	Ground Elevation (m ASL)	Top of Casing Elevation (m ASL)
RMW16-1-X			Bedrock	Tier 2		
MW16-2-6	5659623.82	-31947.65	Unconsolidated	Tier 3	1204.21	1204.82
RMW16-5-12	5658143.42	-31939.39	Bedrock	Tier 2 (Replacement)	1215.499	1216.32
MW16-7-5	5658895.24	-31098.79	Unconsolidated	Tier 2	1199.28	1199.12
MW16-8-8	5659641.12	-30875.72	Unconsolidated	Tier 2	1218.16	1218.67
MW16-8-19	5659641.12	-30875.72	Bedrock	Tier 2	1218.13	1218.66
MW16-10-15	5658478.17	-30461.41	Unconsolidated	Tier 2	1195.40	1196.24
MW16-11-15	5657742.89	-30269.84	Unconsolidated	Tier 2	1193.68	1194.27
RMW16-12-X			Unconsolidated	Tier 2 (Replacement)		
RMW16-13-37	5659058.74	-29601.57	Bedrock	Tier 2 (Replacement)	1222.778	1222.76
RMW16-14-33	5659018.43	-28592.19	Bedrock	Tier 2 (Replacement)	1202.237	1202.177
RMW16-15-39	5658178.33	-27868.46	Bedrock	Tier 2 (Replacement)	1192.098	1192.797
RMW16-16-17	5655079.02	-33276.84	Bedrock	Tier 2 (Replacement)	1222.387	1223.144
RRMW16-17-8	5655746.74	-33037.11	Unconsolidated	Tier 2 (Replacement)	1211.609	1212.366
RMW16-18-5	5656648.94	-32232.08	Unconsolidated	Tier 2 (Replacement)	1211.188	1212.085
RMW16-18-13	5656647.29	-32233.19	Bedrock	Tier 2 (Replacement)	1211.272	1212.019
RMW16-19-10	5657264.12	-31683.29	Unconsolidated	Tier 2 (Replacement)	1202.708	1203.478
RMW16-19-19	5657263.30	-31681.53	Bedrock	Tier 2 (Replacement)	1202.689	1203.451
RMW16-21-X			Bedrock	Tier 2 (Replacement)		
MW16-22-26	5656907.34	-29330.85	Unconsolidated	Tier 2	1190.70	1191.62
RMW16-23-7	5657412.77	-28333.81	Unconsolidated	Tier 2 (Replacement)	1182.833	1183.578
RMW16-23-14	5657412.62	-28336.75	Bedrock	Tier 2 (Replacement)	1182.814	1183.596
RMW16-23-32	5657412.73	-28335.42	Bedrock	Tier 2 (Replacement)	1182.858	1183.578
MW21-3-5	5658760.51	-32910.92	Unconsolidated	Tier 2	1219.315	1220.088
MW21-3-15	5658762.00	-32911.17	Bedrock	Tier 2	1219.216	1219.926
MW21-6-7	5656771.25	-32689.58	Unconsolidated	Tier 2	1219.382	1220.193
MW21-6-12	5656769.84	-32689.72	Bedrock	Tier 2	1219.344	1220.154
MW25-1-X			Unconsolidated	Tier 1		
MW25-2-X			Unconsolidated	Tier 1		
NE20-R3-01			Bedrock	Tier 3		
NE7-R3-01			Unconsolidated (alluvial)	Tier 3		
SW11-R4-02			Bedrock	Tier 3		
SW35-R4-01			Bedrock	Tier 3		
WS11-01			Bedrock	Tier 3		
WS41-02			Bedrock	Tier 3		
WS51-01			Bedrock	Tier 3		
WS62-01			Unconsolidated (alluvial)	Tier 3		
WS81-01			Bedrock	Tier 3		
WS81-02			Bedrock	Tier 3		

[1] NAD83 3TM 114

Figure 2.1 Groundwater Monitoring Network



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ALBERTA TRANSPORTATION SPRINGBANK OFF-STREAM RESERVOIR PROJECT - 2024 GROUNDWATER MONITORING REPORT

Groundwater Monitoring Network
Figure 1

Three monitoring tiers have been established, based loosely around the associated geographic coverage:

- Tier 1 monitoring wells or piezometers are shallow and located within or immediately adjacent to Project infrastructure (dam, diversion intake and channel). Piezometers or vibrating wire piezometers (for pore pressure monitoring) will be used for geotechnical monitoring within the Project components; however, this data will also be used to support the monitoring of potential effects to groundwater. Shallow monitoring wells will also be installed in this area in consultation with the dam engineering team prior to operations.
- Tier 2 monitoring wells are shallow and within or very near the wetted perimeter of the off-stream reservoir and diversion channel. They are installed in both the unconsolidated and shallow bedrock deposits. The Tier 2 wells also include nested pairs completed at different depths to monitor different stratigraphic units and potential changes in vertical hydraulic gradients. Nested monitoring well locations are indicated in Figure 2.1 (multiple well names at a given location). Note that Tier 2 wells installed in bedrock are only situated outside of the wetted perimeter to prevent potential vertical pathways for floodwater to enter bedrock aquifers.

  A subset of Tier 2a wells are also included specifically to monitor drawdown near the diversion channel during construction and dry operations to address Natural Resources Conservation Board (NRCB) approval condition 11.5 a[1].
- Tier 3 monitoring wells are situated beyond the area of predicted Project effects at locations of some of the closest potential receptors to the Project. These monitoring wells are, or will be, installed within unconsolidated or bedrock units depending upon local groundwater use and potential aquifers of interest. The main purpose of these monitoring wells is to provide early detection of potential effects on groundwater that are propagating outward from the LAA. These monitoring wells will also be potentially used as background monitoring wells to discriminate between changes to groundwater levels arising from a flood or precipitation event, versus those which can be attributed to operation of the Project.

Tier 1 locations are in the process of being finalized in consultation with the geotechnical engineers now that the construction phase is nearing an end. Tier 2 monitoring well locations have been finalized and the network is nearing completion. The current network includes 24 of 28 proposed Tier 2 wells in their final locations. The remaining four wells include the following:

- MW16-1-15 was decommissioned in May 2025 prior to the operation phase of the Project and will be replaced outside of the wetted perimeter of the reservoir near location RMW16-1-X in the fall of 2025.
- MW16-12-3 was decommissioned to accommodate dam construction and will be replaced near location RMW16-12-X in the fall of 2025.

[1]"monitor water levels in domestic water wells west of the diversion channel to the boundary of the local assessment area that may be impacted by dewatering during the Project construction. During flood and dryland operation, monitoring of the wells should be continued by the Operator for a minimum of five years or until it can be demonstrated that permanent lowering of the water level does not significantly impact yields from the water wells,"

- MW16-21-11 was damaged during construction and will be replaced with RMW16-21-X in the fall of 2025.
- MW2X-2 (Figure 2.1) was planned pending land access; however, since land access could not be secured, this well is no longer planned.

The final well installations are planned for the fall of 2025 pending the final grading and seeding in the installation areas.

Domestic water well owners within the modelled drawdown area west of the diversion channel were invited to be included in the Tier 2a monitoring well network, however, only one landowner (with two wells) chose to participate.

A total of eight Tier 3 monitoring well locations have been established. One additional well had been proposed (approximate location labeled TBD on Figure 2.1) but required private land access. Private landowners have not accepted invitations to participate and Rocky View County has indicated that they will not allow groundwater monitoring wells in the county road allowances. As such, no additional Tier 3 wells are currently planned for inclusion.

In addition to the monitoring network, the locations of monitoring wells used in the EIA (herein referred to as “EIA Project Wells”) that will not be part of the long-term network are also presented. Some Project wells were decommissioned prior to, or during construction due to their location relative to the construction footprint. A number of these wells continued to be sampled up to the fall 2024 monitoring program to gather additional baseline data but were decommissioned in May 2025 due to their location within the reservoir footprint. The data from these wells is included in the baseline dataset.

Landowners within the LAA and north of Elbow River were also invited to participate in one-time baseline testing of their domestic water wells based on a commitment made during the NRCB EIA Hearing. These locations are labeled “One-Time Domestic Wells” in Figure 2.1.

In Figure 2.1, the Tier 1 monitoring wells are at the downstream toe of the dam structure and, as such are expected to fall within an area where Project effects are expected during flood operations. Tier 1 wells include eight vibrating wire piezometers (VWPs) to measure pressure/hydraulic head and 2 additional monitoring wells to measure groundwater levels and collect groundwater samples. The VWPs are part of a larger network of instrumentation primarily used for geotechnical and dam safety purposes but the data from the eight noted above will also be used to assess project effects during flood operations. The two additional Tier 1 monitoring wells are scheduled to be installed in the fall of 2025 following final grading and seeding of the area.

In Figure 2.1, the Tier 2 monitoring wells are shown across much of the LAA, including some wells within the wetted area of the reservoir (i.e., the area of the reservoir that would be inundated during a design flood). These wells would be expected to fall within or very near to areas where Project effects are expected (during dry and flood operations). Previous wells installed to support the EIA that were completed in bedrock within the wetted perimeter were decommissioned prior to dry operations as noted above. The remaining Tier 2 wells within the wetted perimeter are shallow and completed in the unconsolidated deposits and will remain in place during flood operations to monitor effects.

Tier 2a wells shown in Figure 2.1 fall within the potential construction and dry operations drawdown area near the diversion channel. Monitoring of the Tier 2a wells is voluntary and based on landowner participation.

In Figure 2.1, the Tier 3 monitoring wells are shown both north and south of Elbow River. These wells are situated in areas outside of the expected areas where Project effects could occur (however, they could still detect effects from a flood or precipitation). Tier 3 wells near Elbow River (NE7-R3-01 and WS62-01) are screened within the alluvial deposits and thus are directly connected to Elbow River, and they would be expected to experience changes in levels or quality during and after a flood in response to changes in river stage. Changes in these wells would be associated with natural effects of a flood and could be used to help differentiate flood-related effects from those attributable to the Project. Other wells south of the Project are situated in upland areas outside the alluvial deposits, and they would not be in direct communication with Elbow River.

The plan for the Tier 3 network was to use as many existing domestic wells as possible, however, because they require appropriate construction and are dependent on long-term access agreements, there are a few gaps which could potentially be filled in the future if interested landowners are identified. Tier 3 wells will provide the ability to detect changes that could potentially propagate outward from the LAA in the direction of domestic and agricultural well users.

Existing domestic water wells for inclusion as Tier 3 monitoring wells were evaluated to verify that they were in appropriate locations, are screened at appropriate depths, are in good condition, and have good surface seal integrity. Ideally these wells would not be in use or near other wells in use such that water levels are not influenced by pumping, however, that is not the case for the current set of wells which are groundwater supply wells for domestic and/or stock watering use. Data logging pressure transducers have been installed in the Tier 3 wells to monitor water level variation due to pumping as well as potential interference from the Project.

2.3.2 Monitoring Well Development

Monitoring wells installed specifically for the Project to be included in the GWMP have been developed following completion. Development is conducted to remove drilling fluids (if used) and fine-grained materials from around the filter pack to improve the hydraulic efficiency of the filter pack and improve hydraulic communication between the filter pack and geologic formation. The objective of the well development is to provide more representative groundwater samples and improved hydraulic conductivity estimates.

2.4 Groundwater Monitoring Program

2.4.1 Analytical Parameter Suites

Analytical parameter suites were developed for the GWMP to enable characterization of potential changes in groundwater quality through both general measures of groundwater quality (e.g., electrical conductivity [EC]), and through measures of groundwater quality specific to a given chemical compound (e.g., nitrate).

Interactions between the Project and groundwater can include changes to groundwater quantity or flow patterns that can in turn affect groundwater quality. There is also potential for groundwater contamination related to construction activities or the quality of the water in the reservoir during flood operations. The parameter suites were chosen to include a broad range of analytes as well as general indicators of water quality such as pH, electrical conductivity and dissolved organic carbon. Other parameters such as hydrocarbons are aimed at accidental releases during construction or are presence in floodwater. Similarly, bacteriological parameters are intended to address potential impacts from human or animal waste in the floodwater.

The parameter suite applied during the monitoring program varies depending upon the Project phase and monitoring tier. Three parameter suites have been defined for the GWMP:

- Parameter Suite 1 (PS1) includes temperature and electrical conductivity (measured insitu).
- Parameter Suite 2 (PS2) includes general potability parameters, major ions, bacteriological parameters, dissolved organic carbon (DOC).
- Parameter Suite 3 (PS3) includes those listed in PS2 as well as dissolved metals, nutrients, benzene, toluene, ethylbenzene, xylenes (BTEX), and F1 to F2 fraction hydrocarbons.

Parameter Suite PS3 is being used for the baseline period and into the construction period to gather detailed water quality data. The parameter suites to be measured on an ongoing, scheduled basis during project operations will be reduced to PS2 and PS1 as described in Section 2.4.3. Escalation to a higher parameter suite would still occur during a flood event or if the results from the lower, scheduled parameter suite suggest that further analysis is required. For example, should electrical conductivity (as part of PS1) exhibit an unexpectedly elevated reading, then analysis of PS2 could be implemented to provide further information regarding which specific chemical parameter is contributing to the elevated electrical conductivity.

2.4.2 Frequency of Monitoring

The frequency of monitoring for measurement of groundwater levels and collection of groundwater samples for water quality analysis is dependent on:

- the phase of the Project under consideration. Project Phases requiring higher levels of monitoring comprehensiveness (e.g., baseline and flood operations) will have a higher frequency of monitoring events.

- the tier of monitoring well under examination. In general, monitoring wells within the Tier 1 category will have a higher frequency of monitoring relative to the Tier 3 monitoring wells.
- the parameter suite that is under examination. General or bulk parameters (PS1) will have a higher frequency of monitoring than PS2 or PS3.

The planned frequency of monitoring for groundwater levels and quality has been defined at three levels:

- near-continuous measurement (C) of levels and quality through data logging probes that automatically collect and record at high frequency intervals.
- intermittent (I) measurement of routine, scheduled monitoring at set frequency (e.g., semi-annually)
- event (E) based measurement in response to a flood or other operational event (e.g., maintenance) where groundwater could be affected. Monitoring frequency during operational flood events will be assessed based on accessibility, safety and other constraints.

2.4.3 Overview of Groundwater Monitoring Program

Figure 2.2 illustrates the implementation of Monitoring Tiers, Parameter Suites, and Monitoring Frequency into an overall program that provides varying levels of monitoring comprehensiveness over the Project Phases.

In general, the level of monitoring comprehensiveness varies as follows (highest to lowest):

- Flood and post-flood operations require the most comprehensive monitoring because this is when the most Project interactions are applicable and when effects on groundwater are most likely to be observable.
- Baseline monitoring requires a highly comprehensive monitoring approach that starts prior to construction of the Project. The comprehensive baseline monitoring is being extended for some monitoring locations to assess the natural variability of groundwater quantity and quality. For example, baseline monitoring at monitoring wells not situated near construction areas could extend at least until construction is completed or even further until flood operations occur, if necessary
- Construction monitoring requires medium comprehensive monitoring. This monitoring is more focused on Project interactions that could potentially arise in a localized area due to construction activities (e.g., monitoring around a particular location undergoing construction dewatering).
- Dry operations monitoring has less comprehensive monitoring and occurs during dry operations between floods. This lower level of monitoring reflects the fewer Project interactions that are applicable when the Project is not in operation and flood water is not being retained within the off-stream reservoir.

Figure 2.2 Overview of Groundwater Monitoring Program

		Baseline (Highly Comprehensive)			
	Well Count	Frequency	PS1	PS2	PS3
Tier 1					
Tier 2	28	C	C	I	I
Tier 2a	2	C	C	I	I
Tier 3	9	C	C	I	I

		Construction (Medium Comprehensiveness)			
	Well Count	Frequency	PS1	PS2	PS3
Tier 1	TBD	C			
Tier 2	28	C	C	I	I
Tier 2a	2	C	C		
Tier 3	9	C	C		

		Dry Operations (Least Comprehensive)			
	Well Count	Frequency	PS1	PS2	PS3
Tier 1	TBD	C	C	I	
Tier 2	28	C	C	I	
Tier 2a	2	C	C		
Tier 3	9	C	C		

		Flood/Event Operations (Most Comprehensive)			
	Well Count	Frequency	PS1	PS2	PS3
Tier 1	TBD	C	C	E	E
Tier 2	28	C	C	E	E
Tier 2a	2	C	C	E	
Tier 3	9	C	C	E	

Frequency	C - Continuous
	I - Intermittent
	E - Event Based
Parameter Suite	PS1 - Temperature and EC
	PS2 - potability, major ions, bacteriological, DOC
	PS3 - dissolved metals, nutrients, BTEX, F1-F2 hydrocarbons

As the monitoring program progresses through construction, dry operation, and flood operation it will be adapted as necessary to address observed effects on groundwater levels and groundwater quality. Adaptations may include augmentation of the monitoring network and/or changes to the monitoring frequency or analytical parameters in these areas.

At the end of the current monitoring period, the following monitoring Tier 2 wells have been sampled eight times and the baseline dataset is deemed complete at these locations:

- MW16-1-15
- MW16-2-6
- MW16-7-5
- MW16-8-8 and MW16-8-19
- MW16-10-15
- MW16-11-15
- MW16-22-26
- MW21-6-12
- RMW16-5-12
- RMW16-13-37
- RMW16-16-17
- RMW16-18-13
- RMW16-19-10 and RMW16-19-19

Tier 2a and Tier 3 monitoring wells have been sampled between 3 and 6 times and, as such, baseline sampling will continue at these wells until 8 sampling events have been completed.

2.4.4 Groundwater Monitoring and Sampling Protocols

Data logging pressure transducers and multi parameter sondes are installed in Tier 2 and Tier 3 monitoring wells. This equipment measures and records near continuous (i.e. hourly) water level (pressure), temperature, and electrical conductivity (LTC loggers). Data logging pressure transducers (no electrical conductivity) were also installed at the Tier 2a monitoring wells. Near continuous pressure measurement will also be measured in Tier 1 wells using either pressure transducers or vibrating wire piezometers.

The following field procedures are used during monitoring to measure groundwater levels and to collect the groundwater samples:

- The depth to water at each monitoring well is measured and recorded.

- Each Tier 2 monitoring well is purged using its own dedicated inertial pump system or bailer until three well volumes are removed or until they are dry. Tier 3 domestic wells are purged using existing well pumps for a minimum of 15 minutes and until stabilization of field parameters (dissolved oxygen [DO], oxidation-reduction potential [ORP], pH, EC) is achieved.
- Water samples are collected into laboratory supplied containers within a day of purging (unless additional time is required for water level recovery) following laboratory instructions for filtering, preservation/treatment, and temperature moderation. Samples are labeled at the time of collection with the site number, the date of collection, and the analysis required.
- Field measurements of combustible headspace vapours, DO, ORP, pH, EC and temperature are collected at the time of sample collection.
- Quality assurance/quality control (QA/QC) samples are collected at a rate of approximately 10% of the total samples. Duplicate samples for quality control are obtained by rinsing a clean container with formation water, discarding the rinse water and then collecting the required sample volume. The sample is split into two aliquots and placed into two different bottles with one bottle identified under a different sample name and the second bottle under the regular sample number. The laboratory is not informed of the nature of the sample. Demineralized water blanks are also collected during the sampling periods to determine bottle cleanliness and the effects of sample transport, handling, and collection techniques. QA/QC water samples are given realistic sample numbers and submitted as groundwater samples.

The samples are delivered to an accredited laboratory using standard chain of custody protocols. Chain of custody documents are included along with the laboratory reports in Appendix C.

3 2024-2025 Groundwater Monitoring Programs

The potential Project interactions that could lead to effects on groundwater resources vary depending upon the specific location and Project phase. The potential Project interactions for the baseline and construction phases included in this reporting period are described below.

During baseline data collection there was comprehensive baseline monitoring ongoing prior to Project disturbances. The baseline period will continue through construction and up until operation in areas in and around the reservoir where no construction activities will take place. The intent of baseline monitoring is to understand a wide range of hydrochemical parameters and their potential natural variability in location and time. The baseline monitoring program seeks to understand local seasonal variation in water levels and hydrochemistry and is intended to establish a point of comparison that can be used to assess changes that could be attributable to the Project in the future.

During construction, medium comprehensive monitoring has continued to gather baseline data in some areas as noted above, as well as to monitor potential effects of construction activities that could lead to disturbances to the groundwater system such as construction dewatering or deep excavation along the diversion channel.

The following sections describe the groundwater monitoring network development and the monitoring that was completed during the 2024-2025 reporting period. The scopes of work for drilling and well installation and for groundwater monitoring were dependent on land access constraints related to private property access permissions, progression of construction and weather conditions for fieldwork.

3.1 September 2024 Groundwater Monitoring

The groundwater monitoring well networks were monitored and sampled between September 19 to 26, 2024. The September 2024 monitoring event included:

- 26 - Tier 2/Tier 2a wells
- 4 - EIA Project Wells
- 7 - Tier 3 wells

The monitoring wells included in the September 2024 monitoring event are summarized in Table 3.1. The EIA Project Wells continued to be monitored and sampled for baseline purpose as discussed in Section 2.3.1. Access restrictions on private land prevented monitoring and sampling of the remaining wells as noted in the table. Monitoring and laboratory analysis was completed as described in the sampling protocols in Section 2.4.4.

Data loggers were downloaded and calibrated in September 2024. Data logger pressure, temperature and electrical conductivity data are presented in Appendix B.

Table 3.1 Groundwater Monitoring Summary

Monitoring Well	Monitoring Tier	Unit	2024-2025 Monitoring	
			Sep-24	Jun-25
MW16-1-15	Tier 2	Bedrock	X	Decommissioned
MW16-2-6	Tier 2	Unconsolidated	X	X
RMW16-5-12	Tier 2 (replacement)	Bedrock	X	X
MW16-7-5	Tier 2	Unconsolidated	X	X
MW16-8-8	Tier 2	Unconsolidated	X	X
MW16-8-19	Tier 2	Bedrock	X	X
MW16-10-15	Tier 2	Unconsolidated	X	X
MW16-11-15	Tier 2	Unconsolidated	X	X
RMW16-13-37	Tier 2	Bedrock	X	X
MW16-14-33	Tier 2	Bedrock	NA	
RMW16-15-39	Tier 2	Bedrock	X	X
RMW16-16-17	Tier 2 (replacement)	Bedrock	X	X
RRMW16-17-8	Tier 2 (replacement)	Unconsolidated	X	X
RMW16-18-5	Tier 2 (replacement)	Unconsolidated	X	X
RMW16-18-13	Tier 2 (replacement)	Bedrock	X	X
RMW16-19-10	Tier 2 (replacement)	Unconsolidated	X	X
RMW16-19-19	Tier 2 (replacement)	Bedrock	X	X
MW16-22-26	Tier 2	Unconsolidated	X	X
RMW16-23-7	Tier 2 (replacement)	Unconsolidated	X	X
RMW16-23-14	Tier 2 (replacement)	Bedrock	X	X
RMW16-23-32	Tier 2 (replacement)	Bedrock	X	X
MW21-3-5	Tier 2	Unconsolidated	DRY	DRY
MW21-3-15	Tier 2	Bedrock	X	X
MW21-6-7	Tier 2	Unconsolidated	X	X
MW21-6-12	Tier 2	Bedrock	X	X
WS81-01	Tier 2a	Bedrock	X	X
WS81-02	Tier 2a	Bedrock	X	X
NE20-R3-01	Tier 3	Bedrock	X	X
SW35-R4-01	Tier 3	Bedrock	X	X
NE7-R3-01	Tier 3	Unconsolidated (alluvial)	X	X
SW11-R4-02	Tier 3	Bedrock	X	X
WS11-01	Tier 3	Bedrock	X	X
WS41-02	Tier 3	Bedrock	NA	X
WS51-01	Tier 3	Bedrock	X	X
WS62-01	Tier 3	Unconsolidated (alluvial)	X	X
MW16-3-7	EIA Project Well	Unconsolidated	X	Decommissioned
MW16-4-22	EIA Project Well	Bedrock	X	Decommissioned
MW16-6-11	EIA Project Well	Unconsolidated	X	Decommissioned
MW16-6-20	EIA Project Well	Bedrock	X	Decommissioned

X - monitored and sampled (where sufficient volume)
CNL - could not locate
NA - no access
NR - not required (one-time sampling completed)
ISV - insufficient volume for sample collection

3.2 May 2025 Well Decommissioning

Monitoring well decommissioning activities were completed on May 20 and 21, 2025 to remove the remaining EIA project wells from within the reservoir footprint prior to the dry operations phase. Decommissioning was completed by pulling and/or drilling out the well casing, backfilling with bentonite and hydrating the bentonite to create a seal. Decommissioning included Tier 2 monitoring well MW16-1-15 which will be relocated outside of the reservoir footprint as well as EIA project wells MW16-3-7, MW16-4-22, MW16-6-11 and MW16-6-20. The well locations are presented in Figure 2.1.

3.3 June 2025 Groundwater Monitoring

The groundwater monitoring well networks were monitored and sampled between June 2 to 6, 2025. The monitoring event included:

- 25 - Tier 2/Tier 2a wells
- 8 - Tier 3 wells

The monitoring wells included in the June 2025 monitoring event are summarized in Table 3.1. Access restrictions prevented monitoring and sampling of the remaining wells as noted in the table. Monitoring and laboratory analysis was completed as described in the sampling protocols in Section 2.4.4.

Data loggers were downloaded and calibrated in June 2025. Data logger pressure and electrical conductivity data are presented in Appendix B.

4 Results

4.1 Groundwater Levels

Data logger data are presented in Appendix B. Loggers were installed in several wells in 2016 with quasi-continuous hourly measurements of pressure (head above logger) and temperature recorded since 2016. The data from these monitoring wells (MW16-1-15, MW16-6-11, MW16-6-20, MW16-8-19 and MW16-18-10) show the natural water level fluctuation over the medium term (i.e., seasonal variation over 10 years). Groundwater levels varied by approximately 1.3 m and 3.2 m between minimum and maximum levels between 2016 and 2023 and showed similar ranges in variation between wells installed in shallow unconsolidated deposits and those installed deeper in bedrock. Within a given calendar year, observations to date indicate that the lowest groundwater levels were generally observed between February and April, and the highest levels are generally observed between May and July. Since 2023 there have been changes that are outside of the expected natural variation at several monitoring wells as described below.

Groundwater temperatures fluctuate in a regular pattern maintaining temperatures between approximately 3 and 7 °C throughout the year. A lag in temperature change is observed with the lowest temperatures observed in the summertime and the highest temperatures observed in the winter.

Electrical conductivity measured by the data loggers in 2024 and 2025 was relatively stable with some seasonal fluctuation. Shallow monitors such as MW21-6-7 and MW16-7-5 had increased variability in EC values likely due to seasonal changes in meteoric recharge considering water level fluctuation is also greater in these monitoring wells.

In RMW16-18-5, EC values decreased from approximately 700 to 200 uS/cm January 2025. The decrease in EC corresponded with a sharp decrease in water level and the well has been nearly dry since that time. RMW16-18-5 is approximately 130 m hydraulically downgradient of the diversion channel and, as such, the changes are expected. In RMW16-16-17, EC values had shown significant increases and decreases following each of the monitoring events. Despite recalibration during monitoring events, there may been an issue with the EC sonde and its calibration; however, the variation was lower in 2024 and 2025. Sharp changes are also noted after monitoring /calibration events at RMW16-19-10.

Two other monitoring wells also show considerable EC variation. At RMW16-13-37 EC has fluctuated from less than 100 to over 1,400 uS/cm and is correlated with changes in water levels. It is possible that water of differing quality is entering the well screen from sand seams within the mudstone and fractures in the siltstone (described on the borehole log in Appendix A) and is resulting in fluctuations. At RMW16-19-10 the EC changes are more likely a result of groundwater discharge from the bedrock to the unconsolidated deposits given the strong upward directed gradient (approximately 0.16 to 0.21) at this nested monitoring well location.

Construction of the channel and dam and dewatering of areas near the Tier 2 monitoring network began in 2022 and continued until 2025. Construction activities had the potential to affect the water levels in wells near the dam and diversion channel.

Changes in water levels near the diversion channel included:

- Tier 2 monitoring well RMW16-16-17 is located approximately 50 m hydraulically downgradient of the current diversion channel construction. Groundwater levels decreased approximately 1.8 m at this location between July 2023 and May 2024 but increased between June 2024 and June 2025. At least a portion of the decrease is interpreted to be the result of excavation and dewatering of the diversion channel.
- Nested Tier 2 monitoring wells RMW16-18-5 and RMW16-18-13 are located approximately 100 m hydraulically downgradient of the diversion channel construction and approximately 120 m from a dugout constructed to store water for the Project, although the dugout was decommissioned during the current reporting period. Water levels decreased by approximately 3.3 m in both the shallow and deeper monitoring wells between July and October 2023 before rebounding approximately 1.6 m between October 2023 and February 2024. Further decreases were noted between January 2025 and June 2025. These changes are interpreted to be the result of excavation and dewatering of the diversion channel.
- Nested Tier 2 monitoring wells MW21-6-7 and MW21-6-12 are located approximately 100 m hydraulically upgradient of the diversion channel construction. Drawdown began to be observed at this location in September 2023. Water levels in both the shallow and deep monitoring wells decreased approximately 3 m between September 2023 and February 2024 and continued to decrease through to May 2024. Further decreases have occurred since May 2024 with MW21-6-7 going dry in October 2024 and a total drawdown of approximately 5 m in MW21-6-12 by June 2025. The decreases were similar in magnitude to those predicted through modelling as part of the EIA (AEP Supplemental Information Request Round 3, IR 1. Decreased EC is observed during the drawdown period at MW21-6-7 whereas an increase in EC was observed at MW21-6-12. These changes in water levels and quality are interpreted to be the result of excavation and dewatering of the diversion channel.
- Tier 2a monitoring wells WS81-01 and WS81-02 are located approximately 625 m and 775 m, respectively from the current diversion channel construction footprint. The water levels at WS81-01 were variable due to pumping but the maximum levels (i.e. non-pumping) decreased approximately 6 m between October 2024 and April 2025, similar in timing to the decrease observed the previous year. There is significant fluctuation and noise in the data and the deceases may be in part due to pumping and/or natural fluctuations; however, the timing of the decreases appear similar to the drawdown observed closer to the channel and a portion of this drawdown may be the result of Project effects. A similar pattern of decreasing water levels is observed at WS81-02.

Changes in groundwater levels near the dam included:

- Tier 2 monitoring well MW16-22-26, located approximately 80 m hydraulically downgradient of the current dam construction footprint. Water levels increased by approximately 0.75 m between October 2022 and January 2023 and increased by approximately 1.8 m between July and November 2023. Water levels then decreased by approximately 1.2 m between December 2023 and July 2024. Water levels remained elevated and showed similar fluctuations through the remainder of 2024 and into 2025. Considering the timing of the initial increase and because it was not consistent with observations across the rest of the monitoring network where water levels are generally stable or decrease over those periods, it was interpreted to be the result of a temporary increase in pore pressure related to construction of the dam. This temporary increase was predicted in the EIA. Subsequent fluctuations are similar to other wells across the network and are, therefore, interpreted to be a result of natural variation.
- Tier 2 nested monitoring wells RMW16-23-7/RMW16-23-14/RMW16-23-32 were installed approximately 360 m hydraulically downgradient of the current dam construction footprint. Increases in pore pressure observed at MW16-22-26 were not observed at this location and little variation in water levels was observed in these wells over the current reporting period.

In addition to changes near the construction activities, there w also changes noted at MW16-8-19 located greater than 1.6 km from construction activities. Water levels at this monitoring well decreased approximately 0.5 m in June 2022 and have remained lower with intermittent drawdown of up to an additional 1.5 m. These changes are interpreted to be the result of the installation of a groundwater supply well (AWWID 1023570) installed by the landowner approximately 20 m from the monitoring well location in 2022.

Sporadic changes in water level, temperature and electrical conductivity continued to be observed at monitoring well RMW16-13-37. This monitoring well is located greater than 500 m from the nearest construction and is unlikely to have been impacted by the Project. It was speculated that the results could be due to a well integrity issue, however, upon inspection no integrity issues were noted. It is possible groundwater contributions from other intervals may be entering the completion interval through fractures noted on the borehole log.

4.1.1 Groundwater Level Triggers

Changes in groundwater levels are evaluated based upon the expected variability defined during the baseline monitoring program for each individual monitoring well. As mentioned in previous sections, the baseline period is not strictly limited to pre-construction but is continuing through the construction period for some monitoring wells as discussed in Section 2.2. For example, some monitoring wells that are distal to the construction footprint will continue to gather baseline data up until the first operational flood event to account for longer term natural variability.

It is expected that some monitoring well locations will naturally have a higher variability than others. Monitoring wells that are installed near Elbow River and within the alluvial deposits will exhibit a seasonal trend similar to surface water, with additional precipitation event-based “spikes”. Monitoring wells that are installed in low permeability unconsolidated deposits or deeper into bedrock would exhibit a more muted seasonal variability since they are not directly influenced by the surface water flow regime.

Construction of the channel and dewatering of areas near the Tier 2 monitoring network began in 2022 and continued through the current reporting period. Construction activities had the potential to affect the water levels in wells discussed in Section 4.1. Water level measurements at wells located away from the current construction footprint are still considered part of the baseline with respect to groundwater levels.

Groundwater level triggers include:

- potential development of flowing artesian conditions during flooding or reservoir retention
- a decrease in water level in a well(s) resulting from construction dewatering or permanent drawdown near the diversion channel to the point where the pre-existing well(s) are no longer useable

Neither of the trigger conditions were observed at any of the Project or domestic monitoring wells in 2024 or 2025; however, decreases Tier 2b domestic wells WS81-01 and WS81-02 have the potential to decrease yield to the point where the wells could become no longer useable. The levels at these wells will continue to be evaluated to make that determination.

4.2 Groundwater Quality

4.2.1 Tier 2 and EIA Project Wells

Analytical data for the fall 2024 and spring 2025 monitoring events for the Tier 2 and EIA Project wells are presented in Table 4.1 and laboratory analytical reports are included in Appendix C for reference. Historical data are also presented in Table C.1 in Appendix C for reference.

The full analytical suite of parameters (PS3) described in Section 2.4.1 was analyzed for each monitoring well. Table 4.1 and Table C.1 include the Alberta Tier 1 Soil and Groundwater Remediation Guidelines (Alberta Tier 1 Guidelines) (AEPA 2024) for fine grained soils in an agricultural land use setting. Guidelines are provided only for comparison purposes and discussion.

A total of 13 Tier 2 and EIA Project wells completed in the unconsolidated deposits were sampled in September 2024. The remaining EIA Project wells were decommissioned in August 2025 and the remaining 11 Tier 2 wells were sampled in June 2025.

Table 4.1 Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-1-15	MW16-2-6		MW16-3-7	MW16-4-22			MW16-6-11	MW16-6-20	MW16-7-5		MW16-8-8		MW16-8-19	
Sample Date			25-Sep-24	21-Sep-24	3-Jun-25	21-Sep-24	24-Sep-24	24-Sep-24		21-Sep-24	21-Sep-24	21-Sep-24	3-Jun-25	24-Sep-24	6-Jun-25	24-Sep-24	6-Jun-25
Sample ID			MW16-1-15	MW16-2-6	MW16-2-6	MW16-3-7	MW16-4-22	SR24-08		MW16-6-11	MW16-6-20	MW16-7-5	MW16-7-5	MW16-8-8	MW16-8-8	MW16-8-19	MW16-8-19
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC		STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			BV	BV	BV	BV	BV	BV		BV	BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order			C476327	C475057	C550515	C475057	C475814	C475814		C475057	C475057	C475057	C550515	C475814	C551949	C475814	C551949
Laboratory Sample ID			CWJ884	CWB147	DMG754	CWB146	CWH292	CWH297		CWB152	CWB151	CWB148	DMG752	CWH294	DMO156	CWH295	DMO157
Location Description			Tier 2	Tier 2	Tier 2	EIA Project Well	EIA Project Well	EIA Project Well		EIA Project Well	EIA Project Well	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
Lithology			Bedrock	Unconsolidated	Unconsolidated	Unconsolidated	Bedrock	Bedrock		Unconsolidated	Bedrock	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Bedrock	Bedrock
Sample Type	Units	2024 AEPA Tier 1						Field Duplicate	RPD (%)								
Field Parameters																	
Dissolved Oxygen, Field	mg/L	n/v	1.4	3.96	10.47	3.46	1.25	-	-	4.39	1.85	4.16	6.41	3.57	3.55	3.76	1.15
Electrical Conductivity, Field	µS/cm	1,000[A]	**2,117[A]**	**6,533[A]**	**6,206[A]**	**2,864[A]**	**4,356[A]**	-	-	**3,304[A]**	**2,310[A]**	**2,848[A]**	**2,623[A]**	**1,160[A]**	**1,211[A]**	**1,328[A]**	**1,320[A]**
Oxidation Reduction Potential, field	mV	n/v	40.4	105.8	108.3	68.6	-6.8	-	-	107.1	-53.5	106.7	162	127.4	82.3	138.5	88.3
pH, Field	S.U.	6.5-8.5[A]	7.19	6.91	7.05	7.14	6.74	-	-	7.42	7.79	7.27	7.25	7.27	7.2	7.15	6.99
Temperature, Field	deg C	n/v	10.5	7.3	9.27	9.2	10.1	-	-	8.3	7	6.8	6.94	10.8	10.39	9.8	8.2
Calculated Parameters																	
Anion Sum	meq/L	n/v	31	84	96	32	57	67	nc	46	26	34	34	14	14	13	15
Cation Sum	meq/L	n/v	27	120	91	28	61	59	nc	41	23	33	30	15	15	15	16
Hardness (as CaCO3)	mg/L	n/v	1,000	2,600	2,900	820	2,100	2,000	5%	1,300	190	910	840	670	670	620	650
Ion Balance	%	n/v	6.5	16	-	6.4	3.5	6.6	nc	5.8	7.6	2.3	-	2.8	-	4.7	-
Ion Balance % Difference	%	n/v	6.5	-	2.4	-	-	-	-	-	-	-	5.6	-	2.0	-	1.2
Nitrate	mg/L	13_f[A]	<0.22	<0.44	<0.89	0.64	0.31	1.2	nc	0.076	<0.044	<0.22	<0.18	2.8	2.3	2.6	2.1
Nitrate + Nitrite (as N)	mg/L	100[A]	<0.050 MI	<0.10 MI	<0.20 MI	0.15	0.069 MI	0.28 MI	nc	0.017	<0.010	<0.050 MI	<0.040	0.64	0.53	0.59	0.47
Nitrite	mg/L	$0.197/1.97_{n4,g}$[A]	<0.033	<0.033	<0.13	<0.033	<0.033	<0.033	nc	<0.033	<0.033	<0.033	<0.13	<0.033	<0.13	<0.033	<0.13
Total Dissolved Solids	mg/L	500[A]	**1,900[A]**	**6,100[A]**	**6,000[A]**	**1,900[A]**	**3,700[A]**	**4,100[A]**	10%	**2,800[A]**	**1,600[A]**	**2,100[A]**	**2,000[A]**	**760[A]**	**760[A]**	**720[A]**	**790[A]**
BTEX and Petroleum Hydrocarbons																	
Benzene	mg/L	0.005[A]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	nc	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	nc	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10	0.17	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Miscellaneous Inorganics																	
Dissolved Organic Carbon (DOC)	mg/L	n/v	2.2	3.7	3.5	3.2	4.8	5.4	12%	2.0	2.0	1.7	2.4	1.8	2.0	2.1	1.5
Electrical Conductivity, Lab	µS/cm	1,000[A]	**2,200[A]**	**6,500[A]**	**6,500[A]**	**2,500[A]**	**4,300[A]**	**4,300[A]**	0%	**3,400[A]**	**2,200[A]**	**2,800[A]**	**2,700[A]**	**1,100[A]**	**1,200[A]**	**1,300[A]**	**1,300[A]**
pH, lab	S.U.	6.5-8.5[A]	7.95	7.84	7.95	7.96	7.88	7.67	nc	7.80	8.23	7.94	8.06	7.83	7.84	7.65	7.77
Anions																	
Alkalinity (P as CaCO3)	mg/L	n/v	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	320	650	670	430	480	530	10%	430	310	550	500	430	430	420	480
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	390	790	820	530	580	650	11%	520	380	670	610	530	530	520	590
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	**1,200[A]**	**3,400[A]**	**3,900[A]**	**920[A]**	**2,300[A]**	**2,700[A]**	16%	**1,800[A]**	**960[A]**	**1,100[A]**	**1,100[A]**	**220[A]**	**220[A]**	96	100
Chloride	mg/L	100[A]	12	1.7	2.0	**160[A]**	1.8	<1.0	nc	1.8	1.6	3.4	2.6	26	28	**110[A]**	**120[A]**
Nutrients																	
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	<0.010	<0.010	<0.040	<0.010	<0.010	<0.010	nc	<0.010	<0.010	<0.010	<0.040	<0.010	<0.040	<0.010	<0.040
Orthophosphate (as P)	mg/L	n/v	<0.0030	0.0040	0.0036	0.013	<0.0030	<0.0030	nc	<0.0030	<0.0030	0.0085	0.0069	<0.0030	-	<0.0030	-
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	0.030	**0.19[A]**	**0.21[A]**	0.020	**0.99[A]**	**1.0[A]**	1%	**0.26[A]**	**1.1[A]**	0.019	**0.036[A]**	<0.015	<0.015	<0.015	<0.015
Nitrate (as N)	mg/L	3[A]	<0.050	<0.10	<0.20	0.15	0.069	0.28	nc	0.017	<0.010	<0.050	<0.040	0.64	0.53	0.59	0.47
Phosphorus, Dissolved	mg/L	n/v	<0.0030	-	<0.0030 P2	-	-	-	-	-	-	-	0.0059 P2	-	<0.0030	-	<0.0030
Phosphorus, Total (Dissolved)	mg/L	n/v	<0.0030	<0.0030 P2	-	0.010 P2	<0.0030	<0.0030	nc	<0.0030	0.089	0.0056 P2	-	<0.0030	-	<0.0030	-
Phosphorus, Total	mg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	2.4	-	0.0059
Total Kjeldahl Nitrogen	mg/L	n/v	<0.20	1.4	<2.0	0.32	1.2	1.1	nc	2.1	1.4	0.92	0.47	<0.20	0.53	<0.020	0.12
Nitrogen	mg/L	n/v	<0.20 DB NNA	1.4 DB	<2.0 DB NNA	0.47 DB	1.3	1.4	7%	2.1 DB	1.4	0.92 DB	0.47 DB	0.58 DB NNA	1.1 DB	0.45 NNA	0.59
Metals - Dissolved																	
Aluminum	mg/L	$0.007/0.05_{n1,e}$[A]	0.0039	<0.0030	<0.0030	0.0057	0.0059	0.0031	nc	<0.0030	<0.0030	<0.0030	<0.0030	0.0067	<0.0030	0.0034	<0.0030
Antimony	mg/L	0.006[A]	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	nc	<0.00060	<0.00060	<0.00060	<0.00060	0.00063	<0.00060	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	<0.00020	0.0010	0.00032	0.00041	0.0011	0.0010	10%	0.00026	<0.00020	0.00028	0.00026	<0.00020	<0.00020	<0.00020	<0.00020
Barium	mg/L	2[A]	<0.010	<0.010	<0.010	0.077	<0.010	<0.010	nc	0.010	<0.010	0.017	0.020	0.043	0.039	0.064	0.060
Beryllium	mg/L	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron	mg/L	1[A]	0.078	0.10	0.095	0.084	0.12	0.13	8%	0.13	0.11	0.11	0.099	0.039	0.041	0.044	0.047
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	0.000031	**0.00017[A]**	0.000026	0.000036	<0.000020	<0.000020	nc	**0.00012[A]**	<0.000020	0.000036	0.000029	<0.000020	<0.000020	0.000035	0.000025

Table 4.1 Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-1-15	MW16-2-6		MW16-3-7	MW16-4-22			MW16-6-11	MW16-6-20	MW16-7-5		MW16-8-8		MW16-8-19	
Sample Date			25-Sep-24	21-Sep-24	3-Jun-25	21-Sep-24	24-Sep-24	24-Sep-24		21-Sep-24	21-Sep-24	21-Sep-24	3-Jun-25	24-Sep-24	6-Jun-25	24-Sep-24	6-Jun-25
Sample ID			MW16-1-15	MW16-2-6	MW16-2-6	MW16-3-7	MW16-4-22	SR24-08		MW16-6-11	MW16-6-20	MW16-7-5	MW16-7-5	MW16-8-8	MW16-8-8	MW16-8-19	MW16-8-19
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC		STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			BV	BV	BV	BV	BV	BV		BV	BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order			C476327	C475057	C550515	C475057	C475814	C475814		C475057	C475057	C475057	C550515	C475814	C551949	C475814	C551949
Laboratory Sample ID			CWJ884	CWB147	DMG754	CWB146	CWH292	CWH297		CWB152	CWB151	CWB148	DMG752	CWH294	DMO156	CWH295	DMO157
Location Description			Tier 2	Tier 2	Tier 2	EIA Project Well	EIA Project Well	EIA Project Well		EIA Project Well	EIA Project Well	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
Lithology			Bedrock	Unconsolidated	Unconsolidated	Unconsolidated	Bedrock	Bedrock		Unconsolidated	Bedrock	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Bedrock	Bedrock
Sample Type	Units	2024 AEPA Tier 1						Field Duplicate	RPD (%)								
Calcium	mg/L	n/v	230	370	380	140	460	450	2%	310	50	150	140	140	140	140	150
Chromium	mg/L	0.05[A]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt	mg/L	n/v	0.00098	0.0033	0.0019	<0.00030	0.00039	0.00033	nc	0.0016	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Copper	mg/L	0.007[A]	<0.0010	0.0016	<0.0010	<0.0010	0.0050	0.0045	nc	<0.0010	0.0017	<0.0010	<0.0010	<0.0010	0.0011	<0.0010	<0.0010
Iron	mg/L	0.3[A]	<0.060	<0.060	0.065	<0.060	<0.060	<0.060	nc	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060
Lead	mg/L	0.001/0.007$_{n3}$[A]	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Lithium	mg/L	n/v	<0.020	0.11	0.10	0.047	0.11	0.083	nc	0.044	0.062	0.045	0.047	0.032	<0.020	<0.020	0.079
Magnesium	mg/L	n/v	100	410	470	110	230	210	9%	130	15	130	120	78	75	64	68
Manganese	mg/L	0.02[A]	**0.83[A]**	**0.95[A]**	**1.1[A]**	**0.052[A]**	**0.82[A]**	**0.79[A]**	4%	**0.91[A]**	**0.068[A]**	**0.078[A]**	**0.13[A]**	0.0095	0.0043	<0.0040	<0.0040
Mercury	mg/L	0.000005[A]	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	nc	<0.0000019	<0.0000019	<0.0000019	**0.0000293 CZA[A]**	<0.0000019	<0.0000019	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	0.0020	0.0014	0.00068	0.0030	0.00092	0.00095	nc	0.00087	0.0025	0.0012	0.00091	0.00092	0.00079	0.00064	0.00048
Nickel	mg/L	0/0.17$_{n3}$[A]	**0.0015[A]**	**0.0081[A]**	**0.0056[A]**	**0.0024[A]**	**0.0020[A]**	**0.0018[A]**	nc	**0.0035[A]**	***<0.00050***	**0.0023[A]**	**0.0019[A]**	**0.00088[A]**	**0.00068[A]**	***<0.00050***	***<0.00050***
Phosphorus	mg/L	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Potassium	mg/L	n/v	3.8	7.8	7.4	4.8	9.2	9.0	2%	6.6	3.9	4.7	4.0	6.1	5.9	6.0	6.1
Selenium	mg/L	0.002[A]	<0.00020	0.00052	<0.00020	0.00031	<0.00020	<0.00020	nc	0.00025	<0.00020	<0.00020	0.00022	**0.0024[A]**	**0.0030[A]**	**0.0059[A]**	**0.0049[A]**
Silicon	mg/L	n/v	4.4	4.5	4.8	4.2	4.7	4.6	2%	4.3	3.1	4.6	4.4	4.3	4.5	3.8	4.3
Silver	mg/L	0.00025[A]	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	nc	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium	mg/L	200[A]	150	**1,500[A]**	**780[A]**	**280[A]**	**440[A]**	**420[A]**	5%	**340[A]**	**430[A]**	**330[A]**	**300[A]**	26	26	51	54
Strontium	mg/L	n/v	1.6	4.8	6.1	1.3	7.1	6.9	3%	2.5	0.93	1.6	1.4	1.2	1.1	1.5	1.4
Sulfur	mg/L	n/v	310	2,600	1,400	260	870	840	4%	550	260	350	360	74	77	29	36
Thallium	mg/L	n/v	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Tin	mg/L	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	0.0036	0.0040	<0.0010	<0.0010
Titanium	mg/L	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	0.0049	**0.028[A]**	**0.026[A]**	**0.014[A]**	0.0022	0.0023	4%	0.0060	<0.00010	**0.012[A]**	0.010	**0.014[A]**	0.010	0.0059	0.0049
Vanadium	mg/L	n/v	<0.0010	0.0011	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	0.0031	0.0050	<0.0030	<0.0030	0.011	0.010	nc	0.0041	0.0040	0.0035	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Metals - Total																	
Mercury	mg/L	0.000005[A]	<0.0000019	**0.000088 DB[A]**	**0.000189 DB[A]**	**0.0000167[A]**	<0.0000019	<0.0000019	nc	**0.000727 DB[A]**	<0.0000019	**0.000032 DB[A]**	<0.0000019	**0.00213 DB[A]**	**0.000223 DB[A]**	0.0000026	<0.0000019
Microbiological Parameters																	
Escherichia coli (E.Coli)	mpn/100mL	n/v	<1.0	<2.0 MI	<10 Z8	<2.0 MI	<1.0	<1.0	nc	<1.0	<1.0	<5.0 MI	<5.0 Z8	<5.0 MI	<10 Z8	<1.0	<1.0
Fecal Coliforms	mpn/100mL	n/v	<1.0	2.0 MI	<10 Z8	<2.0 MI	<1.0	<1.0	nc	<1.0	<1.0	<5.0 MI	<5.0 Z8	<2.0 MI	<10 Z8	<5.0 MI	<1.0
Heterotrophic Plate Count	mpn/100mL	n/v	>2400	>2400	>24000 MI	>2400	>2400	>2400	nc	>2400	>2400	>2400	>12000 MI	>2400	20,000 Z8	1,000	870
Total Coliforms	mpn/100mL	n/v	<1.0	<2.0 MI	<10 Z8	<2.0 MI	<1.0	<1.0	nc	1.0	56	2,900 MI	79 Z8	37 MI	<10 Z8	6.3	<1.0

See notes on the last page

Table 4.1 Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-10-15				MW16-11-15		MW16-22-26		MW16-25-9	MW21-3-15		MW21-6-12		RMW16-5-12	
Sample Date			21-Sep-24	21-Sep-24		5-Jun-25	21-Sep-24	5-Jun-25	26-Sep-24	5-Jun-25	6-Jun-25	19-Sep-24	3-Jun-25	20-Sep-24	4-Jun-25	24-Sep-24	3-Jun-25
Sample ID			MW16-10-15	SR24-07		MW16-10-15	MW16-11-15	MW16-11-15	RMW16-22-26	MW16-22-26	MW16-25-9	MW21-3-15	MW21-3-15	MW21-6-12	MW21-6-12	RMW16-5-12	RMW16-5-12
Sampling Company			STANTEC	STANTEC		STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			BV	BV		BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order			C475057	C475057		C551520	C475057	C551520	C476935	C551520	C551949	C474428	C550515	C474887	C551030	C475814	C550515
Laboratory Sample ID			CWB149	CWB154		DML532	CWB150	DML531	CWM896	DML533	DMO158	CVW764	DMG751	CVZ683	DMJ305	CWH293	DMG753
Location Description			Tier 2	Tier 2		Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	EIA Project Well	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
Lithology			Unconsolidated	Unconsolidated		Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock
Sample Type	Units	2024 AEPA Tier 1		Field Duplicate	RPD (%)												
Field Parameters																	
Dissolved Oxygen, Field	mg/L	n/v	3.99	-	-	10.88	3.33	8.09	3.7	4.26	4.64	6.72	7.2	3.58	2.95	2.68	3.87
Electrical Conductivity, Field	µS/cm	1,000[A]	**4,720[A]**	-	-	**4,704[A]**	**3,185[A]**	**3,211[A]**	**2,033[A]**	**2,014[A]**	**1,246[A]**	845	**1,234[A]**	**1,740[A]**	**1,975[A]**	845	770
Oxidation Reduction Potential, field	mV	n/v	121.4	-	-	128.7	30.6	-12	130.4	-70.6	116.9	44.1	129.4	-1.1	-7.2	75.4	48.1
pH, Field	S.U.	6.5-8.5[A]	7.05	-	-	6.9	7.08	7.13	7.75	7.65	7.18	8.46	8.38	7.02	7.03	7.43	7.35
Temperature, Field	deg C	n/v	8.8	-	-	8.54	8.7	11.27	8	10.8	10.79	7.8	8.21	7.4	9.98	11.8	9.45
Calculated Parameters																	
Anion Sum	meq/L	n/v	73	61	nc	68	38	41	24	24	16	14	14	19	21	9.3	9.2
Cation Sum	meq/L	n/v	69	59	nc	69	38	42	24	23	16	15	12	21	21	8.9	8.2
Hardness (as CaCO3)	mg/L	n/v	2,500	2,100	17%	2,500	1,200	1,400	690	690	670	15	12	430	450	290	270
Ion Balance	%	n/v	2.7	1.5	nc	-	0.037	-	0.70	-	-	2.4	-	4.5	-	2.5	-
Ion Balance % Difference	%	n/v	-	-	-	0.73	-	1.5	-	2.1	1.1	-	6.3	-	0.43	-	5.4
Nitrate	mg/L	13$_f$[A]	0.31	0.49	nc	<0.89	<0.22	<0.18	0.27	0.20	<0.18	<0.044	<0.18	<0.044	0.28	0.16	0.29
Nitrate + Nitrite (as N)	mg/L	100[A]	0.069 MI	0.11 MI	nc	<0.20 MI	<0.050 MI	<0.040	0.060	0.045	<0.040	0.029	<0.040	<0.010 MSE	0.064	0.036	0.066
Nitrite	mg/L	0.197/1.97$_{n4,g}$[A]	<0.033	<0.033	nc	<0.13	<0.033	<0.13	<0.033	<0.13	<0.13	0.076	<0.13	<0.033	<0.13	<0.033	<0.13
Total Dissolved Solids	mg/L	500[A]	**4,600[A]**	**3,800[A]**	19%	**4,300[A]**	**2,400[A]**	**2,600[A]**	**1,600[A]**	**1,600[A]**	**820[A]**	**810[A]**	**750[A]**	**1,100[A]**	**1,200[A]**	460	450
BTEX and Petroleum Hydrocarbons																	
Benzene	mg/L	0.005[A]	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	<0.00080	<0.00080	nc	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	<0.00089	<0.00089	nc	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.30 VV	<0.10	<0.10	<0.10	<0.10	<0.10
Miscellaneous Inorganics																	
Dissolved Organic Carbon (DOC)	mg/L	n/v	1.8	1.8	nc	1.8	2.2	2.9	1.3	1.9	4.4	1.6 PRH	1.5	2.6	2.8	1.0	1.2
Electrical Conductivity, Lab	µS/cm	1,000[A]	**4,700[A]**	**4,700[A]**	0%	**4,700[A]**	**3,100[A]**	**3,100[A]**	**2,000[A]**	**2,000[A]**	**1,300[A]**	**1,300[A]**	**1,300[A]**	**1,700[A]**	**1,900[A]**	780	780
pH, lab	S.U.	6.5-8.5[A]	7.59	7.57	nc	7.88	7.76	7.69	8.02	7.65	7.92	**8.64[A]**	**8.58[A]**	7.75	7.93	8.06	8.02
Anions																	
Alkalinity (P as CaCO3)	mg/L	n/v	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	38	12	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	530	540	2%	550	420	440	180	190	560	540	530	530	530	420	410
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	640	660	3%	670	520	530	220	230	690	570	620	650	650	510	500
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	45	15	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	128/429$_{n3}$[A]	**3,000[A]**	**2,400[A]**	22%	**2,700[A]**	**1,400[A]**	**1,500[A]**	**990[A]**	**980[A]**	**210[A]**	**150[A]**	**150[A]**	**270[A]**	**430[A]**	41	42
Chloride	mg/L	100[A]	2.5	2.4	nc	3.0	<1.0	<1.0	2.8	2.6	<1.0	1.6	1.2	91	50	2.2	1.9
Nutrients																	
Nitrite (as N)	mg/L	0.06/0.6$_{n4}$[A]	<0.010	<0.010	nc	<0.040	<0.010	<0.040	<0.010	<0.040	<0.040	0.023	<0.040	<0.010	<0.040	<0.010	<0.040
Orthophosphate (as P)	mg/L	n/v	<0.0030	<0.0030	nc	-	<0.0030	-	<0.0030	-	-	0.019	0.018	<0.0030	-	<0.0030	<0.0030
Ammonia (as N)	mg/L	0.035/125$_{n2}$[A]	**0.37[A]**	**0.37[A]**	0%	**0.41[A]**	**0.46[A]**	**0.49[A]**	**0.56[A]**	**0.57[A]**	<0.015	**0.47[A]**	**0.36[A]**	**0.11[A]**	**0.30[A]**	**0.13[A]**	**0.22[A]**
Nitrate (as N)	mg/L	3[A]	0.069	0.11	nc	<0.20	<0.050	<0.040	0.060	0.045	<0.040	<0.010	<0.040	<0.010	0.064	0.036	0.066
Phosphorus, Dissolved	mg/L	n/v	-	-	-	<0.0030	-	<0.0030	-	0.0052	0.0075	-	0.015 P2	-	<0.0030	-	<0.0030
Phosphorus, Total (Dissolved)	mg/L	n/v	0.0058	<0.0030	nc	-	<0.0030	-	<0.0030	-	-	0.017 PRH P2	-	<0.0030	-	<0.0030	-
Phosphorus, Total	mg/L	n/v	-	-	-	2.7	-	1.8	-	0.12	0.060	-	-	-	2.0	-	-
Total Kjeldahl Nitrogen	mg/L	n/v	1.3	1.1	17%	<2.0	1.1	0.91	0.86	0.74	0.40	0.83	0.47	0.23	0.88	<0.20	<2.0
Nitrogen	mg/L	n/v	1.4 DB	1.2 DB	15%	<2.0 DB NNA	1.1 DB	0.91 DB	0.92	0.78 DB	0.40 DB	0.86 DB	0.47 DB	0.23	0.95 DB	0.23 DB	<2.0 DB NN NNA
Metals - Dissolved																	
Aluminum	mg/L	0.007/0.05$_{n1,e}$[A]	<0.0030	<0.0030	nc	0.0064	<0.0030	<0.0030	0.0045	<0.0030	0.0033	**0.34[A]**	0.0043	<0.0030	<0.0030	**0.022[A]**	<0.0030
Antimony	mg/L	0.006[A]	<0.00060	<0.00060	nc	<0.00060	<0.00060	<0.00060	0.0012	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	0.00023	0.00026	nc	0.00026	0.00035	0.0010	0.00044	0.00049	0.00039	0.0011	0.00063	0.00050	0.0010	<0.00020	<0.00020
Barium	mg/L	2[A]	0.014	<0.010	nc	<0.010	0.011	<0.010	0.019	0.016	0.047	0.024	0.014	0.018	0.015	0.059	0.047
Beryllium	mg/L	n/v	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron	mg/L	1[A]	0.22	0.19	15%	0.21	0.11	0.11	0.12	0.14	0.063	0.23	0.19	0.23	0.25	0.096	0.091
Cadmium	mg/L	0.00004/0.00037$_{n3}$[A]	**0.00014[A]**	**0.00013[A]**	7%	**0.000071[A]**	**0.000097[A]**	0.000027	0.000027	<0.000020	**0.000045[A]**	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020

Table 4.1 Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-10-15			MW16-11-15			MW16-22-26		MW16-25-9	MW21-3-15		MW21-6-12		RMW16-5-12	
Sample Date			21-Sep-24	21-Sep-24		5-Jun-25	21-Sep-24	5-Jun-25	26-Sep-24	5-Jun-25	6-Jun-25	19-Sep-24	3-Jun-25	20-Sep-24	4-Jun-25	24-Sep-24	3-Jun-25
Sample ID			MW16-10-15	SR24-07		MW16-10-15	MW16-11-15	MW16-11-15	RMW16-22-26	MW16-22-26	MW16-25-9	MW21-3-15	MW21-3-15	MW21-6-12	MW21-6-12	RMW16-5-12	RMW16-5-12
Sampling Company			STANTEC	STANTEC		STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			BV	BV		BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order			C475057	C475057		C551520	C475057	C551520	C476935	C551520	C551949	C474428	C550515	C474887	C551030	C475814	C550515
Laboratory Sample ID			CWB149	CWB154		DML532	CWB150	DML531	CWM896	DML533	DMO158	CVW764	DMG751	CVZ683	DMJ305	CWH293	DMG753
Location Description			Tier 2	Tier 2		Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	EIA Project Well	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
Lithology			Unconsolidated	Unconsolidated		Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock
Sample Type	Units	2024 AEPA Tier 1		Field Duplicate	RPD (%)												
Calcium	mg/L	n/v	480	430	11%	490	300	320	180	180	130	5.3	4.1	120	120	63	58
Chromium	mg/L	0.05[A]	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt	mg/L	n/v	0.0038	0.0039	3%	0.0034	0.0014	0.0014	0.00043	0.00035	<0.00030	<0.00030	<0.00030	0.00035	0.00051	0.00031	<0.00030
Copper	mg/L	0.007[A]	<0.0010	<0.0010	nc	0.0014	<0.0010	<0.0010	**0.12[A]**	<0.0010	0.0015	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Iron	mg/L	0.3[A]	<0.060	<0.060	nc	<0.060	<0.060	**0.69[A]**	<0.060	0.15	<0.060	0.20	<0.060	<0.060	**0.37[A]**	<0.060	0.099
Lead	mg/L	0.001/0.007$_{n3}$[A]	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00026	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Lithium	mg/L	n/v	0.069	0.059	nc	0.14	0.036	0.13	0.052	0.091	0.11	0.027	0.023	0.044	0.056	<0.020	<0.020
Magnesium	mg/L	n/v	310	250	21%	310	120	140	60	61	83	0.44	0.31	35	37	33	31
Manganese	mg/L	0.02[A]	**2.7[A]**	**2.5[A]**	8%	**2.8[A]**	**1.1[A]**	**1.1[A]**	**0.39[A]**	**0.43[A]**	**0.062[A]**	<0.0040	0.012	**0.084[A]**	**0.11[A]**	**0.14[A]**	**0.15[A]**
Mercury	mg/L	0.000005[A]	<0.0000019	<0.0000019	nc	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	0.0000034	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	0.00056	0.00064	nc	0.00051	0.00068	0.00058	0.0030	0.0025	0.0012	0.0013	0.0023	0.00087	0.0014	0.00065	0.00060
Nickel	mg/L	0/0.17$_{n3}$[A]	**0.0070[A]**	**0.0072[A]**	3%	**0.0066[A]**	**0.0023[A]**	**0.0021[A]**	**0.00084[A]**	**0.0011[A]**	**0.0029[A]**	***<0.00050***	***<0.00050***	**0.0033[A]**	**0.0022[A]**	**0.00066[A]**	***<0.00050***
Phosphorus	mg/L	n/v	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Potassium	mg/L	n/v	10	9.5	5%	11	5.6	5.9	6.8	6.7	5.7	0.72	0.52	4.9	4.8	6.0	5.5
Selenium	mg/L	0.002[A]	<0.00020	<0.00020	nc	<0.00020	0.00023	<0.00020	<0.00020	<0.00020	0.0014	<0.00020	<0.00020	<0.00020	<0.00020	0.0010	0.0011
Silicon	mg/L	n/v	5.5	4.8	14%	5.5	4.4	4.8	3.7	3.9	5.3	3.9	3.5	4.5	4.2	2.8	2.9
Silver	mg/L	0.00025[A]	<0.00010	<0.00010	nc	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium	mg/L	200[A]	**430[A]**	**390[A]**	10%	**430[A]**	**310[A]**	**340[A]**	**230[A]**	**210[A]**	56	**330[A]**	**270[A]**	**270[A]**	**280[A]**	65	60
Strontium	mg/L	n/v	7.7	6.3	20%	7.0	2.7	3.0	3.0	3.0	1.2	0.075	0.054	1.8	2.2	1.3	1.2
Sulfur	mg/L	n/v	1,000	900	11%	960	490	560	280	340	72	42	47	110	150	12	13
Thallium	mg/L	n/v	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Tin	mg/L	n/v	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	0.012	0.0066	0.0033	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Titanium	mg/L	n/v	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.013	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	**0.013[A]**	**0.013[A]**	0%	**0.012[A]**	0.0053	0.0049	0.0011	0.0015	**0.022[A]**	0.00041	0.00041	0.0075	0.0065	0.0013	0.0011
Vanadium	mg/L	n/v	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0016	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	<0.0030	0.0032	nc	0.0031	<0.0030	<0.0030	0.0096	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Metals - Total																	
Mercury	mg/L	0.000005[A]	**0.000038 DB[A]**	**0.000047 DB[A]**	nc	**0.000210 DB[A]**	**0.000244 DB[A]**	**0.000233 DB[A]**	<0.0000019	0.0000050	<0.0000019	**0.000152 DB[A]**	**0.0000157[A]**	<0.0000019	**0.000162 DB[A]**	**0.0000167[A]**	**0.000210 DB[A]**
Microbiological Parameters																	
Escherichia coli (E.Coli)	mpn/100mL	n/v	<5.0 MI	<5.0 MI	nc	<20 Z8	<5.0 MI	<20 Z8	<1.0	<1.0	<5.0 Z8	<2.0 MI	<2.0 Z8	<1.0	<20 Z8	<2.0 MI	<10 Z8
Fecal Coliforms	mpn/100mL	n/v	<5.0 MI	<5.0 MI	nc	<20 Z8	<5.0 MI	<20 Z8	<1.0	<1.0	<5.0 Z8	2.0 MI	2.0 Z8	<1.0	<20 Z8	<2.0 MI	<10 Z8
Heterotrophic Plate Count	mpn/100mL	n/v	>2400	>2400	nc	>48000 MI	>4800 MI	48,000 Z8	>2400	>2400	>12000 Z8	>2400	>2400	2,400	31,000 Z8	>2400	>24000 MI
Total Coliforms	mpn/100mL	n/v	<5.0 MI	5.0 MI	nc	<20 Z8	<5.0 MI	<20 Z8	8.5	<1.0	<5.0 Z8	<2.0 MI	<2.0 Z8	3.1	<20 Z8	2.0 MI	<10 Z8

See notes on the last page

Table 4.1 Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			RMW16-13-37		RMW16-15-39		RMW16-16-17				RMW16-18-5	RMW16-18-13		RMW16-19-10		RMW16-19-19		
Sample Date			20-Sep-24	5-Jun-25	24-Sep-24	4-Jun-25	19-Sep-24	4-Jun-25	4-Jun-25		26-Sep-24	26-Sep-24	6-Jun-25	26-Sep-24	6-Jun-25	26-Sep-24	26-Sep-24	
Sample ID			RMW16-13-37	RMW16-13-37	RMW16-15-39	RMW16-15-39	RMW16-16-17	RMW16-16-17	SR25-02		RMW16-18-5	RMW16-18-13	RMW16-18-13	RMW16-19-10	RMW16-19-10	RMW16-19-19	SR24-10	
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC		STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	
Laboratory			BV	BV	BV	BV	BV	BV	BV		BV	BV	BV	BV	BV	BV	BV	
Laboratory Work Order			C474887	C551520	C475814	C551030	C474428	C551030	C551030		C476935	C476935	C551949	C476935	C551949	C476935	C476935	
Laboratory Sample ID			CVZ684	DML530	CWH296	DMJ306	CVW763	DMJ304	DMJ309		CWM894	CWM895	DMO155	CWM897	DMO154	CWM898	CWM902	
Location Description			Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2		Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	
Lithology			Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock		Unconsolidated	Bedrock	Bedrock	Unconsolidated	Unconsolidated	Bedrock	Bedrock	
Sample Type	Units	2024 AEPA Tier 1							Field Duplicate	RPD (%)							Field Duplicate	RPD (%)
Field Parameters																		
Dissolved Oxygen, Field	mg/L	n/v	2.5	4.02	2.4	5.32	1.02	2.72	-	-	4.74	3.66	4.65	2.77	6.33	1.95	-	-
Electrical Conductivity, Field	µS/cm	1,000[A]	**1,146[A]**	**1,146[A]**	918	849	**5,238[A]**	**5,133[A]**	-	-	**1,138[A]**	**1,137[A]**	**1,139[A]**	**3,384[A]**	**2,678[A]**	**2,953[A]**	-	-
Oxidation Reduction Potential, field	mV	n/v	-108.2	-42.3	104.4	55.9	-56.9	7.7	-	-	129.9	130.4	-33.6	10.1	128.4	-18.2	-	-
pH, Field	S.U.	6.5-8.5[A]	8.15	8.11	**8.91[A]**	8.41	6.93	6.83	-	-	7.77	7.71	7.64	7.03	7.07	7.11	-	-
Temperature, Field	deg C	n/v	6.6	10.18	9.4	12.2	13.4	13.61	-	-	8.4	7.8	11.96	7.1	11.01	7.4	-	-
Calculated Parameters																		
Anion Sum	meq/L	n/v	13	17	11	9.8	65	67	63	nc	12	12	12	46	35	36	37	nc
Cation Sum	meq/L	n/v	14	17	9.8	8.7	66	63	63	nc	13	12	12	45	34	33	34	nc
Hardness (as CaCO3)	mg/L	n/v	33	29	25	15	1,400	1,300	1,300	0%	270	150	150	1,300	900	550	560	2%
Ion Balance	%	n/v	3.1	-	4.5	-	1.2	-	-	-	2.0	0.021	-	1.4	-	3.9	4.3	nc
Ion Balance % Difference	%	n/v	-	1.1	-	5.9	-	3.2	0.054	nc	-	-	0.34	-	0.42	-	-	-
Nitrate	mg/L	13_f[A]	0.084	0.57	0.11	<0.18	<0.044	<0.18	<0.18	nc	2.3	0.92	1.5	<0.22	<0.18	<0.044	<0.044	nc
Nitrate + Nitrite (as N)	mg/L	100[A]	0.033	0.19	0.078	<0.040	<0.010	<0.040	<0.040	nc	0.51	0.21	0.34 MI	<0.050 MI	<0.040	<0.010	<0.010	nc
Nitrite	mg/L	$0.197/1.97_{n4,g}$[A]	0.046	**0.21[A]**	0.18	<0.13	<0.033	<0.13	<0.13	nc	<0.033	<0.033	<0.13	<0.033	<0.13	<0.033	<0.033	nc
Total Dissolved Solids	mg/L	500[A]	**710[A]**	**950[A]**	**570[A]**	**510[A]**	**4,200[A]**	**4,200[A]**	**4,100[A]**	2%	**670[A]**	**650[A]**	**670[A]**	**2,900[A]**	**2,200[A]**	**2,200[A]**	**2,300[A]**	4%
BTEX and Petroleum Hydrocarbons																		
Benzene	mg/L	0.005[A]	<0.00040	<0.00050 EC	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc
Toluene	mg/L	0.024[A]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc
Ethylbenzene	mg/L	0.0016[A]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc
Xylene, m & p-	mg/L	n/v	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	nc	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	nc
Xylene, o-	mg/L	n/v	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc
Xylenes, Total	mg/L	0.02[A]	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	nc	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	nc
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc
Miscellaneous Inorganics																		
Dissolved Organic Carbon (DOC)	mg/L	n/v	3.9	3.5	3.4	1.4	2.2 PRH	2.1	2.2	nc	2.2	1.5	1.9	5.3	4.0	3.6	3.3	9%
Electrical Conductivity, Lab	µS/cm	1,000[A]	**1,200[A]**	**1,600[A]**	930	840	**5,200[A]**	**5,100[A]**	**5,100[A]**	0%	**1,100[A]**	**1,100[A]**	**1,100[A]**	**3,400[A]**	**2,700[A]**	**2,900[A]**	**2,900[A]**	0%
pH, lab	S.U.	6.5-8.5[A]	8.25	8.37	8.44	**8.56[A]**	8.17	7.94	8.00	nc	8.18	8.32	8.22	7.87	7.82	7.97	7.36	nc
Anions																		
Alkalinity (P as CaCO3)	mg/L	n/v	<1.0	5.3	7.8	8.5	<1.0	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	nc
Alkalinity, Total (as CaCO3)	mg/L	n/v	530	620	450	440	720	770	720	7%	410	400	400	470	530	580	570	2%
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	650	740	530	510	880	940	880	7%	500	490	490	570	640	710	700	1%
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<1.0	6.4	9.4	10	<1.0	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	nc
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	nc
Sulfate	mg/L	$128/429_{n3}$[A]	32	51	78	51	**2,400[A]**	**2,500[A]**	**2,300[A]**	8%	81	71	70	**1,800[A]**	**1,200[A]**	**1,200[A]**	**1,200[A]**	0%
Chloride	mg/L	100[A]	51	**130[A]**	4.5	<1.0	4.9	4.6	4.5	nc	87	86	96	1.8	1.4	<1.0	<1.0	nc
Nutrients																		
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	0.014	**0.063[A]**	0.054	<0.040	<0.010	<0.040	<0.040	nc	<0.010	<0.010	<0.040	<0.010	<0.040	<0.010	<0.010	nc
Orthophosphate (as P)	mg/L	n/v	0.024	-	0.017	-	<0.0030	-	-	-	<0.0030	<0.0030	-	<0.0030	-	<0.0030	<0.0030	nc
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	**0.54[A]**	**0.98[A]**	**0.62[A]**	**0.69[A]**	**1.7[A]**	**1.7[A]**	**1.7[A]**	0%	<0.015	<0.015	**0.098[A]**	**0.070[A]**	**0.12[A]**	**1.1[A]**	**1.1[A]**	0%
Nitrate (as N)	mg/L	3[A]	0.019	0.13	0.024	<0.040	<0.010	<0.040	<0.040	nc	0.51	0.21	0.34	<0.050	<0.040	<0.010	<0.010	nc
Phosphorus, Dissolved	mg/L	n/v	-	0.030	-	0.038	-	<0.0030	<0.0030	nc	-	-	<0.0030	-	<0.0030	-	-	-
Phosphorus, Total (Dissolved)	mg/L	n/v	0.028	-	0.026	-	<0.0030 PRH	-	-	-	<0.0030	<0.0030	-	<0.0030	-	<0.0030	<0.0030	nc
Phosphorus, Total	mg/L	n/v	-	2.4	-	1.3	-	0.0082	0.011	nc	-	-	0.98	-	4.4	-	-	-
Total Kjeldahl Nitrogen	mg/L	n/v	1.4	<2.0	1.2	0.90	2.1	1.9	2.1	10%	1.9	0.085	0.52	0.70	<2.0	1.3	1.3	0%
Nitrogen	mg/L	n/v	1.5 DB	<2.0 DB NN NNA	1.2 DB	0.90 DB	2.1 DB	1.9	2.1	10%	2.4 DB	0.29	0.86 DB	0.70 DB	<2.0 DB NNA	1.3	1.3	0%
Metals - Dissolved																		
Aluminum	mg/L	$0.007/0.05_{n1,e}$[A]	**0.31[A]**	**0.0099[A]**	**0.36[A]**	**0.12[A]**	<0.0030	<0.0030	<0.0030	nc	**0.0079[A]**	0.0050	0.0032	0.0038	0.0040	0.0045	**0.018[A]**	nc
Antimony	mg/L	0.006[A]	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	nc	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	nc
Arsenic	mg/L	0.005[A]	0.0017	0.0013	0.0013	0.00040	0.00051	0.0013	0.0014	7%	0.00020	<0.00020	<0.00020	0.00024	<0.00020	<0.00020	<0.00020	nc
Barium	mg/L	2[A]	0.081	0.15	0.033	0.028	<0.010	<0.010	<0.010	nc	0.072	0.035	0.032	<0.010	0.011	<0.010	<0.010	nc
Beryllium	mg/L	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc
Boron	mg/L	1[A]	0.12	0.12	0.049	0.050	0.21	0.21	0.21	0%	0.12	0.13	0.14	0.11	0.14	0.13	0.13	0%
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	0.000030	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	nc	<0.000020	<0.000020	<0.000020	**0.00019[A]**	**0.000090[A]**	<0.000020	<0.000020	nc

Table 4.1 Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			RMW16-13-37		RMW16-15-39		RMW16-16-17				RMW16-18-5	RMW16-18-13		RMW16-19-10		RMW16-19-19		
Sample Date			20-Sep-24	5-Jun-25	24-Sep-24	4-Jun-25	19-Sep-24	4-Jun-25	4-Jun-25		26-Sep-24	26-Sep-24	6-Jun-25	26-Sep-24	6-Jun-25	26-Sep-24	26-Sep-24	
Sample ID			RMW16-13-37	RMW16-13-37	RMW16-15-39	RMW16-15-39	RMW16-16-17	RMW16-16-17	SR25-02		RMW16-18-5	RMW16-18-13	RMW16-18-13	RMW16-19-10	RMW16-19-10	RMW16-19-19	SR24-10	
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC		STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	
Laboratory			BV	BV	BV	BV	BV	BV	BV		BV	BV	BV	BV	BV	BV	BV	
Laboratory Work Order			C474887	C551520	C475814	C551030	C474428	C551030	C551030		C476935	C476935	C551949	C476935	C551949	C476935	C476935	
Laboratory Sample ID			CVZ684	DML530	CWH296	DMJ306	CVW763	DMJ304	DMJ309		CWM894	CWM895	DMO155	CWM897	DMO154	CWM898	CWM902	
Location Description			Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2		Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	
Lithology			Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock		Unconsolidated	Bedrock	Bedrock	Unconsolidated	Unconsolidated	Bedrock	Bedrock	
Sample Type	Units	2024 AEPA Tier 1							Field Duplicate	RPD (%)							Field Duplicate	RPD (%)
Calcium	mg/L	n/v	11	8.5	6.6	4.2	290	280	280	0%	53	32	33	340	220	130	130	0%
Chromium	mg/L	0.05[A]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc
Cobalt	mg/L	n/v	<0.00030	<0.00030	<0.00030	<0.00030	0.0016	0.0017	0.0016	6%	<0.00030	<0.00030	<0.00030	0.00082	0.00061	<0.00030	<0.00030	nc
Copper	mg/L	0.007[A]	0.0011	<0.0010	0.0018	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc
Iron	mg/L	0.3[A]	<0.060	<0.060	0.083	0.13	<0.060	**2.4[A]**	**2.4[A]**	0%	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	nc
Lead	mg/L	0.001/0.007$_{n3}$[A]	0.00046	<0.00020	0.00035	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	nc
Lithium	mg/L	n/v	0.036	0.14	0.037	0.041	0.24	0.23	0.23	0%	0.058	0.023	<0.020	0.041	<0.020	0.069	0.093	nc
Magnesium	mg/L	n/v	1.6	1.8	2.0	1.0	150	150	150	0%	32	17	16	120	83	56	56	0%
Manganese	mg/L	0.02[A]	0.011	**0.040[A]**	0.015	0.019	**0.34[A]**	**0.40[A]**	**0.40[A]**	0%	0.0057	**0.13[A]**	**0.081[A]**	**1.0[A]**	**0.72[A]**	**0.35[A]**	**0.35[A]**	0%
Mercury	mg/L	0.000005[A]	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	nc	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	nc
Molybdenum	mg/L	n/v	0.042	0.022	0.018	0.0076	0.00039	0.00033	0.00029	nc	0.0028	0.0038	0.0027	0.00066	0.00071	0.0012	0.0012	0%
Nickel	mg/L	0/0.17$_{n3}$[A]	**0.00082[A]**	***0.00050***	**0.0012[A]**	***0.00050***	**0.0017[A]**	**0.0021[A]**	**0.0019[A]**	nc	***0.00050***	***0.00050***	***0.00050***	**0.0019[A]**	**0.0014[A]**	***0.00050***	***0.00050***	nc
Phosphorus	mg/L	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc
Potassium	mg/L	n/v	2.3	2.4	2.6	1.4	7.7	7.3	7.3	0%	2.7	1.3	1.2	6.8	6.4	5.5	5.5	0%
Selenium	mg/L	0.002[A]	<0.00020	<0.00020	0.00043	<0.00020	<0.00020	<0.00020	<0.00020	nc	0.0019	0.00088	0.0019	0.0012	0.00091	<0.00020	<0.00020	nc
Silicon	mg/L	n/v	2.5	2.8	3.5	3.3	4.7	5.0	4.9	2%	4.1	2.8	3.2	3.9	4.1	3.4	3.4	0%
Silver	mg/L	0.00025[A]	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	nc	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	nc
Sodium	mg/L	200[A]	**290[A]**	**390[A]**	**210[A]**	190	**890[A]**	**840[A]**	**850[A]**	1%	170	200	**210[A]**	**410[A]**	**370[A]**	**500[A]**	**520[A]**	4%
Strontium	mg/L	n/v	0.20	0.17	0.10	0.072	8.4	7.3	7.2	1%	0.43	0.24	0.21	2.2	1.6	2.1	2.1	0%
Sulfur	mg/L	n/v	11	20	25	17	830	850	860	1%	22	22	24	550	380	340	340	0%
Thallium	mg/L	n/v	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	nc
Tin	mg/L	n/v	0.0030	0.0029	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	0.0025	<0.0010	<0.0010	0.0018	0.0012	<0.0010	<0.0010	nc
Titanium	mg/L	n/v	0.013	<0.0010	0.0066	0.0024	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc
Uranium	mg/L	0.01[A]	0.0066	0.0035	0.0016	0.00026	0.00030	0.00024	0.00031	nc	0.0082	0.0061	0.0053	**0.013[A]**	0.010	0.00089	0.00089	0%
Vanadium	mg/L	n/v	0.0022	<0.0010	0.0029	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc
Zinc	mg/L	0.03[A]	<0.0030	<0.0030	<0.0030	<0.0030	0.011	<0.0030	<0.0030	nc	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	nc
Metals - Total																		
Mercury	mg/L	0.000005[A]	**0.000028 DB[A]**	**0.000224 DB[A]**	**0.000058 DB[A]**	**0.0000568 DB[A]**	<0.0000019	<0.0000019	<0.0000019	nc	**0.000253 DB[A]**	0.0000044	**0.000117 DB[A]**	**0.000206 DB[A]**	**0.000295 DB[A]**	<0.0000019	<0.0000019	nc
Microbiological Parameters																		
Escherichia coli (E.Coli)	mpn/100mL	n/v	10 MI	<20 Z8	<100 MI	<20 Z8	<1.0	<1.0	<1.0	nc	<1.0	<1.0	<10 Z8	<10 MI	<20 Z8	<1.0	<1.0	nc
Fecal Coliforms	mpn/100mL	n/v	58 MI	<20 Z8	<100 MI	<20 Z8	<1.0	<1.0	<1.0	nc	<2.0 MI	<1.0	<10 Z8	<10 MI	<20 Z8	<1.0	<1.0	nc
Heterotrophic Plate Count	mpn/100mL	n/v	>2400	>48000 MI	>2400	>48000 Z8	490	>2400	290	nc	>2400	>2400	>24000 MI	>2400	>48000 MI	820	820	0%
Total Coliforms	mpn/100mL	n/v	>4800 MI	330 Z8	<100 MI	<20 Z8	2.0	<1.0	<1.0	nc	<1.0	<1.0	<10 Z8	<10 MI	<20 Z8	<1.0	<1.0	nc

See notes on the last page

Table 4.1 Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location				RMW16-23-7		RMW16-23-14		RMW16-23-32				RRMW16-17-8	
Sample Date			6-Jun-25	26-Sep-24	6-Jun-25	26-Sep-24	6-Jun-25	26-Sep-24	6-Jun-25	6-Jun-25		19-Sep-24	2-Jun-25
Sample ID			RMW16-19-19	RMW16-23-7	RMW16-23-7	RMW16-23-14	RMW16-23-14	RMW16-23-32	RMW16-23-32	SR25-03		RRMW16-17-8	RRMW16-17-8
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC		STANTEC	STANTEC
Laboratory			BV	BV	BV	BV	BV	BV	BV	BV		BV	BV
Laboratory Work Order			C551949	C476935	C551949	C476935	C551949	C476935	C551949	C551949		C474428	C550086
Laboratory Sample ID			DMO153	CWM899	DMO152	CWM900	DMO151	CWM901	DMO150	DMO159		CVW762	DME304
Location Description			Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2		Tier 2	Tier 2
Lithology			Bedrock	Unconsolidated	Unconsolidated	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock		Unconsolidated	Unconsolidated
Sample Type	Units	2024 AEPA Tier 1								Field Duplicate	RPD (%)		
Field Parameters													
Dissolved Oxygen, Field	mg/L	n/v	1.86	2.32	2.79	1.05	5.86	1.5	4.13	-	-	3.74	2.77
Electrical Conductivity, Field	µS/cm	1,000[A]	**2,814[A]**	**1,084[A]**	975	**1,172[A]**	**1,179[A]**	**1,191[A]**	**1,182[A]**	-	-	**12,126[A]**	**11,897[A]**
Oxidation Reduction Potential, field	mV	n/v	-11.5	116.7	31	-10	22.5	54.4	-3.5	-	-	88.9	74.2
pH, Field	S.U.	6.5-8.5[A]	7.1	7.37	7.33	7.18	7.35	7.8	8.05	-	-	6.91	6.81
Temperature, Field	deg C	n/v	11.04	7.9	6.39	7.5	8.72	6.7	7.44	-	-	8.5	10
Calculated Parameters													
Anion Sum	meq/L	n/v	34	11	11	13	13	14	13	13	nc	200	180
Cation Sum	meq/L	n/v	32	12	12	13	13	14	14	13	nc	190	210
Hardness (as CaCO3)	mg/L	n/v	510	480	480	390	400	69	70	68	3%	5,500	5,800
Ion Balance	%	n/v	-	3.1	-	1.7	-	0.94	-	-	-	3.0	-
Ion Balance % Difference	%	n/v	3.5	-	2.2	-	1.0	-	1.1	0.73	nc	-	7.6
Nitrate	mg/L	13_f[A]	<0.18	<0.22	0.19	0.14	<0.18	<0.044	<0.18	<0.18	nc	<1.1	<1.8
Nitrate + Nitrite (as N)	mg/L	100[A]	<0.040	<0.050 MI	0.044	0.031	<0.040	<0.010	<0.040	<0.040	nc	<0.25 MI	<0.40 MI
Nitrite	mg/L	$0.197/1.97_{n4,g}$[A]	<0.13	<0.033	<0.13	<0.033	<0.13	<0.033	<0.13	<0.13	nc	<0.033	<0.13
Total Dissolved Solids	mg/L	500[A]	**2,100[A]**	**610[A]**	**600[A]**	**730[A]**	**740[A]**	**760[A]**	**750[A]**	**740[A]**	1%	**13,000[A]**	**12,000[A]**
BTEX and Petroleum Hydrocarbons													
Benzene	mg/L	0.005[A]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	nc	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	nc	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10
Miscellaneous Inorganics													
Dissolved Organic Carbon (DOC)	mg/L	n/v	3.9	1.2	1.5	1.2	1.7	0.99	1.2	1.2	nc	23 PRH	26
Electrical Conductivity, Lab	µS/cm	1,000[A]	**2,800[A]**	990	1,000	**1,100[A]**	**1,200[A]**	**1,200[A]**	**1,200[A]**	**1,200[A]**	0%	**12,000[A]**	**12,000[A]**
pH, lab	S.U.	6.5-8.5[A]	7.85	7.93	7.92	8.04	8.03	8.39	8.34	8.39	nc	8.15	7.91
Anions													
Alkalinity (P as CaCO3)	mg/L	n/v	<1.0	<1.0	<1.0	<1.0	<1.0	6.3	1.2	4.8	nc	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	600	340	340	380	390	590	540	540	0%	950	970
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	740	410	420	460	470	700	660	650	2%	1,200	1,200
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<1.0	<1.0	<1.0	<1.0	<1.0	7.6	1.4	5.8	nc	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	**1,100[A]**	**140[A]**	**140[A]**	**210[A]**	**230[A]**	100	120	120	0%	**8,900[A]**	**7,700[A]**
Chloride	mg/L	100[A]	<1.0	50	50	26	29	<1.0	<1.0	<1.0	nc	5.2	4.7
Nutrients													
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	<0.040	<0.010	<0.040	<0.010	<0.040	<0.010	<0.040	<0.040	nc	<0.010	<0.040
Orthophosphate (as P)	mg/L	n/v	-	<0.0030	-	<0.0030	-	0.0088	-	-	-	0.0074	0.0044
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	**1.1[A]**	**0.046[A]**	**0.042[A]**	**0.46[A]**	**0.44[A]**	**0.79[A]**	**0.80[A]**	**0.82[A]**	2%	**0.89[A]**	**0.52[A]**
Nitrate (as N)	mg/L	3[A]	<0.040	<0.050	0.044	0.031	<0.040	<0.010	<0.040	<0.040	nc	<0.25	<0.40
Phosphorus, Dissolved	mg/L	n/v	<0.0030	-	<0.0030	-	<0.0030	-	0.0074	0.0071	nc	-	0.0034 P2
Phosphorus, Total (Dissolved)	mg/L	n/v	-	<0.0030	-	<0.0030	-	0.0054 P2	-	-	-	0.0040 PRH P2	-
Phosphorus, Total	mg/L	n/v	0.013	-	0.21	-	0.0046	-	0.0081	0.0079	nc	-	-
Total Kjeldahl Nitrogen	mg/L	n/v	1.4	0.28	0.30	0.51	0.66	0.89	0.93	0.94	1%	2.4	<2.0
Nitrogen	mg/L	n/v	1.4	0.28 DB	0.34 DB	0.54	0.66	0.89	0.93	0.94	1%	2.4 DB	<2.0 DB NNA
Metals - Dissolved													
Aluminum	mg/L	$0.007/0.05_{n1,e}$[A]	<0.0030	0.0066	0.0050	0.0034	0.0033	<0.0030	<0.0030	<0.0030	nc	**0.014[A]**	**0.013[A]**
Antimony	mg/L	0.006[A]	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	nc	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	0.00026	<0.00020	0.00025	<0.00020	<0.00020	0.00058	0.00053	0.00060	nc	0.00073	0.00055
Barium	mg/L	2[A]	<0.010	0.047	0.047	0.014	0.013	0.017	0.017	0.016	nc	0.013	<0.010
Beryllium	mg/L	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010
Boron	mg/L	1[A]	0.15	0.031	0.027	0.053	0.059	0.081	0.085	0.086	nc	0.17	0.16
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	nc	**0.00014[A]**	<0.000020

Table 4.1 Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location				RMW16-23-7		RMW16-23-14		RMW16-23-32				RRMW16-17-8	
Sample Date			6-Jun-25	26-Sep-24	6-Jun-25	26-Sep-24	6-Jun-25	26-Sep-24	6-Jun-25	6-Jun-25		19-Sep-24	2-Jun-25
Sample ID			RMW16-19-19	RMW16-23-7	RMW16-23-7	RMW16-23-14	RMW16-23-14	RMW16-23-32	RMW16-23-32	SR25-03		RRMW16-17-8	RRMW16-17-8
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC		STANTEC	STANTEC
Laboratory			BV	BV	BV	BV	BV	BV	BV	BV		BV	BV
Laboratory Work Order			C551949	C476935	C551949	C476935	C551949	C476935	C551949	C551949		C474428	C550086
Laboratory Sample ID			DMO153	CWM899	DMO152	CWM900	DMO151	CWM901	DMO150	DMO159		CVW762	DME304
Location Description			Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2		Tier 2	Tier 2
Lithology			Bedrock	Unconsolidated	Unconsolidated	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock		Unconsolidated	Unconsolidated
Sample Type	Units	2024 AEPA Tier 1								Field Duplicate	RPD (%)		
Calcium	mg/L	n/v	120	120	110	93	96	18	18	18	0%	390	390
Chromium	mg/L	0.05[A]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010
Cobalt	mg/L	n/v	<0.00030	0.00056	0.00060	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	nc	0.0067	0.0064
Copper	mg/L	0.007[A]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	0.0026	0.0013
Iron	mg/L	0.3[A]	**2.5[A]**	<0.060	0.30	<0.060	**0.54[A]**	<0.060	0.16	0.16	nc	<0.060	**0.31[A]**
Lead	mg/L	0.001/0.007$_{n3}$[A]	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020
Lithium	mg/L	n/v	0.034	<0.020	0.020	0.030	0.025	0.054	0.13	0.13	0%	0.10	0.10
Magnesium	mg/L	n/v	51	47	46	38	38	5.7	5.8	5.6	4%	1,100	1,200
Manganese	mg/L	0.02[A]	**0.33[A]**	**0.40[A]**	**0.45[A]**	**0.13[A]**	**0.13[A]**	0.020	**0.022[A]**	**0.021[A]**	5%	**2.4[A]**	**2.5[A]**
Mercury	mg/L	0.000005[A]	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	nc	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	0.0012	0.0011	0.0010	0.0013	0.0011	0.0020	0.0018	0.0018	0%	0.0012	0.00083
Nickel	mg/L	0/0.17$_{n3}$[A]	***<0.00050***	**0.0012[A]**	**0.00091[A]**	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***	nc	**0.0098[A]**	**0.0081[A]**
Phosphorus	mg/L	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10
Potassium	mg/L	n/v	5.1	5.0	4.6	4.5	4.4	2.7	2.7	2.7	0%	13	13
Selenium	mg/L	0.002[A]	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	nc	0.00052	0.00033
Silicon	mg/L	n/v	3.6	3.5	3.8	4.0	4.4	3.2	3.6	3.6	0%	5.3	5.1
Silver	mg/L	0.00025[A]	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	nc	<0.00010	<0.00010
Sodium	mg/L	200[A]	**490[A]**	47	45	120	110	**280[A]**	**280[A]**	**270[A]**	4%	**1,900[A]**	**2,200[A]**
Strontium	mg/L	n/v	1.9	0.73	0.67	0.99	0.91	0.32	0.32	0.32	0%	11	11
Sulfur	mg/L	n/v	360	40	50	63	77	34	41	41	0%	2,800	3,000
Thallium	mg/L	n/v	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020
Tin	mg/L	n/v	0.0018	0.0041	0.0024	<0.0010	<0.0010	<0.0010	<0.0010	0.0019	nc	<0.0010	<0.0010
Titanium	mg/L	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	0.00082	0.0021	0.0017	0.00052	0.00053	0.00017	0.00012	0.00011	nc	**0.046[A]**	**0.044[A]**
Vanadium	mg/L	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	nc	0.0036	0.0064
Metals - Total													
Mercury	mg/L	0.000005[A]	<0.0000019	**0.000058 DB[A]**	**0.0000145[A]**	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	nc	**0.000191 DB[A]**	**0.000093 DB[A]**
Microbiological Parameters													
Escherichia coli (E.Coli)	mpn/100mL	n/v	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	nc	<100 MI	<10 Z8
Fecal Coliforms	mpn/100mL	n/v	<1.0	<1.1 VV	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	nc	<100 MI	<10 Z8
Heterotrophic Plate Count	mpn/100mL	n/v	>2400	>2400	>2400	980	440	>2400	1,000	550	**58%**	>2400	>4800 MI
Total Coliforms	mpn/100mL	n/v	1.0	25	98	<1.0	2.0	<1.0	<1.0	<1.0	nc	3,800 MI	52 Z8

See notes on the last page

Table 4.1 Groundwater Analytical Results - Tier 2 and EIA Project Wells

Notes:

2024 AEPA Tier 1 [A]	Alberta Environment and Protected Areas (AEPA). 2024. Alberta Tier 1 Soil and Groundwater Remediation Guidelines. Land Policy Branch 189 pp.
	Table 2. Alberta Tier 1 Groundwater Remediation Guidelines - Agricultural - Fine
6.5[A]	Concentration exceeds the indicated standard.
15.2	Measured concentration did not exceed the indicated standard.
<0.50	Laboratory reporting limit was greater than the applicable standard.
<0.03	Analyte was not detected at a concentration greater than the laboratory reporting limit.
n/v	No standard/guideline value.
-	Parameter not analyzed / not available.
f	Guidelines only provided for Nitrate (as N). Nitrate guideline (as NO3) is calculated by multiplying the Nitrate (as N) guideline by 4.43.
n1,e	Standard varies with pH, long term guideline is shown.
n2	Standard varies with pH and temperature.
n3	Standard varies with hardness, long term guideline is shown.
n4	Standard varies with chloride, maximum 30-d Average Nitrite-N guideline is shown.
n4,q	Standard varies with chloride, maximum Nitrite-N guideline is shown.
CZA	Client supplied DM vial contained particulate which may increase uncertainty associated with result.
DB	Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.
EC	Detection limit raised due to interferent.
MI	Detection limits raised due to matrix interference.
MSE	Matrix spike exceeds acceptance limits due to probable matrix interference.
NN	Nitrogen < Nitrate: Both values fall within the method uncertainty for duplicates and are likely equivalent.
NNA	Nitrogen < Ammonia: Both values fall within the method uncertainty for duplicates and are likely equivalent.
P2	Phosphorus < Orthophosphate: Both values fall within the method uncertainty for duplicates and are likely equivalent.
PRH	Sample filtered and preserved past method specified hold time
VV	Detection limit raised based on sample volume used for analysis.
Z8	Detection limit raised due to matrix interference.
RPD	Relative Percent Difference.
61%	RPD exceeds data quality objective of 30%.
nc	RPD is not calculated if one or more values is non detect or if one or more values is less than five times the reportable detection limit.

The TDS concentrations in the unconsolidated deposits were similar to the historical results. Excluding RRMW16-17-8, the TDS concentrations ranged from 600 to 6,100 mg/L with an average concentration of 2,544 mg/L. RRMW16-17-8 is installed adjacent to a wetland which is likely a groundwater discharge feature with evapotranspiration concentrating salts in the shallow subsurface. The TDS concentrations naturally exceed both referenced guidelines and are considered slightly to moderately saline with concentrations of 13,000 and 12,000 mg/L in September 2024 and June 2025, respectively. At two other locations (MW16-2-6 and MW16-10-15), the TDS concentrations exceeded the definition of "non-saline water" (TDS <4,000 mg/L) under the Alberta's Water (Ministerial) Regulation. Elevated TDS had been observed historically at these locations and the latest results were consistent with historical results.

A total of 14 Tier 2 and EIA Project wells completed in bedrock were sampled in September 2024 and 11 Tier 2 wells were sampled in June 2025. The TDS concentrations in the bedrock deposits were similar to the historical (2016-2024) results and ranged from 510 to 4,200 mg/L with an average concentration of 1,405 mg/L. The bedrock TDS concentrations remain lower than in the surficial deposits but still exceed referenced guidelines in the monitoring wells sampled and are considered slightly saline. The dominant cations contributing to the TDS is sodium (calcium and magnesium to a lesser extent) and the dominant anions are sulphate and bicarbonate. Chloride concentrations are generally low, however, exceedances of the 100 mg/L Alberta Tier 1 Guideline have been noted at MW16-8-19 with concentrations within the range of historical results. An elevated chloride concentration of 130 mg/L was also noted in RMW16-13-37 located near the shoulder of Springbank Road.

Nutrient concentrations including ammonia, nitrate, nitrite, and phosphate are analyzed because they are contaminants of potential concern in agricultural settings. Nitrate, nitrite and ammonia concentrations were low in September 2024 and June 2025. The ammonia guideline varies with pH and temperature from 0.035 to 125 mg/L-N. The 2024 and 2025 ammonia concentrations remain relatively low ranging from <0.015 mg/L-N to 1.7 mg/L-N, but exceed the low end of the guideline range at the majority of monitoring wells. Nitrate and nitrite concentrations were below the referenced guidelines with the exception of the June 2025 nitrite concentration of 0.063 mg/L-N which marginally exceeded the 0.06 mg/L-N guideline. Phosphate concentrations were also low and/or below the laboratory detection limit in most samples.

Dissolved metals concentrations were generally within the range of expected concentrations for monitoring wells completed in glacial deposits and shallow bedrock in southern Alberta. Dissolved iron concentrations exceeded the 0.3 mg/L guideline in six monitoring wells with a maximum concentration of 2.5 mg/L at RMW16-19-19 in June 2025. Manganese concentrations exceeded the referenced guidelines (0.02 mg/L) during one or both monitoring events at all locations except MW16-8-8 and MW16-8-19, MW21-3-15, RMW16-15-39 and RMW16-18-5 with values ranging from <0.004 to 2.8 mg/L. Selenium exceeded the 0.002 mg/L Alberta Tier 1 Guideline in two monitoring wells with concentrations similar to historical results and a maximum concentration of 0.0059 mg/L at MW16-8-19 in September 2024. Uranium concentrations exceeded the 0.01 mg/L guidelines at eight monitoring wells. Results were consistent with historical conditions and all uranium exceedances were in wells completed in unconsolidated deposits, which is not unexpected given the prevalence of uranium in the glacial material. Sporadic Alberta Tier 1 Guideline exceedances of aluminum, cadmium, copper, nickel were also noted in the 2024 and 2025 analytical data as have been observed in the historical results.

Mercury is a contaminant of potential concern for dam reservoir areas due to the potential for methylmercury to form during the decomposition of organic matter. Dissolved mercury was below the laboratory detection limit in all samples in 2024 and 2025 with the exception of a single exceedance at MW16-7-5 with a concentration of 0.0000293 mg/L compared to the guideline of 0.000005 mg/L. Historical exceedances have also been noted at RMW16-13-37, RMW16-17-10, MW16-22-26, MW16-23-14, and MW21-6-7. Total mercury was also analysed in all samples with concentrations ranging from <0.0000019 to 0.00213 mg/L which is within the range of historical results.

Hydrocarbon concentrations were below Alberta Tier 1 Guidelines at all monitoring wells in September 2024 and June 2025.

Bacteriological parameters including Escherichia coli (E. Coli), fecal coliform, total coliforms, and heterotrophic plate counts (HPC) were enumerated for all samples. Sediment in the samples affected the detection limits for the bacteriological parameters as has also been the case for historical monitoring events. While the detection limits were not low enough to determine if the water is safe for human consumption in most samples, it does provide general information on the bacteriological levels and potential for pre-existing impacts in the shallow groundwater.

HPC's were included in the analytical suite to provide information on the level of bacteriological activity. HPC concentrations varied significantly from 440 mpn/100 mL at RMW16-23-14 to greater than 48,000 cfu/100 mL at several locations. No spatial or depth correlation was evident in the HPC data. E. coli counts were generally below the detection limits (up to 100 mpn/100 mL) but were detected at RMW16-13-37 in September 2024 (10 mpn/100 mL). Total coliform bacteria ranged from <1 to >4,800 mpn/100 mL. Fecal coliform bacteria were also detected at three locations with concentrations of up to 58 mpn/100 mL at RMW16-13-37, consistent with historical results.

4.2.2 Tier 2A and Tier 3

The Tier 2a and Tier 3 wells are grouped together for the purposes of discussion considering they are domestic and/or stock watering wells as opposed to monitoring wells installed specifically for the Project. Analytical data for the September 2025 and June 2025 monitoring events are presented Table 4.2 and laboratory analytical reports are included in Appendix C for reference. Historical data are also presented in Table C.2 in Appendix C for reference. Table C.2 also includes historical data for the one-time domestic well sampling. Table 4.2 and Table C.2 include the Alberta Tier 1 Soil and Groundwater Remediation Guidelines (Alberta Tier 1 Guidelines) (AEPA 2024) for fine grained soils in an agricultural land use setting and the Guidelines for Canadian Drinking Water Quality (GCDWQ) (Health Canada 2023). Guidelines are provided only for comparison purposes and discussion.

TDS concentrations were lower in the Tier 2a and Tier 3 wells compared to the Tier 2 monitoring wells, averaging 676 mg/L in wells known to be completed in bedrock (some completion details are unknown) and 355 mg/L in wells completed in shallow alluvial deposits. The bedrock wells had similar major ion chemistry to the Tier 2 and EIA Project wells in the previous section. The dominant cations contributing to the TDS in the bedrock wells are sodium (calcium and magnesium to a lesser extent) and the dominant anions are sulphate and bicarbonate. In contrast, the groundwater in the alluvial deposits is calcium and magnesium bicarbonate type water.

Table 4.2 Groundwater Analytical Results - Tier 2a and Tier 3

Sample Location				NE7-R3-01		NE20-R3-01				SW11-R4-02		SW35-R4-01		WS11-01		WS41-02	WS51-01	
Sample Date				25-Sep-24	5-Jun-25	25-Sep-24	3-Jun-25	3-Jun-25		19-Sep-24	2-Jun-25	21-Sep-24	4-Jun-25	20-Sep-24	3-Jun-25	3-Jun-25	25-Sep-24	2-Jun-25
Sample ID				NE7-R3-01	NE7-R3-01	NE20-R3-01	NE20-R3-01	SR25-01		SW11-R4-02	SW11-R4-02	SW35-R4-01	SW35-R4-01	WS11-01	WS11-01	WS41-02	WS51-01	WS51-01
Sampling Company				STANTEC	STANTEC	STANTEC	STANTEC	STANTEC		STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory				BV	BV	BV	BV	BV		BV	BV	BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order				C476327	C551520	C476327	C550515	C550515		C474428	C550086	C475057	C551030	C474887	C550515	C550515	C476327	C550086
Laboratory Sample ID				CWJ887	DML534	CWJ889	DMG756	DMG758		CVW761	DME305	CWB153	DMJ307	CVZ682	DMG755	DMG757	CWJ883	DME306
Location Description				Tier 3	Tier 3	Tier 3	Tier 3	Tier 3		Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3
Lithology				Unconsolidated (alluvial)	Unconsolidated (alluvial)	Bedrock	Bedrock	Bedrock		Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock
Sample Type	Units	2024 AEPA Tier 1	GCDWQ					Field Duplicate	RPD (%)									
Field Parameters																		
Dissolved Oxygen, Field	mg/L	n/v	n/v	8.02	11.72	7.35	8.73	-	-	1.86	4.58	4.3	5.07	3.9	5.75	3.33	1.61	2.96
Electrical Conductivity, Field	µS/cm	1,000[A]	n/v	566	321	**1,134[A]**	**1,123[A]**	-	-	318	310	**1,388[A]**	891	846	549	**1,138[A]**	518	501
Oxidation Reduction Potential, field	mV	n/v	n/v	98	90.3	128.1	174.4	-	-	-25.7	84.2	87.3	55.2	-18.6	71.6	66.9	-129.2	-115.4
pH, Field	S.U.	6.5-8.5[A]	7.0-10.5[B]	7.56	7.57	7.41	7.29	-	-	7.98	8.04	7.64	7.73	7.629	7.54	7.3	7.64	7.63
Temperature, Field	deg C	n/v	≤15[B]	9.9	4.27	11.4	12.66	-	-	7.1	7.09	7.4	7.22	7.4	8.58	7.08	8.2	7.2
Calculated Parameters																		
Anion Sum	meq/L	n/v	n/v	6.2	6.3	17	17	17	nc	5.2	5.1	17	16	9.6	9.6	13	8.6	8.5
Cation Sum	meq/L	n/v	n/v	6.1	5.5	18	16	16	nc	5.1	5.2	15	15	10	8.6	12	8.3	8.9
Hardness (as CaCO3)	mg/L	n/v	n/v	280	260	570	530	530	0%	69	74	79	69	270	230	270	170	180
Ion Balance	%	n/v	n/v	0.60	-	2.1	-	-	-	0.77	-	4.3	-	2.3	-	-	1.8	-
Ion Balance % Difference	%	n/v	n/v	0.60	6.8	2.1	4.2	2.7	nc	-	0.36	-	2.4	-	5.4	4.3	1.8	2.0
Nitrate	mg/L	13_f[A]	45[C]	2.7	2.1	1.9	1.8	1.8	0%	<0.044	<0.18	6.5	3.4	0.044	<0.18	10	<0.044	<0.18
Nitrate + Nitrite (as N)	mg/L	100[A]	n/v	0.62	0.46	0.53	0.40	0.40 MSE	0%	<0.010	<0.040	1.5	0.78	0.010	<0.040	2.2	<0.010	<0.040
Nitrite	mg/L	$0.197/1.97_{n4,g}$[A]	3[C]	<0.033	<0.13	**0.32[A]**	<0.13	<0.13	nc	<0.033	<0.13	0.037	<0.13	0.033	<0.13	<0.13	<0.033	<0.13
Total Dissolved Solids	mg/L	500[A]	≤500[B]	320	320	**960[AB]**	**940[AB]**	**930[AB]**	1%	290	290	**900[AB]**	**900[AB]**	490	460	**680[AB]**	480	490
BTEX and Petroleum Hydrocarbons																		
Benzene	mg/L	0.005[A]	0.005[C]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	0.00040	0.00056	<0.00040	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	0.024[B]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	0.0016[B]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	n/v	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	nc	<0.00080	<0.00080	<0.00080	<0.00080	0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	n/v	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	0.02[B]	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	nc	<0.00089	<0.00089	<0.00089	<0.00089	0.00089	<0.00089	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	0.10	<0.10	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	0.10	<0.10	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	0.10	<0.10	<0.10	<0.10	<0.10
Miscellaneous Inorganics																		
Dissolved Organic Carbon (DOC)	mg/L	n/v	n/v	1.0	0.69	2.0	1.8	1.7	nc	<0.50 PRH	<0.50	1.2	1.2	0.98	1.6	1.6	0.98	1.0
Electrical Conductivity, Lab	µS/cm	1,000[A]	n/v	560	550	**1,500[A]**	**1,500[A]**	**1,500[A]**	0%	500	490	**1,400[A]**	**1,500[A]**	840	820	**1,200[A]**	780	780
pH, lab	S.U.	6.5-8.5[A]	7.0-10.5[B]	8.29	7.78	8.00	7.87	7.98	nc	7.26	8.41	8.23	8.40	7.86	8.08	8.20	8.35	8.30
Anions																		
Alkalinity (P as CaCO3)	mg/L	n/v	n/v	<1.0	<1.0	<1.0	<1.0	<1.0	nc	<1.0	3.9	<1.0	6.1	1.0	<1.0	<1.0	2.6	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	n/v	230	230	460	490	470	4%	190	180	650	620	450	460	520	300	290
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	n/v	280	280	560	590	580	2%	230	220	800	740	550	560	630	360	350
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	n/v	<1.0	<1.0	<1.0	<1.0	<1.0	nc	<1.0	4.7	<1.0	7.3	1.0	<1.0	<1.0	3.2	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	n/v	<1.0	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	1.0	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	≤500[B]	60	72	**280[A]**	**280[A]**	**280[A]**	0%	59	61	**150[A]**	**170[A]**	17	13	61	**130[A]**	**130[A]**
Chloride	mg/L	100[A]	≤250[B]	8.4	7.7	64	63	63	0%	5.9	5.9	5.6	5.3	4.5	5.2	49	<1.0	<1.0
Nutrients																		
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	1[C]	<0.010	<0.040	**0.096[A]**	<0.040	<0.040	nc	<0.010	<0.040	0.011	<0.040	0.010	<0.040	<0.040	<0.010	<0.040
Orthophosphate (as P)	mg/L	n/v	n/v	<0.0030	-	<0.0030	<0.0030	<0.0030	nc	<0.0030	<0.0030	0.0093	-	0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	n/v	<0.015	<0.015	**0.57[A]**	**0.64[A]**	**0.64[A]**	0%	**0.18[A]**	**0.18[A]**	**0.12[A]**	**0.24[A]**	**0.24[A]**	**0.24[A]**	**0.11[A]**	**0.22[A]**	**0.25[A]**
Nitrate (as N)	mg/L	3[A]	10[C]	0.62	0.46	0.44	0.40	0.40	0%	<0.010	<0.040	1.5	0.78	0.010	<0.040	2.2	<0.010	<0.040
Phosphorus, Dissolved	mg/L	n/v	n/v	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	nc	-	<0.0030	-	0.0056	-	0.0038	<0.0030	<0.0030	<0.0030
Phosphorus, Total (Dissolved)	mg/L	n/v	n/v	<0.0030	-	<0.0030	-	-	-	<0.0030 PRH	-	0.0049 P2	-	0.0036	-	-	<0.0030	-
Phosphorus, Total	mg/L	n/v	n/v	-	0.0050	-	-	-	-	-	-	-	0.032	-	-	-	-	-
Total Kjeldahl Nitrogen	mg/L	n/v	n/v	0.085	0.052	0.63	0.73	0.84	14%	0.21	0.19	<0.050	0.18	0.50	0.34	<0.20	0.31	0.25
Nitrogen	mg/L	n/v	n/v	0.71	0.52	1.2	1.1	1.2	9%	0.21	0.19	1.4 NNA	0.96	0.50	0.34	2.2 NN	0.31	0.25 NNA
Metals - Dissolved																		
Aluminum	mg/L	$0.007/0.05_{n1,e}$[A]	0.1_a[B]	0.0056	0.0031	0.0054	<0.0030	<0.0030	nc	<0.0030	<0.0030	<0.0030	<0.0030	0.0030	<0.0030	<0.0030	0.0066	<0.0030
Antimony	mg/L	0.006[A]	0.006[C]	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	nc	<0.00060	<0.00060	<0.00060	<0.00060	0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	0.010_{ALARA}[C]	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	0.00049	0.00067	0.00033	0.00023	<0.00020	0.00045	0.00078
Barium	mg/L	2[A]	2.0[C]	0.14	0.11	0.018	0.015	0.017	nc	0.086	0.072	0.022	0.024	0.28	0.36	0.059	0.014	0.014
Beryllium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron	mg/L	1[A]	5[C]	<0.020	<0.020	0.055	0.050	0.050	nc	0.034	0.031	0.076	0.084	0.32	0.26	0.050	0.10	0.092
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	0.007[C]	<0.000020	<0.000020	**0.000043[A]**	0.000036	0.000034	nc	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	<0.000020	0.000027	<0.000020	<0.000020
Calcium	mg/L	n/v	n/v	79	70	130	110	120	9%	18	20	20	18	58	49	59	51	56

Table 4.2 Groundwater Analytical Results - Tier 2a and Tier 3

Sample Location				NE7-R3-01		NE20-R3-01				SW11-R4-02		SW35-R4-01		WS11-01		WS41-02	WS51-01	
Sample Date				25-Sep-24	5-Jun-25	25-Sep-24	3-Jun-25	3-Jun-25		19-Sep-24	2-Jun-25	21-Sep-24	4-Jun-25	20-Sep-24	3-Jun-25	3-Jun-25	25-Sep-24	2-Jun-25
Sample ID				NE7-R3-01	NE7-R3-01	NE20-R3-01	NE20-R3-01	SR25-01		SW11-R4-02	SW11-R4-02	SW35-R4-01	SW35-R4-01	WS11-01	WS11-01	WS41-02	WS51-01	WS51-01
Sampling Company				STANTEC	STANTEC	STANTEC	STANTEC	STANTEC		STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory				BV	BV	BV	BV	BV		BV	BV	BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order				C476327	C551520	C476327	C550515	C550515		C474428	C550086	C475057	C551030	C474887	C550515	C550515	C476327	C550086
Laboratory Sample ID				CWJ887	DML534	CWJ889	DMG756	DMG758		CVW761	DME305	CWB153	DMJ307	CVZ682	DMG755	DMG757	CWJ883	DME306
Location Description				Tier 3	Tier 3	Tier 3	Tier 3	Tier 3		Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3
Lithology				Unconsolidated (alluvial)	Unconsolidated (alluvial)	Bedrock	Bedrock	Bedrock		Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock
Sample Type	Units	2024 AEPA Tier 1	GCDWQ					Field Duplicate	RPD (%)									
Chromium	mg/L	0.05[A]	0.05[C]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt	mg/L	n/v	n/v	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	nc	<0.00030	<0.00030	<0.00030	<0.00030	0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Copper	mg/L	0.007[A]	≤1.0[B]	0.0011	<0.0010	0.0024	0.0018	0.0018	nc	<0.0010	<0.0010	0.0034	0.0034	0.0010	<0.0010	0.0013	<0.0010	<0.0010
Iron	mg/L	0.3[A]	≤0.1[B]	<0.060	<0.060	<0.060	<0.060	<0.060	nc	<0.060	<0.060	<0.060	<0.060	0.060	0.089	<0.060	<0.060	**0.27[B]**
Lead	mg/L	0.001/0.007$_{n3}$[A]	0.005$_{ALARA}$[C]	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Lithium	mg/L	n/v	n/v	<0.020	<0.020	0.030	0.039	0.039	nc	<0.020	<0.020	0.062	0.069	0.020	<0.020	0.029	<0.020	0.022
Magnesium	mg/L	n/v	n/v	21	20	63	58	59	2%	5.7	6.1	6.7	5.8	31	26	29	10	10
Manganese	mg/L	0.02[A]	≤0.02[B]	<0.0040	<0.0040	**0.033[AB]**	**0.028[AB]**	**0.028[AB]**	0%	**0.050[AB]**	**0.052[AB]**	0.0092	0.017	**0.38[AB]**	**0.34[AB]**	0.0052	**0.13[AB]**	**0.13[AB]**
Mercury	mg/L	0.000005[A]	0.001[C]	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	nc	<0.0000019	<0.0000019	<0.0000019	<0.0000019	0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	n/v	0.00074	0.00064	0.00082	0.00079	0.00079	nc	0.0018	0.0017	0.0052	0.0043	0.0037	0.0041	0.0060	0.0055	0.0050
Nickel	mg/L	0/0.17$_{n3}$[A]	n/v	***<0.00050***	***<0.00050***	**0.0018[A]**	**0.0018[A]**	**0.0019[A]**	nc	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***	**0.00050[A]**	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***
Phosphorus	mg/L	n/v	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	0.10	<0.10	<0.10	<0.10	<0.10
Potassium	mg/L	n/v	n/v	4.2	3.1	6.6	5.7	5.8	2%	0.93	0.88	2.7	2.6	4.8	4.0	4.8	1.1	1.1
Selenium	mg/L	0.002[A]	0.05[C]	0.00055	0.00076	0.00030	<0.00020	<0.00020	nc	<0.00020	<0.00020	0.0014	0.00058	0.00020	<0.00020	**0.0063[A]**	<0.00020	<0.00020
Silicon	mg/L	n/v	n/v	3.2	2.8	3.9	4.0	4.0	0%	3.7	4.0	2.8	3.0	6.0	5.5	2.8	4.5	5.2
Silver	mg/L	0.00025[A]	n/v	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	nc	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium	mg/L	200[A]	≤200[B]	7.8	6.4	140	120	120	0%	86	84	**310[AB]**	**320[AB]**	100	88	150	110	120
Strontium	mg/L	n/v	7.0[C]	0.39	0.37	1.8	1.6	1.6	0%	0.41	0.37	0.31	0.32	2.8	2.6	0.88	0.48	0.46
Sulfur	mg/L	n/v	n/v	17	25	85	95	96	1%	18	20	49	59	5.7	4.1	20	39	44
Thallium	mg/L	n/v	n/v	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Tin	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Titanium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	0.02[C]	0.00081	0.00060	0.0029	0.0023	0.0023	0%	<0.00010	<0.00010	0.00063	0.00048	0.00010	0.00019	0.0032	0.00025	0.00020
Vanadium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	≤5.0[B]	0.0079	0.0055	0.017	0.012	0.013	nc	**0.043[A]**	0.018	0.018	0.011	0.0030	<0.0030	0.0042	<0.0030	<0.0030
Metals - Total																		
Mercury	mg/L	0.000005[A]	0.001[C]	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	nc	<0.0000019	<0.0000019	<0.0000019	<0.0000019	0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019
Microbiological Parameters																		
Escherichia coli (E.Coli)	mpn/100mL	n/v	0[D]	**2.0[D]**	***<1.0***	***<1.0***	***<1.0***	***<1.0***	nc	***<1.0***	***<1.0***	***<1.0***	***<1.0***	**1.0[D]**	***<1.0***	***<1.0***	***<1.0***	**3.1[D]**
Fecal Coliforms	mpn/100mL	n/v	0[D]	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	nc	***<1.0***	***<1.0***	***<1.0***	***<1.0***	**1.0[D]**	***<1.0***	***<1.0***	***<1.0***	***<1.0***
Heterotrophic Plate Count	mpn/100mL	n/v	n/v	1,400	730	>2400	>2400	>2400	nc	2,400	>2400	2,000	1,700	>2400	>2400	54	1.0	>2400
Total Coliforms	mpn/100mL	n/v	0[D]	**340[D]**	**1.0[D]**	***<1.0***	***<1.0***	***<1.0***	nc	***<1.0***	***<1.0***	***<1.0***	***<1.0***	**1.0[D]**	***<1.0***	**4.1[D]**	***<1.0***	**55[D]**

See notes on the last page

Table 4.2 Groundwater Analytical Results - Tier 2a and Tier 3

Sample Location				WS62-01		WS81-01		WS81-02
Sample Date				25-Sep-24	5-Jun-25	25-Sep-24	4-Jun-25	25-Sep-24
Sample ID				WS62-01	WS62-01	WS81-01	WS81-01	WS81-02
Sampling Company				STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory				BV	BV	BV	BV	BV
Laboratory Work Order				C476327	C551520	C476327	C551030	C476327
Laboratory Sample ID				CWJ888	DML535	CWJ886	DMJ308	CWJ885
Location Description				Tier 3	Tier 3	Tier 2a	Tier 2a	Tier 2a
Lithology				Unconsolidated (alluvial)	Unconsolidated (alluvial)	Bedrock	Bedrock	Bedrock
Sample Type	Units	2024 AEPA Tier 1	GCDWQ					
Field Parameters								
Dissolved Oxygen, Field	mg/L	n/v	n/v	4.46	7.34	4.01	4.08	1.68
Electrical Conductivity, Field	µS/cm	1,000[A]	n/v	470	636	929	858	**1,022[A]**
Oxidation Reduction Potential, field	mV	n/v	n/v	133.6	151.2	56.4	145.6	-72.5
pH, Field	S.U.	6.5-8.5[A]	7.0-10.5[B]	7.3	7.36	7.05	7.43	7.41
Temperature, Field	deg C	n/v	≤15[B]	10	4.09	9	8.81	8.3
Calculated Parameters								
Anion Sum	meq/L	n/v	n/v	7.4	7.5	15	14	17
Cation Sum	meq/L	n/v	n/v	7.3	6.9	15	14	17
Hardness (as CaCO3)	mg/L	n/v	n/v	340	320	490	220	230
Ion Balance	%	n/v	n/v	1.2	-	1.1	-	0.33
Ion Balance % Difference	%	n/v	n/v	1.2	4.3	1.1	2.9	0.33
Nitrate	mg/L	13_f[A]	45[C]	0.19	0.37	**54[AC]**	**21[A]**	3.8
Nitrate + Nitrite (as N)	mg/L	100[A]	n/v	0.044	0.084	12	4.7	0.88
Nitrite	mg/L	$0.197/1.97_{n4,g}$[A]	3[C]	<0.033	<0.13	<0.033	<0.13	0.058
Total Dissolved Solids	mg/L	500[A]	≤500[B]	390	390	**820[AB]**	**800[AB]**	**960[AB]**
BTEX and Petroleum Hydrocarbons								
Benzene	mg/L	0.005[A]	0.005[C]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	0.024[B]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	0.0016[B]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	n/v	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	n/v	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	0.02[B]	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	n/v	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	n/v	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	n/v	<0.10	<0.10	<0.10	<0.10	<0.10
Miscellaneous Inorganics								
Dissolved Organic Carbon (DOC)	mg/L	n/v	n/v	1.2	1.0	2.5	1.6	2.7
Electrical Conductivity, Lab	µS/cm	1,000[A]	n/v	670	660	**1,300[A]**	**1,300[A]**	**1,500[A]**
pH, lab	S.U.	6.5-8.5[A]	7.0-10.5[B]	8.18	7.75	8.11	8.36	8.22
Anions								
Alkalinity (P as CaCO3)	mg/L	n/v	n/v	<1.0	<1.0	<1.0	3.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	n/v	270	260	440	470	570
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	n/v	330	320	530	560	690
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	n/v	<1.0	<1.0	<1.0	3.6	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	n/v	<1.0	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	≤500[B]	88	95	**160[A]**	**180[A]**	**250[A]**
Chloride	mg/L	100[A]	≤250[B]	8.0	7.6	71	36	13
Nutrients								
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	1[C]	<0.010	<0.040	<0.010	<0.040	0.018
Orthophosphate (as P)	mg/L	n/v	n/v	<0.0030	-	<0.0030	-	<0.0030
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	n/v	<0.015	<0.015	<0.015	<0.015	<0.015
Nitrate (as N)	mg/L	3[A]	10[C]	0.044	0.084	**12[AC]**	**4.7[A]**	0.86
Phosphorus, Dissolved	mg/L	n/v	n/v	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Phosphorus, Total (Dissolved)	mg/L	n/v	n/v	<0.0030	-	<0.0030	-	<0.0030
Phosphorus, Total	mg/L	n/v	n/v	-	<0.0030	-	<0.0030	-
Total Kjeldahl Nitrogen	mg/L	n/v	n/v	0.090	0.069	<0.25	<0.20	<0.20
Nitrogen	mg/L	n/v	n/v	0.13	0.15	12 NNA	4.5 NN	0.91 DB
Metals - Dissolved								
Aluminum	mg/L	$0.007/0.05_{n1,e}$[A]	0.1_a[B]	0.0066	<0.0030	<0.0030	<0.0030	0.0052
Antimony	mg/L	0.006[A]	0.006[C]	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	0.010_{ALARA}[C]	<0.00020	<0.00020	<0.00020	<0.00020	0.00024
Barium	mg/L	2[A]	2.0[C]	0.080	0.065	0.026	0.015	0.038
Beryllium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron	mg/L	1[A]	5[C]	<0.020	<0.020	0.12	0.20	0.16
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	0.007[C]	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Calcium	mg/L	n/v	n/v	96	89	100	47	52

Table 4.2 Groundwater Analytical Results - Tier 2a and Tier 3

Sample Location				WS62-01		WS81-01		WS81-02
Sample Date				25-Sep-24	5-Jun-25	25-Sep-24	4-Jun-25	25-Sep-24
Sample ID				WS62-01	WS62-01	WS81-01	WS81-01	WS81-02
Sampling Company				STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory				BV	BV	BV	BV	BV
Laboratory Work Order				C476327	C551520	C476327	C551030	C476327
Laboratory Sample ID				CWJ888	DML535	CWJ886	DMJ308	CWJ885
Location Description				Tier 3	Tier 3	Tier 2a	Tier 2a	Tier 2a
Lithology				Unconsolidated (alluvial)	Unconsolidated (alluvial)	Bedrock	Bedrock	Bedrock
Sample Type	Units	2024 AEPA Tier 1	GCDWQ					
Chromium	mg/L	0.05[A]	0.05[C]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt	mg/L	n/v	n/v	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Copper	mg/L	0.007[A]	≤1.0[B]	**0.040[A]**	**0.012[A]**	0.0044	0.0030	<0.0010
Iron	mg/L	0.3[A]	≤0.1[B]	<0.060	<0.060	<0.060	<0.060	<0.060
Lead	mg/L	0.001/0.007$_{n3}$[A]	0.005$_{ALARA}$[C]	0.00025	<0.00020	0.00022	<0.00020	<0.00020
Lithium	mg/L	n/v	n/v	<0.020	<0.020	0.022	0.038	0.032
Magnesium	mg/L	n/v	n/v	25	25	57	25	25
Manganese	mg/L	0.02[A]	≤0.02[B]	<0.0040	0.0054	<0.0040	<0.0040	0.010
Mercury	mg/L	0.000005[A]	0.001[C]	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	n/v	0.00052	0.00035	0.0037	0.0098	0.0024
Nickel	mg/L	0/0.17$_{n3}$[A]	n/v	***<0.00050***	***<0.00050***	**0.00083[A]**	***<0.00050***	**0.00051[A]**
Phosphorus	mg/L	n/v	n/v	<0.10	<0.10	<0.10	<0.10	<0.10
Potassium	mg/L	n/v	n/v	2.3	1.8	2.3	1.4	1.7
Selenium	mg/L	0.002[A]	0.05[C]	0.00059	0.0012	**0.0022[A]**	**0.0027[A]**	**0.0022[A]**
Silicon	mg/L	n/v	n/v	3.2	3.0	3.3	3.2	2.8
Silver	mg/L	0.00025[A]	n/v	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium	mg/L	200[A]	≤200[B]	8.3	7.9	110	**210[AB]**	**280[AB]**
Strontium	mg/L	n/v	7.0[C]	0.49	0.48	1.3	0.72	0.89
Sulfur	mg/L	n/v	n/v	27	34	46	58	71
Thallium	mg/L	n/v	n/v	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Tin	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Titanium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	0.02[C]	0.00085	0.00080	0.0036	0.0025	0.0059
Vanadium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	≤5.0[B]	**0.061[A]**	0.0095	0.0056	<0.0030	<0.0030
Metals - Total								
Mercury	mg/L	0.000005[A]	0.001[C]	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019
Microbiological Parameters								
Escherichia coli (E.Coli)	mpn/100mL	n/v	0[D]	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***
Fecal Coliforms	mpn/100mL	n/v	0[D]	***<1.0***	**1.0[D]**	***<1.0***	***<1.0***	***<1.0***
Heterotrophic Plate Count	mpn/100mL	n/v	n/v	65	1,600	330	2,400	170
Total Coliforms	mpn/100mL	n/v	0[D]	***<1.0***	***<1.0***	**17[D]**	***<1.0***	***<1.0***

See notes on the last page

Table 4.2 Groundwater Analytical Results - Tier 2a and Tier 3

Notes:

2024 AEPA Tier 1	Alberta Environment and Protected Areas (AEPA). 2024. Alberta Tier 1 Soil and Groundwater Remediation Guidelines. Land Policy Branch 189 pp.
A	Table 2. Alberta Tier 1 Groundwater Remediation Guidelines - Agricultural - Fine
GCDWQ	Health Canada (March 2025). Guidelines for Canadian Drinking Water Quality—Summary Table. Water and Air Quality Bureau, Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.
B	Guidelines for Canadian Drinking Water Quality - Aesthetic Objectives/ Operational Guidelines
C	Guidelines for Canadian Drinking Water Quality - Maximum Acceptable Concentration
D	Guidelines for Canadian Drinking Water Quality - Microbiological Parameters
6.5[A]	Concentration exceeds the indicated standard.
15.2	Measured concentration did not exceed the indicated standard.
<0.50	Laboratory reporting limit was greater than the applicable standard.
<0.03	Analyte was not detected at a concentration greater than the laboratory reporting limit.
n/v	No standard/guideline value.
-	Parameter not analyzed / not available.
a	This is an operational guidance value, designed to apply only to drinking water treatment plants using aluminum-based coagulants; it does not apply to naturally occurring aluminum found in groundwater. The operational guidance values of 0.1 mg/L applies to conventional treatment plants, and 0.2 mg/L applies to other types of treatment systems.
ALARA	as low as reasonably achievable
f	Guidelines only provided for Nitrate (as N). Nitrate guideline (as NO3) is calculated by multiplying the Nitrate (as N) guideline by 4.43.
i	High levels (above 500 mg/L) can cause physiological effects such as diarrhea or dehydration.
n1,e	Standard varies with pH, long term guideline is shown.
n2	Standard varies with pH and temperature.
n3	Standard varies with hardness, long term guideline is shown.
n4	Standard varies with chloride, maximum 30-d Average Nitrite-N guideline is shown.
n4,q	Standard varies with chloride, maximum Nitrite-N guideline is shown.
DB	Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.
MSE	Matrix spike exceeds acceptance limits due to probable matrix interference.
NN	Nitrogen < Nitrate: Both values fall within the method uncertainty for duplicates and are likely equivalent.
NNA	Nitrogen < Ammonia: Both values fall within the method uncertainty for duplicates and are likely equivalent.
P2	Phosphorus < Orthophosphate: Both values fall within the method uncertainty for duplicates and are likely equivalent.
PRH	Sample filtered and preserved past method specified hold time
RPD	Relative Percent Difference.
61%	RPD exceeds data quality objective of 30%.
nc	RPD is not calculated if one or more values is non detect or if one or more values is less than five times the reportable detection limit.

Nutrient concentrations including ammonia, nitrate, nitrite, phosphate and total Kjeldahl nitrogen were generally low. Nitrate concentrations exceeded the 3.0 mg/L-N Alberta Tier 1 Guideline in WS81-01 in September 2024 and June 2025. Nitrate has historically been elevated at this location.

Dissolved metals concentrations were generally lower than in the Project wells in Section 4.2.1, however, exceedances of Alberta Tier 1 Guidelines were noted for cadmium, copper, iron, manganese, nickel, selenium, sodium and zinc in some samples. Total and dissolved mercury concentrations were low or below laboratory detection limits in all samples. Hydrocarbon concentrations were below their respective guideline concentrations at all Tier 2a and Tier 3 wells.

Bacteriological parameters including E. coli, fecal coliform, total coliforms and HPC were enumerated for all samples. HPC concentrations varied widely from 1 cfu/100 mL at WS51-01 in September 2024 to >2,400 cfu/100 mL at a number of locations during both the September 2024 and June 2025 monitoring events. Total coliform bacteria ranged from <1 to 340 mpn/100 mL at NE7-R3-01 in September 2024. E. coli and fecal coliforms were below laboratory detection limits in all samples except NE7-R3-01 which reported a E. coli count of 2 mpn/100mL in September 2024, WS11-01 with E. coli and fecal coliform counts of 1 mpn/100 mL in September 2024, WS51-01 with an E. coli count of 3.1 mpn/100 mL in June 2025 and WS62-01 with a fecal coliform count of 1 mpn/100 mL in June 2025.

4.2.3 Groundwater Quality Triggers

Where sufficient baseline dataset has been established at a monitoring well (eight monitoring events where possible), trigger values have been determined for parameters that are naturally present at detectible concentrations (e.g., chlorides) to identify changes in groundwater quality that fall outside of the baseline conditions for a given well. UCL values have been calculated for the 15 monitoring wells with eight monitoring events or more listed in Section 2.4.3 and are presented in Table 4.3 in Appendix C.

Triggers were developed for each individual monitoring well based on a calculated upper confidence limit (UCL). The UCL was calculated for each parameter with less than 50% non-detect values as follows:

$$UCL = x + Z*s$$

Where:

- x = sample mean
- Z = multiplier (a value of 4.5 is considered appropriate for groundwater monitoring [Gibbons 1999])
- s = sample standard deviation

United States Environmental Protection Agency (US EPA 1989) indicated that the overall confidence levels for the control limits calculated using Z=4.5 is 95% based on a minimum of eight historical monitoring events.

Where the standard deviation is very large or very small, the coefficient of variation (Cv) will be calculated for the UCL as follows:

Where Cv < 0.05 UCL = 1.225*x

Where Cv > 0.5 UCL = 3.25*x

UCL values for parameters that are not naturally present in groundwater (e.g., BTEX, F1-F2 hydrocarbons) are considered to be equal to the referenced guideline for that parameter.

UCL exceedances for the September 2024 and June 2025 monitoring events were noted for total mercury at RMW16-18-13 and MW21-06-12 in June 2025. Dissolved mercury remained below the laboratory detection limit in both samples, therefore, the total mercury increase was likely related to higher suspended solids at the time of monitoring. Total and dissolved mercury concentrations will be reviewed following the next monitoring event to determine if the June 2025 concentrations were anomalous or represent a change in water quality at these locations. No other UCL exceedances were noted during the current reporting period.

Non-parametric trend analysis has been conducted for each groundwater monitoring well where a baseline data set has been established to assess changes in groundwater quality that may be due to Project operations. Trend analysis has been conducted for select analytes that are indicative of changes in general groundwater quality parameters which could be related to Project operations. The parameters chosen for trend analysis include: pH, EC, TDS, DOC, chloride, sulphate, ammonia and nitrate.

A summary of the trend analysis results is presented in Table 4.3 and are summarized as follows:

- Laboratory measured pH values exhibit a decreasing trend at RMW16-19-19. No increasing trends were noted.
- Increasing EC and TDS trends were noted at MW16-10-15 and additional increasing TDS trends were noted at MW16-08-08, MW21-06-12 and RMW16-19-19. Decreasing EC and TDS trends were noted at MW16-07-05 and RMW16-13-37.
- Decreasing DOC are noted at 6 of the 15 monitoring wells with an increasing trend noted at one (MW16-08-19)
- Chloride concentrations are increasing at MW16-01-15 and RMW16-18-13 and decreasing at MW16-07-05 and MW16-22-26
- Sulphate concentrations indicate a mix of increasing (4 wells) and decreasing (3 wells). Sulphate concentration changes (increasing and decreasing) are likely due to changes in bacterial sulphate reduction.
- Ammonia concentrations are decreasing at MW16-07-05 and MW16-10-15 and nitrate concentrations are decreasing at MW16-08-08 and MW16-08-19. No increasing ammonia or nitrate concentration trends are noted.



Table 4.3 Summary of Mann-Kendall Trend Analysis

Parameter	MW16-01-15	MW16-02-06	MW16-07-05	MW16-08-08	MW16-08-19	MW16-10-15	MW16-11-15	MW16-22-26	MW21-06-12	RMW16-05-12	RMW16-13-37	RMW16-16-17	RMW16-18-13	RMW16-19-10	RMW16-19-19
pH, lab	94.0% (+)	90.7% (+)	81.0% (+)	53.5% (+)	89.2% (+)	72.9% (+)	83.2% (-)	60.3% (-)	54.8% (-)	64.0% (-)	64.0% (+)	72.6% (+)	50.0% (+)	54.8% (+)	96.5% (-)
Electrical Conductivity, Lab	61.9% (+)	78.4% (+)	100.0% (-)	87.3% (+)	50.0% (.)	99.7% (+)	70.0% (+)	81.0% (-)	91.1% (+)	64.0% (+)	98.4% (-)	80.1% (-)	72.6% (+)	79.4% (-)	91.1% (+)
Total Dissolved Solids	91.0% (+)	56.9% (-)	99.8% (-)	99.2% (+)	72.9% (+)	99.2% (+)	66.8% (+)	50.0% (+)	98.4% (+)	50.0% (+)	98.4% (-)	54.8% (-)	86.2% (+)	54.8% (-)	98.4% (+)
Dissolved Organic Carbon	61.9% (-)	99.2% (-)	97.7% (-)	60.3% (-)	95.5% (+)	97.7% (-)	83.2% (-)	99.2% (-)	50.0% (.)	98.4% (-)	99.7% (-)	90.4% (-)	90.4% (-)	90.4% (-)	72.6% (-)
Chloride	97.5% (+)	60.3% (-)	100.0% (-)	78.4% (-)	70.0% (-)	72.9% (-)		99.8% (-)	80.1% (+)	86.2% (-)	50.0% (.)	72.6% (-)	98.4% (+)	90.4% (-)	
Sulfate	86.5% (+)	70.0% (-)	99.2% (-)	99.4% (+)	89.2% (+)	95.5% (+)	50.0% (-)	60.3% (-)	98.4% (+)	96.5% (-)	98.4% (-)	54.8% (+)	94.6% (-)	50.0% (.)	99.7% (+)
Ammonia (as N)	50.0% (-)	70.0% (+)	98.1% (-)			99.2% (-)	50.0% (+)	53.5% (+)	90.4% (-)	79.4% (-)	91.1% (-)	63.7% (-)		64.0% (+)	54.8% (+)
Nitrate (as N)				99.4% (-)	99.2% (-)			70.0% (-)		50.0% (-)	50.0% (+)		54.8% (-)		

statistically significant increasing trend
statistically significant decreasing trend

Concentration changes and trends were locally observed in some monitoring wells, however, the changes were limited to select parameters and cannot be interpreted in isolation. Multiple lines of evidence need to be considered in assessing potential Project effects (e.g. trends and UCL exceedances in areas where changes in groundwater levels and flows are observed as a result of dewatering). At MW21-06-12 there are increasing TDS and sulphate trends with sulphate increasing from 270 mg/L in September 2024 to 430 mg/L in June 2025. The data logger at MW21-16-12 also indicates drawdown at this location and increasing EC. The drawdown and water quality changes are interpreted to be a result of Project effects and resultant changes in groundwater flow. These types of Project related effects within the LAA were predicted in the EIA (Volume 3A). No correlation between the construction activities and the concentration trends was noted at the other monitoring wells.

No other Project related effects on groundwater quality were identified based on the review of the September 2024 and June 2025 groundwater monitoring program data.

4.2.4 QA/QC Analytical Results

Six field duplicate sample sets, two field blanks and two trip blanks were prepared during the September 2024 and June 2025 monitoring events. The QA/QC samples were prepared to evaluate the precision or reproducibility of the analytical data between samples. The relative percent difference (RPD) between the sample and duplicate results was calculated for each sample when the parameter result was greater than five times the detection limit. An RPD of 40% or less is considered acceptable for duplicate groundwater samples (CCME 2016).

The duplicate QA/QC analytical results are presented along with the analytical data in Table 4.1 and Table 4.2. Comparison of the duplicate sample results indicated that the results meet the criteria referenced above except for a single heterotrophic plate count for the June 2025 duplicate on RMW16-23-32. Overall, the reproducibility of the data is good and the analytical results are considered valid.

Field and trip blank sample results were below detection limits or within two times the detection limit for all results and no QA/QC issues were noted.

Laboratory QA/QC procedures and analysis are included with the analytical results in Appendix C. The quality assurance reports include analysis of matrix spikes, QC standards, blanks and calibration checks.

5 Conclusions and Recommendations

Groundwater monitoring network development and groundwater monitoring activities continued during the July 2024 to June 2025 reporting period. Groundwater monitoring and sampling was completed in September 2024 and June 2025. The monitoring and sampling included the Tier 2 monitoring wells, Tier 2a monitoring wells, Tier 3 domestic wells, and the legacy EIA Project wells (September 2024 only). Monitoring well decommissioning activities were completed in May 2025 to remove the remaining EIA project wells from within the reservoir footprint prior to the dry operations phase.

The monitoring programs included measurement of groundwater levels, field parameters (DO, ORP, pH, EC) and downloading and calibration of data logging pressure transducers. The transducers are deployed to measure and record near continuous water level (pressure), temperature, and electrical conductivity at the Tier 2, Tier 2a and Tier 3 monitoring wells. Groundwater samples were collected and submitted to the laboratory for routine potability parameters, major ions, bacteriological parameters, DOC, dissolved metals, nutrients, BTEX, and F1 to F2 fraction hydrocarbons.

Construction of the dam and diversion channel and dewatering of several areas near the Tier 2 monitoring network continued throughout the current reporting period. Construction activities had the potential to affect the water levels in wells near the dam and diversion channel. Changes in water levels at monitoring wells near these areas included:

- Water levels at five of the Tier 2 monitoring wells located near the diversion channel have decreased as a result of construction and dewatering of the channel as was predicted in the EIA. Initial decreases occurred starting in July 2023. Levels at RMW16-16-17 have rebounded in 2025 while further decreases were noted at RMW16-18-5, RMW16-18-13, MW21-6-7 and MW21-6-12 in 2025.
- The water levels at Tier 2b monitoring well WS81-01, located approximately 625 m from the current diversion channel construction footprint were variable due to pumping but the maximum levels (i.e. non-pumping) decreased approximately 6 m between October 2024 and April 2025, similar in timing to the decrease observed the previous year. There is significant of fluctuation and noise in the data and the deceases may be in part due to use/pumping and/or natural fluctuations, however the timing of the decreases appear similar to the drawdown observed closer to the channel and a portion may be the result of Project effects. A similar pattern of decreasing water levels is also observed at WS81-02.
- Tier 2 monitoring well MW16-22-26 is located approximately 80 m hydraulically downgradient of the current dam construction footprint. Water levels increased by approximately 2.3 m between October 2022 and November 2023. Given the timing of the increases and absence of similar increases across the network, the changes in water levels are interpreted to be a result of an increase in pore pressure related to construction of the dam. Water levels have fluctuated but remain elevated through 2024 and 2025. Increased pressure was not observed at nested monitoring wells RMW16-23-7/RMW16-23-14/RMW16-23-32 approximately 360 m hydraulically downgradient of the current dam construction footprint.



Changes in water levels that are potentially related to Project effects are limited to localized areas near the construction activities as anticipated in the EIA, and water level trigger conditions (i.e., increases resulting in flowing artesian conditions or decreases such that existing wells are no longer useable) were not observed at any of the Project or domestic monitoring wells in 2024 or 2025. However, decreases in Tier 2b domestic wells WS81-01 and WS81-02 have the potential to decrease yield to the point where the wells could become no longer useable. The levels at these wells will continue to be evaluated to make that determination along with potential feedback from the well owner.

Groundwater quality during the September 2024 and June 2025 monitoring events was consistent with historical results and, while there are numerous exceedances of the Alberta Tier 1 Guidelines (AEPA 2024) and the Guidelines for Canadian Drinking Water Quality (Health Canada 2023), exceedances were not attributed to Project effects. Project related water quality changes were only noted at one location (MW21-16-12). Increasing TDS and sulphate concentration trends are noted in conjunction with water level drawdown at MW21-16-12. The drawdown and water quality changes are interpreted to be a result of Project effects and resultant changes in groundwater flow. These types of Project related effects within the LAA were predicted in the EIA (Volume 3A). No other Project effects on groundwater quality have been identified at this point near the end of the construction phase.

The following recommendations are made for the next monitoring period:

- continue semi-annual groundwater monitoring for potential construction related effects through to construction completion and as additional baseline data gathering away from construction areas
- install Tier 1 monitoring wells at locations indicated in Figure 2.1 in the fall of 2025 and spring of 2026
- replace Tier 2 monitoring wells MW16-1-15, MW16-12-3, MW16-21-11 at locations indicated in Figure 2.1 in the fall of 2025 and spring of 2026

6 References

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Appendices

Appendix A Borehole Logs

Monitoring Well: MW16-1-15 (GW1)

Project:	Springbank Off-Stream Reservoir Project (SR1)	**Drilling method:**	Hollow-stem auger (Track mounted)/ Coring
Client:	Alberta Transportation	**Date started/completed:**	19-May-2016
Location:	Rocky View County, Alberta	**Ground surface elevation:**	n/a
Number:	110773396	**Top of casing elevation:**	n/a
Field investigator:	D. Nisbet	**Easting:**	-33327.478
Contractor:	All Service Drilling Inc.	**Northing:**	5659967.274

SUBSURFACE PROFILE | INSTALLATION DETAILS

Depth (ft)	Depth (m)	Graphic Log	Lithologic Description	Depth (m BGS)
0	0		Ground Surface	
			SAND AND GRAVEL Fine to coarse grained	0.00
			SILT Medium brown, with clay, moist, high plastic	0.30
5	2		CLAY Medium brown, trace silt, moist, high plastic, few intermittent <150 mm thick silt lenses	1.52
10	4			
15			SILTY CLAY (TILL) Medium brown, with very fine to medium grained sand, some gravel, moist	4.88
20	6			
25	8			
30			CLAY (TILL) Dark brown to dark grey, with gravel, some silt, low plastic	8.53
	10		SILTSTONE Grey to greenish grey, few fractures	10.06
35				
40	12		SANDSTONE Medium grey, fine grained, moderate fracturing, minor oxidation and clay mineralization along fractures - @ 13.11 m: sand becomes interbedded with alternating grey and brown fine grained layers	12.19
45	14			
50	16			
55			End of Borehole	16.76

INSTALLATION DETAILS

Diagram / Description

- 0.805 m Stick-up
- Sand
  0 to 1.83 m BGS
- Groundwater
  3.70 m BGS
  May 19, 2016
- 254 mm diameter
  borehole
  from 0 to 10.06 m
- Bentonite
- Solid pipe
  51 mm diameter
  Schedule 40 PVC
- 102 mm diameter
  borehole
  from 10.06 to 16.76 m
- Sand
  Sil 9 (4/10)
- Slotted pipe
  51 mm diameter
  Schedule 40 PVC
  No. 10 slot

Screen Interval: 12.19 - 15.24 m BGS
Sand Pack Interval: 11.58 - 16.76 m BGS
Well Seal Interval: 1.83 - 11.58 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

mm - millimetres
Coordinate System - NAD 1983 3TM 114
Completed as Well MW16-1-15

Stantec

Drawn By/Checked By: M. Kuhl / D. King

STANTEC BOREHOLE AND WELL V2 110773396_NEW.GPJ STANTEC - DATA TEMPLATE.GDT 17/1/16 MKUHL

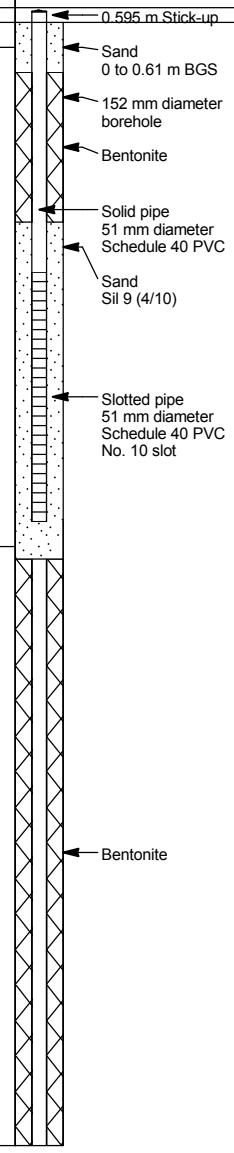
Monitoring Well: MW16-2-6 (GW2)

Project:	Springbank Off-Stream Reservoir Project (SR1)	**Drilling method:**	Solid-stem auger (Track mounted)
Client:	Alberta Transportation	**Date started/completed:**	26-May-2016
Location:	Rocky View County, Alberta	**Ground surface elevation:**	n/a
Number:	110773396	**Top of casing elevation:**	n/a
Field investigator:	D. Nisbet	**Easting:**	-31947.274
Contractor:	All Service Drilling Inc.	**Northing:**	5659623.886

SUBSURFACE PROFILE

Depth (ft)	Depth (m)	Graphic Log	Lithologic Description	Depth (m BGS)
0	0		Ground Surface	
			SOIL Black to dark brown, moist	0.00
			CLAY Brown to beige, some silt, moist, high plastic	0.30
5	2		- @ 2.13 m: becomes mottled beige and grey, silt content increases to 15-30%	
10	4		- @ 3.66 m: trace gravel and coal present	
20	6			
			SILT (TILL) Light brown, some fine grained sand stringers, with gravel and clay, moist, low plastic	6.40
25	8			
30	10			
35			- @ 10.67 m: grades to gravelly silt	
40	12			
45	14		End of Borehole	13.72

INSTALLATION DETAILS



Screen Interval: 3.05 - 6.10 m BGS
Sand Pack Interval: 2.44 - 6.55 m BGS
Well Seal Interval: 6.55 - 13.72 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

mm - millimetres
Coordinate System - NAD 1983 3TM 114
Completed as Well MW16-2-6

Stantec

Drawn By/Checked By: M. Kuhl / D. King

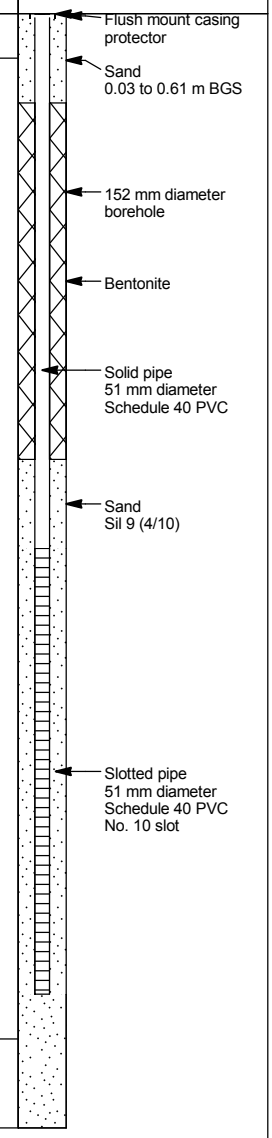
STANTEC BOREHOLE AND WELL V2 110773396_NEW.GPJ STANTEC - DATA TEMPLATE.GDT 17/1/16 MKUHL

Monitoring Well: MW16-3-7 (GW3)

Project:	Springbank Off-Stream Reservoir Project (SR1)	**Drilling method:**	Solid-stem auger (Truck mounted)
Client:	Alberta Transportation	**Date started/completed:**	29-Jul-2016
Location:	Rocky View County, Alberta	**Ground surface elevation:**	n/a
Number:	110773396	**Top of casing elevation:**	n/a
Field investigator:	D. Nisbet	**Easting:**	-31904.435
Contractor:	All Service Drilling Inc.	**Northing:**	5659073.461

SUBSURFACE PROFILE | INSTALLATION DETAILS

Depth (ft)	Depth (m)	Graphic Log	Lithologic Description	Depth (m BGS)
			Ground Surface	
			SAND AND GRAVEL (FILL)	0.00
			CLAY AND SILT Medium brown, moist, medium plastic	0.30
5	2		- @ 1.83 m: silt content decreases to 30-40%, high plastic	
10	4			
15			- from 5.18 to 6.10 m: layer of silt with clay, wet	
20	6			
			SILTY CLAY (TILL) Medium brown, some very fine grained sand, with gravel, dry to moist, low to medium plastic	7.01
25	8		End of Borehole	7.62



Screen Interval: 3.66 - 6.71 m BGS
Sand Pack Interval: 3.05 - 7.62 m BGS
Well Seal Interval: 0.61 - 3.05 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

mm - millimetres
Coordinate System - NAD 1983 3TM 114
Completed as Well MW16-3-7

Stantec

Drawn By/Checked By: M. Kuhl / D. King

STANTEC BOREHOLE AND WELL V2 110773396_NEW.GPJ STANTEC - DATA TEMPLATE.GDT 17/1/16 MKUHL

Monitoring Well: MW16-4-22 (GW4)

Project:	Springbank Off-Stream Reservoir Project (SR1)	**Drilling method:**	Hollow-stem auger (Track mounted)/ Coring
Client:	Alberta Transportation	**Date started/completed:**	20-May-2016
Location:	Rocky View County, Alberta	**Ground surface elevation:**	n/a
Number:	110773396	**Top of casing elevation:**	n/a
Field investigator:	D. Nisbet	**Easting:**	-32259.324
Contractor:	All Service Drilling Inc.	**Northing:**	5658717.399

SUBSURFACE PROFILE | INSTALLATION DETAILS

Depth (ft)	Depth (m)	Graphic Log	Lithologic Description	Depth (m BGS)
			Ground Surface	
0	0		TOPSOIL	0.00
			CLAY Light to medium brown, with silt, moist, high plastic	0.30
5	2			
10	4			
15				
20	6			
			SILTY CLAY (TILL) Medium brown, some very fine to fine sand, with gravel, moist, high plastic	6.71
25	8		- @ 8.23 m: trace coal present	
30			- @ 9.45 m: sand component increases to 15-30% very fine to fine sand	
	10			
35			SILT AND CLAY (TILL) With very fine to fine sand, with gravel, dry to slighly moist, friable	10.97

Diagram / Description:

- 0.662 m Stick-up
- Sand 0 to 1.22 m BGS
- Bentonite
- Groundwater 2.38 m BGS May 20, 2016
- Cuttings and sand 1.83 to 4.88 m BGS
- 254 mm diameter borehole from 0 to 12.80 m
- Solid pipe 51 mm diameter Schedule 40 PVC
- Bentonite

Screen Interval: 18.59 - 21.64 m BGS
Sand Pack Interval: 18.29 - 21.95 m BGS
Well Seal Interval: 21.95 - 22.86 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

mm - millimetres
Coordinate System - NAD 1983 3TM 114
Completed as Well MW16-4-22

Stantec

Drawn By/Checked By: M. Kuhl / D. King

STANTEC BOREHOLE AND WELL V2 110773396_NEW.GPJ STANTEC - DATA TEMPLATE.GDT 17/1/16 MKUHL

Monitoring Well: MW16-4-22 (GW4)

Project:	Springbank Off-Stream Reservoir Project (SR1)	**Drilling method:**	Hollow-stem auger (Track mounted)/ Coring
Client:	Alberta Transportation	**Date started/completed:**	20-May-2016
Location:	Rocky View County, Alberta	**Ground surface elevation:**	n/a
Number:	110773396	**Top of casing elevation:**	n/a
Field investigator:	D. Nisbet	**Easting:**	-32259.324
Contractor:	All Service Drilling Inc.	**Northing:**	5658717.399

SUBSURFACE PROFILE | INSTALLATION DETAILS

Depth (ft)	Depth (m)	Graphic Log	Lithologic Description	Depth (m BGS)
			SILT AND CLAY (TILL) With very fine to fine sand, with gravel, dry to slighly moist, friable	
40	12			
			SANDSTONE Medium grey, very fine to fine grained, few fractures, some oxidation on fracture surfaces, no structure, massive	12.80
45	14			
			- @ 14.94 m: sandstone becomes slightly banded with alternating light grey and dark grey layers, no oxidation present	
50				
	16			
55				
			- @ 17.98 m: medium grained layers interbedded with finer grained layers become present	
60	18			
			- @ 20.12 m: sand begins to coarsen to medium grained sandstone, some clay along fractures	
65	20			
70				
			SILTSTONE Dark grey, highly fractured and altered - @ 21.95 m: clay mineralization along fractures	21.64
	22		SANDSTONE Medium grey, very fine grained	22.25
			CLAYSTONE Dark grey to black, few fractures	22.56
75			End of Borehole	22.86

INSTALLATION DETAILS	Description
Diagram	
	102 mm diameter borehole from 12.80 to 22.86 m
	Sand Sil 9 (4/10)
	Slotted pipe 51 mm diameter Schedule 40 PVC No. 10 slot
	Bentonite

Screen Interval: 18.59 - 21.64 m BGS
Sand Pack Interval: 18.29 - 21.95 m BGS
Well Seal Interval: 21.95 - 22.86 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

mm - millimetres
Coordinate System - NAD 1983 3TM 114
Completed as Well MW16-4-22

Stantec

Drawn By/Checked By: M. Kuhl / D. King

STANTEC BOREHOLE AND WELL V2 110773396_NEW.GPJ STANTEC - DATA TEMPLATE.GDT 17/1/16 MKUHL

Monitoring Wells: RMW16-5-12

Project:	SR1/Springank	**Method:**	Soid Stem Auger
Client:	Alberta Transportaiton	**Date started/completed:**	30-Nov-2021
Location:	Rockyview County	**Ground surface elevation:**	n/a
Number:	10773396.5210.215	**Top of casing elevation:**	n/a
Field investigator:	WT/AK	**Easting:**	n/a
Contractor:	All Service Drilling	**Northing:**	n/a

SUBSURFACE PROFILE | INSTALLATION DETAILS

Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Depth (m BGS)	Diagram	Description
-2	-0.5					Aboveground casing 0.76 m
0	0.0		Ground Surface TOPSOIL	0.00		50 mm solid PVC pipe packed in 10-20 filter sand
1			SANDY CLAY fine grained sand, some oxidation and organics, greyish brown, dry	0.30		
2	0.5					
3	1.0					
4						
5	1.5					
6			SILTY SAND some gravel, trace clay, low plasticity, reddish brown, moist	1.80		
7	2.0					
8	2.5					
9						
10	3.0					
11	3.5					
12			SANDSTONE fine to very fine sand, brown, dry	3.50		
13	4.0					
14						
15	4.5					50 mm solid PVC pipe packed in hydrated bentonite chips 0.3 to 8.7 m BGS
16						
17	5.0					
18	5.5					
19						
20	6.0					
21	6.5					
22						
23	7.0					Water level 6.914 m BTOC 4-May-22

Screen Interval: 9.00 - 12.00 m BGS
Sand Pack Interval: 8.70 - 12.00 m BGS
Well Seal Interval: 0.30 - 8.70 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

m BTOC - metres below top of casing

Stantec

Drawn By/Checked By: JL/DK

STANTEC BOREHOLE AND WELL V2 SPRINGBANK_LOGS_20220808.GPJ STANTEC - DATA TEMPLATE.GDT 8/11/22 JLAUTERMILCH

Monitoring Wells: RMW16-5-12

Project:	SR1/Springank	**Method:**	Soid Stem Auger
Client:	Alberta Transportaiton	**Date started/completed:**	30-Nov-2021
Location:	Rockyview County	**Ground surface elevation:**	n/a
Number:	10773396.5210.215	**Top of casing elevation:**	n/a
Field investigator:	WT/AK	**Easting:**	n/a
Contractor:	All Service Drilling	**Northing:**	n/a

SUBSURFACE PROFILE				INSTALLATION DETAILS	
Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Depth (m BGS)	Diagram / Description
24	7.5		SANDSTONE fine to very fine sand, brown, dry		
26	8.0		SILTSTONE traces of coal, grey, wet	8.00	
28	8.5				
29	9.0		SANDSTONE very fine sand, silt seams, grey, dry	9.00	50 mm solid PVC pipe packed in 10-20 filter sand 8.7 to 9.0 m BGS
31	9.5				
33	10.0				
34	10.5				50 mm slotted PVC pipe packed in 10-20 filter sand 9.0 to 12.0 m BGS
36	11.0				
38	11.5				
39	12.0		End of Borehole	12.00	
41	12.5				
43	13.0				
44	13.5				
46	14.0				
47	14.5				
49	15.0				

Screen Interval: 9.00 - 12.00 m BGS
Sand Pack Interval: 8.70 - 12.00 m BGS
Well Seal Interval: 0.30 - 8.70 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

m BTOC - metres below top of casing

Stantec

Drawn By/Checked By: JL/DK

STANTEC BOREHOLE AND WELL V2 SPRINGBANK_LOGS_20220808.GPJ STANTEC - DATA TEMPLATE.GDT 8/11/22 JLAUTERMILCH

Monitoring Well: MW16-6-20 (GW6D)

Project:	Springbank Off-Stream Reservoir Project (SR1)	**Drilling method:**	Solid-stem auger (Truck mounted)
Client:	Alberta Transportation	**Date started/completed:**	26-Aug-2016
Location:	Rocky View County, Alberta	**Ground surface elevation:**	n/a
Number:	110773396	**Top of casing elevation:**	n/a
Field investigator:	D. Nisbet	**Easting:**	-31100.423
Contractor:	All Service Drilling Inc.	**Northing:**	5658133.938

SUBSURFACE PROFILE | INSTALLATION DETAILS

Depth (ft)	Depth (m)	Graphic Log	Lithologic Description	Depth (m BGS)
			Ground Surface	
			TOPSOIL	0.00
			SILT Light brown, some clay, moist to wet - @ 1.22 m: clay content begins to increase	0.30
5	2			
			SILTY CLAY Light brown to light grey, medium to high plastic, mottled	2.44
10	4			
15			- @ 4.88 m: clay content decreases to 15-30%, high plastic	
20	6			
25				
	8		SILTY CLAY (TILL) Medium brown, with very fine grained sand, some gravel, moist, medium plastic	7.92
30			- @ 9.14 m: silt content increases to > 40%	
	10			
35			CLAYSTONE - fom 10.36 to 18.90 m: light to medium grey, dry, medium to high plastic when wetted, some small intervals of soft clay fracture gouge throughout	10.36
40	12			
45	14			
50				
	16			
55				
	18			
60			- from 18.90 to 20.42 m: black to dark grey, dry	
65	20			
			SILTSTONE Light grey, weathered to silt	20.42
70			CLAYSTONE Dark grey, dry	21.34
	22			
75			End of Borehole	22.86
	24			

Diagram	Description
	Flush mount casing protector
	Sand 0.03 to 0.61 m BGS
	152 mm diameter borehole
	Bentonite seal
	Solid pipe 51 mm diameter Schedule 40 PVC
	Sand Sil 9 (4/10)
	Slotted pipe 51 mm diameter Schedule 40 PVC No. 10 slot

Screen Interval: 18.90 - 21.95 m BGS
Sand Pack Interval: 18.29 - 22.86 m BGS
Well Seal Interval: 0.61 - 18.29 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

mm - millimetres
Coordinate System - NAD 1983 3TM 114
Completed as Well MW16-6-20

Stantec

Drawn By/Checked By: M. Kuhl / D. King

STANTEC BOREHOLE AND WELL V2 110773396_NEW.GPJ STANTEC - DATA TEMPLATE.GDT 17/1/16 MKUHL

Monitoring Well: MW16-7-5 (GW7)

Project:	Springbank Off-Stream Reservoir Project (SR1)	**Drilling method:**	Solid-stem auger (Truck mounted)
Client:	Alberta Transportation	**Date started/completed:**	28-Jul-2016
Location:	Rocky View County, Alberta	**Ground surface elevation:**	n/a
Number:	110773396	**Top of casing elevation:**	n/a
Field investigator:	D. Nisbet	**Easting:**	-31098.792
Contractor:	All Service Drilling Inc.	**Northing:**	5658895.242

SUBSURFACE PROFILE | INSTALLATION DETAILS

Depth (ft)	Depth (m)	Graphic Log	Lithologic Description	Depth (m BGS)
			Ground Surface	
			TOPSOIL	0.00
			SILTY CLAY Light to medium brown, moist, medium plastic	0.30
5	2			
10	4			
15			- from 4.57 to 5.18 m: trace fine grained sand, some gravel	
20	6			
			SILTY CLAY (TILL) With very fine to fine grained sand (oxidized), with gravel, dry to moist, low plastic	6.71
25	8			
30			End of Borehole	9.14
	10			

Diagram / Description

- Flush mount casing protector
- Sand 0.05 to 0.61 m BGS
- 152 mm diameter borehole
- Bentonite
- Solid pipe 51 mm diameter Schedule 40 PVC
- Sand Sil 9 (4/10)
- Slotted pipe 51 mm diameter Schedule 40 PVC No. 10 slot
- Bentonite

Screen Interval: 2.13 - 5.18 m BGS
Sand Pack Interval: 1.83 - 5.19 m BGS
Well Seal Interval: 0.61 - 1.83 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

mm - millimetres
Coordinate System - NAD 1983 3TM 114
Completed as Well MW16-7-5

Stantec

Drawn By/Checked By: M. Kuhl / D. King

STANTEC BOREHOLE AND WELL V2 110773396_NEW.GPJ STANTEC - DATA TEMPLATE.GDT 17/1/16 MKUHL

Monitoring Well: MW16-8-8 (GW8S)

Project:	Springbank Off-Stream Reservoir Project (SR1)	**Drilling method:**	Hollow-stem auger (Track mounted)
Client:	Alberta Transportation	**Date started/completed:**	25-May-2016
Location:	Rocky View County, Alberta	**Ground surface elevation:**	n/a
Number:	110773396	**Top of casing elevation:**	n/a
Field investigator:	D. Nisbet	**Easting:**	-30875.717
Contractor:	All Service Drilling Inc.	**Northing:**	5659641.119

SUBSURFACE PROFILE | INSTALLATION DETAILS

Depth (ft)	Depth (m)	Graphic Log	Lithologic Description	Depth (m BGS)
			Ground Surface	
0	0		SOIL Black, dry	0.00
			SILT (TILL) Brown to light brown, some gravel, with clay, dry, low plastic, friable	0.30
5	2		- @ 2.44 m: some very fine grained sand seams become present	
10	4		- @ 3.35 m: becomes moist	
15	6		- @ 5.79 m: red to orange, trace oxidized silt stringers	
20			SILT AND SAND Brown, very fine grained, saturated	6.71
			SILTY CLAY (TILL) Light to medium brown, with gravel, dry, low plastic	7.01
25	8		End of Borehole	7.92

Diagram / Description

- 0.516 m Stick-up
- Sand, 0 to 0.61 m BGS
- 254 mm diameter borehole
- Bentonite
- Solid pipe, 51 mm diameter, Schedule 40 PVC
- Sand, Sil 9 (4/10)
- Groundwater, 6.27 m BGS, May 25, 2016
- Slotted pipe, 51 mm diameter, Schedule 40 PVC, No. 10 slot

Screen Interval: 6.10 - 7.62 m BGS
Sand Pack Interval: 5.49 - 7.92 m BGS
Well Seal Interval: 0.61 - 5.49 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

mm - millimetres
Coordinate System - NAD 1983 3TM 114
Completed as Well MW16-8-8

Stantec

Drawn By/Checked By: M. Kuhl / D. King

STANTEC BOREHOLE AND WELL V2 110773396_NEW.GPJ STANTEC - DATA TEMPLATE.GDT 17/1/16 MKUHL

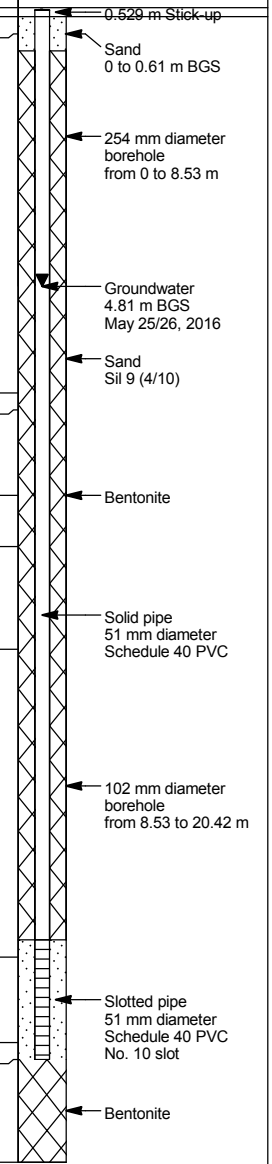
Monitoring Well: MW16-8-19 (GW8D)

Project:	Springbank Off-Stream Reservoir Project (SR1)	**Drilling method:**	Hollow-stem auger (Track mounted)/ Coring
Client:	Alberta Transportation	**Date started/completed:**	25-May-2016 / 26-May-2016
Location:	Rocky View County, Alberta	**Ground surface elevation:**	n/a
Number:	110773396	**Top of casing elevation:**	n/a
Field investigator:	D. Nisbet	**Easting:**	-30877.454
Contractor:	All Service Drilling Inc.	**Northing:**	5659641.18

SUBSURFACE PROFILE

Depth (ft)	Depth (m)	Graphic Log	Lithologic Description	Depth (m BGS)
0	0		Ground Surface	
			SOIL Black, dry	0.00 0.30
			SILT (TILL) Brown to light brown, some gravel, with clay, dry, low plastic, friable	
5	2			
			- @ 2.44 m: some very fine grained sand seams become present	
10	4		- @ 3.35 m: becomes moist	
15				
20	6		- @ 5.79 m: red to orange, trace oxidized silt stringers	
			SILT AND SAND Brown, very fine grained, saturated	6.71 7.01
25	8		SILTY CLAY (TILL) Light to medium brown, with gravel, dry, low plastic	
30			SILTSTONE Light brown to beige, dry, friable	8.53
	10		CLAYSTONE Light to medium grey, few fructures	9.45
35			- @ 10.36 m: becomes highly weathered, with abundant fractures, orangish brown clay mineralization along fracture surfaces	
			SILTSTONE Grey to dark grey, finely interbedded light and dark layers, unfractured	11.28
40	12			
45	14		- @ 14.02 m: thin very fine to fine grained sand layers become present	
50	16			
55			SANDSTONE Medium brown, fine grained, few fractures, minor oxidation and mineralization along fractures	16.76
	18			
60			CLAY Black, high plastic	18.29 18.59
			SILTSTONE Grey to greenish grey, dry, friable, clay alteration along fracture surfaces	
65	20			
			End of Borehole	20.42
70				

INSTALLATION DETAILS



Screen Interval: 16.46 - 18.59 m BGS
Sand Pack Interval: 16.46 - 18.59 m BGS
Well Seal Interval: 0.61 - 16.46 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

mm - millimetres
Coordinate System - NAD 1983 3TM 114
Completed as Well MW16-8-19

Stantec

Drawn By/Checked By: M. Kuhl / D. King

STANTEC BOREHOLE AND WELL V2 110773396_NEW.GPJ STANTEC - DATA TEMPLATE.GDT 17/1/16 MKUHL

Monitoring Well: MW16-10-15 (GW10)

Project:	Springbank Off-Stream Reservoir Project (SR1)	**Drilling method:**	Solid-stem auger (Track mounted)
Client:	Alberta Transportation	**Date started/completed:**	10-Aug-2016
Location:	Rocky View County, Alberta	**Ground surface elevation:**	n/a
Number:	110773396	**Top of casing elevation:**	n/a
Field investigator:	D. Nisbet	**Easting:**	-30461.405
Contractor:	All Service Drilling Inc.	**Northing:**	5658478.167

SUBSURFACE PROFILE | INSTALLATION DETAILS

Depth (ft)	Depth (m)	Graphic Log	Lithologic Description	Depth (m BGS)
			Ground Surface	
0	0		TOPSOIL	0.00
			SILTY CLAY Light to medium brown, moist, medium to high plastic, mottled	0.30
5	2			
10	4		- below 3.66 m: some very fine grained sand, some gravel	
15				
			CLAYEY SILT Light grey to medium brown, moist, high plastic, mottled	5.49
20	6			
25	8			
30				
	10		CLAY (TILL) Medium brown, some very fine grained sand, some gravel, with silt, dry to moist, medium plastic	9.45
35			- @ 10.97 m: gravel content increases to 15-30%	
40	12			
			CLAYEY SILT (TILL) Medium to dark grey, with very fine grained sand, some gravel, dry, low plastic	12.80
45	14			
50			SILTSTONE Light to medium grey, dry	14.94
	16			
55				
60	18		End of Borehole	18.29

Diagram	Description
	0.848 m Stick-up
	Sand 0 to 0.30 m BGS
	152 mm diameter borehole
	Bentonite
	Solid pipe 51 mm diameter Schedule 40 PVC
	Sand Sil 9 (4/10)
	Slotted pipe 51 mm diameter Schedule 40 PVC No. 10 slot
	Bentonite

Screen Interval: 12.19 - 15.24 m BGS
Sand Pack Interval: 11.89 - 18.14 m BGS
Well Seal Interval: 18.14 - 18.29 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

mm - millimetres
Coordinate System - NAD 1983 3TM 114
Completed as Well MW16-10-15

Stantec

Drawn By/Checked By: M. Kuhl / D. King

STANTEC BOREHOLE AND WELL V2 110773396_NEW.GPJ STANTEC - DATA TEMPLATE.GDT 17/1/16 MKUHL

Monitoring Well: MW16-11-15 (GW11)

Project:	Springbank Off-Stream Reservoir Project (SR1)	**Drilling method:**	Solid-stem auger (Track mounted)
Client:	Alberta Transportation	**Date started/completed:**	30-Jun-2016
Location:	Rocky View County, Alberta	**Ground surface elevation:**	n/a
Number:	110773396	**Top of casing elevation:**	n/a
Field investigator:	D. Nisbet	**Easting:**	-30269.84
Contractor:	All Service Drilling Inc.	**Northing:**	5657742.889

SUBSURFACE PROFILE				INSTALLATION DETAILS	
Depth (ft)	Depth (m)	Graphic Log	Lithologic Description	Depth (m BGS)	Diagram / Description
0	0		Ground Surface		0.588 m Stick-up
			TOPSOIL	0.00	Sand 0 to 0.30 m BGS
			CLAY Light to medium brown, with silt, moist, high plastic, mottled	0.30	152 mm diameter borehole
5	2		- @ 2.13 m: silt content increases to 30-40%, mottled brown and grey		
10	4		- @ 2.74 m: silt content decreases back to 15-30%		
15					
20	6		- @ 5.79 m: clay content begins to decrease towards bottom of interval		Bentonite
			SILT Medium brown, some clay, moist	6.40	
25	8				
			SILT (TILL) Medium brown, with fine to medium grained sand, with gravel, some clay, moist	8.53	
30	10				Solid pipe 51 mm diameter Schedule 40 PVC
35					Sand Sil 9 (4/10)
40	12		SILT Medium brown, some very fine grained sand, moist to wet	12.19	
45	14				Slotted pipe 51 mm diameter Schedule 40 PVC No. 10 slot
			CLAY (TILL) Medium to dark grey, some very fine grained sand, some gravel, with silt, low plastic	14.63	
50	16		End of Borehole	15.24	

Screen Interval: 11.58 - 14.63 m BGS
Sand Pack Interval: 10.97 - 15.24 m BGS
Well Seal Interval: 0.30 - 10.97 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

mm - millimetres
Coordinate System - NAD 1983 3TM 114
Completed as Well MW16-11-15

Stantec

Drawn By/Checked By: M. Kuhl / D. King

STANTEC BOREHOLE AND WELL V2 110773396_NEW.GPJ STANTEC - DATA TEMPLATE.GDT 17/1/16 MKUHL

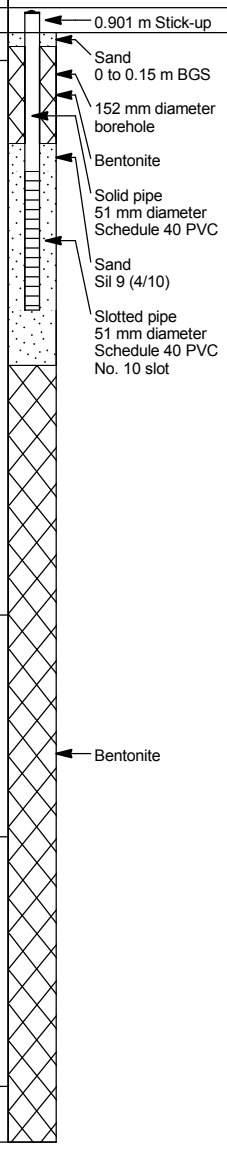
Monitoring Well: MW16-12-3 (GW12)

Project:	Springbank Off-Stream Reservoir Project (SR1)	**Drilling method:**	Solid-stem auger (Track mounted)
Client:	Alberta Transportation	**Date started/completed:**	19-Aug-2016
Location:	Rocky View County, Alberta	**Ground surface elevation:**	n/a
Number:	110773396	**Top of casing elevation:**	n/a
Field investigator:	D. Nisbet	**Easting:**	-29160.284
Contractor:	All Service Drilling Inc.	**Northing:**	5657858.348

SUBSURFACE PROFILE

Depth (ft)	Depth (m)	Graphic Log	Lithologic Description	Depth (m BGS)
0	0		Ground Surface	
			TOPSOIL	0.00
			CLAYEY SILT (TILL) Medium brown, moist, high plastic	0.30
5	2		- @ 1.83 m: sand content increases to 30-40%, fine to medium grained sand, some gravel	
10	4		- @ 2.74 m: sand content decreases to 15-30%	
15				
20	6		SANDY SILT (TILL) Medium brown, some gravel, with clay, dry to moist, crumbly	6.40
25	8			
30			SANDY CLAY (TILL) Medium to dark grey, some silt, dry to moist	8.84
35	10			
40	12		CLAYSTONE Light grey to brown, dry	11.58
			End of Borehole	12.19

INSTALLATION DETAILS



Screen Interval: 1.52 - 3.05 m BGS
Sand Pack Interval: 1.22 - 3.66 m BGS
Well Seal Interval: 0.15 - 1.22 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

mm - millimetres
Coordinate System - NAD 1983 3TM 114
Completed as Well MW16-12-3

Stantec

Drawn By/Checked By: M. Kuhl / D. King

STANTEC BOREHOLE AND WELL V2 110773396_NEW.GPJ STANTEC - DATA TEMPLATE.GDT 17/1/16 MKUHL

Monitoring Well: RMW16-13-37

Project:	SR1/Springank	**Method:**	Solid Stem Auger
Client:	Alberta Transportaiton	**Date started/completed:**	24-Aug-2021
Location:	Rockyview County	**Ground surface elevation:**	n/a
Number:	10773396.5210.215	**Top of casing elevation:**	n/a
Field investigator:	WT	**Easting:**	680595
Contractor:	All Service Drilling	**Northing:**	5660430

SUBSURFACE PROFILE				INSTALLATION DETAILS	
Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Depth (m BGS)	Diagram / Description
			Ground Surface		
			GRAVEL FILL	0.00	Flushmount well protector
2	1		SILTY CLAY TILL some sand, trace gravel and coal, oxidaiton staining, and white mineral precipitate, medium plasticity, brown, moist	0.30	50 mm solid PVC pipe packed in 10-20 filter sand
4					
6	2				
8					
10	3		- at 3.2 m BGS, increasing sand		
12			SANDY SILTY CLAY some gravel, brown, moist	3.50	
14	4				
16	5		- at 4.6 m BGS, some cobbles		
18					
20	6				
22	7				
24			- at 7.4 m BGS, sandstone chips		
26	8		SANDSTONE weathered	7.50	
28			- at 8.6 m BGS, auger refusal, switch to air rotary		
30	9		- at 9.0 m BGS, very fine grained, greyish brown to grey		
32	10				
34			MUDSTONE brown to dark brown, dry	10.40	
36	11				
38			SILTSTONE some weathering and oxidized fractures, grey to dark grey	11.50	
40	12				
42					

Screen Interval: 33.50 - 36.50 m BGS
Sand Pack Interval: 33.00 - 36.50 m BGS
Well Seal Interval: 0.30 - 33.00 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

m BTOC - metres below top of casing
Locaiton coordinates are approximate

Stantec

Drawn By/Checked By: JL/DK

STANTEC BOREHOLE AND WELL V2 SPRINGBANK_LOGS_20220808.GPJ STANTEC - DATA TEMPLATE.GDT 8/11/22 JLAUTERMILCH

Monitoring Well: RMW16-13-37

Project:	SR1/Springank	**Method:**	Solid Stem Auger
Client:	Alberta Transportaiton	**Date started/completed:**	24-Aug-2021
Location:	Rockyview County	**Ground surface elevation:**	n/a
Number:	10773396.5210.215	**Top of casing elevation:**	n/a
Field investigator:	WT	**Easting:**	680595
Contractor:	All Service Drilling	**Northing:**	5660430

SUBSURFACE PROFILE				INSTALLATION DETAILS	
Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Depth (m BGS)	Diagram / Description
44			SILTSTONE some weathering and oxidized fractures, grey to dark grey		
46	14				
48			very fine to fine grained, friable, grey to light grey, dry	14.70	
50	15		- at 15.5 m BGS, interbedded sitlstone, grey to dark grey		
52	16				
54					50 mm solid PVC pipe packed in hydrated bentonite chips 0.3 to 33.0 m BGS
56	17		MUDSTONE dark grey to dark brown, friable	17.00	
58					
60	18				
62	19				
64					
66	20				
68					
70	21				
72	22				
74					
76	23				
78					
80	24				Water level 24.275 m BTOC 4-May-22
82	25				
84			SILTSTONE grey to dark grey	25.20	

Screen Interval: 33.50 - 36.50 m BGS
Sand Pack Interval: 33.00 - 36.50 m BGS
Well Seal Interval: 0.30 - 33.00 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

m BTOC - metres below top of casing
Locaiton coordinates are approximate

Stantec

Drawn By/Checked By: JL/DK

STANTEC BOREHOLE AND WELL V2 SPRINGBANK_LOGS_20220808.GPJ STANTEC - DATA TEMPLATE.GDT 8/11/22 JLAUTERMILCH

Monitoring Well: RMW16-13-37

Project:	SR1/Springank	**Method:**	Solid Stem Auger
Client:	Alberta Transportaiton	**Date started/completed:**	24-Aug-2021
Location:	Rockyview County	**Ground surface elevation:**	n/a
Number:	10773396.5210.215	**Top of casing elevation:**	n/a
Field investigator:	WT	**Easting:**	680595
Contractor:	All Service Drilling	**Northing:**	5660430

SUBSURFACE PROFILE				INSTALLATION DETAILS	
Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Depth (m BGS)	Diagram / Description
86			SILTSTONE grey to dark grey		
88	27				
90					
92	28				
94			MUDSTONE light grey to grey, dry	28.50	
96	29				
98			SILTSTONE dark grey, interbeded with very fine grained sandstone	29.60	
100	30		at 30.1 m BGS, SANDSTONE		
102			MUDSTONE grey to light grey	30.70	
104	31				
106	32		- at 32.0 m BGS, grey to dark grey with black speckled sandstone, saturated		
108					
110	33		- at 33.0 m BGS, brown to grey		50 mm solid PVC pipe packed in 10-20 filter sand 33 to 33.5 m BGS
112	34				
114			SILTSTONE grey to dark grey, oxidized fractures	34.50	50 mm slotted PVC pipe packed in 10-20 filter sand 7.5 to 10.5 m BGS
116	35				
118					
120	36		MUDSTONE grey to greenish grey	36.00	
122	37		End of Borehole	36.50	
124					
126	38				

Screen Interval: 33.50 - 36.50 m BGS
Sand Pack Interval: 33.00 - 36.50 m BGS
Well Seal Interval: 0.30 - 33.00 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

m BTOC - metres below top of casing
Locaiton coordinates are approximate

Stantec

Drawn By/Checked By: JL/DK

STANTEC BOREHOLE AND WELL V2 SPRINGBANK_LOGS_20220808.GPJ STANTEC - DATA TEMPLATE.GDT 8/11/22 JLAUTERMILCH

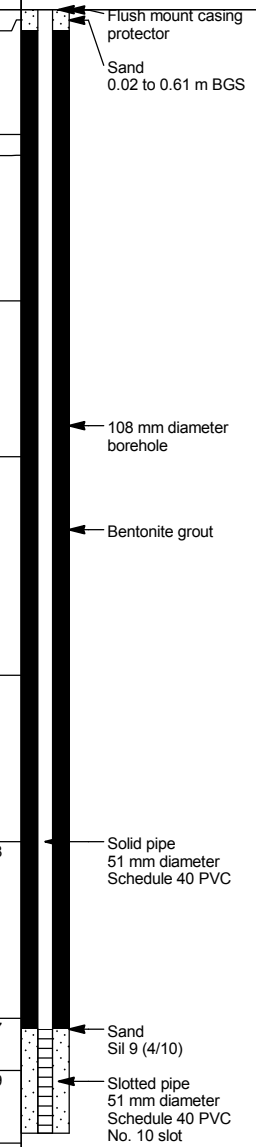
Monitoring Well: MW16-14-33 (GW14)

Project:	Springbank Off-Stream Reservoir Project (SR1)	**Drilling method:**	Air rotary auger (Truck mounted)
Client:	Alberta Transportation	**Date started/completed:**	09-Aug-2016
Location:	Rocky View County, Alberta	**Ground surface elevation:**	n/a
Number:	110773396	**Top of casing elevation:**	n/a
Field investigator:	D. Nisbet	**Easting:**	-28592.189
Contractor:	All Service Drilling Inc.	**Northing:**	5659018.428

SUBSURFACE PROFILE

Depth (ft)	Depth (m)	Graphic Log	Lithologic Description	Depth (m BGS)
			Ground Surface	
			GRAVEL	0.00
5	2		CLAYEY SILT (TILL) Brown, some very fine grained sand, moist, medium plastic	0.30
10				
	4		SANDSTONE Light to medium brown, very fine grained sand, dry	3.66
15				4.27
20	6		CLAYSTONE Medium grey, dry	
25	8			
30			SANDSTONE Light to medium brown, very fine to fine grained	8.53
35	10			
40	12			
45	14		SILTSTONE Light grey, dry	13.11
50				
55	16			
60	18			
65	20		CLAYSTONE Medium grey to brown, dry	19.51
70				
75	22			
80	24		SILTSTONE Medium brown, saturated	24.38
85	26			
90				
95	28			
100	30		CLAYSTONE Light to medium grey	29.57
105	32		SILTSTONE Light to medium grey, saturated	31.09
110	34		CLAYSTONE Light to medium grey	33.22
115	36		End of Borehole	33.53

INSTALLATION DETAILS



Screen Interval: 29.88 - 32.93 m BGS
Sand Pack Interval: 29.87 - 32.93 m BGS
Well Seal Interval: 0.61 - 29.87 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

mm - millimetres
Coordinate System - NAD 1983 3TM 114
Completed as Well MW16-14-33

Stantec

Drawn By/Checked By: M. Kuhl / D. King

STANTEC BOREHOLE AND WELL V2 110773396_NEW.GPJ STANTEC - DATA TEMPLATE.GDT 17/1/16 MKUHL

Monitoring Well: RMW16-15-39

Project:	Springbank Offstream Reservoir Project (SR1)	**Method:**	Air Rotary
Client:	Alberta Transportation	**Date started/completed:**	22-Sep-2023 / 23-Sep-2023
Location:	Rocky View County	**Ground surface elevation:**	1,192.10 m m ASL
Number:	110773396	**Top of casing elevation:**	1,192.80 m m ASL
Field investigator:	W.T.	**Easting:**	-27868.5
Contractor:	All Service Drilling	**Northing:**	5658178

SUBSURFACE PROFILE				INSTALLATION DETAILS	
Depth (ft) (m)	Graphic Log	Stratigraphic Description	Elevation (m m ASL) Depth (m BGS)	Diagram	Description
			1192.75		
0 0		Ground Surface	1192.10		Stickup
		TOPSOIL	0.00		
		brown to black, moist	1191.90		
2		SILT AND SAND	0.20		
1		fine, light brown, trace mineral precipitate, dry			
4			1190.70		
		TILL	1.40		
6 2		clay with some sand and gravel, olive green with grey mottling, trace mineral precipitate, dry			
8			1189.20		
10 3		SANDSTONE	2.90		
		very fine grained, brown, dry			
12			1188.10		
4		SILTSTONE	4.00		
14		beige, dry	1187.50		
		SANDSTONE	4.60		
16 5		very fine grained, brown			
18					
20 6			1185.40		
22		SILTSTONE	6.70		
7		interbedded with very fine grained sandstone, beige			
24					
26 8					
28					
30 9			1183.00		
		SANDSTONE	9.10		
32		thin siltstone layers, light brown, dry			
10					
34					
36 11					
38					
40 12					
42			1179.00		
13		MUDSTONE	13.10		
44		light grey to grey, dry			
46 14					

Screen Interval:	36.60 - 39.60 m BGS	Notes:
Sand Pack Interval:	36.30 - 39.60 m BGS	m BGS - metres below ground surface
Well Seal Interval:	0.00 - 36.30 m BGS	n/a - not available

Soil strength (consistency) and plasticity terms are for descriptive purposes only and must not be used for design or construction purposes.

Drawn By/Checked By: D.K.

STANTEC BOREHOLE AND WELL V2 SR1_BH-LOGS_DRAFT-TB EDITS.GPJ STANTEC - DATA TEMPLATE.GDT 10/1/24 TBOYDA

Monitoring Well: RMW16-15-39

Project:	Springbank Offstream Reservoir Project (SR1)	**Method:**	Air Rotary
Client:	Alberta Transportation	**Date started/completed:**	22-Sep-2023 / 23-Sep-2023
Location:	Rocky View County	**Ground surface elevation:**	1,192.10 m m ASL
Number:	110773396	**Top of casing elevation:**	1,192.80 m m ASL
Field investigator:	W.T.	**Easting:**	-27868.5
Contractor:	All Service Drilling	**Northing:**	5658178

SUBSURFACE PROFILE				INSTALLATION DETAILS	
Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Elevation (m m ASL) Depth (m BGS)	Diagram / Description
				1177.50	
48			SANDSTONE	14.60	
	15		interbeedded with siltstone, brown to light brown, dry		
50					
52	16				
54				1175.30	
	17		MUDSTONE	16.80	
56			interbedded with siltstone below 22.6 m, grey to brownish grey		
58					
	18				51 mm solid PVC pipe packed in bentonite
60					
62	19				
64					
	20				
66					
68					
	21				
70					
72	22				
74					
	23				
76					
78					
	24				
80					
82	25				
84					
	26				
86					
88					
	27				
90					
92	28				
94					
	29				
96					

Screen Interval:	36.60 - 39.60 m BGS	Notes:
Sand Pack Interval:	36.30 - 39.60 m BGS	m BGS - metres below ground surface
Well Seal Interval:	0.00 - 36.30 m BGS	n/a - not available

Soil strength (consistency) and plasticity terms are for descriptive purposes only and must not be used for design or construction purposes.

Drawn By/Checked By: D.K.

STANTEC BOREHOLE AND WELL V2 SR1_BH-LOGS_DRAFT-TB EDITS.GPJ STANTEC - DATA TEMPLATE.GDT 10/1/24 TBOYDA

Monitoring Well: RMW16-15-39

Project:	Springbank Offstream Reservoir Project (SR1)	**Method:**	Air Rotary
Client:	Alberta Transportation	**Date started/completed:**	22-Sep-2023 / 23-Sep-2023
Location:	Rocky View County	**Ground surface elevation:**	1,192.10 m m ASL
Number:	110773396	**Top of casing elevation:**	1,192.80 m m ASL
Field investigator:	W.T.	**Easting:**	-27868.5
Contractor:	All Service Drilling	**Northing:**	5658178

SUBSURFACE PROFILE				INSTALLATION DETAILS	
Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Elevation (m m ASL) Depth (m BGS)	Diagram / Description
			MUDSTONE interbedded with siltstone below 22.6 m, grey to brownish grey	1162.10	
98	30		SANDSTONE very fine grained, brown to dark brown	30.00 1161.60	
100			MUDSTONE thin layers of siltstone, grey to brownish grey	30.50	
102	31				
104					
106	32				
108					
110	33				
112				1158.00	
114	34		SILTSTONE greyish green, dry	34.10	
116	35			1157.00	
118			SANDSTONE very fine grained, light grey	35.10	
120	36			1155.50	51 mm solid PVC pipe packed in 10-20 filter sand
122			MUDSTONE grey to brownish grey, dry	36.60	
124	37			1154.60	
126			SANDSTONE very fine grained, light grey, saturated	37.50 1154.00	
128	38		MUDSTONE grey to dark grey, saturated	38.10	51 mm slotted PVC screen packed in 10-20 filter sand
130	39			1152.50	
132			End of Borehole	39.60	
134	40				
136	41				
138					
140	42				
142	43				
144					
	44				

Screen Interval: 36.60 - 39.60 m BGS
Sand Pack Interval: 36.30 - 39.60 m BGS
Well Seal Interval: 0.00 - 36.30 m BGS

Notes:
m BGS - metres below ground surface
n/a - not available

Soil strength (consistency) and plasticity terms are for descriptive purposes only and must not be used for design or construction purposes.

Drawn By/Checked By: D.K.

STANTEC BOREHOLE AND WELL V2 SR1_BH-LOGS_DRAFT-TB EDITS.GPJ STANTEC - DATA TEMPLATE.GDT 10/1/24 TBOYDA

Monitoring Well: RMW16-16-17

Project:	SR1/Springank	**Method:**	Solid Stem Auger
Client:	Alberta Transportaiton	**Date started/completed:**	25-Aug-2021
Location:	Rockyview County	**Ground surface elevation:**	n/a
Number:	10773396.5210.215	**Top of casing elevation:**	n/a
Field investigator:	WT	**Easting:**	677090
Contractor:	All Service Drilling	**Northing:**	565364

SUBSURFACE PROFILE				INSTALLATION DETAILS	
Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Depth (m BGS)	Diagram / Description
-2	-0.5				Aboveground casing 0.73 m
0	0.0		Ground Surface		
			TOPSOIL organics, black, dry	0.00	50 mm solid PVC pipe packed in 10-20 filter sand
1	0.5		SILTY CLAY trace sand, white mineral precipitates, occasional lenses of silt and very fine sand, light brown, grey mottling, high plasticity	0.30	
5	1.5				
6	2.0		SILTY CLAY TILL some sand, trace gravel, white mineral precipitates, high plasticity, light brown with grey mottling, dry to moist	1.70	
10	3.0				
11	3.5		- at 3.3 m BGS, slight increase in silt and sand, medium plasticity		
17	5.0				Water level 5.34 m BTOC 5-May-22
18	5.5				
19	6.0				
20			- at 6.0 m BGS, colour changes to brown		
			- at 6.2 m BGS, ioncreasing gravel, occasional cobble		
21	6.5				50 mm solid PVC pipe packed in hydrated bentonite chips 0.3 to 12.9 m BGS
23	7.0				
25	7.5				
26	8.0				

Screen Interval: 13.50 - 16.50 m BGS
Sand Pack Interval: 12.90 - 16.50 m BGS
Well Seal Interval: 0.30 - 12.90 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

m BTOC - metres below top of casing
Locaiton coordinates are approximate

Stantec

Drawn By/Checked By: JL/DK

STANTEC BOREHOLE AND WELL V2 SPRINGBANK_LOGS_20220808.GPJ STANTEC - DATA TEMPLATE.GDT 8/11/22 JLAUTERMILCH

Monitoring Well: RMW16-16-17

Project:	SR1/Springank	**Method:**	Solid Stem Auger
Client:	Alberta Transportaiton	**Date started/completed:**	25-Aug-2021
Location:	Rockyview County	**Ground surface elevation:**	n/a
Number:	10773396.5210.215	**Top of casing elevation:**	n/a
Field investigator:	WT	**Easting:**	677090
Contractor:	All Service Drilling	**Northing:**	565364

SUBSURFACE PROFILE				INSTALLATION DETAILS	
Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Depth (m BGS)	Diagram / Description
28	8.5		SILTY CLAY TILL some sand, trace gravel, white mineral precipitates, high plasticity, light brown with grey mottling, dry to moist		
29	9.0				
30					
31	9.5				
32					
33	10.0		- at 10.0 m BGS, some moisture		
34					
35	10.5				
36	11.0				
37					
38	11.5				
39			SANDSTONE very fine grained, weathered, friable, light brown to grey, weathered	11.80	
40	12.0				
41	12.5				
42					
43	13.0				50 mm solid PVC pipe packed in 10-20 filter sand 12.9 to 13.5 m BGS
44					
45	13.5				
46	14.0				
47					
48	14.5				
49	15.0		- at 15.0 m BGS, bery poor recovery		50 mm slotted PVC pipe packed in 10-20 filter sand 13.5 to 16.5 m BGS
50					
51	15.5				
52	16.0		- at 15.8 m BGS, saturated, auger refusal		
53					
54	16.5		End of Borehole	16.50	
55					
56	17.0				

Screen Interval: 13.50 - 16.50 m BGS
Sand Pack Interval: 12.90 - 16.50 m BGS
Well Seal Interval: 0.30 - 12.90 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

m BTOC - metres below top of casing
Locaiton coordinates are approximate

Stantec

Drawn By/Checked By: JL/DK

STANTEC BOREHOLE AND WELL V2 SPRINGBANK_LOGS_20220808.GPJ STANTEC - DATA TEMPLATE.GDT 8/11/22 JLAUTERMILCH

Monitoring Well: RRWM16-17-8

Project:	Springbank Offstream Reservoir Project (SR1)	**Method:**	Solid Stem
Client:	Alberta Transportation	**Date started/completed:**	22-Sep-2023
Location:	Rocky View County	**Ground surface elevation:**	1,211.61 m m ASL
Number:	110773396	**Top of casing elevation:**	1,212.37 m m ASL
Field investigator:	W.T.	**Easting:**	-33037.1
Contractor:	All Service Drilling	**Northing:**	5655747

SUBSURFACE PROFILE | INSTALLATION DETAILS

Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Elevation (m m ASL) / Depth (m BGS)	Diagram	Description
				1212.30		
			Ground Surface	1211.61		Stickup
0	0		TOPSOIL	0.00		
				1211.46		
2			SILTY CLAY olive with grey mottling, moist to dry	0.15		
4	1					
6	2			1209.51		
			TILL silty clay, some sand, trace gravel, trace coal at 3.6 m, olive with grey mottling and oxidation staining, moist	2.10		
8						
10	3					51 mm solid PVC pipe packed in bentonite
12	4					
14						
16	5					
18				1205.61		
20	6		SAND AND GRAVEL some cobbles, brown, saturated	6.00		51 mm solid PVC pipe packed in 10-20 filter sand
22	7					
24				1204.11		51 mm slotted PVC screen packed in 10-20 filter sand
			TILL silty clay, some gravel, trace sand with increasing sand from 9-10.5 m sand , dark grey to dark brown, moist	7.50		
26	8					
28						
30	9					
32						
34	10					
36	11			1200.61		
			SANDSTONE very fine grained, light grey to brownish grey, weathered, dry	11.00		
38						
40	12			1199.61		
42			End of Borehole	12.00		
44	13					
46	14					

Screen Interval:	6.50 - 8.00 m BGS	Notes:
Sand Pack Interval:	6.20 - 12.00 m BGS	m BGS - metres below ground surface
Well Seal Interval:	0.00 - 6.20 m BGS	n/a - not available

Soil strength (consistency) and plasticity terms are for descriptive purposes only and must not be used for design or construction purposes.

Drawn By/Checked By: D.K.

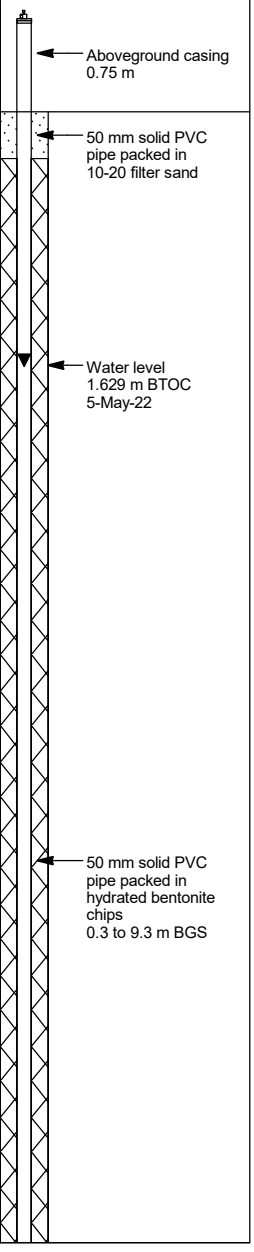
STANTEC BOREHOLE AND WELL V2 SR1_BH-LOGS_DRAFT-TB EDITS.GPJ STANTEC - DATA TEMPLATE.GDT 10/1/24 TBOYDA

Monitoring Well: RMW16-18-13

Project:	SR1/Springank	**Method:**	Solid Stem Auger
Client:	Alberta Transportaiton	**Date started/completed:**	26-Aug-2021
Location:	Rockyview County	**Ground surface elevation:**	n/a
Number:	10773396.5210.215	**Top of casing elevation:**	n/a
Field investigator:	WT	**Easting:**	678068
Contractor:	All Service Drilling	**Northing:**	5657928

SUBSURFACE PROFILE | INSTALLATION DETAILS

Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Depth (m BGS)
0	0.0		Ground Surface	
			TOPSOIL organics, black, dry	0.00
			SILTY CLAY TILL some sand, trace gravel, trace oxidation statining (light orange), brown, medium plasticity	0.20
			SANDY CLAY some gravel and cobbles, brown, dry	2.30
			SILT AND SAND some gravel, trace clay, brown, moist	3.20
			SILTSTONE very poor recovery, grey, weathered	4.70
			SANDSTONE grey to greenish grey,	5.30
				7.10



Screen Interval: 9.60 - 12.60 m BGS
Sand Pack Interval: 9.30 - 12.60 m BGS
Well Seal Interval: 0.30 - 9.30 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

m BTOC - metres below top of casing
Locaiton coordinates are approximate

Stantec

Drawn By/Checked By: JL/DK

STANTEC BOREHOLE AND WELL V2 SPRINGBANK_LOGS_20220808.GPJ STANTEC - DATA TEMPLATE.GDT 8/11/22 JLAUTERMILCH

Monitoring Well: RMW16-18-13

Project:	SR1/Springank	**Method:**	Solid Stem Auger
Client:	Alberta Transportaiton	**Date started/completed:**	26-Aug-2021
Location:	Rockyview County	**Ground surface elevation:**	n/a
Number:	10773396.5210.215	**Top of casing elevation:**	n/a
Field investigator:	WT	**Easting:**	678068
Contractor:	All Service Drilling	**Northing:**	5657928

SUBSURFACE PROFILE | INSTALLATION DETAILS

Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Depth (m BGS)	Diagram	Description
24	7.5		MUDSTONE dark brown to dark grey - at 7.3 to 7.5 m BGS, oxidation and slight weathering			
25						
26	8.0		- at 7.85 m BGS, fracture			
27			- at 8.1 to 8.8 m BGS light grey clay, alogr multiple fractures			
28	8.5					
29			- at 8.8 m BGS, highly fractured and oxidized			
30	9.0					
31	9.5		SANDSTONE fine grained, slight oxidation, greenish grey to grey	9.20		50 mm solid PVC pipe packed in 10-20 filter sand 9.3 to 9.6 m BGS
32						
33	10.0		SILTSTONE greenish grey to grey, highly fractured with some silts and clays along fractured zones	9.90		
34						
35	10.5		- at 10.6 m BGS, no silts and clays			
36	11.0					
37			SANDSTONE greenish grey to grey	11.10		50 mm slotted PVC pipe packed in 10-20 filter sand 9.6 to 12.6 m BGS
38	11.5		SILTSTONE greenish grey to grey, well consolidated, highly fractured	11.50		
39						
40	12.0					
41	12.5		End of Borehole	12.60		
42						
43	13.0					
44						
45	13.5					
46	14.0					
47						
48	14.5					
49	15.0					

Screen Interval: 9.60 - 12.60 m BGS
Sand Pack Interval: 9.30 - 12.60 m BGS
Well Seal Interval: 0.30 - 9.30 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

m BTOC - metres below top of casing
Locaiton coordinates are approximate

Stantec

Drawn By/Checked By: JL/DK

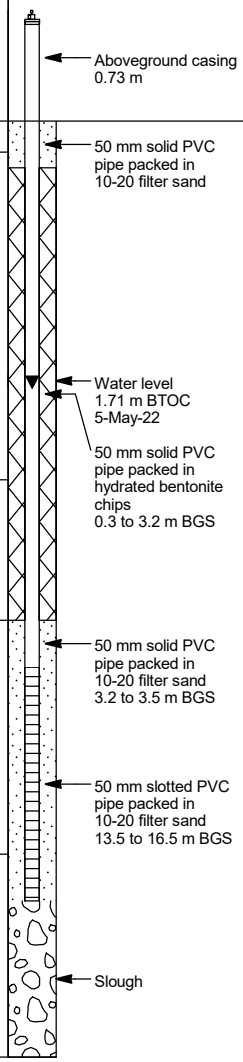
STANTEC BOREHOLE AND WELL V2 SPRINGBANK_LOGS_20220808.GPJ STANTEC - DATA TEMPLATE.GDT 8/11/22 JLAUTERMILCH

Monitoring Well: RMW16-18-5

Project:	SR1/Springank	**Method:**	Solid Stem Auger
Client:	Alberta Transportaiton	**Date started/completed:**	23-Aug-2021
Location:	Rockyview County	**Ground surface elevation:**	n/a
Number:	10773396.5210.215	**Top of casing elevation:**	n/a
Field investigator:	WT	**Easting:**	678066
Contractor:	All Service Drilling	**Northing:**	5657928

SUBSURFACE PROFILE | INSTALLATION DETAILS

Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Depth (m BGS)
			Ground Surface	
0	0.0		TOPSOIL organics, black, dry	0.00
1	0.5		SILTY CLAY TILL some sand, trace gravel, trace oxidation statining (light orange), brown, medium plasticity	0.20
8	2.5		SANDY CLAY some gravel and cobbles, brown, dry	2.30
11	3.5		SILT AND SAND some gravel, trace clay, brown, moist	3.20
16	5.0		SILTSTONE very poor recovery, grey, weathered	4.70
20	6.0		End of Borehole	6.00



Screen Interval: 3.50 - 5.00 m BGS
Sand Pack Interval: 3.20 - 5.00 m BGS
Well Seal Interval: 0.30 - 3.20 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

m BTOC - metres below top of casing
Locaiton coordinates are approximate

Stantec

Drawn By/Checked By: JL/DK

STANTEC BOREHOLE AND WELL V2 SPRINGBANK_LOGS_20220808.GPJ STANTEC - DATA TEMPLATE.GDT 8/11/22 JLAUTERMILCH

Monitoring Well: RMW16-19-10

Project:	SR1/Springank	**Method:**	Soid Stem Auger
Client:	Alberta Transportaiton	**Date started/completed:**	29-Nov-2021
Location:	Rockyview County	**Ground surface elevation:**	n/a
Number:	10773396.5210.215	**Top of casing elevation:**	n/a
Field investigator:	WT/AK	**Easting:**	n/a
Contractor:	All Service Drilling	**Northing:**	n/a

SUBSURFACE PROFILE | INSTALLATION DETAILS

Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Depth (m BGS)	Diagram	Description
-2	-0.5					Aboveground casing 0.76 m
0	0.0		Ground Surface			
			TOPSOIL sandy, brown, dry	0.00		50 mm solid PVC pipe packed in 10-20 filter sand
1	0.5		SILTY CLAY AND SAND brown, low plasticity, dry	0.50		
2						
3	1.0					
4						
5	1.5					
6						
7	2.0					
8						
	2.5		- at 2.5 m BGS, trace gravel, grey to brown, medium plasticity, moist			
9						
10	3.0					
11						
12	3.5					50 mm solid PVC pipe packed in hydrated bentonite chips 0.3 to 7.2 m BGS
13						
14	4.0					
15						
16	4.5					
17						
18	5.0					
19						
20	5.5					
21						
22	6.0					
23	6.5					Water level 7.035 m BTOC 6-May-22
24			SILTY CLAY some sand	6.90		
25	7.0					50 mm solid PVC pipe packed in
	7.5					

Screen Interval: 7.50 - 10.50 m BGS
Sand Pack Interval: 7.20 - 10.50 m BGS
Well Seal Interval: 0.30 - 7.20 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

m BTOC - metres below top of casing

Stantec

Drawn By/Checked By: JL/DK

STANTEC BOREHOLE AND WELL V2 SPRINGBANK_LOGS_20220808.GPJ STANTEC - DATA TEMPLATE.GDT 8/11/22 JLAUTERMILCH

Monitoring Well: RMW16-19-10

Project:	SR1/Springank	**Method:**	Soid Stem Auger
Client:	Alberta Transportaiton	**Date started/completed:**	29-Nov-2021
Location:	Rockyview County	**Ground surface elevation:**	n/a
Number:	10773396.5210.215	**Top of casing elevation:**	n/a
Field investigator:	WT/AK	**Easting:**	n/a
Contractor:	All Service Drilling	**Northing:**	n/a

SUBSURFACE PROFILE				INSTALLATION DETAILS	
Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Depth (m BGS)	Diagram / Description
26	8.0		SILTY CLAY some sand		10-20 filter sand 7.2 to 7.5 m BGS
27					
28	8.5				
29					
30	9.0				50 mm slotted PVC pipe packed in 10-20 filter sand 7.5 to 10.5 m BGS
31					
32	9.5				
33	10.0		SANDSTONE finegrained, brown, wet	10.00	
34					
35	10.5		End of Borehole	10.50	
36	11.0				
37					
38	11.5				
39					
40	12.0				
41	12.5				
42					
43	13.0				
44					
45	13.5				
46	14.0				
47					
48	14.5				
49					
50	15.0				
51	15.5				
52					
53	16.0				

Screen Interval: 7.50 - 10.50 m BGS
Sand Pack Interval: 7.20 - 10.50 m BGS
Well Seal Interval: 0.30 - 7.20 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

m BTOC - metres below top of casing

Stantec

Drawn By/Checked By: JL/DK

STANTEC BOREHOLE AND WELL V2 SPRINGBANK_LOGS_20220808.GPJ STANTEC - DATA TEMPLATE.GDT 8/11/22 JLAUTERMILCH

Monitoring Well: RMW16-19-19

Project:	SR1/Springank	**Method:**	Soid Stem Auger
Client:	Alberta Transportaiton	**Date started/completed:**	29-Nov-2021
Location:	Rockyview County	**Ground surface elevation:**	n/a
Number:	10773396.5210.215	**Top of casing elevation:**	n/a
Field investigator:	WT/AK	**Easting:**	n/a
Contractor:	All Service Drilling	**Northing:**	n/a

SUBSURFACE PROFILE | INSTALLATION DETAILS

Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Depth (m BGS)	Diagram	Description
-2						Aboveground casing 0.76 m
0	0		Ground Surface			
			TOPSOIL sandy, brown, dry	0.00		50 mm solid PVC pipe packed in 10-20 filter sand
2			SILTY CLAY AND SAND brown, low plasticity, dry	0.50		
4	1					
6	2					
8			- at 2.5 m BGS, trace gravel, grey to brown, medium plasticity, moist			
10	3					
12						
14	4					
16	5					
18						Water level 5.824 m BTOC 6-May-22
20	6					
22						50 mm solid PVC pipe packed in hydrated bentonite chips 0.3 to 13.1 m BGS
	7		SILTY CLAY some sand	6.90		
24						
26	8					
28						
30	9					

Screen Interval: 17.50 - 19.50 m BGS
Sand Pack Interval: 13.10 - 19.50 m BGS
Well Seal Interval: 0.30 - 13.10 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

m BTOC - metres below top of casing

Stantec

Drawn By/Checked By: JL/DK

STANTEC BOREHOLE AND WELL V2 SPRINGBANK_LOGS_20220808.GPJ STANTEC - DATA TEMPLATE.GDT 8/11/22 JLAUTERMILCH

Monitoring Well: RMW16-19-19

Project:	SR1/Springank	**Method:**	Soid Stem Auger
Client:	Alberta Transportaiton	**Date started/completed:**	29-Nov-2021
Location:	Rockyview County	**Ground surface elevation:**	n/a
Number:	10773396.5210.215	**Top of casing elevation:**	n/a
Field investigator:	WT/AK	**Easting:**	n/a
Contractor:	All Service Drilling	**Northing:**	n/a

SUBSURFACE PROFILE | INSTALLATION DETAILS

Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Depth (m BGS)	Diagram	Description
34	10		SANDSTONE finegrained, brown, wet	10.00		
36	11					
38	12					
40						
42	13		SILTSTONE some sand and clay, grey, low plasticity, dry	13.00		
44						
46	14					
48						
50	15					50 mm solid PVC pipe packed in 10-20 filter sand 13.1 to 17.5 m BGS
52	16					
54						
56	17					
58			SANDSTONE fine grained, grey, moist	17.70		
60	18					
62	19		SILTSTONE some sand and clay, grey, low plasticity, moist	18.70		50 mm slotted PVC pipe pre-packed packed in filter sand 17.5 to 19.5 m BGS
64			End of Borehole	19.50		
66	20					

Screen Interval: 17.50 - 19.50 m BGS
Sand Pack Interval: 13.10 - 19.50 m BGS
Well Seal Interval: 0.30 - 13.10 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

m BTOC - metres below top of casing

Stantec

Drawn By/Checked By: JL/DK

STANTEC BOREHOLE AND WELL V2 SPRINGBANK_LOGS_20220808.GPJ STANTEC - DATA TEMPLATE.GDT 8/11/22 JLAUTERMILCH

Monitoring Well: MW16-20-21 (D2)

Project:	Springbank Off-Stream Reservoir Project (SR1)	**Drilling method:**	Solid-stem auger
Client:	Alberta Transportation	**Date started/completed:**	10-Jun-2016
Location:	Rocky View County, Alberta	**Ground surface elevation:**	n/a
Number:	110773396	**Top of casing elevation:**	n/a
Field investigator:	D. Nisbet	**Easting:**	-31218.384
Contractor:	All Service Drilling Inc.	**Northing:**	5657498.57

SUBSURFACE PROFILE

Depth (ft)	Depth (m)	Graphic Log	Lithologic Description	Depth (m BGS)
0	0		Ground Surface	
			TOPSOIL	0.00
			SILTY CLAY Light brown, moist, medium plastic	0.30
5	2			
			SILTY CLAY (TILL) Mottled brown and grey, with very fine sand lenses (tend to be orangish brown and oxidized), with gravel, moist	2.44
10	4			
15				
20	6			
25	8		SILT Medium brown, with clay, moist, crumbly	7.32
30				
	10		- @ 9.45 m: beige, begins to contain some very fine sand lenses (150 mm thick) and some gravel, dry	
35				
40	12		- @ 11.58 m: silt becomes dark brown to grey	
45	14		SILTSTONE Medium to dark grey, highly fractured, edges of large fractures have been weathered to silt, smaller fractures exhibit oxidation	13.41
50				
	16			
55				
60	18			
65	20		SANDSTONE Grey to dark grey, very fine to fine grained, with weak cross-bedding, few fractures	19.51
70				
	22		End of Borehole	21.34
75				

INSTALLATION DETAILS

Diagram

Description

- 0.746 m Stick-up
- Sand
0 to 1.22 m BGS
- Groundwater
1.93 m BGS
June 10, 2016
- Bentonite
- 152 mm diameter borehole
from 0 to 13.41 m
- Solid pipe
51 mm diameter
Schedule 40 PVC
- 102 mm diameter borehole
from 13.41 to 21.34 m
- Sand
- Slotted pipe
51 mm diameter
Schedule 40 PVC
No. 10 slot

Screen Interval: 19.81 - 21.34 m BGS
Sand Pack Interval: 4.27 - 21.34 m BGS
Well Seal Interval: 1.22 - 4.27 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

mm - millimetres
Coordinate System - NAD 1983 3TM 114
Completed as Well MW16-20-20

Stantec

Drawn By/Checked By: M. Kuhl / D. King

STANTEC BOREHOLE AND WELL V2 110773396_NEW.GPJ STANTEC - DATA TEMPLATE.GDT 17/1/16 MKUHL

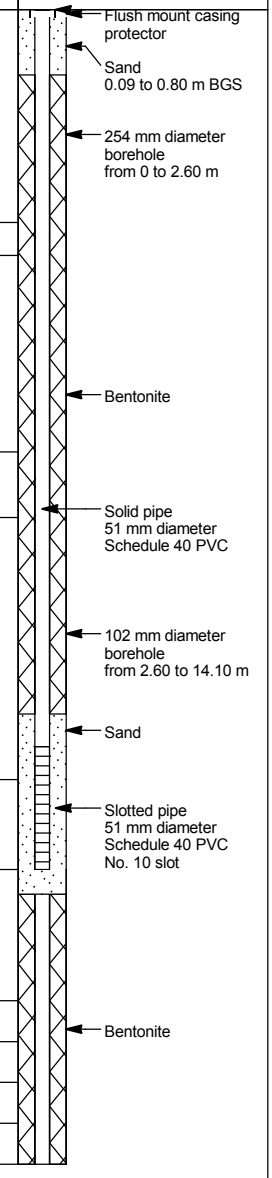
Monitoring Well: MW16-21-11 (D9)

Project:	Springbank Off-Stream Reservoir Project (SR1)	**Drilling method:**	Hollow-stem auger (Track mounted)/ Coring
Client:	Alberta Transportation	**Date started/completed:**	01-May-2016
Location:	Rocky View County, Alberta	**Ground surface elevation:**	n/a
Number:	110773396	**Top of casing elevation:**	n/a
Field investigator:	D. Nisbet	**Easting:**	-30383.805
Contractor:	All Service Drilling Inc.	**Northing:**	5656987.083

SUBSURFACE PROFILE

Depth (ft)	Depth (m)	Graphic Log	Lithologic Description	Depth (m BGS)
			Ground Surface	
			OVERBURDEN	0.00
5	2			
			SANDSTONE Coarse grained, weathered, few fractures	2.60
10			MUDSTONE AND CLAYSTONE Interbedded, massive - mudstone: brown, friable, has been weathered to clay along fractured - claystone: grey to light grey, with minor fractures, oxidation on fractures	3.00
15	4			
			SANDSTONE Grey to brown, fine grained, well defined cross-bedding	5.40
20	6			
			SILTSTONE Grey to brown, highly fractured and weathered, portions are highly friable and weathered to clay	6.20
25	8			
30				
			SANDSTONE Grey to brown, medium grained, planar laminated, competent core	9.40
35	10			
			SILTSTONE Highly fractured with weathering to silt along fractures	10.50
40	12			
			SANDSTONE Fine grained, finely cross-bedded, few fractures with oxidation along fracture surfaces	12.10
			SILTSTONE Grey, highly fractured and weathered	12.60
			SANDSTONE Fine grained, finely cross-bedded, few fractures	13.10
45	14		SILTSTONE Highly fractured and friable	13.60
			End of Borehole	14.10

INSTALLATION DETAILS



Screen Interval: 9.00 - 10.50 m BGS
Sand Pack Interval: 8.60 - 10.80 m BGS
Well Seal Interval: 10.80 - 14.10 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

mm - millimetres
Coordinate System - NAD 1983 3TM 114
Completed as Well MW16-21-11

Stantec

Drawn By/Checked By: M. Kuhl / D. King

STANTEC BOREHOLE AND WELL V2 110773396_NEW.GPJ STANTEC - DATA TEMPLATE.GDT 17/1/16 MKUHL

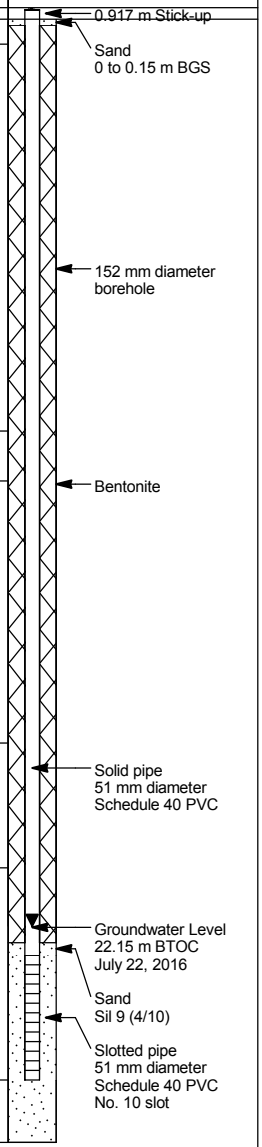
Monitoring Well: MW16-22-26 (D27)

Project:	Springbank Off-Stream Reservoir Project (SR1)	**Drilling method:**	Solid-stem auger (Track mounted)
Client:	Alberta Transportation	**Date started/completed:**	21-Jul-2016 / 22-Jul-2016
Location:	Rocky View County, Alberta	**Ground surface elevation:**	n/a
Number:	110773396	**Top of casing elevation:**	n/a
Field investigator:	D. Nisbet	**Easting:**	-29330.853
Contractor:	All Service Drilling Inc.	**Northing:**	5656907.343

SUBSURFACE PROFILE

Depth (ft)	Depth (m)	Graphic Log	Lithologic Description	Depth (m BGS)
0	0		Ground Surface	
			TOPSOIL	0.00
5	2		CLAY - from 0.61 to 2.44 m: beige to light brown, with silt, moist, high plastic	0.61
10	4		- from 2.44 to 10.06 m: medium brown, trace fine grained sand, trace gravel, some silt, medium plastic	
15				
20	6			
25	8			
30	10			
35			SILTY CLAY Medium brown, some very fine grained sand, trace gravel, medium plastic, minor oxidation within sand stringers - @ 11.28 m: sand content increases to 15-30%, gravel content increases to 5-15%	10.06
40	12		SANDY SILT Medium brown, with gravel, dry to moist, friable	11.28
45	14			
50				
55	16		- below 15.85 m: dry	
60	18		SANDY SILT (TILL) Medium to dark grey, some gravel, with clay, dry, medium plastic	17.68
65	20			
70			SILTY CLAY (TILL) Dark grey, with gravel, dry to moist, medium plastic	20.73
75	22			
80	24			
85	26		SILTSTONE Light to medium grey	25.91
90	28		End of Borehole	27.43
95				
	30			

INSTALLATION DETAILS



Screen Interval: 22.86 - 25.91 m BGS
Sand Pack Interval: 22.56 - 27.43 m BGS
Well Seal Interval: 0.15 - 22.56 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

mm - millimetres
Coordinate System - NAD 1983 3TM 114
Completed as Well MW16-22-26

Stantec

Drawn By/Checked By: M. Kuhl / D. King

STANTEC BOREHOLE AND WELL V2 110773396_NEW.GPJ STANTEC - DATA TEMPLATE.GDT 17/1/16 MKUHL

Monitoring Well: RMW16-23-13

Project:	SR1/Springank	**Method:**	Air Rotary
Client:	Alberta Transportaiton	**Date started/completed:**	12-May-2022
Location:	Rockyview County	**Ground surface elevation:**	n/a
Number:	10773396.5210.215	**Top of casing elevation:**	n/a
Field investigator:	WT/IM	**Easting:**	n/a
Contractor:	All Service Drilling	**Northing:**	n/a

SUBSURFACE PROFILE				INSTALLATION DETAILS	
Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Depth (m BGS)	Diagram / Description
			Ground Surface		
1			TOPSOIL darkbrown to black, moist	0.00	Flushmount casing 0.76 m
2	0.5		SILTY SAND trace gravel, light brown to grey, dry to moist	0.30	50 mm solid PVC pipe packed in 10-20 filter sand
3	1.0		SANDY CLAY TILL trace gravel, trace mineral precipitate, oxidation staining, low plasticity, light brown to brown,	0.90	
4					
5	1.5		- at 1.4 m BGS, cobble sized gravel - at 1.5 m BGS, increased gravel to approximately 30 percent		
6					
7	2.0				
8					
9	2.5				
10	3.0		SAND AND GRAVEL brown, dry	3.00	
11					
12	3.5				
13	4.0				Water level 4.09 m BTOC 13-May-22
14					
15	4.5		- at 4.5 m BGS, becomes moist		
16					
17	5.0				
18	5.5				50 mm solid PVC pipe packed in hydrated bentonite chips 0.3 to 11.1 m BGS
19					
20	6.0				
21			SANDSTONE fine grained, brown, poor recovery	6.20	
22	6.5				
23	7.0				
24			- at 7.2 m BGS, colour changes to grey, moist		
25	7.5		- at 7.7 m BGS, colour changes to brown		
26	8.0				
27					
28	8.5		- at 8.4 m BGS, Colour changes to grey, weathered		
29					
30	9.0		MUDSTONE grey, moist	9.00	
31	9.5				
32					

Screen Interval: 11.40 - 12.90 m BGS
Sand Pack Interval: 11.10 - 12.90 m BGS
Well Seal Interval: 0.30 - 11.10 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

m BTOC - metres below top of casing

Stantec

Drawn By/Checked By: JD/DK

STANTEC BOREHOLE AND WELL V2 SPRINGBANK_LOGS_20220808.GPJ STANTEC - DATA TEMPLATE.GDT 8/11/22 JLAUTERMILCH

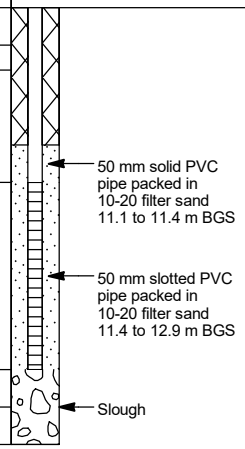
Monitoring Well: RMW16-23-13

Project:	SR1/Springank	**Method:**	Air Rotary
Client:	Alberta Transportaiton	**Date started/completed:**	12-May-2022
Location:	Rockyview County	**Ground surface elevation:**	n/a
Number:	10773396.5210.215	**Top of casing elevation:**	n/a
Field investigator:	WT/IM	**Easting:**	n/a
Contractor:	All Service Drilling	**Northing:**	n/a

SUBSURFACE PROFILE | INSTALLATION DETAILS

Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Depth (m BGS)
34	10.5		SANDSTONE fine grained, trace silt, moist	10.30
35			MUDSTONE saturated, grey	10.50
36	11.0			
37				
38	11.5		SANDSTONE saturated, grey to brown	11.40
39	12.0			
40				
41	12.5		- at 12.4 to 12.5 m BGS, mudstone lens	
42				
43	13.0		MUDSTONE saturated, grey to brown	12.90
44			SANDSTONE saturated, grey to brown	13.20
45	13.5		End of Borehole	13.50
46	14.0			
47				
48	14.5			
49				
50	15.0			
51				
52	15.5			
53				
54	16.0			
55				
56	16.5			
57				
58	17.0			
59				
60	17.5			
61				
62	18.0			
63				
64	18.5			
65				
	19.0			
	19.5			

Diagram / Description



Screen Interval: 11.40 - 12.90 m BGS
Sand Pack Interval: 11.10 - 12.90 m BGS
Well Seal Interval: 0.30 - 11.10 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

m BTOC - metres below top of casing

Stantec

Drawn By/Checked By: JD/DK

STANTEC BOREHOLE AND WELL V2 SPRINGBANK_LOGS_20220808.GPJ STANTEC - DATA TEMPLATE.GDT 8/11/22 JLAUTERMILCH

Monitoring Well: RMW16-23-32

Project:	SR1/Springank	**Method:**	Air Rotary
Client:	Alberta Transportaiton	**Date started/completed:**	13-May-2022
Location:	Rockyview County	**Ground surface elevation:**	n/a
Number:	10773396.5210.215	**Top of casing elevation:**	n/a
Field investigator:	WT/IM	**Easting:**	681934
Contractor:	All Service Drilling	**Northing:**	5658853

SUBSURFACE PROFILE				INSTALLATION DETAILS	
Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Depth (m BGS)	Diagram / Description
			Ground Surface		
			TOPSOIL darkbrown to black, moist	0.00	Flushmount casing
2			SILTY SAND trace gravel, light brown to grey, dry to moist	0.30	50 mm solid PVC pipe packed in 10-20 filter sand
4	1		SANDY CLAY TILL trace gravel, trace mineral precipitate, oxidation staining, low plasticity, light brown to brown, - at 1.4 m BGS, cobble sized gravel - at 1.5 m BGS, increased gravel to approximately 30 percent	0.90	
6	2				
8					
10	3		SAND AND GRAVEL brown, dry	3.00	Water level 3.27 m BTOC 13-May-22
12					
14	4		- at 4.5 m BGS, becomes moist		
16					
18	5				
20	6		SANDSTONE fine grained, brown, poor recovery	6.20	
22					
24	7		- at 7.2 m BGS, colour changes to grey, moist - at 7.7 m BGS, colour changes to brown		
26	8				
28			- at 8.4 m BGS, Colour changes to grey, weathered		
30	9		MUDSTONE grey, moist	9.00	
32					
34	10		SANDSTONE	10.30	

Screen Interval: 29.50 - 31.00 m BGS
Sand Pack Interval: 29.20 - 31.00 m BGS
Well Seal Interval: 0.30 - 29.20 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

m BTOC - metres below top of casing
Locaiton coordinates are approximate

Stantec

Drawn By/Checked By: JL/DK

STANTEC BOREHOLE AND WELL V2 SPRINGBANK_LOGS_20220808.GPJ STANTEC - DATA TEMPLATE.GDT 8/11/22 JLAUTERMILCH

Monitoring Well: RMW16-23-32

Project:	SR1/Springank	**Method:**	Air Rotary
Client:	Alberta Transportaiton	**Date started/completed:**	13-May-2022
Location:	Rockyview County	**Ground surface elevation:**	n/a
Number:	10773396.5210.215	**Top of casing elevation:**	n/a
Field investigator:	WT/IM	**Easting:**	681934
Contractor:	All Service Drilling	**Northing:**	5658853

SUBSURFACE PROFILE					INSTALLATION DETAILS	
Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Depth (m BGS)	Diagram	Description
			fine grained, trace silt, moist	10.50		
36	11		MUDSTONE saturated, grey			
38			SANDSTONE saturated, grey to brown	11.40		
40	12		- at 12.4 to 12.5 m BGS, mudstone lens			
42	13		MUDSTONE saturated, grey to brown	12.90		
44			SANDSTONE saturated, grey to brown	13.20		
46	14					
48			SANDSTONE AND MUDSTONE intebedded dark grey mudstone and fine grained grey to blackish grey sandstones	14.30		50 mm solid PVC pipe packed in hydrated bentonite chips 0.3 to 29.2 m BGS
50	15					
52	16					
54						
56	17					
58						
60	18		MUDSTONE grey to dark grey	18.00		
62	19					
64						
66	20		- at 19.8 m BGS, becomes sturated, grey			
			SILTSTONE grey to dark grey, saturated	20.40		
68			SANDSTONE saturated, dark grey	20.70		

Screen Interval: 29.50 - 31.00 m BGS
Sand Pack Interval: 29.20 - 31.00 m BGS
Well Seal Interval: 0.30 - 29.20 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

m BTOC - metres below top of casing
Locaiton coordinates are approximate

Stantec

Drawn By/Checked By: JL/DK

STANTEC BOREHOLE AND WELL V2 SPRINGBANK_LOGS_20220808.GPJ STANTEC - DATA TEMPLATE.GDT 8/11/22 JLAUTERMILCH

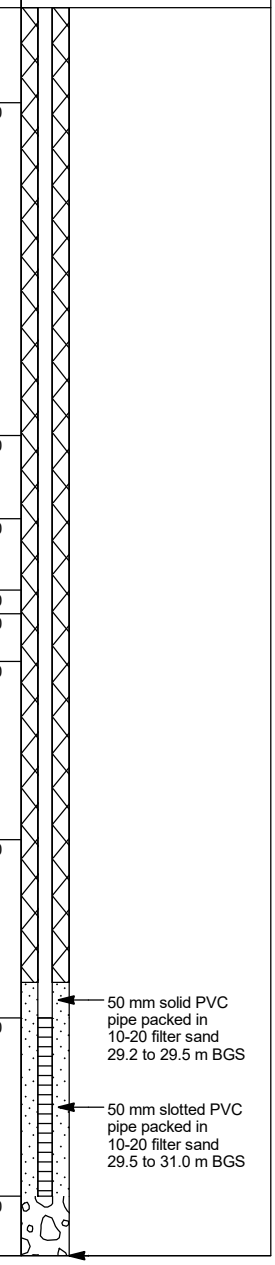
Monitoring Well: RMW16-23-32

Project:	SR1/Springank	**Method:**	Air Rotary
Client:	Alberta Transportaiton	**Date started/completed:**	13-May-2022
Location:	Rockyview County	**Ground surface elevation:**	n/a
Number:	10773396.5210.215	**Top of casing elevation:**	n/a
Field investigator:	WT/IM	**Easting:**	681934
Contractor:	All Service Drilling	**Northing:**	5658853

SUBSURFACE PROFILE | INSTALLATION DETAILS

Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Depth (m BGS)
70			SANDSTONE saturated, dark grey	
72	22		MUDSTONE saturated, grey to light grey	21.80
74				
76	23			
78				
80	24			
82	25		SANDSTONE saturated, grey	24.60
84			SILTSTONE saturated, black	25.30
86	26		MUDSTONE saturated, grey	25.90
			SILTSTONE saturated, dark grey	26.10
88	27		MUDSTONE saturated, grey - at 27.6 m BGS, becomes weathered	26.50
90				
92	28		SILTSTONE saturated, brown to grey	28.00
94				
96	29			
98	30		SANDSTONE saturated, grey to greyish brown	29.50
100				
102	31		MUDSTONE saturated, dark grey	31.00

Diagram / Description



Screen Interval: 29.50 - 31.00 m BGS
Sand Pack Interval: 29.20 - 31.00 m BGS
Well Seal Interval: 0.30 - 29.20 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

m BTOC - metres below top of casing
Locaiton coordinates are approximate

Stantec

Drawn By/Checked By: JL/DK

STANTEC BOREHOLE AND WELL V2 SPRINGBANK_LOGS_20220808.GPJ STANTEC - DATA TEMPLATE.GDT 8/11/22 JLAUTERMILCH

Monitoring Well: RMW16-23-32

Project:	SR1/Springank	**Method:**	Air Rotary
Client:	Alberta Transportaiton	**Date started/completed:**	13-May-2022
Location:	Rockyview County	**Ground surface elevation:**	n/a
Number:	10773396.5210.215	**Top of casing elevation:**	n/a
Field investigator:	WT/IM	**Easting:**	681934
Contractor:	All Service Drilling	**Northing:**	5658853

SUBSURFACE PROFILE				INSTALLATION DETAILS	
Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Depth (m BGS)	Diagram	Description
104	32		SILTSTONE SHALE saturated, dark grey	31.70		Slough
			End of Borehole	32.00		
106						
108	33					
110						
112	34					
114						
116	35					
118						
120	36					
122						
124	37					
126						
128	38					
130						
132	39					
134						
136	40					
	41					

Screen Interval: 29.50 - 31.00 m BGS
Sand Pack Interval: 29.20 - 31.00 m BGS
Well Seal Interval: 0.30 - 29.20 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

m BTOC - metres below top of casing
Locaiton coordinates are approximate

Stantec

Drawn By/Checked By: JL/DK

STANTEC BOREHOLE AND WELL V2 SPRINGBANK_LOGS_20220808.GPJ STANTEC - DATA TEMPLATE.GDT 8/11/22 JLAUTERMILCH

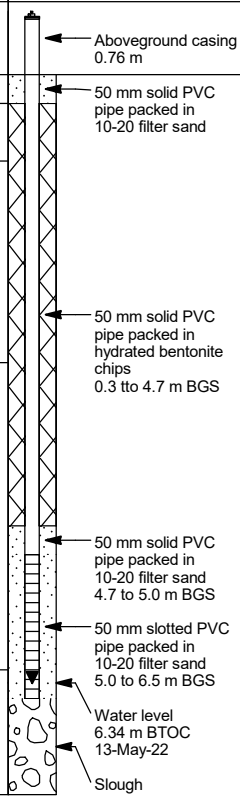
Monitoring Well: RMW16-23-7

Project:	SR1/Springank	**Method:**	Solid Stem Auger
Client:	Alberta Transportaiton	**Date started/completed:**	11-May-2022
Location:	Rockyview County	**Ground surface elevation:**	n/a
Number:	10773396.5210.215	**Top of casing elevation:**	n/a
Field investigator:	WT/IM	**Easting:**	n/a
Contractor:	All Service Drilling	**Northing:**	n/a

SUBSURFACE PROFILE

Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Depth (m BGS)
			Ground Surface	
0	0		TOPSOIL darkbrown to black, moist	0.00
2			SILTY SAND trace gravel, light brown to grey, dry to moist	0.30
4	1		SANDY CLAY TILL trace gravel, trace mineral precipitate, oxidation staining, low plasticity, light brown to brown, - at 1.4 m BGS, cobble sized gravel - at 1.5 m BGS, increased gravel to approximately 30 percent	0.90
6	2			
8				
10	3		SAND AND GRAVEL brown, dry	3.00
12	4			
14				
16	5		- at 4.5 m BGS, becomes moist	
18				
20	6		SANDSTONE fine grained, brown, poor recovery	6.20
22	7			
24			End of Borehole	7.50
26	8			
28				
30	9			
32	10			
34				
36	11			
38				
	12			

INSTALLATION DETAILS



Screen Interval: 5.00 - 6.50 m BGS
Sand Pack Interval: 4.70 - 6.50 m BGS
Well Seal Interval: 0.30 - 4.70 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

m BTOC - metres below top of casing

Stantec

Drawn By/Checked By: JL/DK

STANTEC BOREHOLE AND WELL V2 SPRINGBANK_LOGS_20220808.GPJ STANTEC - DATA TEMPLATE.GDT 8/11/22 JLAUTERMILCH

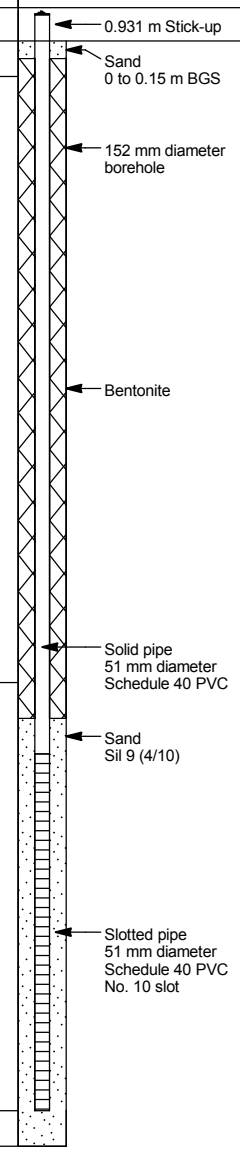
Monitoring Well: MW16-25-9 (BS3)

Project:	Springbank Off-Stream Reservoir Project (SR1)	**Drilling method:**	Solid-stem auger (Track mounted)
Client:	Alberta Transportation	**Date started/completed:**	19-Aug-2016
Location:	Rocky View County, Alberta	**Ground surface elevation:**	n/a
Number:	110773396	**Top of casing elevation:**	n/a
Field investigator:	D. Nisbet	**Easting:**	-29274.736
Contractor:	All Service Drilling Inc.	**Northing:**	5658230.981

SUBSURFACE PROFILE

Depth (ft)	Depth (m)	Graphic Log	Lithologic Description	Depth (m BGS)
			Ground Surface	
0	0		TOPSOIL	0.00
			SILTY CLAY Light to medium brown, moist, medium plastic, some mottling	0.30
5	2			
			- @ 2.74 m: silt content decreases to 15-30%	
10	4			
15			- @ 4.88 m: silt content increases to > 40% - below 5.18 m: trace gravel	
			SILT AND CLAY (TILL) Medium brown, some very fine grained sand, some gravel, moist, medium plastic	5.49
20	6			
25	8			
30			CLAYSTONE Light grey to brown, dry	9.14
	10		End of Borehole	9.45

INSTALLATION DETAILS



Screen Interval: 6.10 - 9.14 m BGS
Sand Pack Interval: 5.79 - 9.45 m BGS
Well Seal Interval: 0.15 - 5.79 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

mm - millimetres
Coordinate System - NAD 1983 3TM 114
Completed as Well MW16-25-9

Stantec

Drawn By/Checked By: M. Kuhl / D. King

STANTEC BOREHOLE AND WELL V2 110773396_NEW.GPJ STANTEC - DATA TEMPLATE.GDT 17/1/16 MKUHL

Monitoring Well: MW21-3-5

Project:	SR1/Springank	**Method:**	Solid Stem Auger
Client:	Alberta Transportaiton	**Date started/completed:**	27-Aug-2022
Location:	Rockyview County	**Ground surface elevation:**	n/a
Number:	10773396.5210.215	**Top of casing elevation:**	n/a
Field investigator:	WT	**Easting:**	677301
Contractor:	All Service Drilling	**Northing:**	5660000

SUBSURFACE PROFILE | INSTALLATION DETAILS

Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Depth (m BGS)	Diagram	Description
-2	-0.5					Aboveground casing 0.74 m
0	0.0		Ground Surface			
			TOPSOIL some organics, brown to black, dry	0.00		50 mm solid PVC pipe packed in 10-20 filter sand
1						
2	0.5		SILT AND SAND very fine sand, some clay, light brown to brown, low plasticity, dry	0.40		
3	1.0					
4						
5	1.5		CLAYEY SILT some sand, trace gravel, trace oxidaiton staining and white mineral precipitates, low plasticity	1.40		
6						50 mm solid PVC pipe packed in hydrated bentonite chips 0.3 to 3.4 m BGS
7	2.0					
8	2.5					
9						
10	3.0					
11						
12	3.5					50 mm solid PVC pipe packed in 10-20 filter sand 3.4 to 3.7 m BGS
13	4.0					
			SILTY SAND very fine sand, brown, moist	4.10		
14						
15	4.5					50 mm slotted PVC pipe packed in 10-20 filter sand 3.7 to 5.3 m BGS
16			- at 4.9 m BGS, auger refusal, switch to coring			
	5.0		MUDSTONE highly fractured and oxidized surfaces, greyish brown	4.90		
17						
			End of Borehole	5.30		
18	5.5					
19						
20	6.0					
21						
22	6.5					
23	7.0					

Screen Interval: 3.70 - 5.30 m BGS
Sand Pack Interval: 3.40 - 5.30 m BGS
Well Seal Interval: 0.30 - 3.40 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

m BTOC - metres below top of casing
Locaiton coordinates are approximate

Stantec

Drawn By/Checked By: JL/DK

STANTEC BOREHOLE AND WELL V2 SPRINGBANK_LOGS_20220808.GPJ STANTEC - DATA TEMPLATE.GDT 8/11/22 JLAUTERMILCH

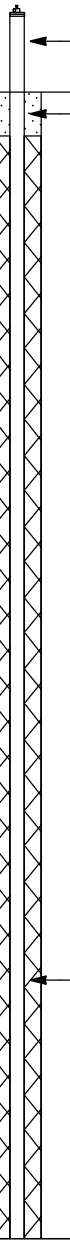
Monitoring Well: MW21-3-15

Project:	SR1/Springank	**Method:**	Solid Stem Auger
Client:	Alberta Transportaiton	**Date started/completed:**	26-Aug-2022
Location:	Rockyview County	**Ground surface elevation:**	n/a
Number:	10773396.5210.215	**Top of casing elevation:**	n/a
Field investigator:	WT	**Easting:**	677300
Contractor:	All Service Drilling	**Northing:**	5660000

SUBSURFACE PROFILE

Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Depth (m BGS)
-2	-0.5			
-1				
0	0.0		Ground Surface	
1			TOPSOIL some organics, brown to black, dry	0.00
2	0.5		SILT AND SAND very fine sand, some clay, light brown to brown, low plasticity, dry	0.40
3	1.0			
4				
5	1.5		CLAYEY SILT some sand, trace gravel, trace oxidaiton staining and white mineral precipitates, low plasticity	1.40
6	2.0			
7				
8	2.5			
9				
10	3.0			
11	3.5			
12				
13	4.0			
14			SILTY SAND very fine sand, brown, moist	4.10
15	4.5			
16			- at 4.9 m BGS, auger refusal, switch to coring	
17	5.0		MUDSTONE highly fractured and oxidized surfaces, greyish brown	4.90
18	5.5			
19				
20	6.0		- at 6.0 m BGS, some clay and silt along fractures	
21	6.5			
22				
23	7.0		- at 6.95 m BGS, thin clay layer	
24	7.5			
25				

INSTALLATION DETAILS



Diagram

Description

- Aboveground casing 0.69 m
- 50 mm solid PVC pipe packed in 10-20 filter sand
- 50 mm solid PVC pipe packed in hydrated bentonite chips 0.3 to 11.8 m BGS

Screen Interval: 12.40 - 15.40 m BGS
Sand Pack Interval: 11.80 - 15.40 m BGS
Well Seal Interval: 0.30 - 11.80 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

m BTOC - metres below top of casing
Locaiton coordinates are approximate

Stantec

Drawn By/Checked By: JL/DK

STANTEC BOREHOLE AND WELL V2 SPRINGBANK_LOGS_20220808.GPJ STANTEC - DATA TEMPLATE.GDT 8/11/22 JLAUTERMILCH

Monitoring Well: MW21-3-15

Project:	SR1/Springank	**Method:**	Solid Stem Auger
Client:	Alberta Transportaiton	**Date started/completed:**	26-Aug-2022
Location:	Rockyview County	**Ground surface elevation:**	n/a
Number:	10773396.5210.215	**Top of casing elevation:**	n/a
Field investigator:	WT	**Easting:**	677300
Contractor:	All Service Drilling	**Northing:**	5660000

SUBSURFACE PROFILE | INSTALLATION DETAILS

Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Depth (m BGS)	Diagram	Description
26	8.0		MUDSTONE highly fractured and oxidized surfaces, greyish brown			
27			SILTSTONE highly oxidized, grayish green to grey - at 8.3 to 8.8 m BGS, extensive weathering and fractures, clays and silts in fractures	8.10		Water level 8.319 m BTOC 4-May-22
28	8.5					
29						
30	9.0		SANDSTONE very fine grained, greyish green to grey	8.90		
31	9.5					
32						
33	10.0		SILTSONE greenish grey to grey - at 9.8 to 10.1 m BGS, very weathered to poorly consolidated silts and some clays in fractures	9.80		
34						
35	10.5					
36	11.0		SANDSTONE very fine grained, grey to very light grey	10.90		
37						
38	11.5		SILTSTONE grey to dark grey, poorly consolidated	11.30		
39						
40	12.0		- at 12.1 to 12.3 m BGS, few fractures throughout			50 mm solid PVC pipe packed in 10-20 filter sand 11.8 to 12.4 m BGS
41	12.5		SANDSTONE fine grained, grey to very light grey, few fractures	12.40		
42						
43	13.0		- at 12.8 to 13.1 m BGS, thin layer of siltstone			
44						
45	13.5					
46	14.0		SILTSTONE grey to dark grey, thin coal layer to 14.1 m BGS - at 14.1 to 14.4 m BGS, poorly consolidated	13.90		50 mm slotted PVC pipe packed in 10-20 filter sand 12.4 to 15.4 m BGS
47						
48	14.5					
49	15.0					
50						
51	15.5		End of Borehole	15.40		
52						
53	16.0					

Screen Interval: 12.40 - 15.40 m BGS
Sand Pack Interval: 11.80 - 15.40 m BGS
Well Seal Interval: 0.30 - 11.80 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

m BTOC - metres below top of casing
Locaiton coordinates are approximate

Stantec

Drawn By/Checked By: JL/DK

STANTEC BOREHOLE AND WELL V2 SPRINGBANK_LOGS_20220808.GPJ STANTEC - DATA TEMPLATE.GDT 8/11/22 JLAUTERMILCH

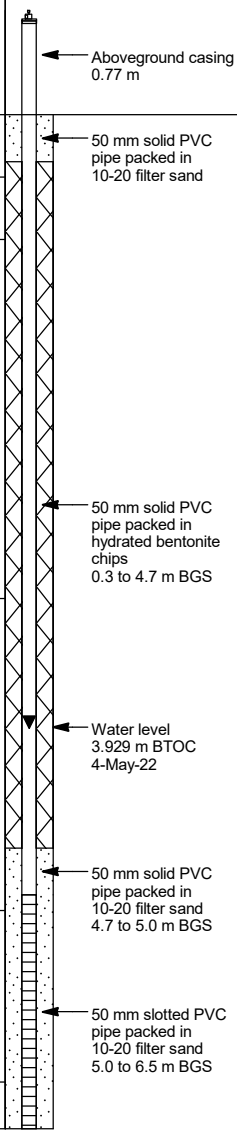
Monitoring Well: MW21-6-7

Project:	SR1/Springank	**Method:**	Solid Stem Auger
Client:	Alberta Transportaiton	**Date started/completed:**	27-Aug-2021
Location:	Rockyview County	**Ground surface elevation:**	n/a
Number:	10773396.5210.215	**Top of casing elevation:**	n/a
Field investigator:	WT	**Easting:**	677606
Contractor:	All Service Drilling	**Northing:**	5658026

SUBSURFACE PROFILE

Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Depth (m BGS)
-2	-0.5			
-1				
0	0.0		Ground Surface	
			TOPSOIL organics, black, dry	0.00
1				
	0.5		SILT AND SAND some gravel, light brown, dry	0.40
2				
3			SILTY CLAY TILL some sand, and gravel, trace oxidaiton staining, light brown to brown, medium plasticity, dry	0.80
	1.0			
4				
5	1.5			
6				
7	2.0			
8				
	2.5			
9				
10	3.0			
			SANDY CLAY trace siltstone and sandstone, low plasticity, moist	3.10
11				
	3.5			
12				
13	4.0			
14				
15	4.5			
16				
	5.0			
17			SILTY SAND trace clay and gravel, light brown, damp, moist at bottom	5.10
18	5.5			
19				
20	6.0			
			SILTSTONE highly fractured, oxidated surfaces, weathered, friable	6.20
21	6.5			
22			End of Borehole	6.50
23	7.0			

INSTALLATION DETAILS



Screen Interval: 5.00 - 6.50 m BGS
Sand Pack Interval: 4.70 - 6.50 m BGS
Well Seal Interval: 0.30 - 4.70 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

m BTOC - metres below top of casing
Locaiton coordinates are approximate

Stantec

Drawn By/Checked By: JL/DK

STANTEC BOREHOLE AND WELL V2 SPRINGBANK_LOGS_20220808.GPJ STANTEC - DATA TEMPLATE.GDT 8/11/22 JLAUTERMILCH

Monitoring Well: MW21-6-12

Project:	SR1/Springank	**Method:**	Solid Stem Auger
Client:	Alberta Transportaiton	**Date started/completed:**	27-Aug-2021
Location:	Rockyview County	**Ground surface elevation:**	n/a
Number:	10773396.5210.215	**Top of casing elevation:**	n/a
Field investigator:	WT	**Easting:**	677606
Contractor:	All Service Drilling	**Northing:**	5658026

SUBSURFACE PROFILE				INSTALLATION DETAILS	
Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Depth (m BGS)	Diagram / Description
-2	-0.5				Aboveground casing 0.73 m
0	0.0		Ground Surface		
			TOPSOIL organics, black, dry	0.00	50 mm solid PVC pipe packed in 10-20 filter sand
1					
2	0.5		SILT AND SAND some gravel, light brown, dry	0.40	
3	1.0		SILTY CLAY TILL some sand, and gravel, trace oxidaiton staining, light brown to brown, mediun plasticity, dry	0.80	
4					
5	1.5				
6					
7	2.0				
8	2.5				
9					
10	3.0				
11			SANDY CLAY trace siltstone and sandstone, low plasticity, moist	3.10	Water level 3.92 m BTOC 5-May-22
12	3.5				
13					
14	4.0				
15	4.5				50 mm solid PVC pipe packed in hydrated bentonite chips 0.3 to 8.87 m BGS
16					
17	5.0		SILTY SAND trace clay and gravel, light brown, damp, moist at bottom	5.10	
18	5.5				
19					
20	6.0				
21			SILTSTONE highly fractured, oxidated surfaces, weathered, friable	6.20	
22	6.5		- at 6.7 to 7.0 m BGS, colour changes to greenish grey		
23	7.0				

Screen Interval: 9.10 - 12.10 m BGS
Sand Pack Interval: 8.80 - 12.30 m BGS
Well Seal Interval: 0.30 - 8.80 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

m BTOC - metres below top of casing
Locaiton coordinates are approximate

Stantec

Drawn By/Checked By: JL/DK

STANTEC BOREHOLE AND WELL V2 SPRINGBANK_LOGS_20220808.GPJ STANTEC - DATA TEMPLATE.GDT 8/11/22 JLAUTERMILCH

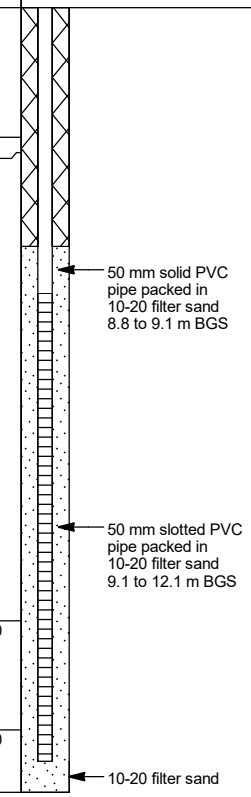
Monitoring Well: MW21-6-12

Project:	SR1/Springank	**Method:**	Solid Stem Auger
Client:	Alberta Transportaiton	**Date started/completed:**	27-Aug-2021
Location:	Rockyview County	**Ground surface elevation:**	n/a
Number:	10773396.5210.215	**Top of casing elevation:**	n/a
Field investigator:	WT	**Easting:**	677606
Contractor:	All Service Drilling	**Northing:**	5658026

SUBSURFACE PROFILE | INSTALLATION DETAILS

Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Depth (m BGS)
24	7.5		SILTSTONE highly fractured, oxidated surfaces, weathered, friable	
25				
26	8.0			
27			SANDSTONE very fine grained, grey to very light grey, oxidation of fractured surfaces	8.10
			MUDSTONE grey to very light grey, weathering, oxidaiton along fractures	8.20
28	8.5		- at 8.6 to 8.9 m BGS, poorly consolidated	
29				
30	9.0		- at 8.9 to 9.7 m BGS consolidated	
31	9.5			
32			- 9.7 to 10.1 m BGS, well cemented	
33	10.0			
34			- 10.1 to 10.5 m BGS, weathered and poorly consolidated clays and silts	
35	10.5			
36	11.0			
37			- at 11.1 m BGS, well cemented	
			SANDSTONE grey to very light grey, fossils	11.20
38	11.5			
39				
40	12.0		MUDSTONE brown to grey, slight weathering at upper contact	11.90
			End of Borehole	12.30
41	12.5			
42				
43	13.0			
44				
45	13.5			
46				
47	14.0			
48	14.5			
49	15.0			

INSTALLATION DETAILS



Screen Interval: 9.10 - 12.10 m BGS
Sand Pack Interval: 8.80 - 12.30 m BGS
Well Seal Interval: 0.30 - 8.80 m BGS

Notes:
m AMSL - metres above mean sea level
m BGS - metres below ground surface
n/a - not available

m BTOC - metres below top of casing
Locaiton coordinates are approximate

Stantec

Drawn By/Checked By: JL/DK

STANTEC BOREHOLE AND WELL V2 SPRINGBANK_LOGS_20220808.GPJ STANTEC - DATA TEMPLATE.GDT 8/11/22 JLAUTERMILCH

Monitoring Well: WS11-01

Project:	Springbank Offstream Reservoir Project (SR1)	**Method:**	Solid Stem Auger
Client:	Alberta Transportation	**Date started/completed:**	24-Nov-2022
Location:		**Ground surface elevation:**	n/a
Number:	110773396	**Top of casing elevation:**	n/a
Field investigator:	W.T.	**Easting:**	2272.481
Contractor:	All Service Drilling	**Northing:**	2252.153

SUBSURFACE PROFILE				INSTALLATION DETAILS	
Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Depth (m BGS)	Diagram / Description
-2	-0.5				Above Ground Casing 0.725 m AGS
0	0.0		Ground Surface		
			TOPSOIL dark brown to black, moist	0.00	
1	0.5		SILTY SAND trace sand, brown, dry	0.40	
2			SILT AND CLAY trace sand, brown, dry -at 1.1 m BGS white mineral precipitates	0.70	
3	1.0				
4					
5	1.5		SILTY CLAY some sand, trace gravel and cobbles, trace mineral precipitates and oxidation staining throughout, brown to olive, moist	1.50	
6	2.0				
7					
8	2.5				
9					
10	3.0				
11			SANDY SILT trace clay decreasing with depth, dark brown	3.20	
12	3.5				
13					
14	4.0				
15	4.5		-saturated at 4.4 m BGS SILTY CLAY trace sand and gravel, dark brown, moist to saturated	4.50	
16					
17	5.0		SANDSTONE very fine grained, light brown	5.00	51 mm solid PVC pipe packed in bentonite 0.0 to 10.2 m BGS
18	5.5				
19					
20	6.0		-very fine sand to silt (siltstone), greyish brown at 6.0 m BGS		

Screen Interval: 10.50 - 12.00 m BGS
Sand Pack Interval: 10.20 - 12.00 m BGS
Well Seal Interval: 0.00 - 10.20 m BGS

Notes:
m BGS - metres below ground surface
n/a - not available

Soil strength (consistency) and plasticity terms are for descriptive purposes only and must not be used for design or construction purposes.

Drawn By/Checked By: D.K.

STANTEC BOREHOLE AND WELL V2 ALBERTA TRANSPORTATION SR1 BH LOGS_JULY2023_KY.GPJ STANTEC - DATA TEMPLATE.GDT 09/07/23 KIYOUNG

Monitoring Well: WS11-01

Project:	Springbank Offstream Reservoir Project (SR1)	**Method:**	Solid Stem Auger
Client:	Alberta Transportation	**Date started/completed:**	24-Nov-2022
Location:		**Ground surface elevation:**	n/a
Number:	110773396	**Top of casing elevation:**	n/a
Field investigator:	W.T.	**Easting:**	2272.481
Contractor:	All Service Drilling	**Northing:**	2252.153

SUBSURFACE PROFILE				INSTALLATION DETAILS	
Depth (ft)	Depth (m)	Graphic Log	Stratigraphic Description	Depth (m BGS)	Diagram / Description
21	6.5		SANDSTONE very fine grained, light brown		
22					
23	7.0				
24					
	7.5				
25			SILTSTONE greyish brown, dry	7.50	
26	8.0				
27					
28	8.5				
29					
	9.0		SANDSTONE coal seam, moist to saturated	9.00	
30					
31	9.5		-very fine grained, dark brow, moist at 9.6 m BGS		
32					
33	10.0				
34					51 mm solid PVC pipe packed in 10-20 filter sand 10.2 to 10.5 m BGS
35	10.5		-fine to medium grained, grey, well consolidated at 10.5 m BGS		
36					
37	11.0				51 mm slotted PVC screen packed in 10-20 filter sand 10.5 to 12.0 m BGS
38					
39	11.5				
	12.0		-aguer refusal at 12.0 m BGS End of Borehole	12.00	
40					
41	12.5				
42					
43	13.0				

Screen Interval: 10.50 - 12.00 m BGS
Sand Pack Interval: 10.20 - 12.00 m BGS
Well Seal Interval: 0.00 - 10.20 m BGS

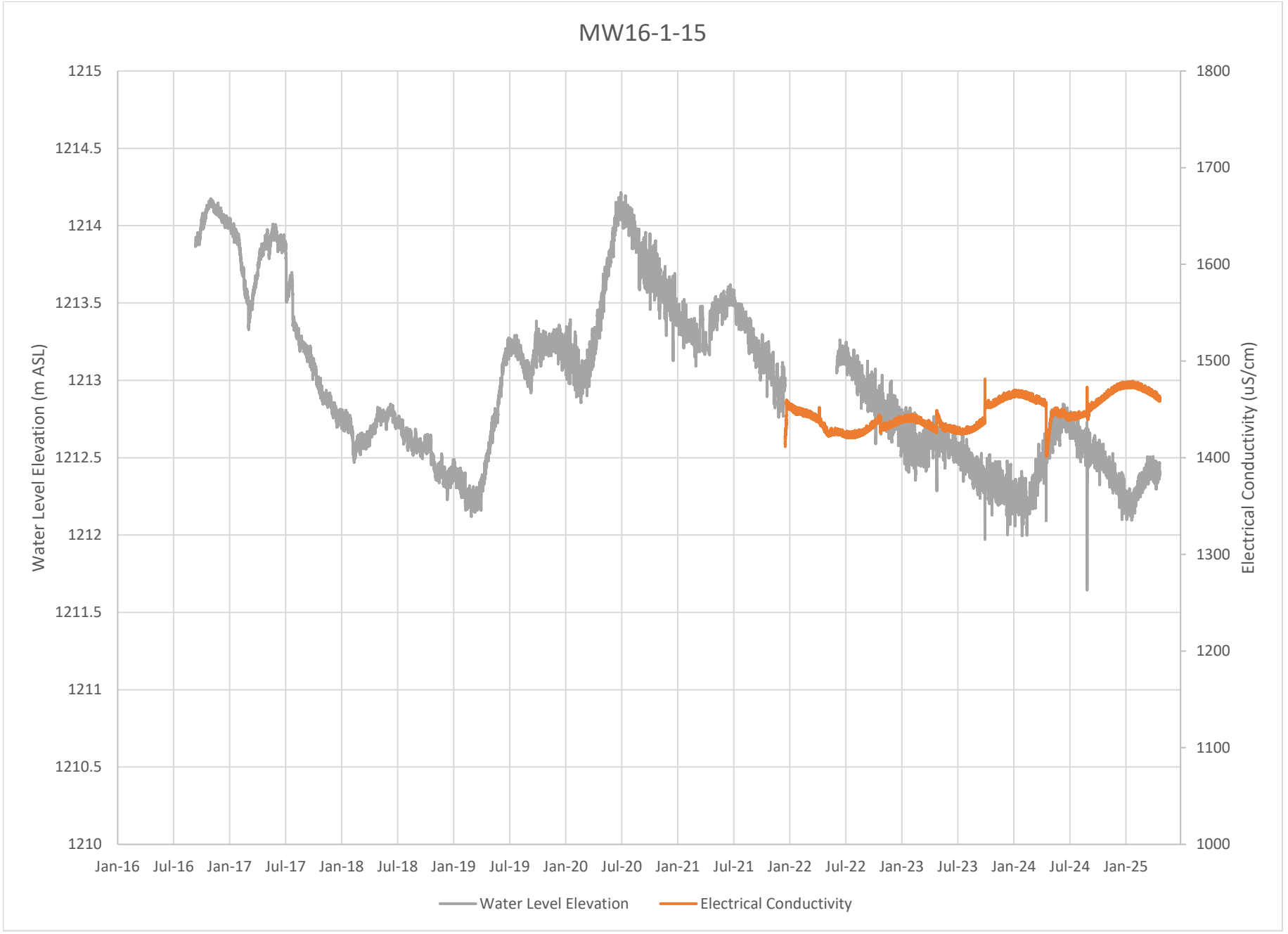
Notes:
m BGS - metres below ground surface
n/a - not available

Soil strength (consistency) and plasticity terms are for descriptive purposes only and must not be used for design or construction purposes.

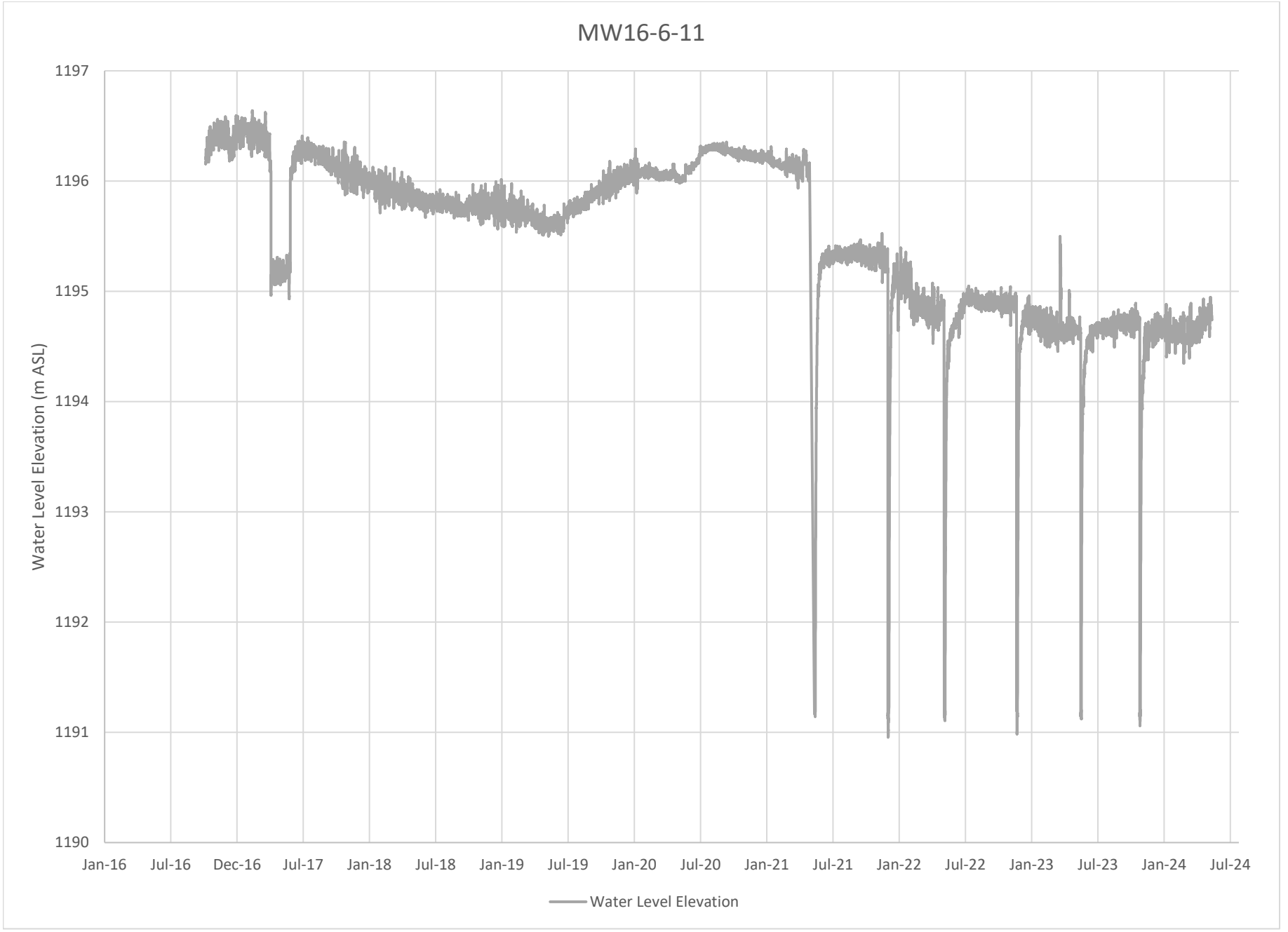
Drawn By/Checked By: D.K.

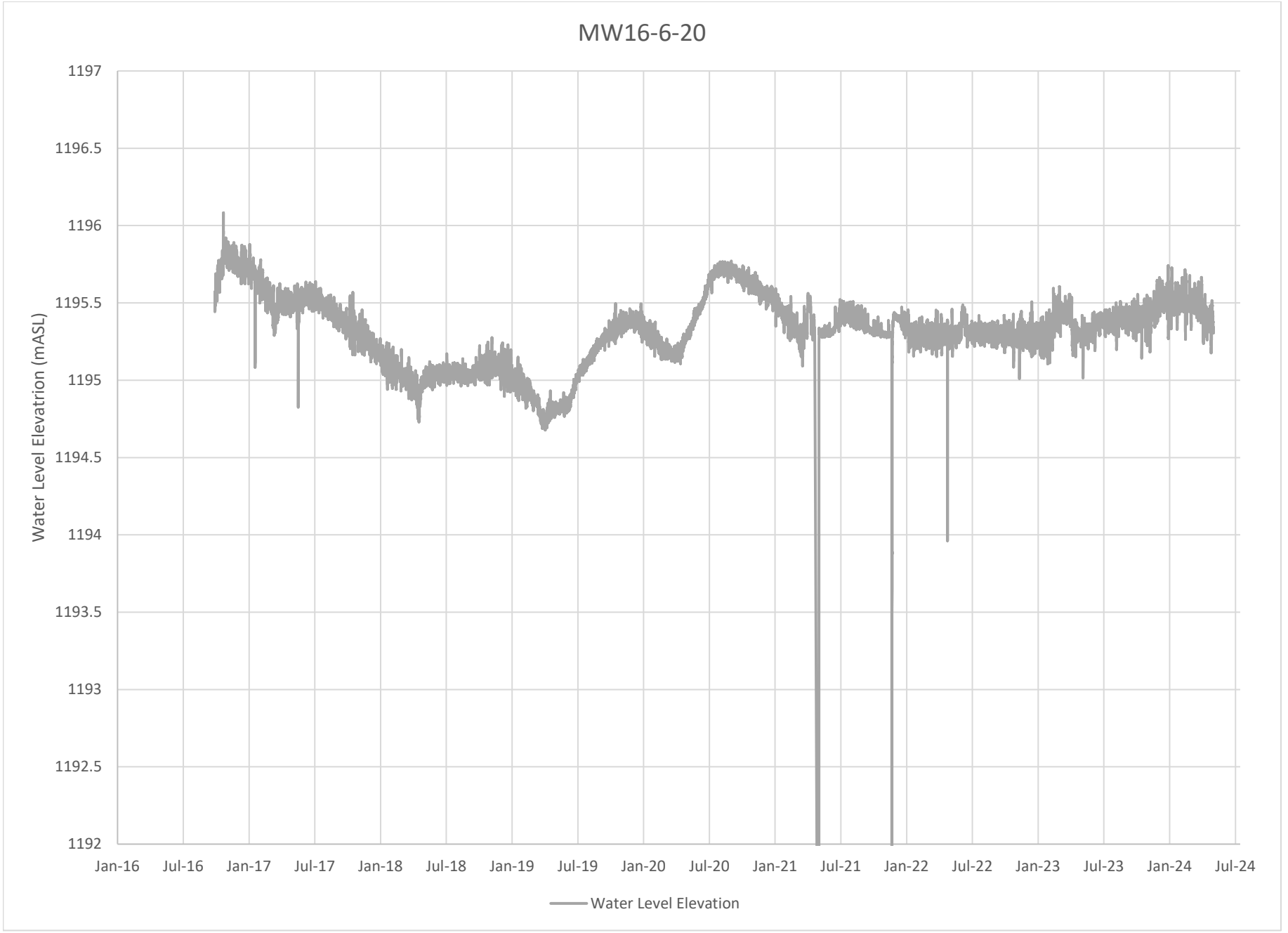
STANTEC BOREHOLE AND WELL V2 ALBERTA TRANSPORTATION SR1 BH LOGS_JULY2023_KY.GPJ STANTEC - DATA TEMPLATE.GDT 09/07/23 KIYOUNG

Appendix B Data Logging Pressure Transducer Data

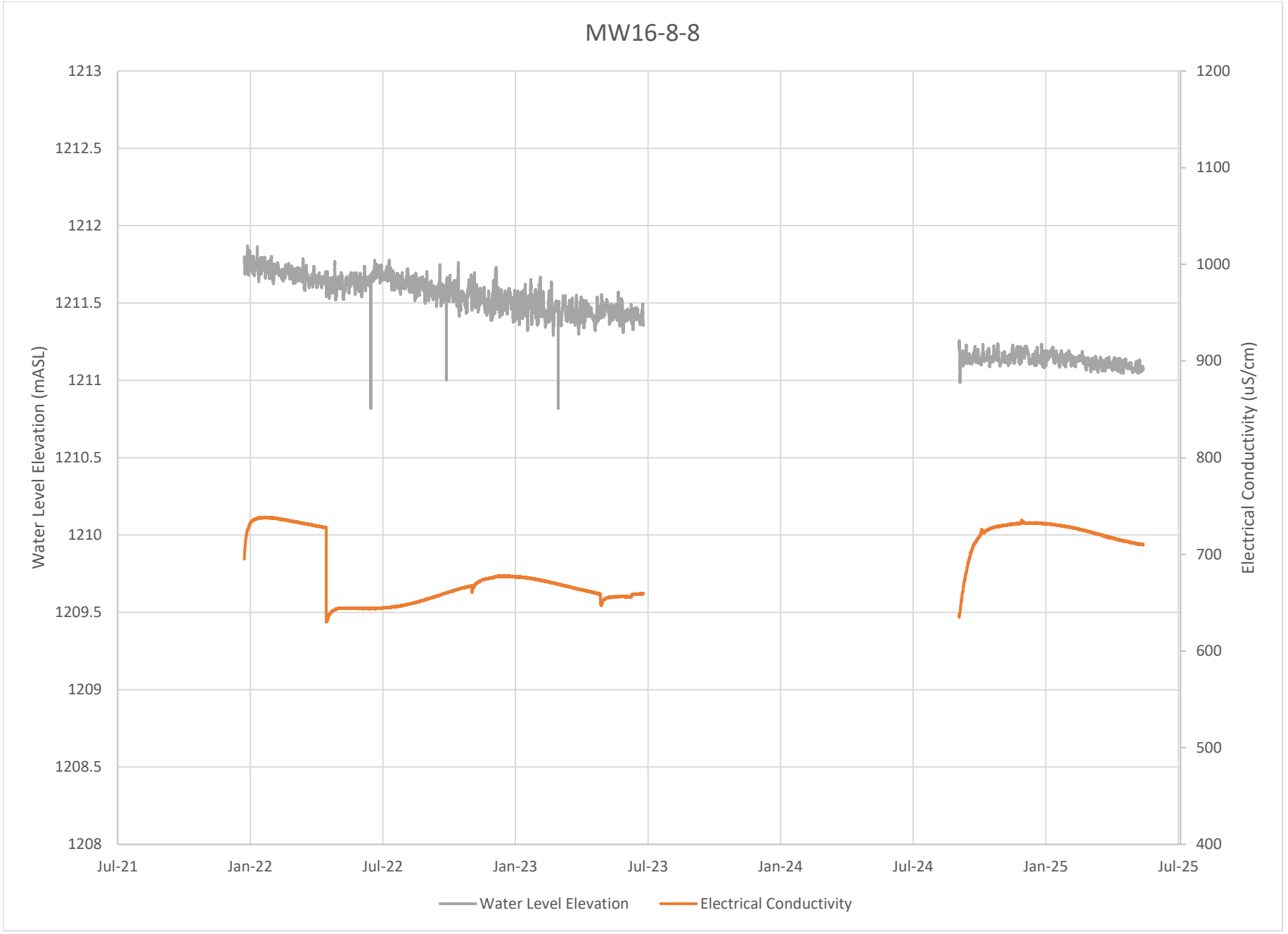

MW16-1-15
Water Level Elevation (m ASL)
Electrical Conductivity (uS/cm)
1215
1214.5
1214
1213.5
1213
1212.5
1212
1211.5
1211
1210.5
1210
1800
1700
1600
1500
1400
1300
1200
1100
1000
Jan-16
Jul-16
Jan-17
Jul-17
Jan-18
Jul-18
Jan-19
Jul-19
Jan-20
Jul-20
Jan-21
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Jan-25
Water Level Elevation
Electrical Conductivity

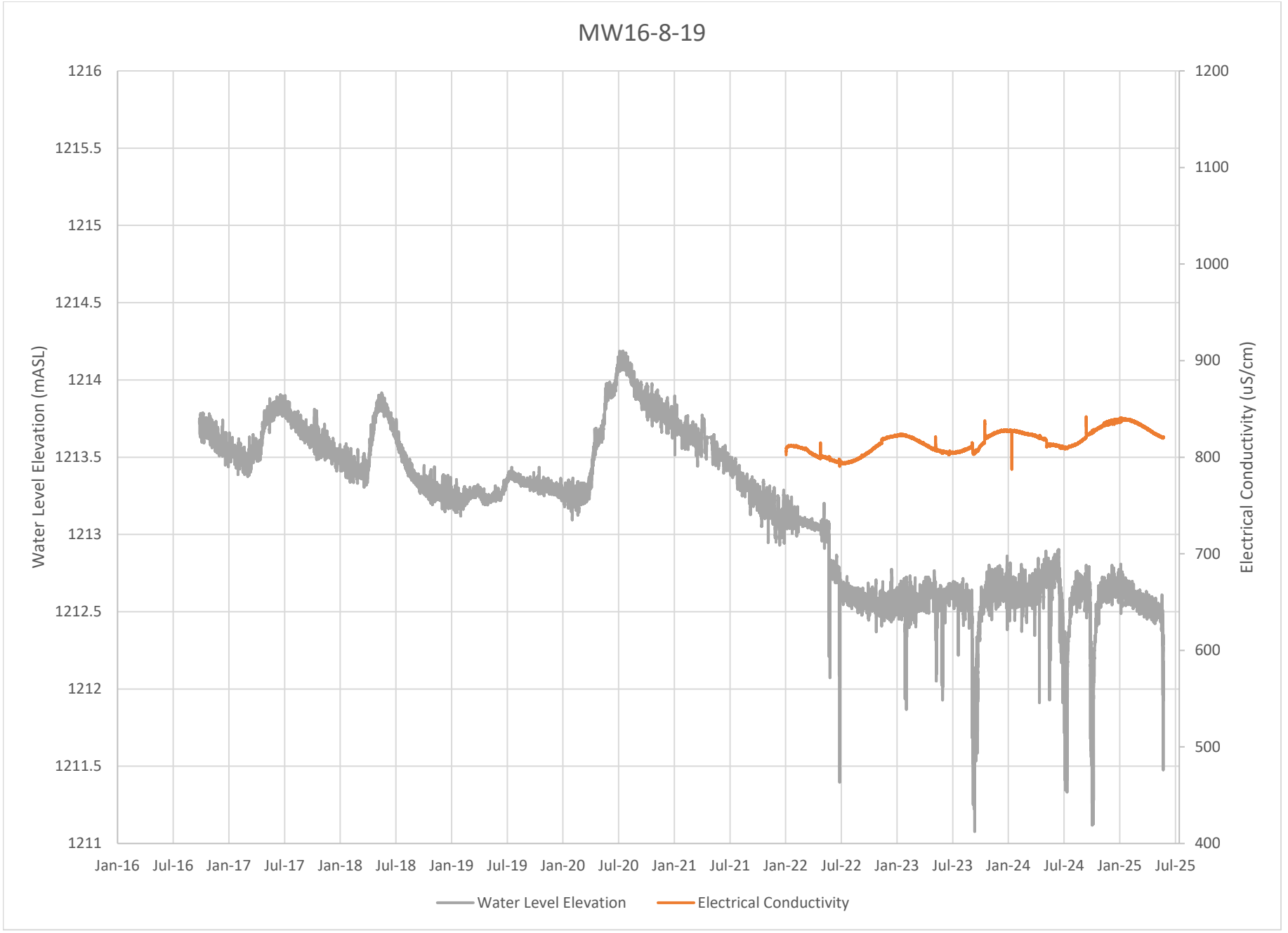

MW16-2-6
Water Level Elevation (m ASL)
Electrical Conductivity (uS/cm)
1206
1205.5
1205
1204.5
1204
1203.5
1203
1202.5
1202
1201.5
1201
4400
4200
4000
3800
3600
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Jan-25
Jul-25
Water Level Elevation
Electrical Conductivity

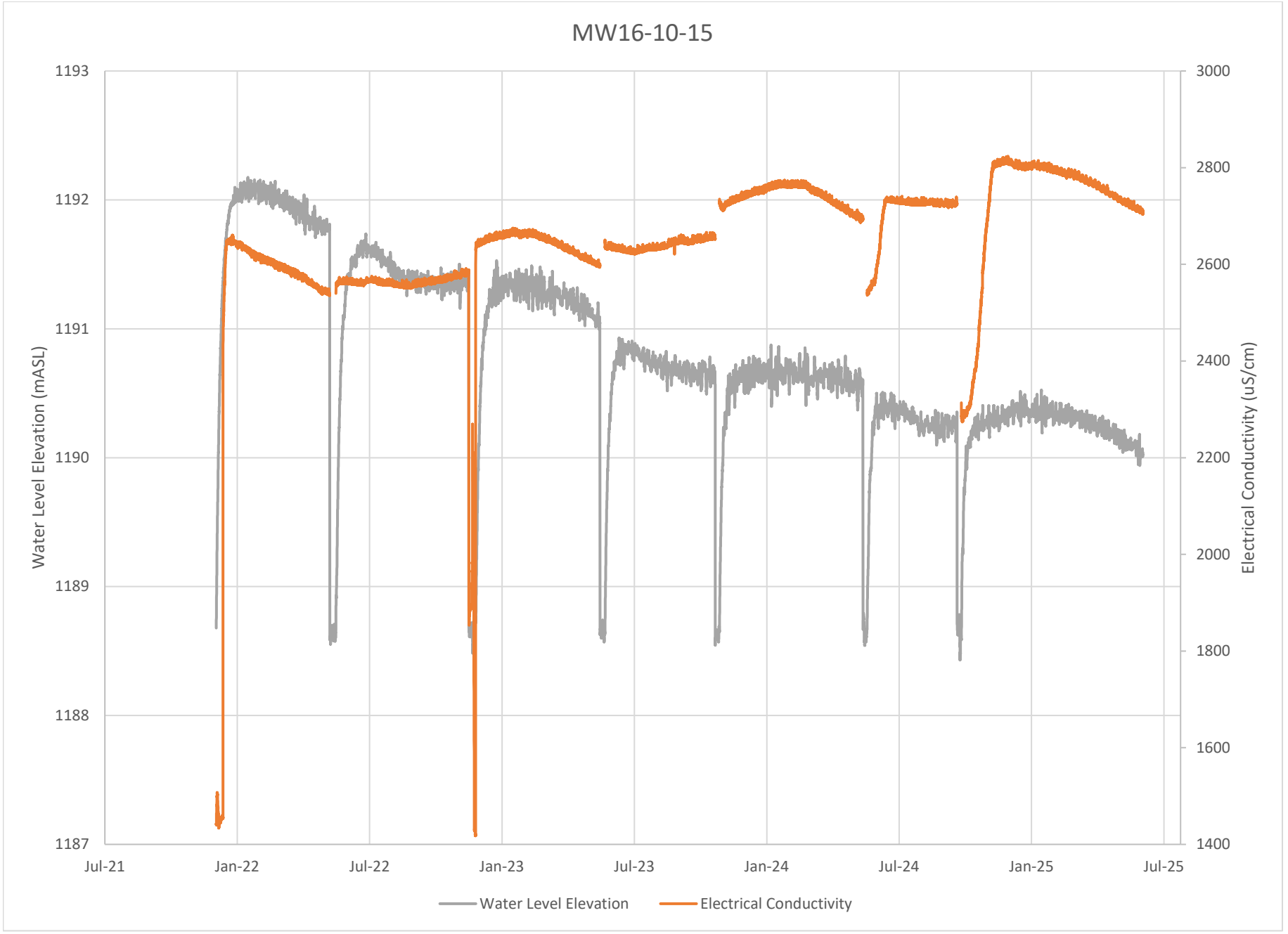

MW16-6-11
Water Level Elevation (m ASL)
1197
1196
1195
1194
1193
1192
1191
1190
Jan-16
Jul-16
Dec-16
Jul-17
Jan-18
Jul-18
Jan-19
Jul-19
Jan-20
Jul-20
Jan-21
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Water Level Elevation

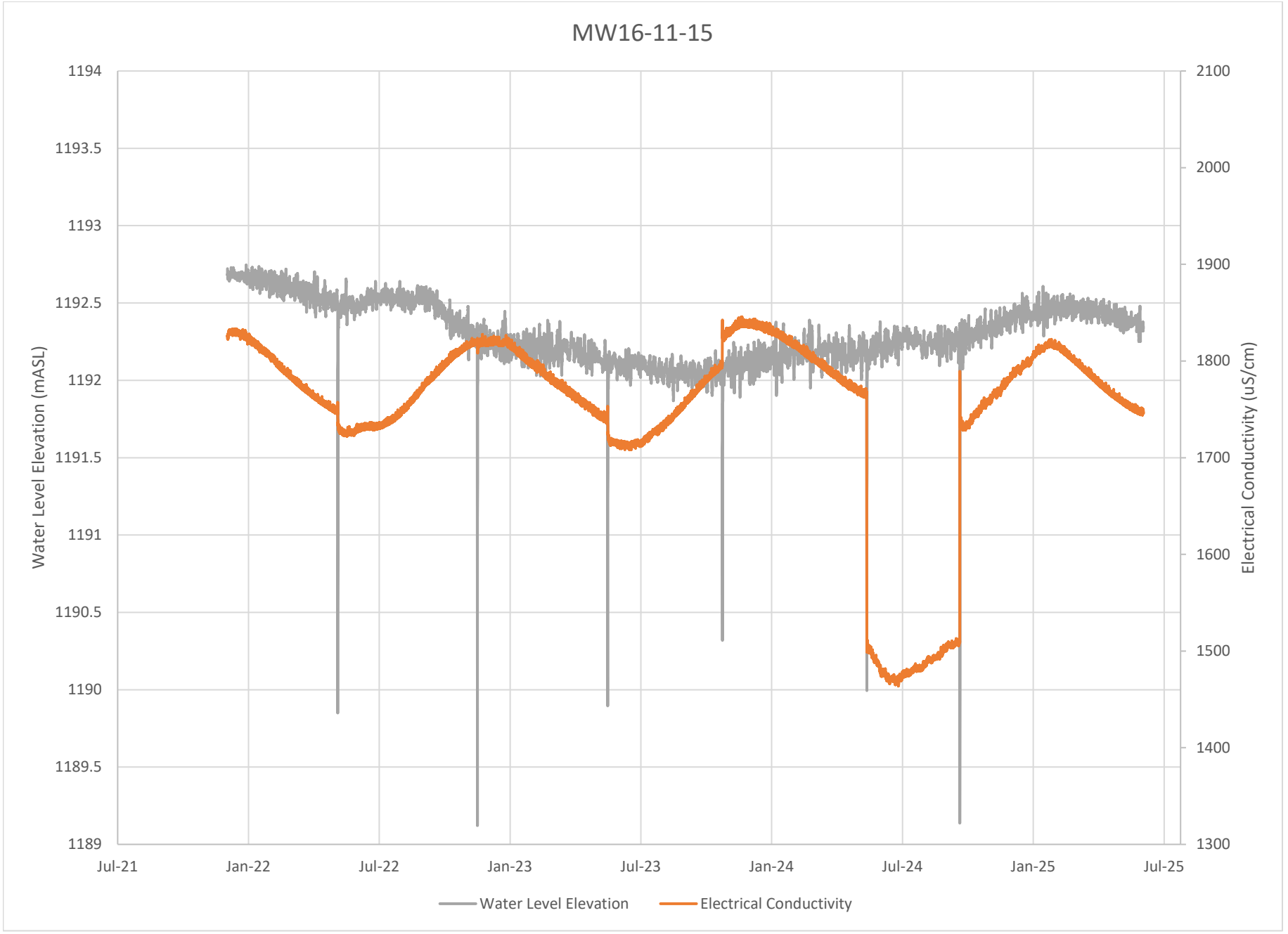

MW16-6-20
Water Level Elevatrion (mASL)
1197
1196.5
1196
1195.5
1195
1194.5
1194
1193.5
1193
1192.5
1192
Jan-16
Jul-16
Jan-17
Jul-17
Jan-18
Jul-18
Jan-19
Jul-19
Jan-20
Jul-20
Jan-21
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Water Level Elevation

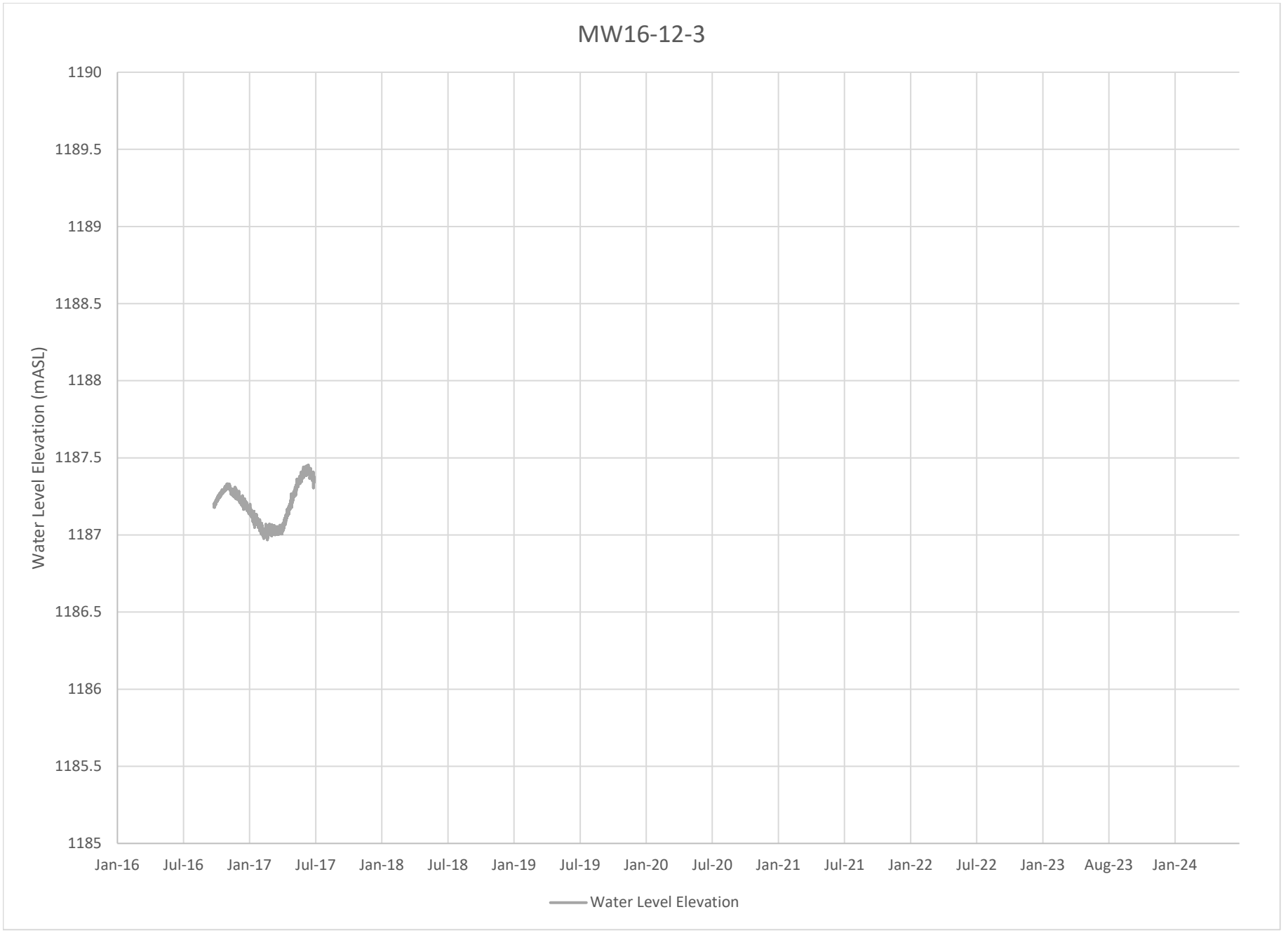

MW16-7-5
Water Level Elevation (mASL)
Electrical Conductivity (uS/cm)
1198
1197.5
1197
1196.5
1196
1195.5
1195
1194.5
1194
1193.5
1193
2400
2300
2200
2100
2000
1900
1800
1700
1600
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Jan-25
Jul-25
Water Level Elevation
Electrical Conductivity

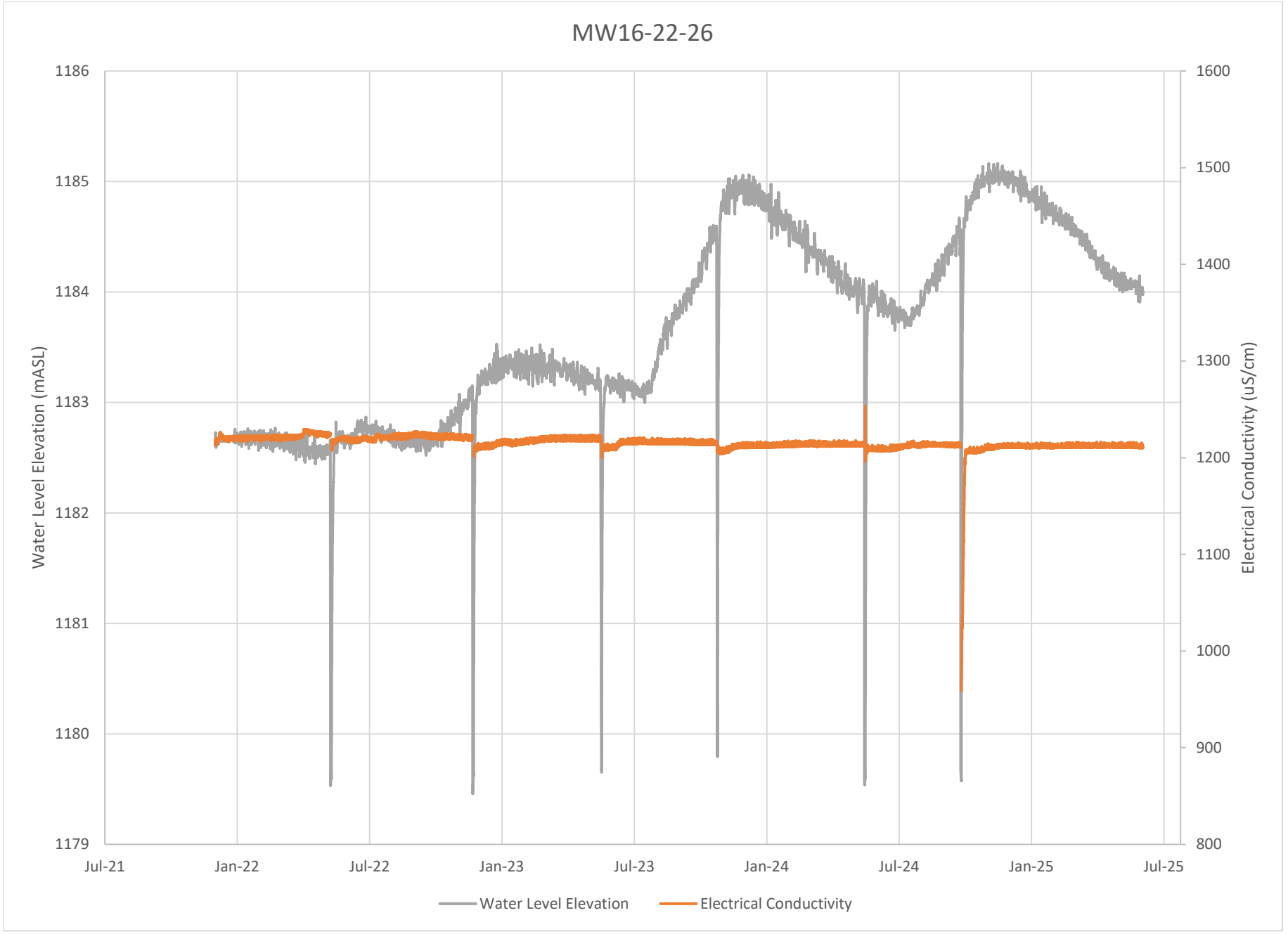

MW16-8-8
Water Level Elevation (mASL)
Electrical Conductivity (uS/cm)
1213
1212.5
1212
1211.5
1211
1210.5
1210
1209.5
1209
1208.5
1208
1200
1100
1000
900
800
700
600
500
400
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Jan-25
Jul-25
Water Level Elevation
Electrical Conductivity


MW16-8-19
Water Level Elevation (mASL)
Electrical Conductivity (uS/cm)
1216
1215.5
1215
1214.5
1214
1213.5
1213
1212.5
1212
1211.5
1211
1200
1100
1000
900
800
700
600
500
400
Jan-16
Jul-16
Jan-17
Jul-17
Jan-18
Jul-18
Jan-19
Jul-19
Jan-20
Jul-20
Jan-21
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Jan-25
Jul-25
Water Level Elevation
Electrical Conductivity

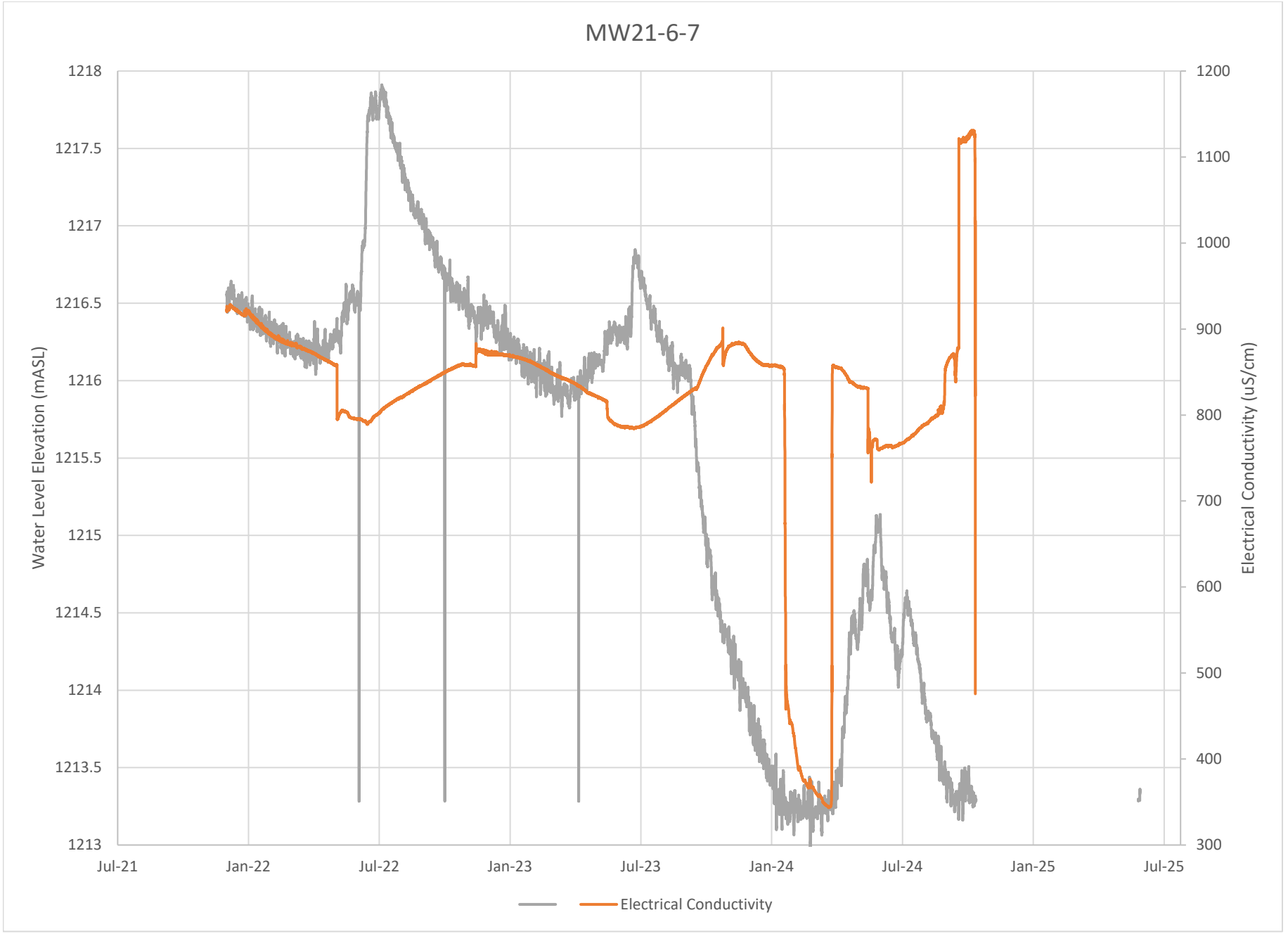

MW16-10-15
Water Level Elevation (mASL)
Electrical Conductivity (uS/cm)
1193
1192
1191
1190
1189
1188
1187
3000
2800
2600
2400
2200
2000
1800
1600
1400
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Jan-25
Jul-25
Water Level Elevation
Electrical Conductivity

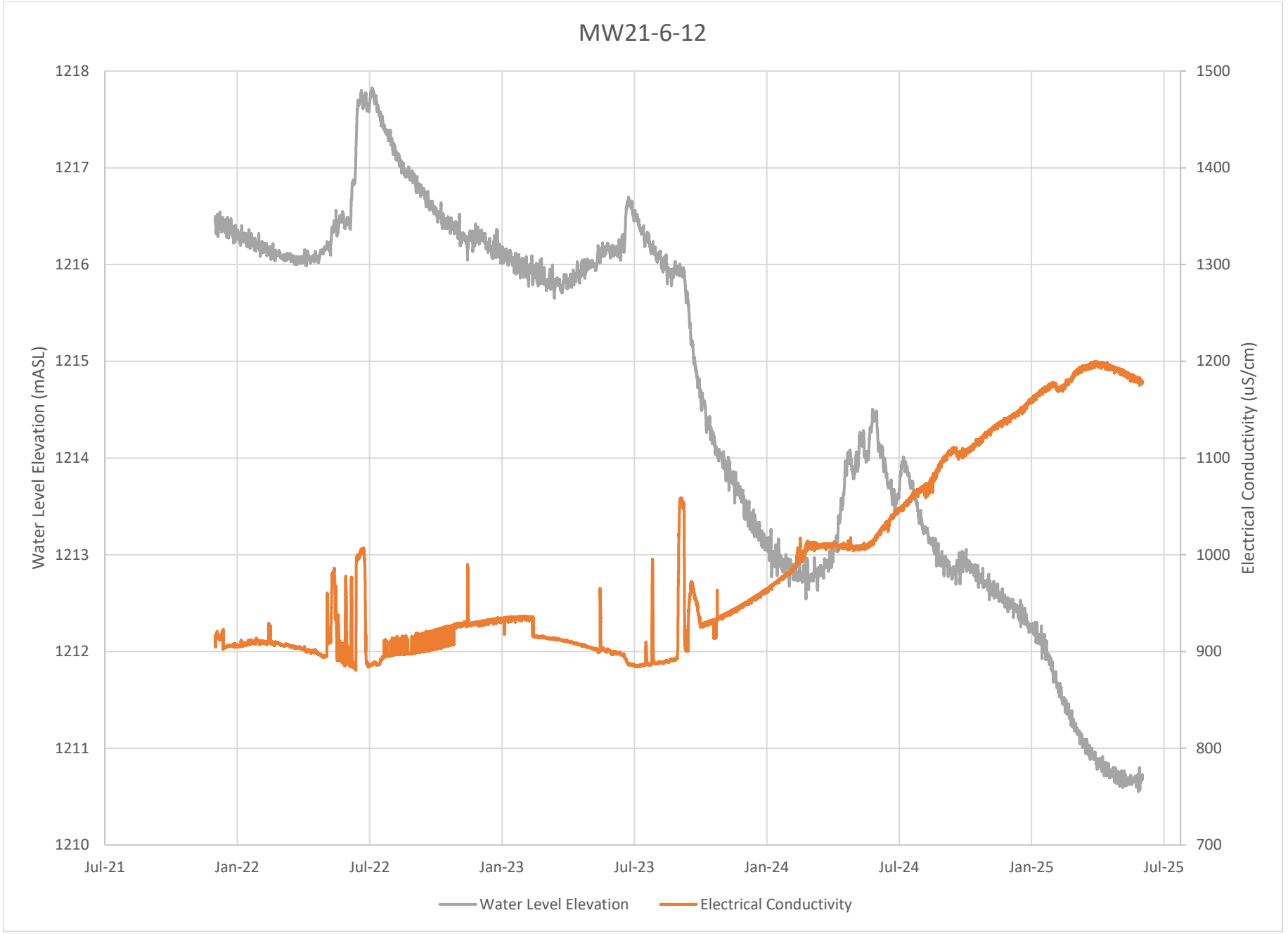

MW16-11-15
Water Level Elevation (mASL)
Electrical Conductivity (uS/cm)
1194
1193.5
1193
1192.5
1192
1191.5
1191
1190.5
1190
1189.5
1189
2100
2000
1900
1800
1700
1600
1500
1400
1300
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Jan-25
Jul-25
Water Level Elevation
Electrical Conductivity

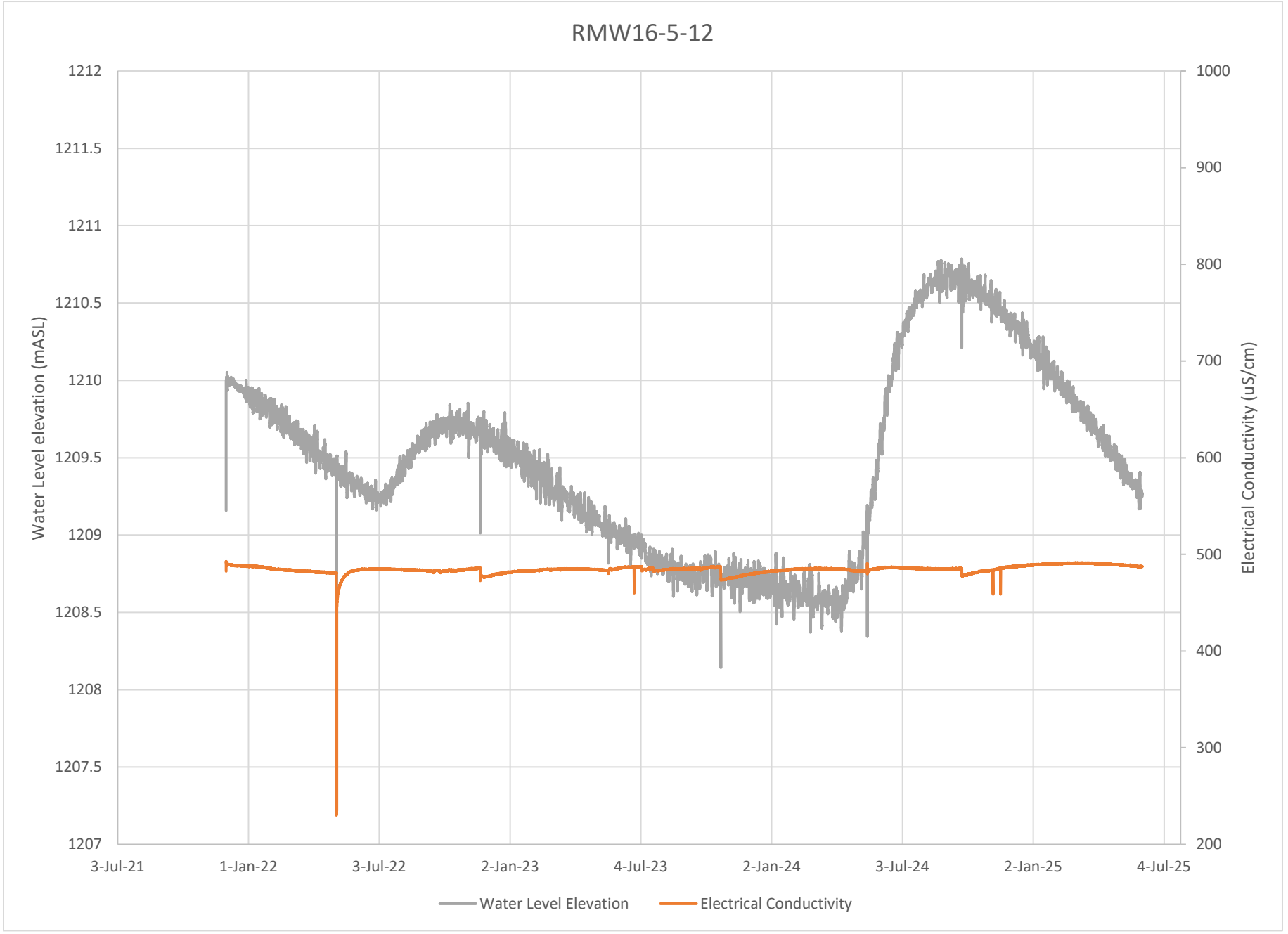

MW16-12-3
Water Level Elevation (mASL)
1190
1189.5
1189
1188.5
1188
1187.5
1187
1186.5
1186
1185.5
1185
Jan-16
Jul-16
Jan-17
Jul-17
Jan-18
Jul-18
Jan-19
Jul-19
Jan-20
Jul-20
Jan-21
Jul-21
Jan-22
Jul-22
Jan-23
Aug-23
Jan-24
Water Level Elevation

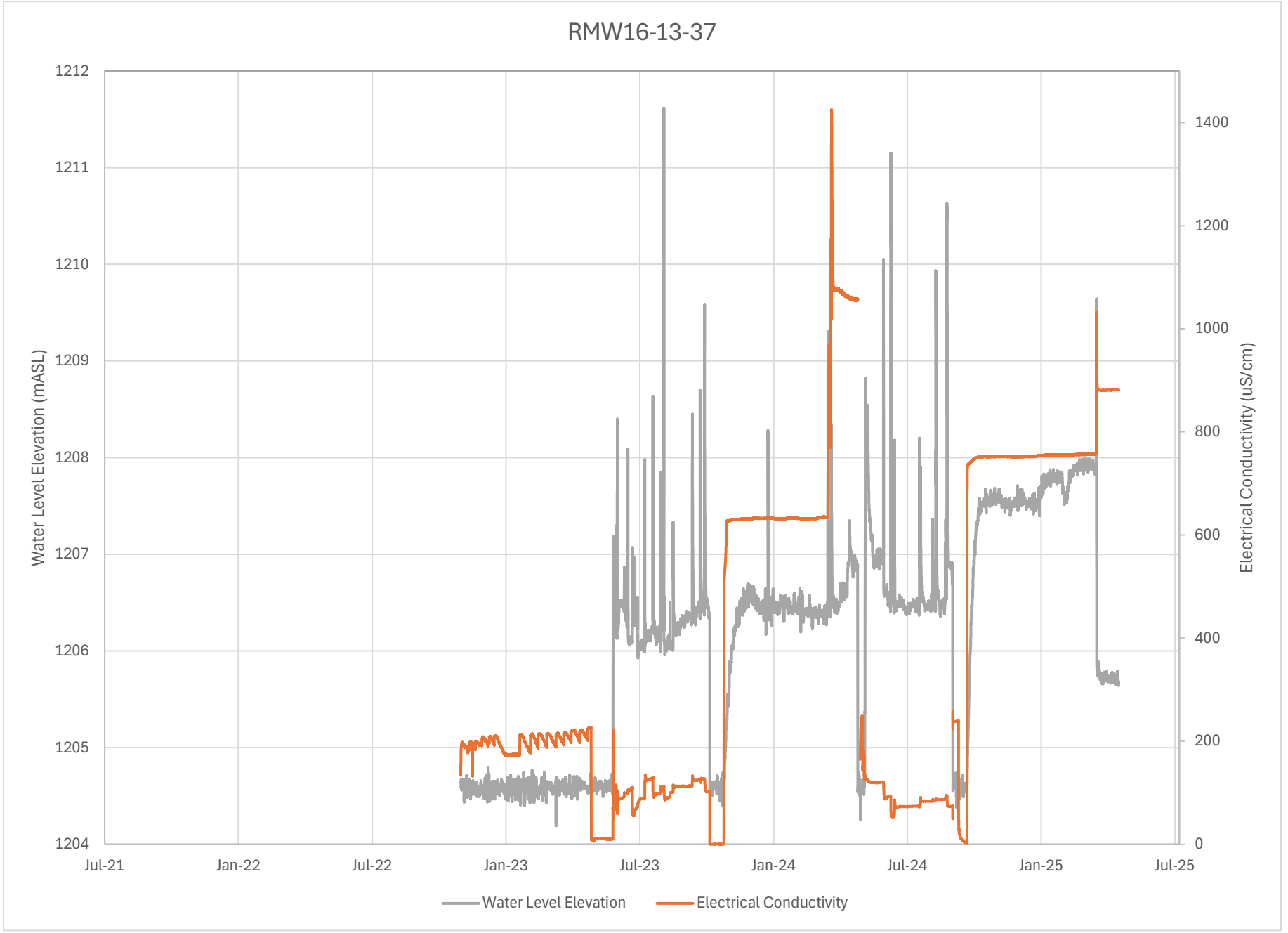

MW16-22-26
Water Level Elevation (mASL)
Electrical Conductivity (uS/cm)
1186
1185
1184
1183
1182
1181
1180
1179
1600
1500
1400
1300
1200
1100
1000
900
800
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Jan-25
Jul-25
Water Level Elevation
Electrical Conductivity

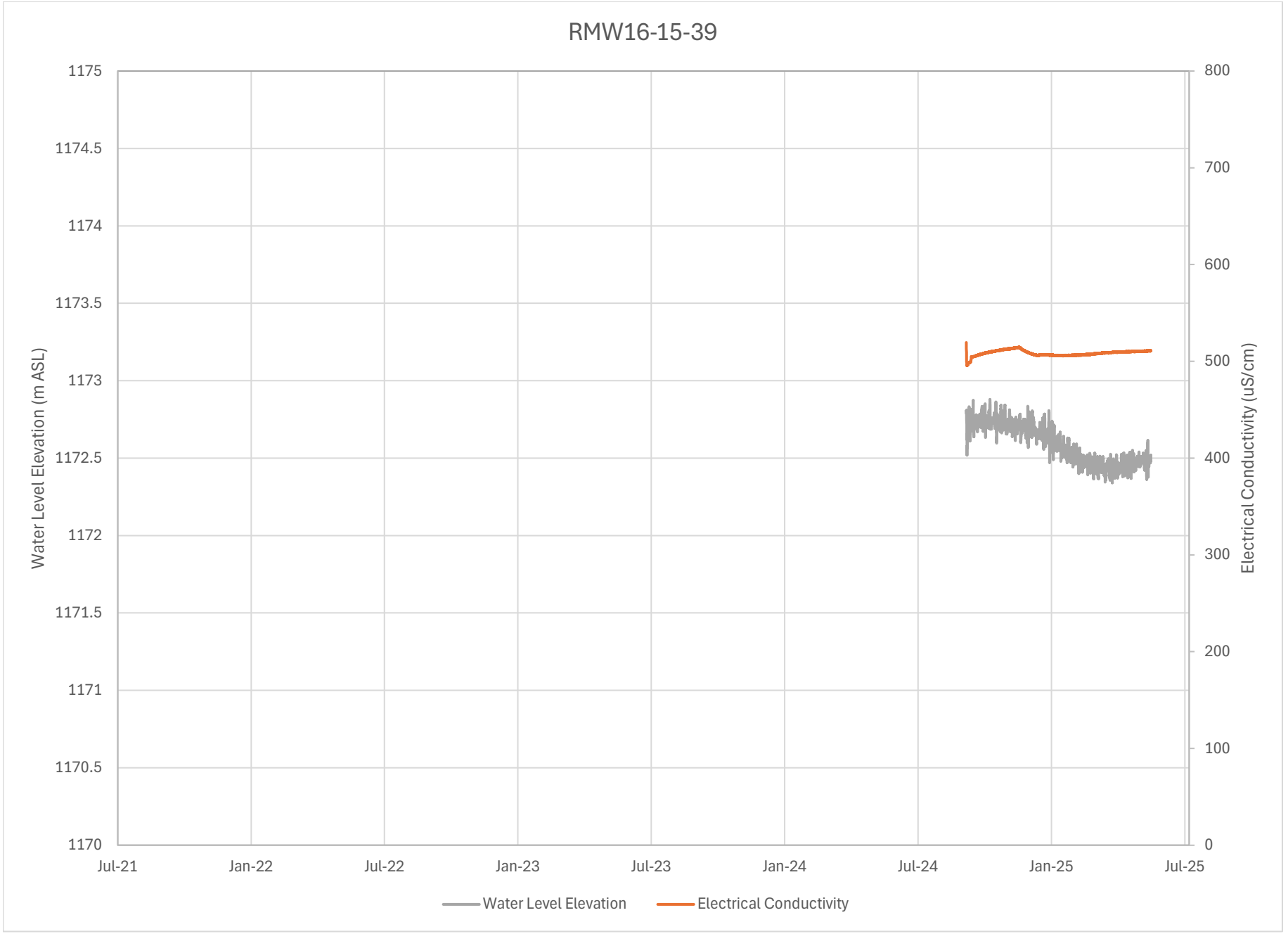

MW21-3-15
Water Level Elevation (mASL)
Electrical Conductivity (uS/cm)
1214
1213.5
1213
1212.5
1212
1211.5
1211
1210.5
1210
1209.5
1209
1200
1100
1000
900
800
700
600
500
400
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Jan-25
Jul-25
Water Level Elevation
Electrical Conductivity

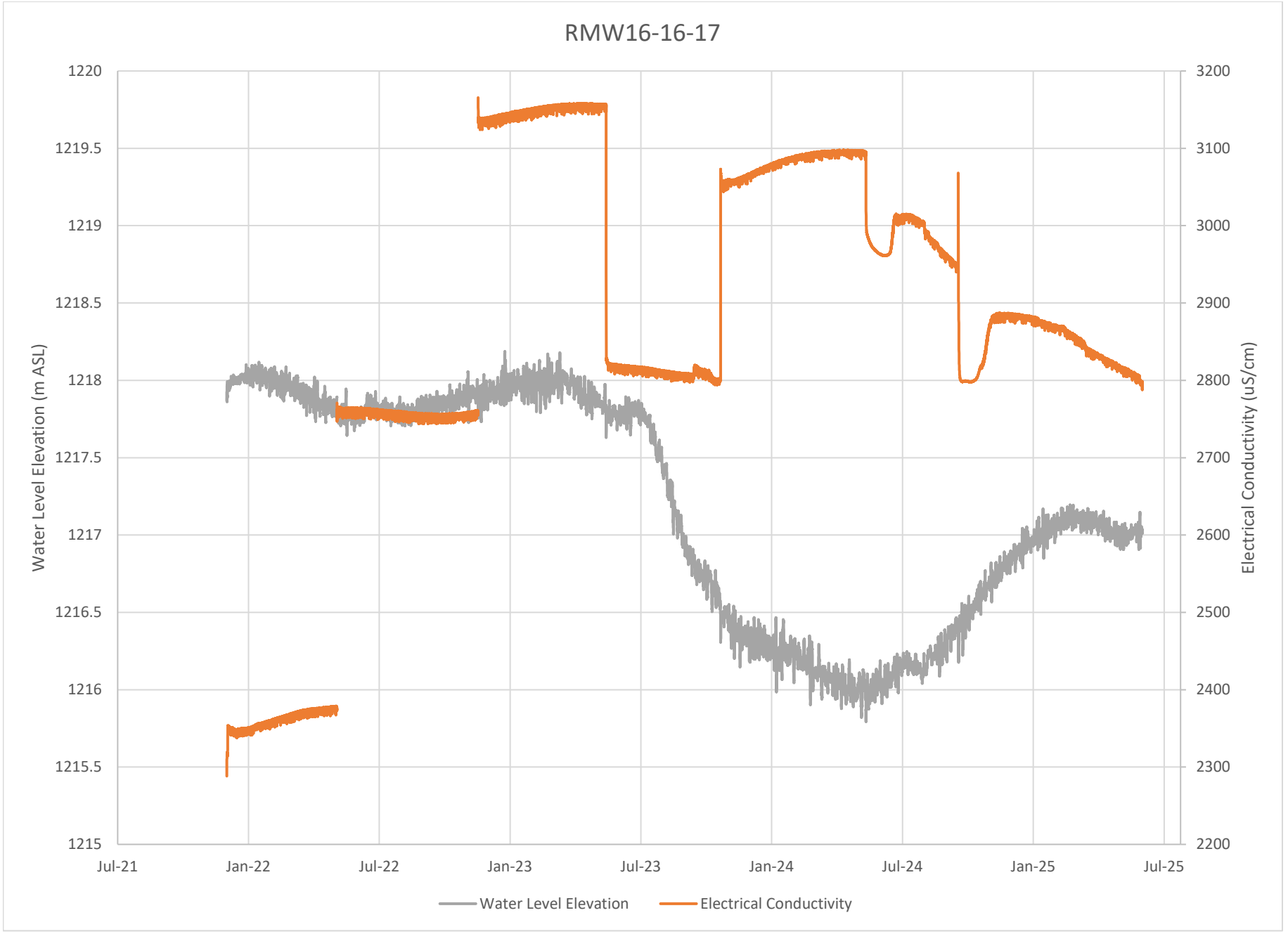

MW21-6-7
Water Level Elevation (mASL)
Electrical Conductivity (uS/cm)
1218
1217.5
1217
1216.5
1216
1215.5
1215
1214.5
1214
1213.5
1213
1200
1100
1000
900
800
700
600
500
400
300
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Jan-25
Jul-25
Electrical Conductivity

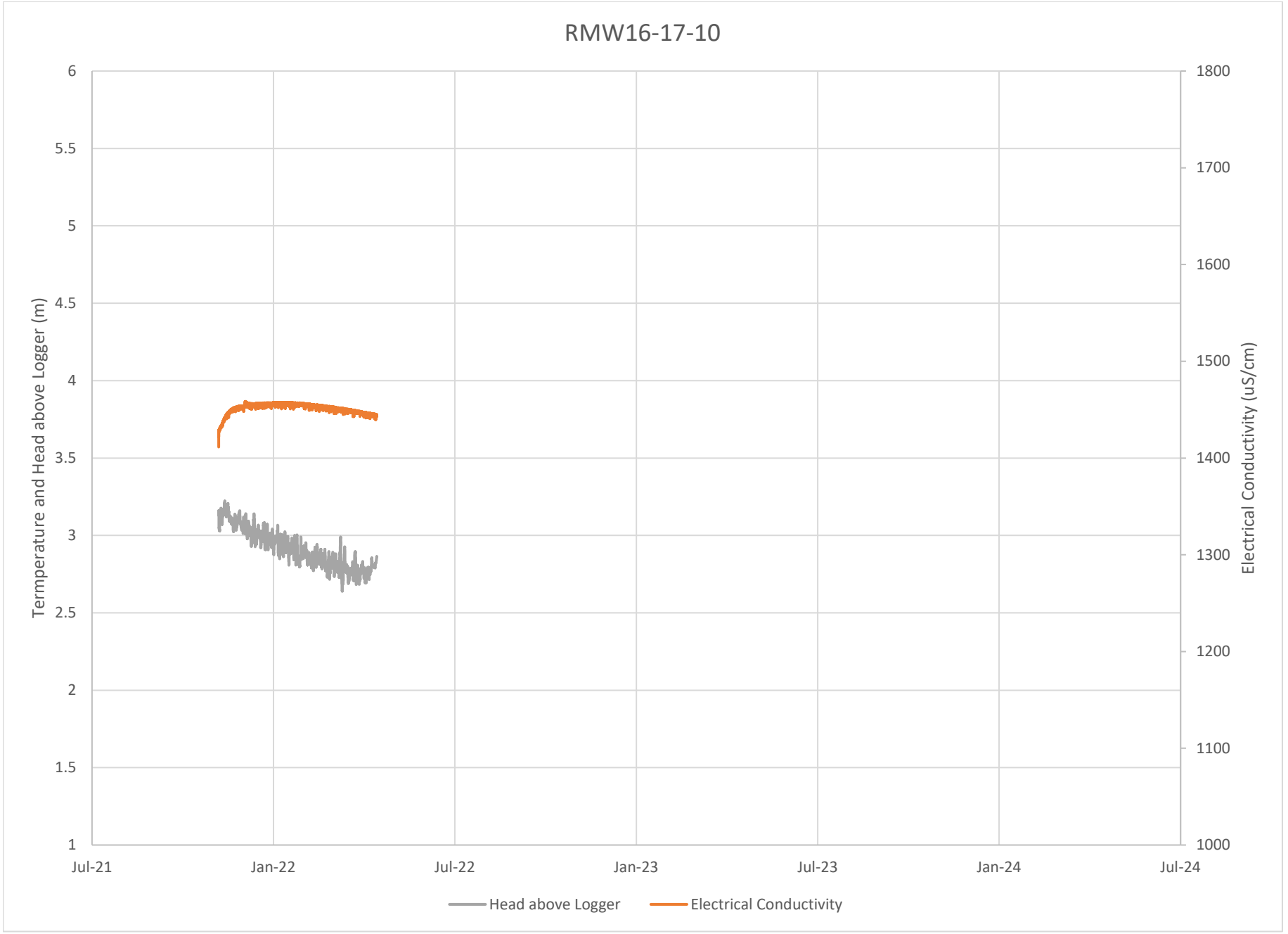

MW21-6-12
Water Level Elevation (mASL)
Electrical Conductivity (uS/cm)
1218
1217
1216
1215
1214
1213
1212
1211
1210
1500
1400
1300
1200
1100
1000
900
800
700
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Jan-25
Jul-25
Water Level Elevation
Electrical Conductivity

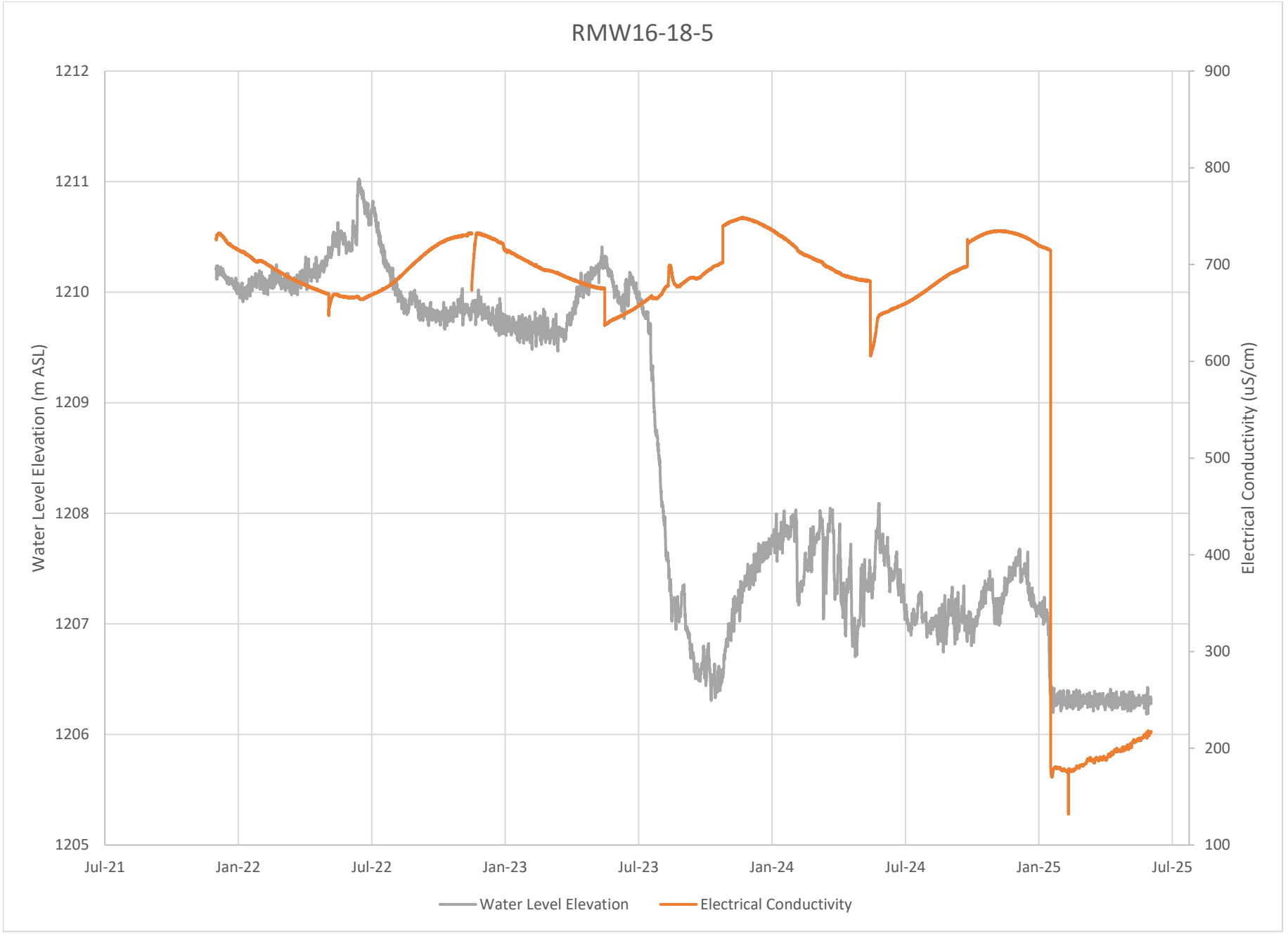

RMW16-5-12
Water Level elevation (mASL)
Electrical Conductivity (uS/cm)
1212
1211.5
1211
1210.5
1210
1209.5
1209
1208.5
1208
1207.5
1207
1000
900
800
700
600
500
400
300
200
3-Jul-21
1-Jan-22
3-Jul-22
2-Jan-23
4-Jul-23
2-Jan-24
3-Jul-24
2-Jan-25
4-Jul-25
Water Level Elevation
Electrical Conductivity

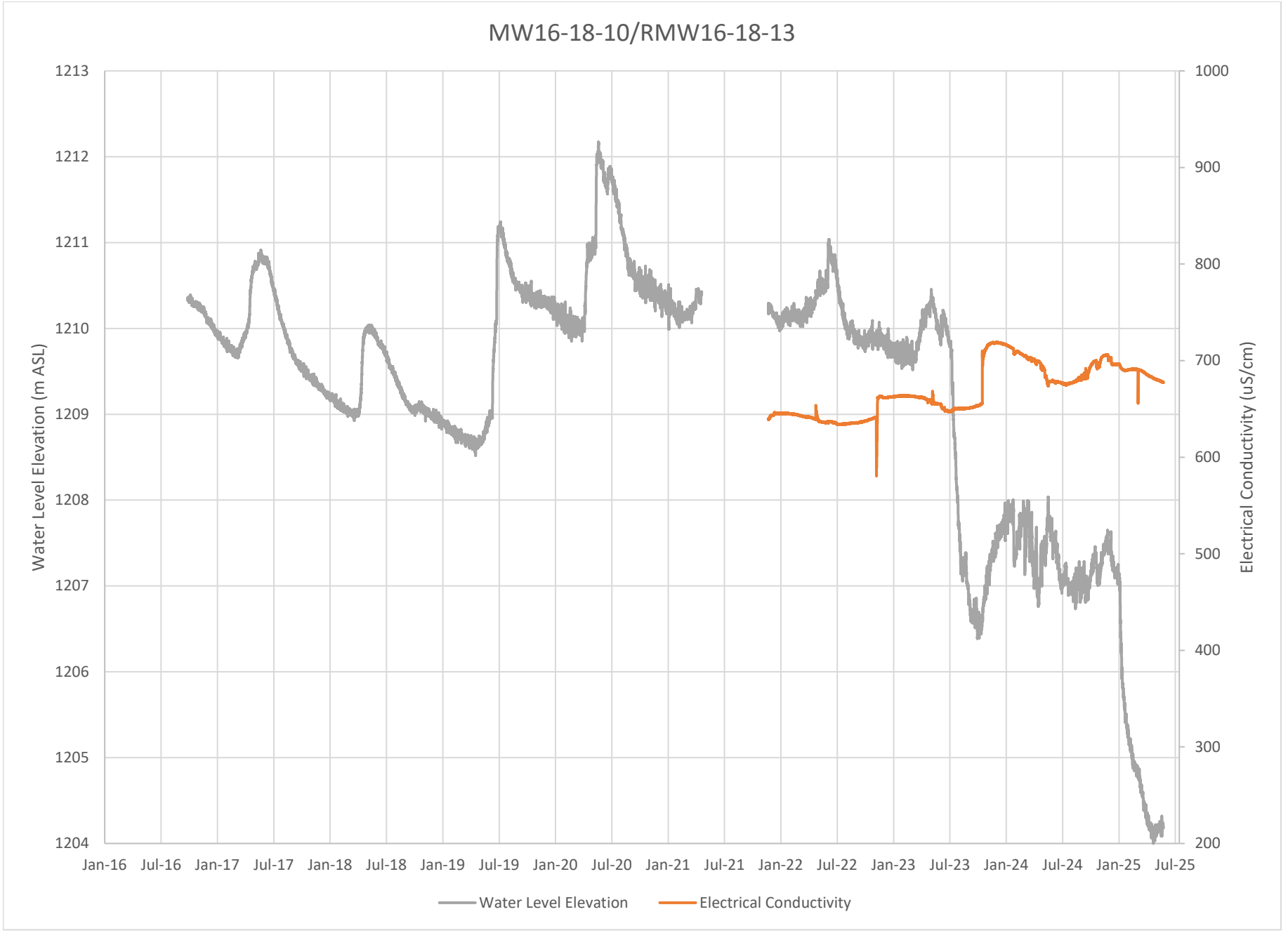

RMW16-13-37
Water Level Elevation (mASL)
1212
1211
1210
1209
1208
1207
1206
1205
1204
Electrical Conductivity (uS/cm)
1400
1200
1000
800
600
400
200
0
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Jan-25
Jul-25
Water Level Elevation
Electrical Conductivity

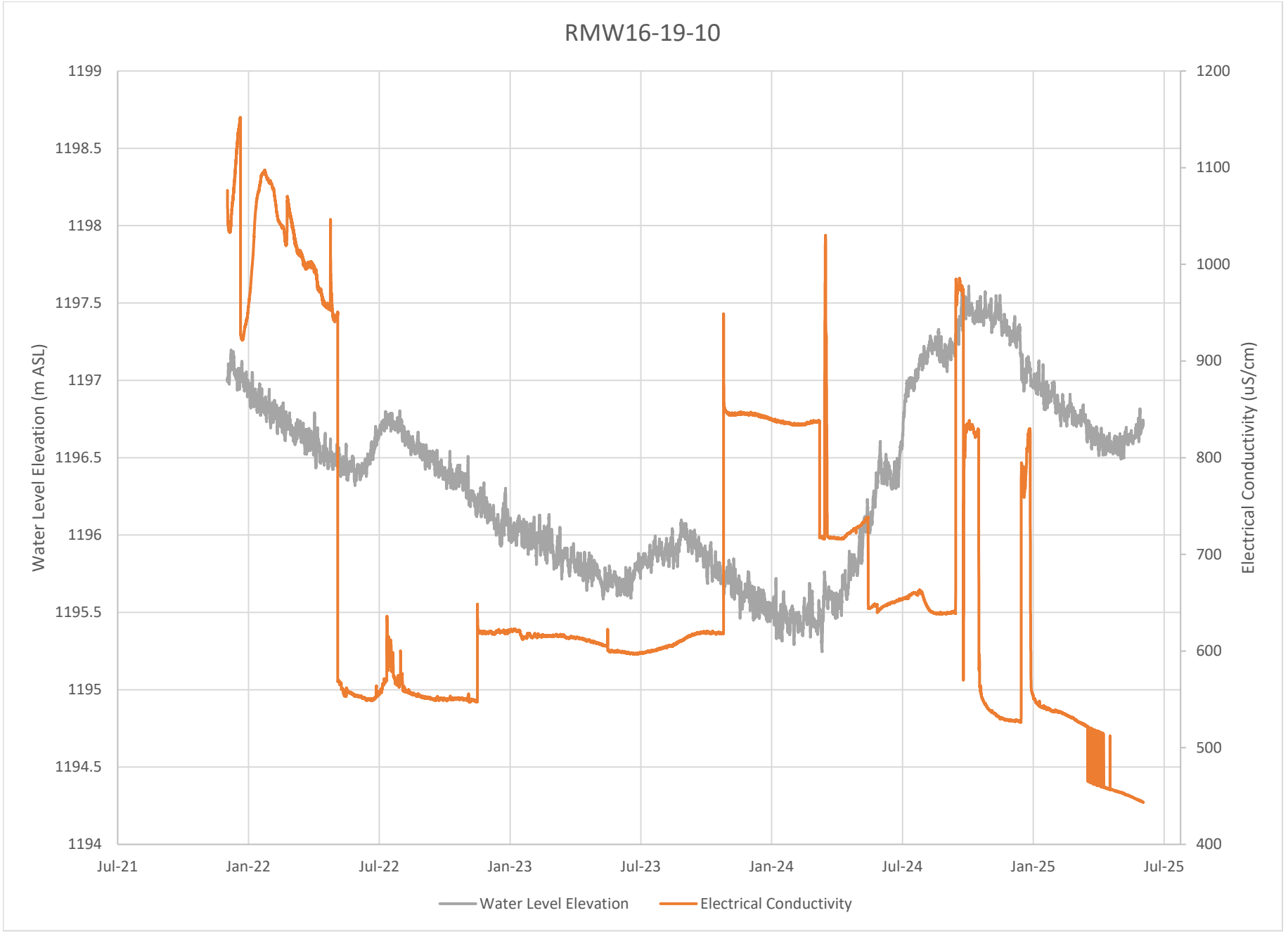

RMW16-15-39
Water Level Elevation (m ASL)
Electrical Conductivity (uS/cm)
1175
1174.5
1174
1173.5
1173
1172.5
1172
1171.5
1171
1170.5
1170
800
700
600
500
400
300
200
100
0
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Jan-25
Jul-25
Water Level Elevation
Electrical Conductivity

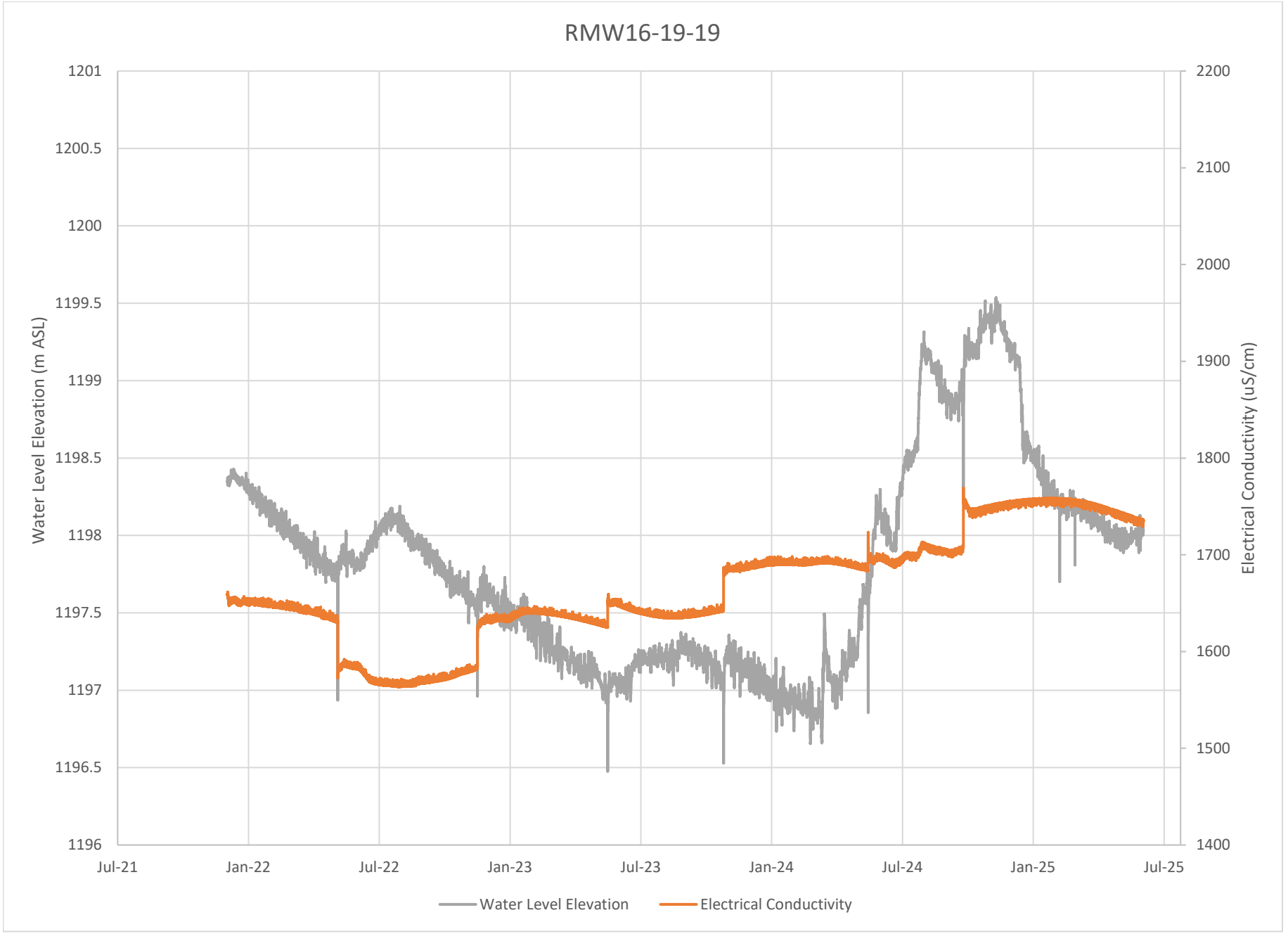

RMW16-16-17
Water Level Elevation (m ASL)
Electrical Conductivity (uS/cm)
1220
1219.5
1219
1218.5
1218
1217.5
1217
1216.5
1216
1215.5
1215
3200
3100
3000
2900
2800
2700
2600
2500
2400
2300
2200
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Jan-25
Jul-25
Water Level Elevation
Electrical Conductivity

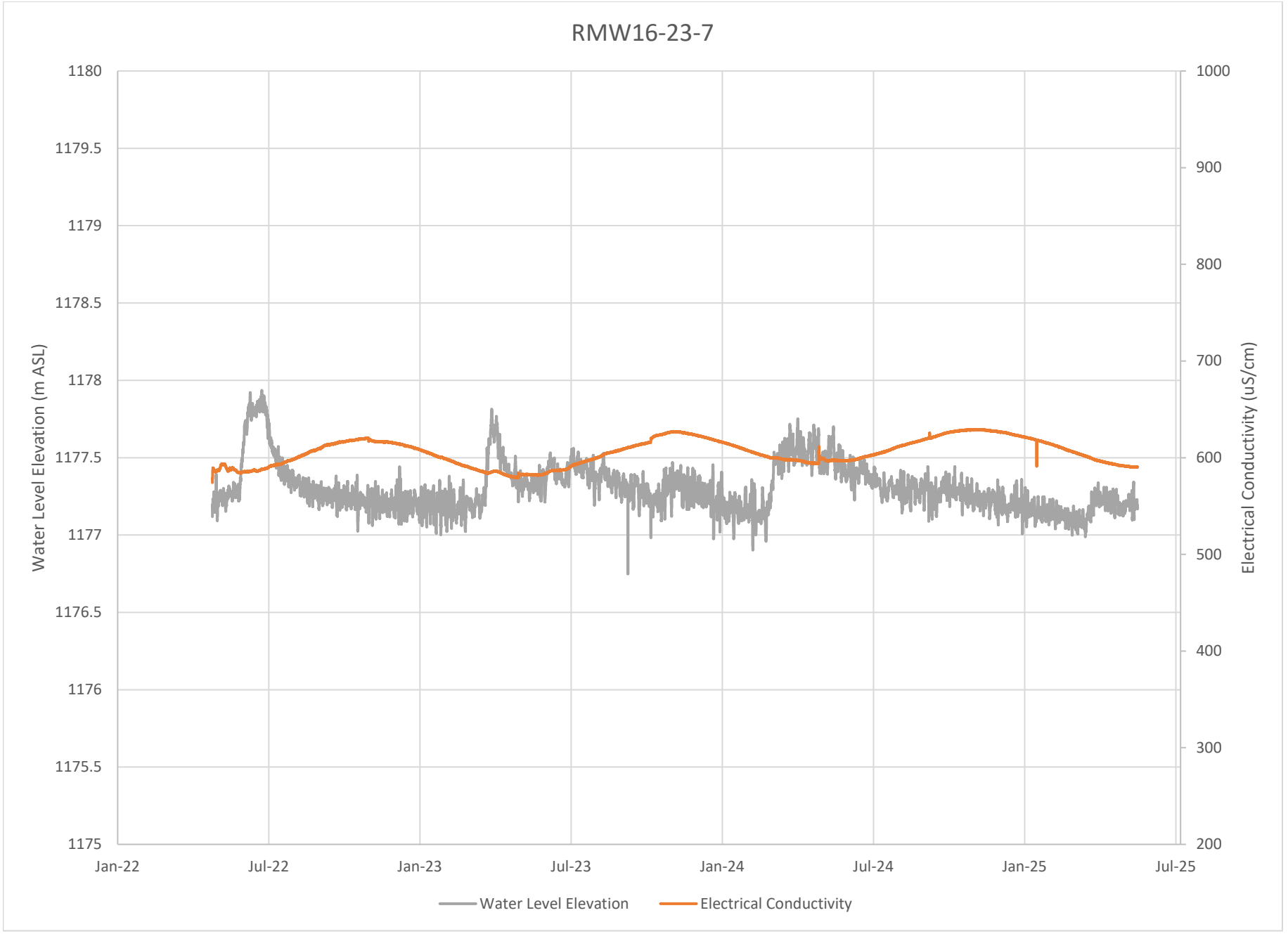

RMW16-17-10
Termperature and Head above Logger (m)
Electrical Conductivity (uS/cm)
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
1
1800
1700
1600
1500
1400
1300
1200
1100
1000
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Head above Logger
Electrical Conductivity

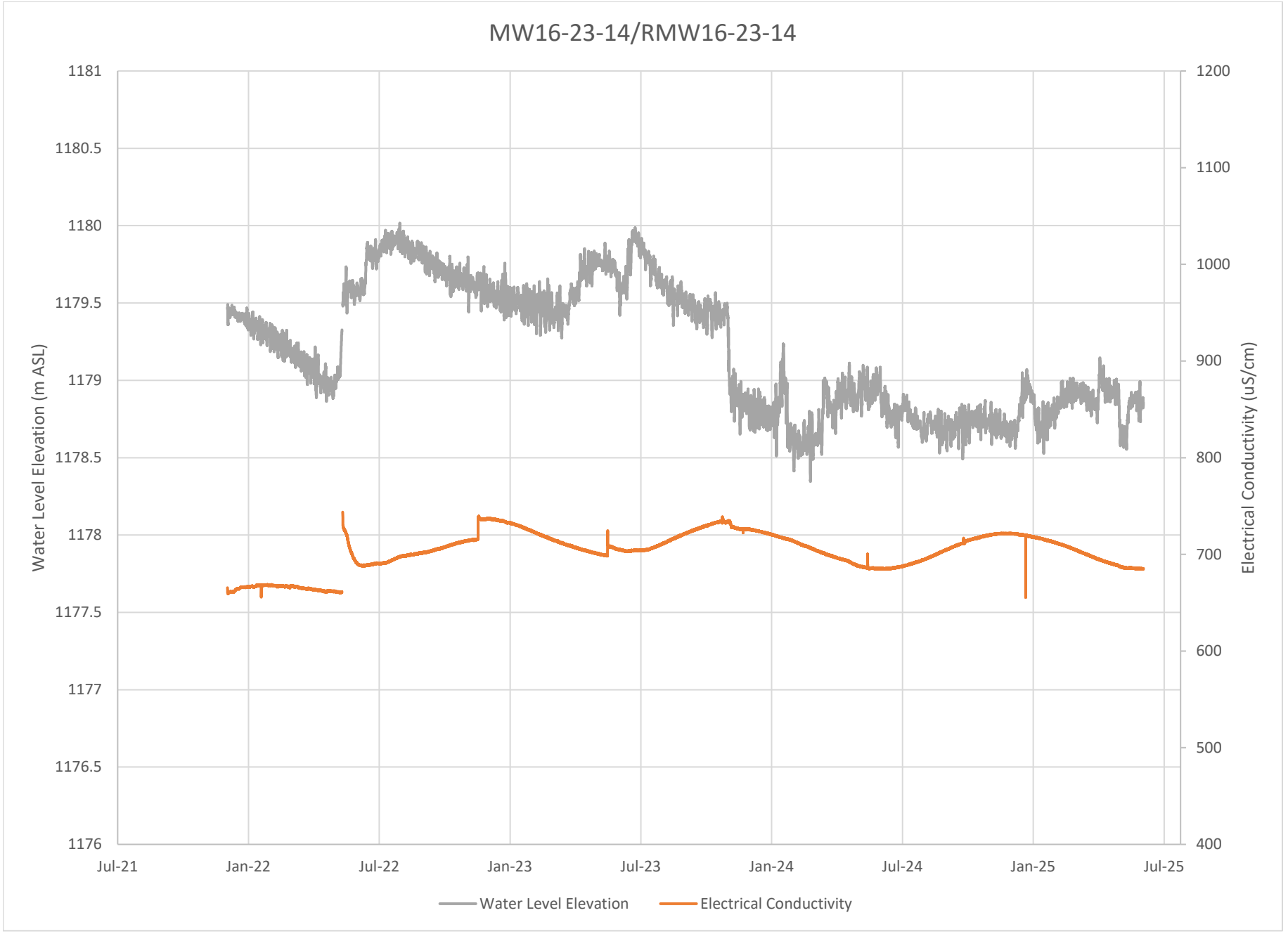

RMW16-18-5
Water Level Elevation (m ASL)
Electrical Conductivity (uS/cm)
1212
1211
1210
1209
1208
1207
1206
1205
900
800
700
600
500
400
300
200
100
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Jan-25
Jul-25
Water Level Elevation
Electrical Conductivity

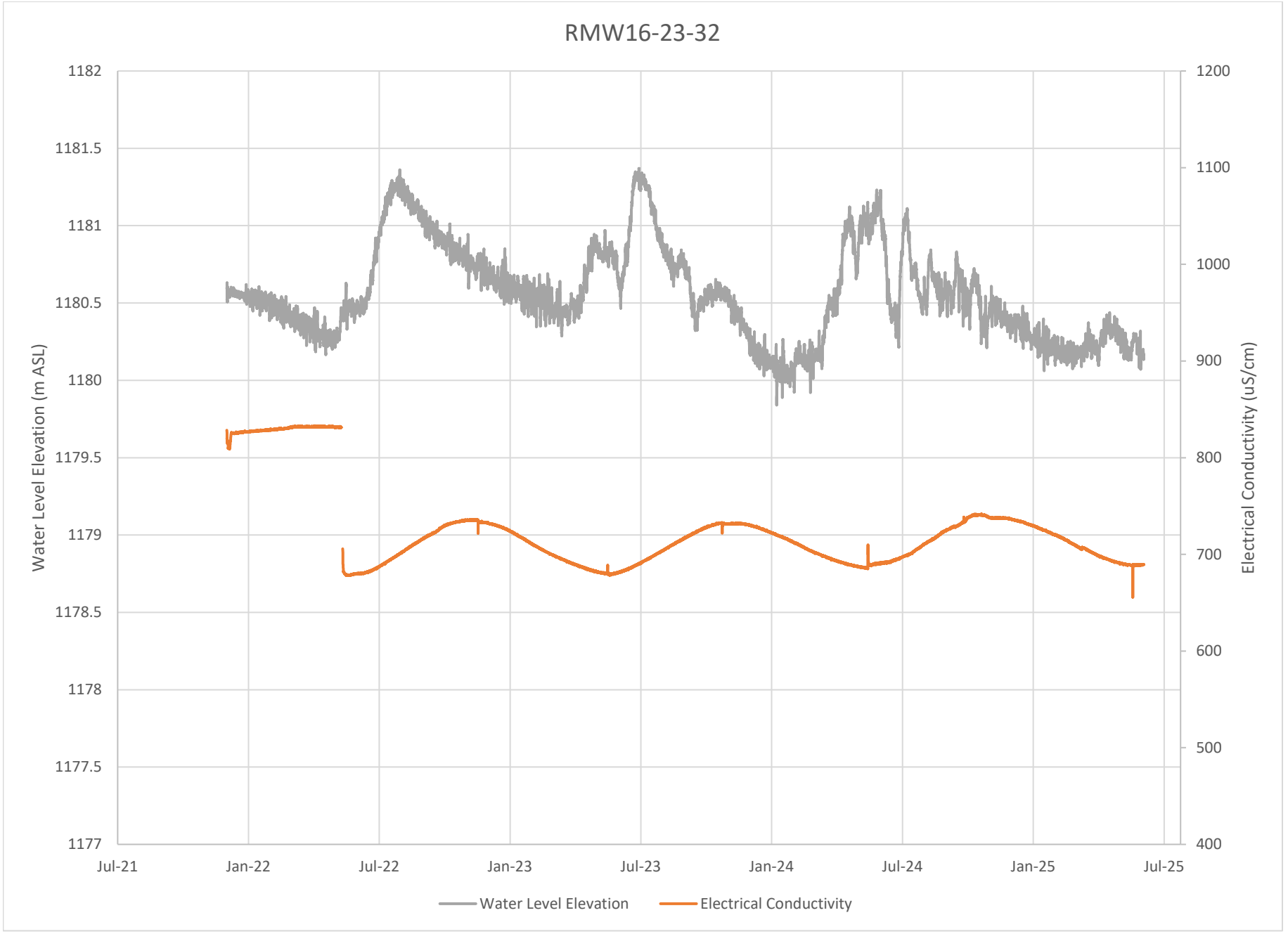

MW16-18-10/RMW16-18-13
Water Level Elevation (m ASL)
Electrical Conductivity (uS/cm)
1213
1212
1211
1210
1209
1208
1207
1206
1205
1204
1000
900
800
700
600
500
400
300
200
Jan-16
Jul-16
Jan-17
Jul-17
Jan-18
Jul-18
Jan-19
Jul-19
Jan-20
Jul-20
Jan-21
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Jan-25
Jul-25
Water Level Elevation
Electrical Conductivity

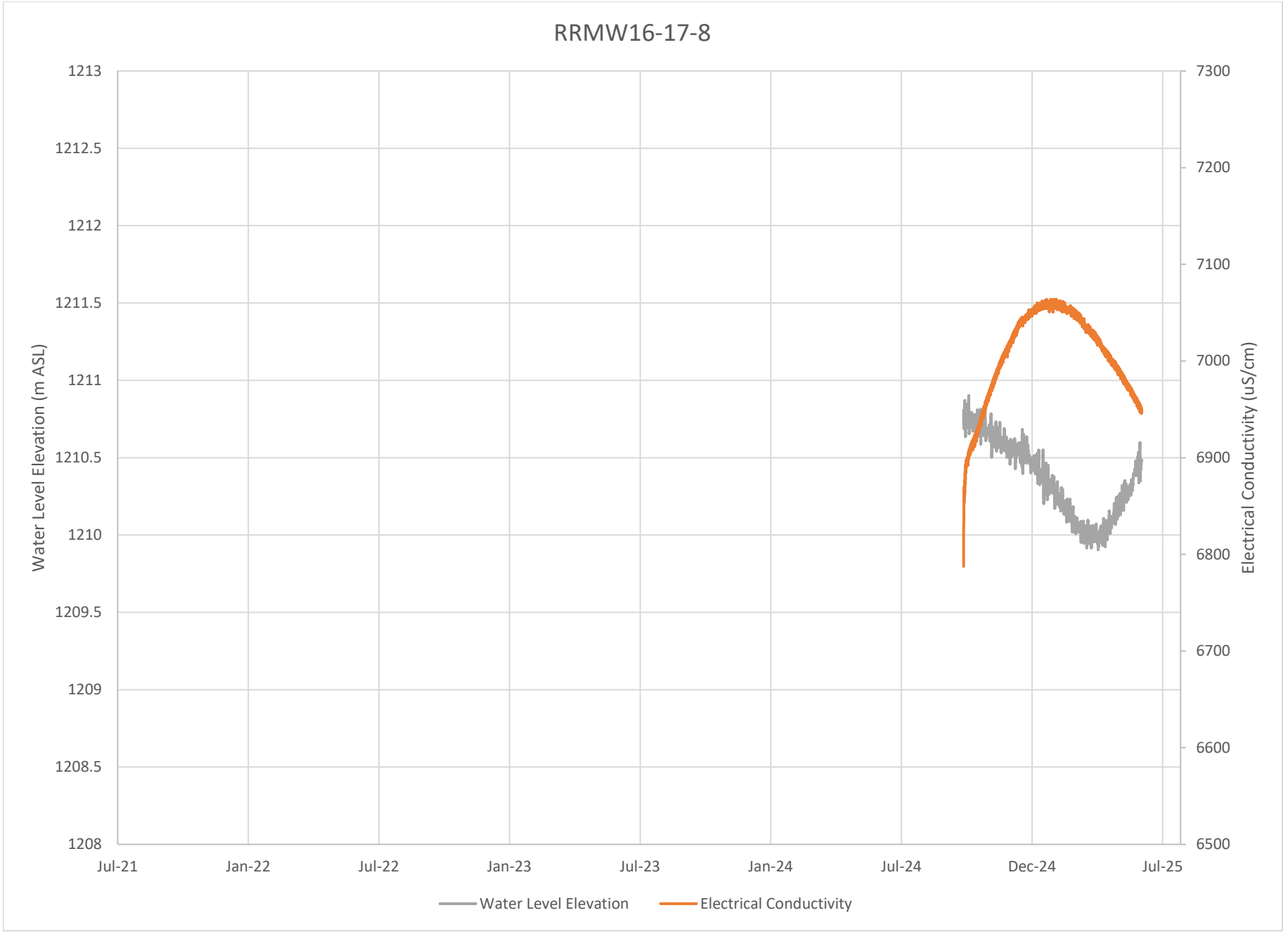

RMW16-19-10
Water Level Elevation (m ASL)
Electrical Conductivity (uS/cm)
1199
1198.5
1198
1197.5
1197
1196.5
1196
1195.5
1195
1194.5
1194
1200
1100
1000
900
800
700
600
500
400
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Jan-25
Jul-25
Water Level Elevation
Electrical Conductivity

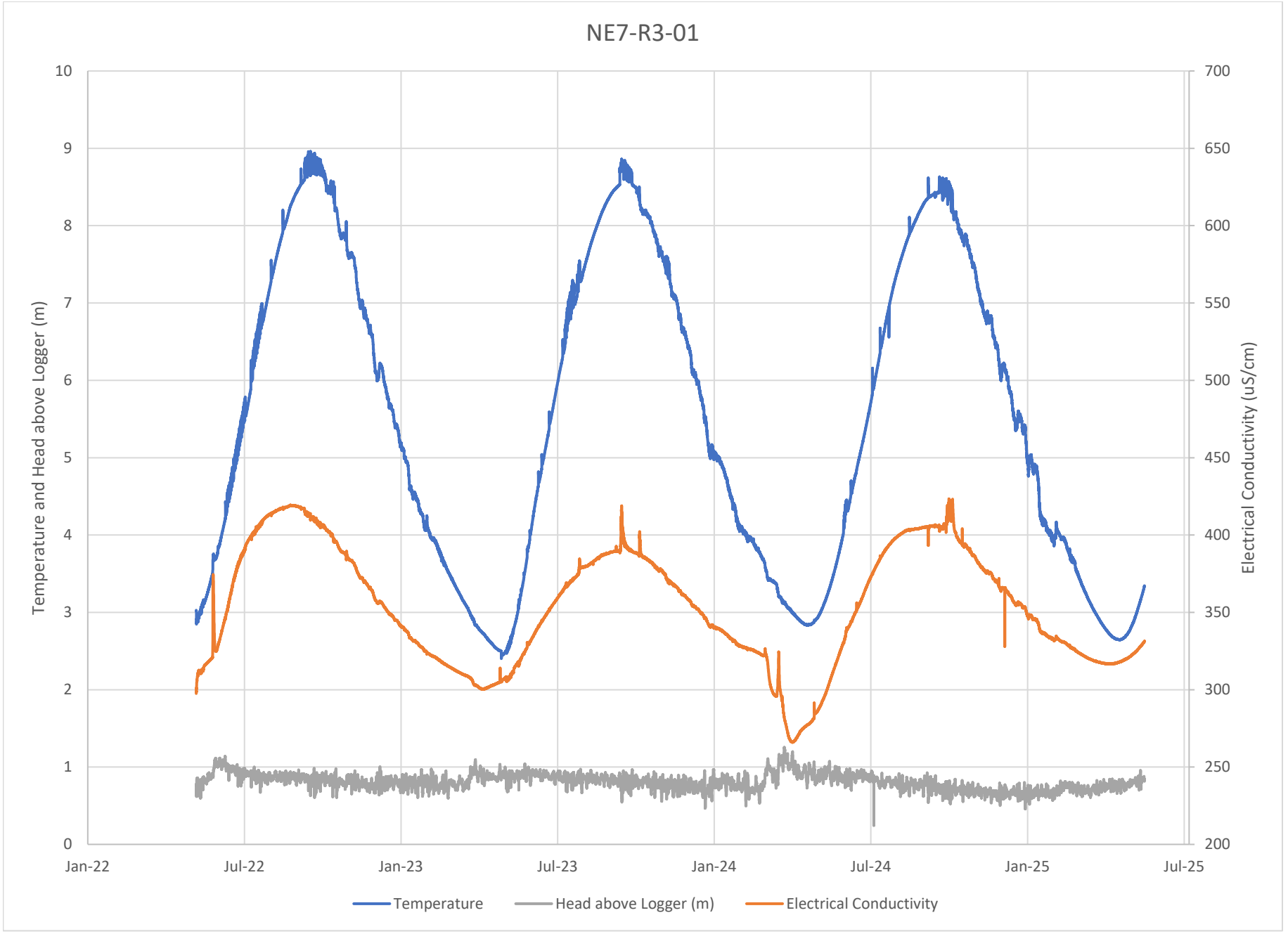

RMW16-19-19
Water Level Elevation (m ASL)
Electrical Conductivity (uS/cm)
1201
1200.5
1200
1199.5
1199
1198.5
1198
1197.5
1197
1196.5
1196
2200
2100
2000
1900
1800
1700
1600
1500
1400
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Jan-25
Jul-25
Water Level Elevation
Electrical Conductivity

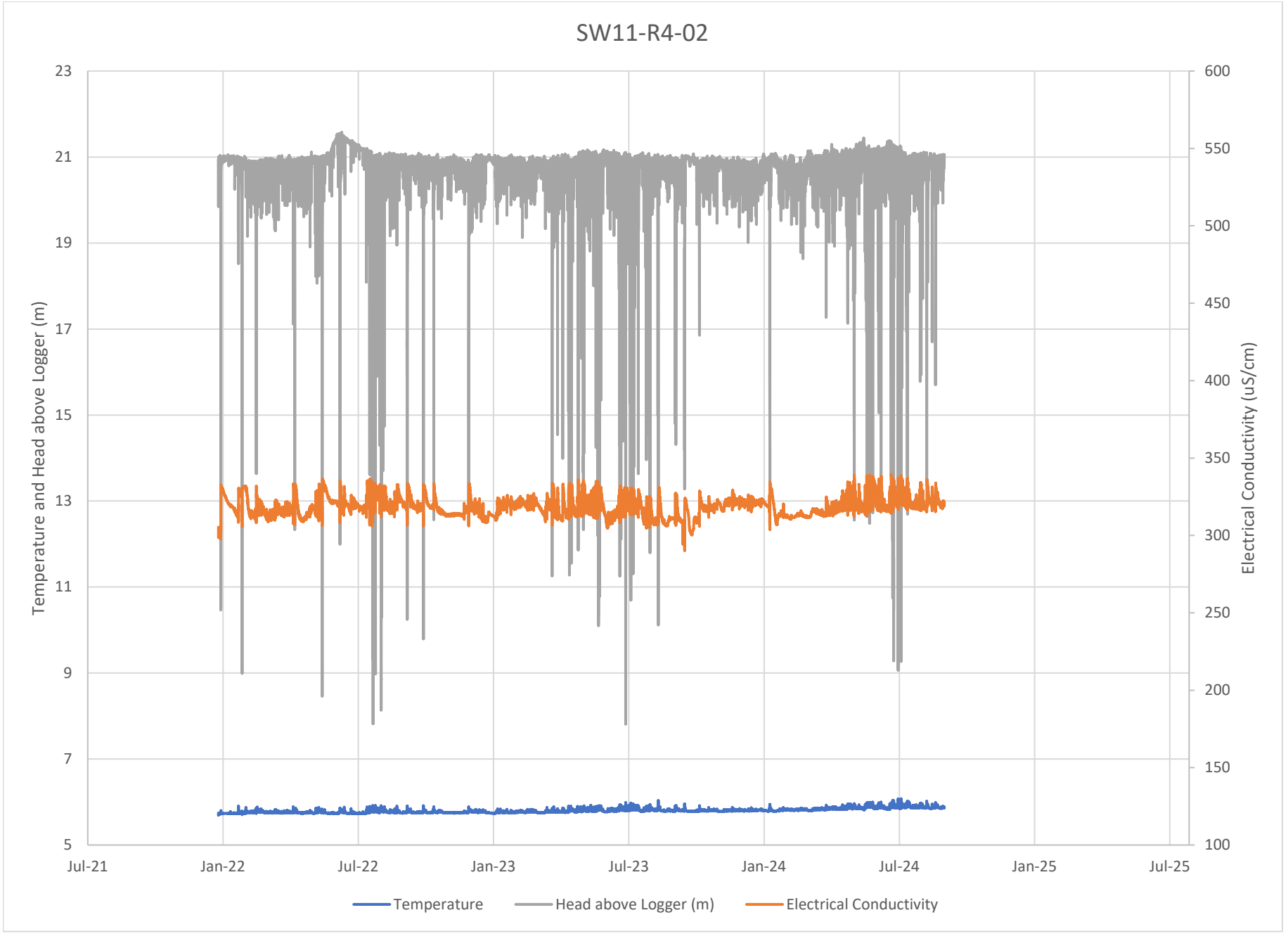

RMW16-23-7
Water Level Elevation (m ASL)
Electrical Conductivity (uS/cm)
1180
1179.5
1179
1178.5
1178
1177.5
1177
1176.5
1176
1175.5
1175
1000
900
800
700
600
500
400
300
200
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Jan-25
Jul-25
Water Level Elevation
Electrical Conductivity

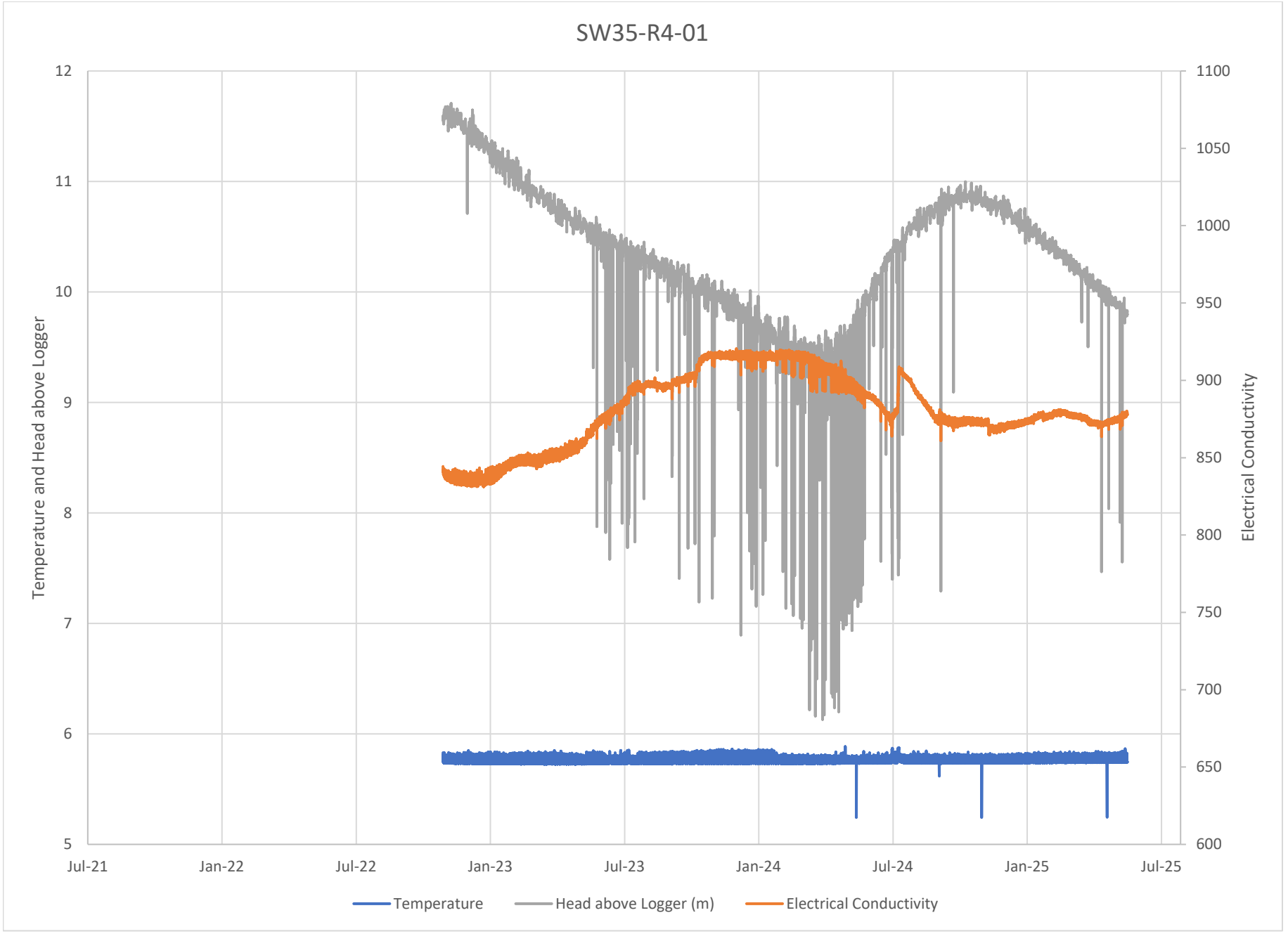

MW16-23-14/RMW16-23-14
Water Level Elevation (m ASL)
Electrical Conductivity (uS/cm)
1181
1180.5
1180
1179.5
1179
1178.5
1178
1177.5
1177
1176.5
1176
1200
1100
1000
900
800
700
600
500
400
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Jan-25
Jul-25
Water Level Elevation
Electrical Conductivity

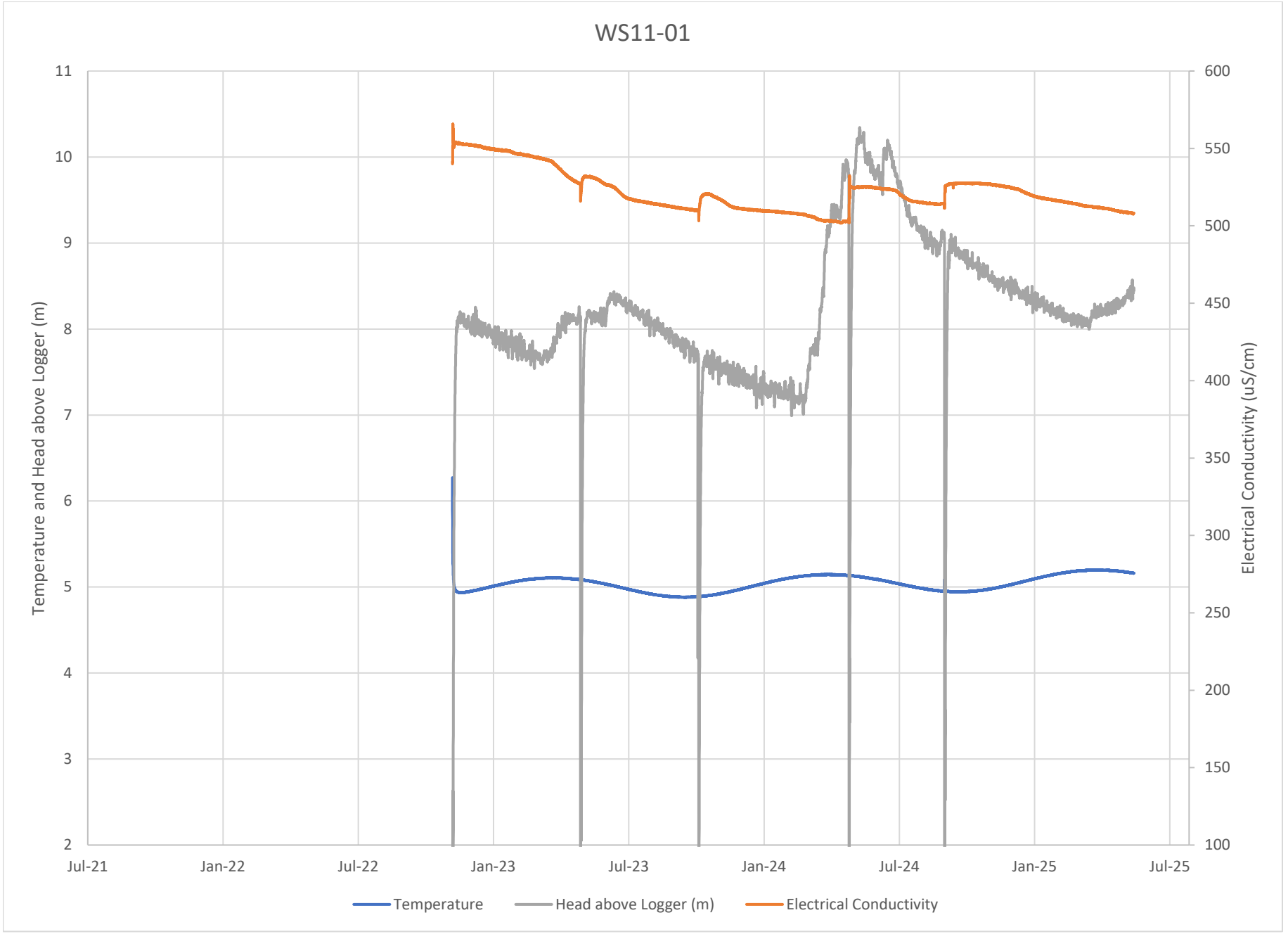

RMW16-23-32
Water Level Elevation (m ASL)
Electrical Conductivity (uS/cm)
1182
1181.5
1181
1180.5
1180
1179.5
1179
1178.5
1178
1177.5
1177
1200
1100
1000
900
800
700
600
500
400
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Jan-25
Jul-25
Water Level Elevation
Electrical Conductivity

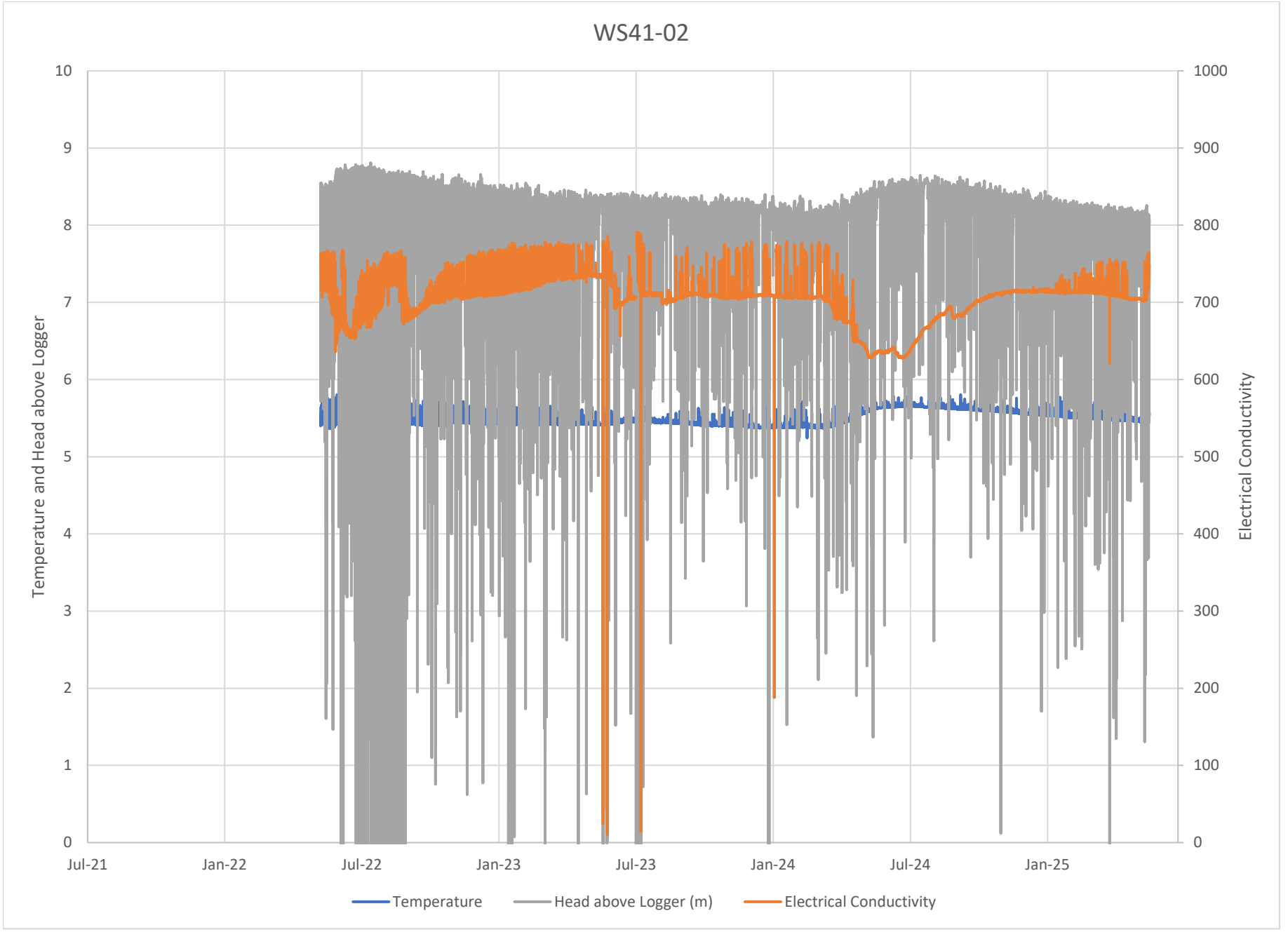

RRMW16-17-8
Water Level Elevation (m ASL)
Electrical Conductivity (uS/cm)
1213
1212.5
1212
1211.5
1211
1210.5
1210
1209.5
1209
1208.5
1208
7300
7200
7100
7000
6900
6800
6700
6600
6500
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Dec-24
Jul-25
Water Level Elevation
Electrical Conductivity

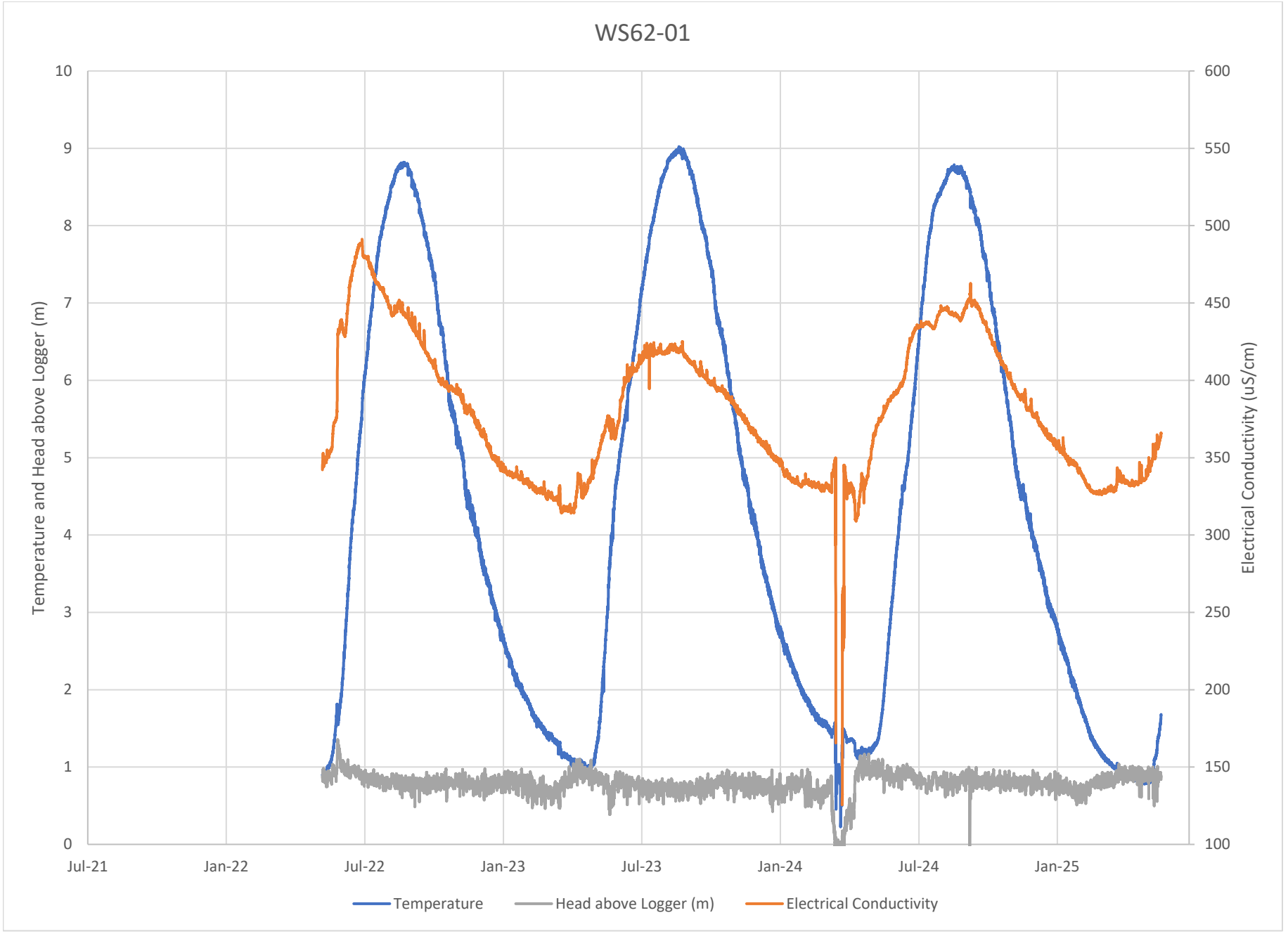

NE7-R3-01
Temperature and Head above Logger (m)
Electrical Conductivity (uS/cm)
10
9
8
7
6
5
4
3
2
1
0
700
650
600
550
500
450
400
350
300
250
200
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Jan-25
Jul-25
Temperature
Head above Logger (m)
Electrical Conductivity

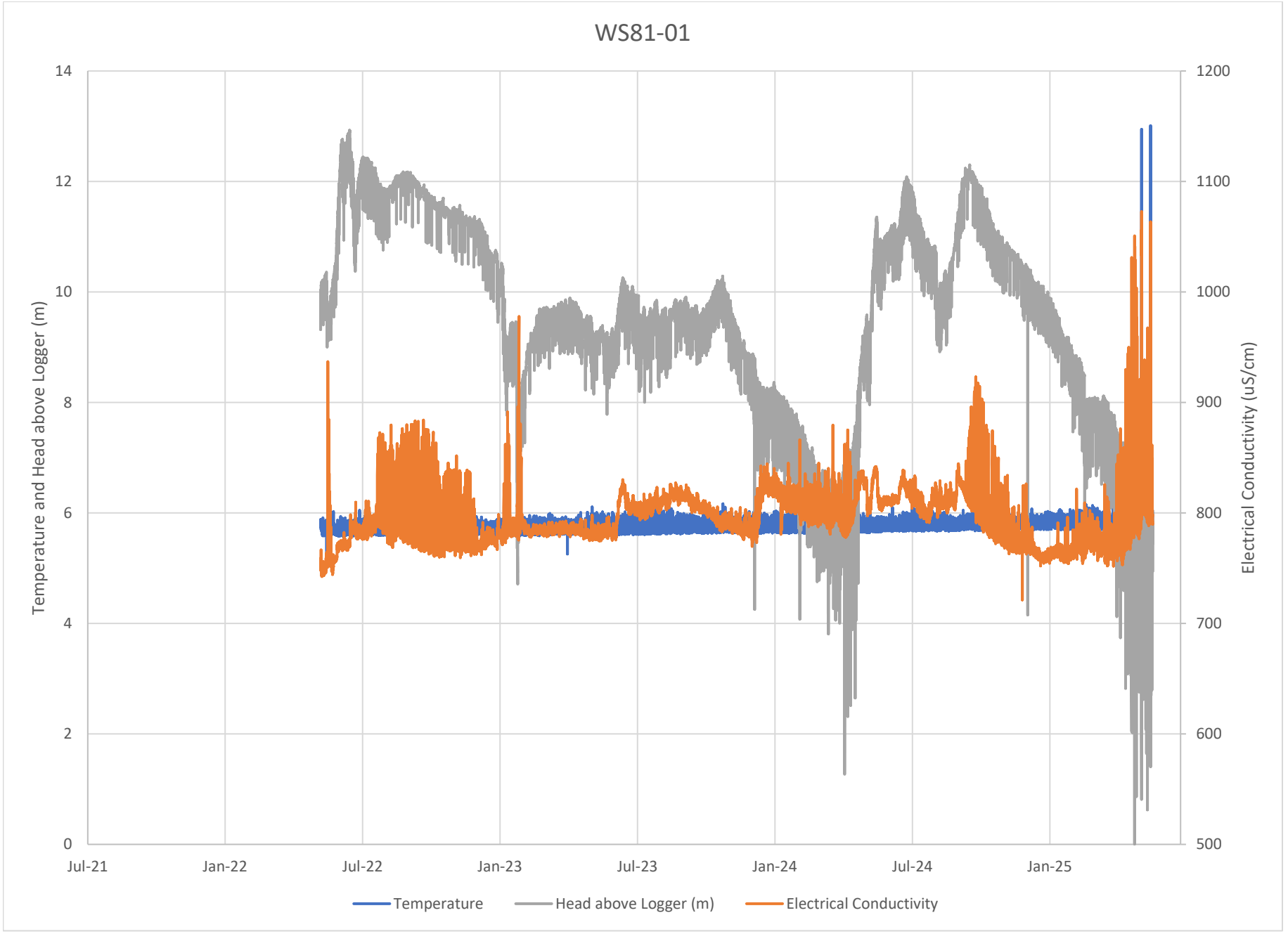

SW11-R4-02
Temperature and Head above Logger (m)
Electrical Conductivity (uS/cm)
23
21
19
17
15
13
11
9
7
5
600
550
500
450
400
350
300
250
200
150
100
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Jan-25
Jul-25
Temperature
Head above Logger (m)
Electrical Conductivity

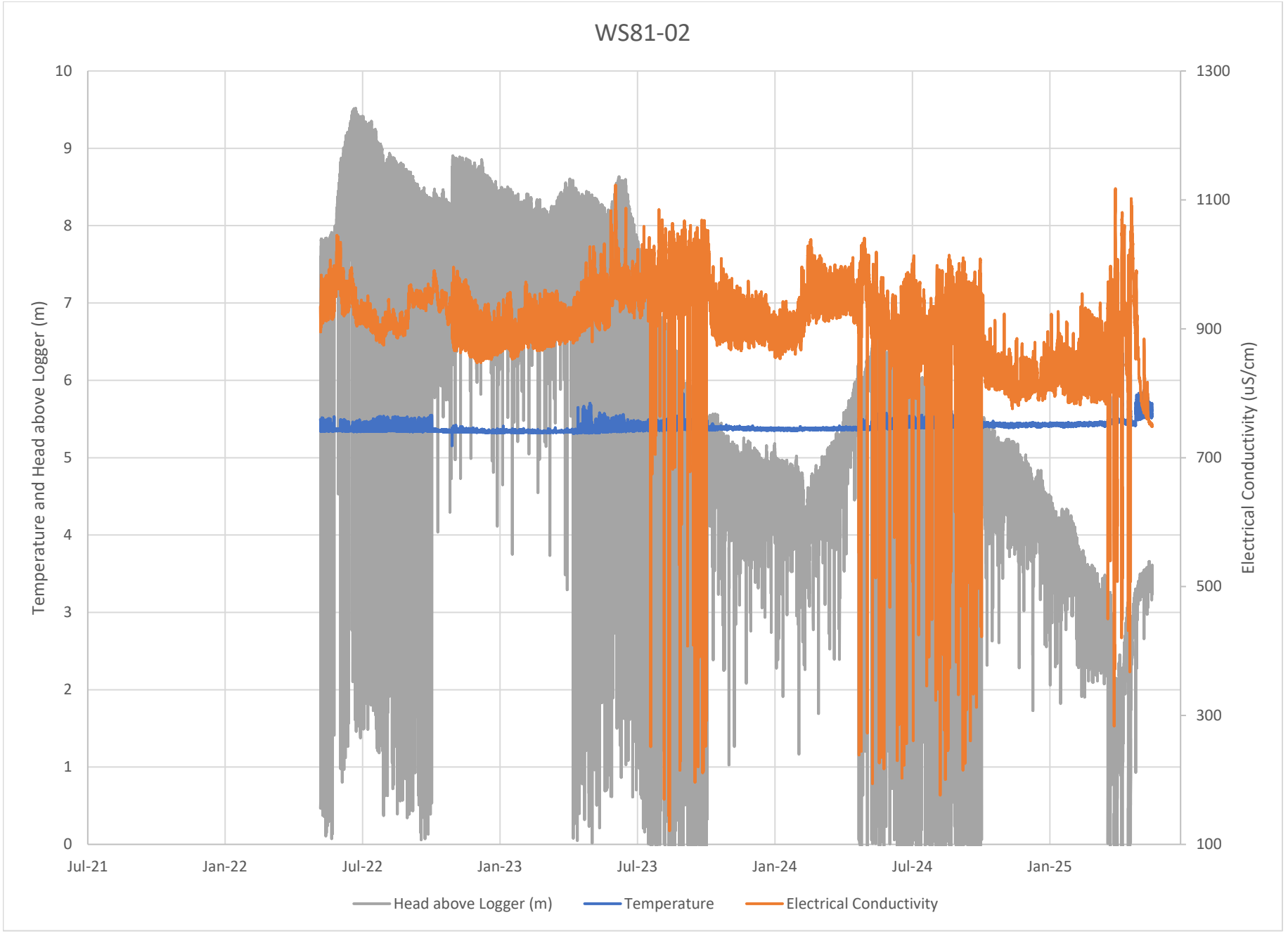

SW35-R4-01
Temperature and Head above Logger
Electrical Conductivity
12
11
10
9
8
7
6
5
1100
1050
1000
950
900
850
800
750
700
650
600
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Jan-25
Jul-25
Temperature
Head above Logger (m)
Electrical Conductivity


WS11-01
Temperature and Head above Logger (m)
Electrical Conductivity (uS/cm)
11
10
9
8
7
6
5
4
3
2
600
550
500
450
400
350
300
250
200
150
100
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Jan-25
Jul-25
Temperature
Head above Logger (m)
Electrical Conductivity


WS41-02
Temperature and Head above Logger
Electrical Conductivity
10
9
8
7
6
5
4
3
2
1
0
1000
900
800
700
600
500
400
300
200
100
0
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Jan-25
Temperature
Head above Logger (m)
Electrical Conductivity


WS62-01
Temperature and Head above Logger (m)
Electrical Conductivity (uS/cm)
10
9
8
7
6
5
4
3
2
1
0
600
550
500
450
400
350
300
250
200
150
100
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Jan-25
Temperature
Head above Logger (m)
Electrical Conductivity


WS81-01
Temperature and Head above Logger (m)
Electrical Conductivity (uS/cm)
14
12
10
8
6
4
2
0
1200
1100
1000
900
800
700
600
500
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Jan-25
Temperature
Head above Logger (m)
Electrical Conductivity


WS81-02
Temperature and Head above Logger (m)
Electrical Conductivity (uS/cm)
10
9
8
7
6
5
4
3
2
1
0
1300
1100
900
700
500
300
100
Jul-21
Jan-22
Jul-22
Jan-23
Jul-23
Jan-24
Jul-24
Jan-25
Head above Logger (m)
Temperature
Electrical Conductivity

Appendix C Laboratory Analytical Data and Historical Data Tables

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location										MW16-1-15						
Sample Date				3-Oct-16	12-May-21	13-Jan-22	5-May-22	5-May-22		21-Nov-22	21-Nov-22		23-May-23	27-Oct-23	14-May-24	25-Sep-24
Sample ID				MW16-1-15	MW16-1-15	MW16-01-15	MW16-1-15	MW22-1-5		MW16-1-15	22-13		MW16-1-15	MW16-1-15	MW16-1-15	MW16-1-15
Sampling Company				STANTEC	STANTEC	STANTEC	STANTEC	STANTEC		STANTEC	STANTEC		STANTEC	STANTEC	STANTEC	STANTEC
Laboratory				MAXX	BV	BV	BV	BV		BV	BV		BV	BV	BV	BV
Laboratory Work Order				B686741	C131657	C202060	C230164	C230164		C291884	C291884		C336439	C387774	C434263	C476327
Laboratory Sample ID				PR2485	ZU0431	AMZ442	ASP036	ASP044		BHL363	BHL367		BQW247	CDB055	CNN527	CWJ884
Location Description				Tier 2	Tier 2	Tier 2	Tier 2	Tier 2		Tier 2	Tier 2		Tier 2	Tier 2	Tier 2	Tier 2
Lithology				Bedrock	Bedrock	Bedrock	Bedrock	Bedrock		Bedrock	Bedrock		Bedrock	Bedrock	Bedrock	Bedrock
Sample Type	Units	2024 AEPA Tier 1	UCL					Field Duplicate	RPD (%)		Field Duplicate	RPD (%)				
Field Parameters																
Dissolved Oxygen, Field	mg/L	n/v	n/v	-	1.43	2.83	3.18	-	-	10.6	-	-	7.8	3.6	1.9	1.4
Electrical Conductivity, Field	µS/cm	1,000[A]	n/v	**1,978[A]**	**2,187[A]**	**2,134[A]**	**2,192[A]**	-	-	**1,008[A]**	-	-	**1,976[A]**	**2,100[A]**	1.994	**2,117[A]**
Oxidation Reduction Potential, field	mV	n/v	n/v	-	60.2	44.7	68.2	-	-	-19.8	-	-	212.7	85.3	-41.5	40.4
pH, Field	S.U.	6.5-8.5[A]	n/v	7.2	7.23	7.64	7.16	-	-	6.88	-	-	7.46	7.33	7.58	7.19
Temperature, Field	deg C	n/v	n/v	7.7	8.8	5.6	7.7	-	-	6.3	-	-	8.9	5.9	8.5	10.5
Calculated Parameters																
Anion Sum	meq/L	n/v	n/v	25	27	29	29	28	nc	28	28	nc	-	28	28	31
Cation Sum	meq/L	n/v	n/v	28	26	27	29	31	nc	26	26	nc	-	30	28	27
Hardness (as CaCO3)	mg/L	n/v	n/v	1,000	990	1,000	1,100	1,100	0%	940	970	3%	1,100	1,100	1,100	1,000
Ion Balance	%	n/v	n/v	1.1	2.4	2.2	0.84	3.7	nc	4.5	3.2	nc	4.8	3.7	1.3	6.5
Ion Balance % Difference	%	n/v	n/v	-	-	-	-	-	-	-	-	-	-	-	-	6.5
Nitrate	mg/L	13_f[A]	n/v	<0.044	<0.22	<0.22	<0.22	<0.044	nc	0.065	<0.044	nc	<0.044	<0.044	<0.44	<0.22
Nitrate + Nitrite (as N)	mg/L	100[A]	n/v	<0.020	<0.050 MI	<0.050 AT	<0.050 AT	<0.010	nc	0.015	<0.010	nc	<0.010	<0.010	<0.10 MI	<0.050 MI
Nitrite	mg/L	$0.197/1.97_{n4.a}$[A]	n/v	<0.033	<0.033	<0.033	<0.033	<0.033	nc	<0.033	<0.033	nc	<0.033	<0.033	<0.033	<0.033
Total Dissolved Solids	mg/L	500[A]	2,151[B]	**1,600[A]**	**1,700[A]**	**1,800[A]**	**1,800[A]**	**1,800[A]**	0%	**1,700[A]**	**1,700[A]**	0%	**1,800[A]**	**1,800[A]**	**1,700[A]**	**1,900[A]**
Sodium Adsorption Ratio (SAR)	none	5[A]	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-
BTEX and Petroleum Hydrocarbons																
Benzene	mg/L	0.005[A]	n/v	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	n/v	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	n/v	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	n/v	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	nc	<0.00080	<0.00080	nc	<0.00080	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	n/v	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	n/v	<0.00080	<0.00089	<0.00089	<0.00089	<0.00089	nc	<0.00089	<0.00089	nc	<0.00089	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10
Miscellaneous Inorganics																
Dissolved Organic Carbon (DOC)	mg/L	n/v	3.2[B]	2.6	2.4	2.1	2.4	2.4	nc	2.7	2.7	0%	2.2	2.4	2.5	2.2
Electrical Conductivity, Lab	µS/cm	1,000[A]	2,654[B]	**2,100[A]**	**2,200[A]**	**2,200[A]**	**2,200[A]**	**2,200[A]**	0%	**2,100[A]**	**2,100[A]**	0%	**2,200[A]**	**2,100[A]**	**2,200[A]**	**2,200[A]**
pH, lab	S.U.	6.5-8.5[A]	9.56[B]	7.88	7.63	7.56	7.74	7.92	nc	7.75	7.78	nc	7.98	7.89	7.84	7.95
Anions																
Alkalinity (P as CaCO3)	mg/L	n/v	n/v	<0.50	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	n/v	300	320	320	300	300	0%	320	330	3%	320	330	330	320
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	n/v	360	390	400	370	370	0%	400	400	0%	390	400	400	390
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	n/v	<0.50	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	n/v	<0.50	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	1,371[B]	**910 CD[A]**	**990 CD[A]**	**1,000[A]**	**1,100[A]**	**1,100[A]**	0%	**1,000[A]**	**1,000[A]**	0%	**1,000[A]**	**1,000[A]**	**990[A]**	**1,200[A]**
Chloride	mg/L	100[A]	20[B]	3.8	9.3	11	11	12	9%	10	10	0%	10	11	11	12
Fluoride	mg/L	1[A]	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-
Nutrients																
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	n/v	<0.010	<0.010	<0.010	<0.010	<0.010	nc	<0.010	<0.010	nc	<0.010	<0.010	<0.010	<0.010
Orthophosphate (as P)	mg/L	n/v	n/v	<0.0030	<0.0030	0.0041	<0.0030	<0.0030	nc	<0.0030	0.0031	nc	<0.0030	<0.0030	0.0033	<0.0030
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	0.09[B]	***<0.050***	**0.045[A]**	**0.036[A]**	**0.036[A]**	0.034	nc	**0.056[A]**	0.029	nc	**0.058[A]**	**0.037[A]**	**0.057[A]**	0.030
Nitrate (as N)	mg/L	3[A]	n/v	<0.010	<0.050	<0.050	<0.050	<0.010	nc	0.015	<0.010	nc	<0.010	<0.010	<0.10	<0.050
Phosphorus, Dissolved	mg/L	n/v	n/v	-	-	-	-	-	-	-	-	-	-	-	-	<0.0030
Phosphorus, Total (Dissolved)	mg/L	n/v	n/v	<0.0030	<0.0030	0.52 DB	<0.0030	<0.0030	nc	<0.0030	<0.0030	nc	<0.0030	<0.0030	<0.0030 P2	<0.0030
Total Kjeldahl Nitrogen	mg/L	n/v	2.3[B]	1.5 DB	0.26	0.258	0.86	0.99	nc	<1.0	<1.0	nc	0.55	0.36	1.22	<0.20
Nitrogen	mg/L	n/v	n/v	-	0.26 DB	0.26	0.86 DB	0.99 DB	nc	<1.0 DB	<1.0 DB	nc	0.55 DB	0.36 DB	1.2 DB	<0.20 DB NNA
Metals - Dissolved																
Aluminum	mg/L	$0.007/0.05_{n1.e}$[A]	n/v	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	nc	<0.0030	<0.0030	nc	-	<0.0030	<0.0030	0.0039
Antimony	mg/L	0.006[A]	n/v	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	nc	<0.00060	<0.00060	nc	-	<0.00060	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	0.00067[B]	<0.00020	<0.00020	0.00036	0.00051	0.00041	nc	0.00038	0.00032	nc	-	0.00033	0.00037	<0.00020
Barium	mg/L	2[A]	0.02[B]	0.018	<0.010	0.012	0.012	0.013	nc	0.011	0.011	nc	-	0.012	0.013	<0.010
Beryllium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	nc	-	<0.0010	<0.0010	<0.0010
Boron	mg/L	1[A]	0.12[B]	0.078	0.078	0.077	0.080	0.080	nc	0.061	0.059	nc	-	0.098	0.073	0.078
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	0.000402[B]	<0.000020	<0.000020	**0.00032[A]**	**0.000066[A]**	**0.00010[A]**	nc	**0.00018[A]**	**0.00018[A]**	0%	-	**0.000093[A]**	**0.000053[A]**	0.000031
Calcium	mg/L	n/v	304[B]	230	220	230	250	260	4%	220	230	4%	260	260	240	230

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location												MW16-1-15					
Sample Date				3-Oct-16	12-May-21	13-Jan-22	5-May-22	5-May-22		21-Nov-22	21-Nov-22		23-May-23	27-Oct-23	14-May-24	25-Sep-24
Sample ID				MW16-1-15	MW16-1-15	MW16-01-15	MW16-1-15	MW22-1-5		MW16-1-15	22-13		MW16-1-15	MW16-1-15	MW16-1-15	MW16-1-15
Sampling Company				STANTEC	STANTEC	STANTEC	STANTEC	STANTEC		STANTEC	STANTEC		STANTEC	STANTEC	STANTEC	STANTEC
Laboratory				MAXX	BV	BV	BV	BV		BV	BV		BV	BV	BV	BV
Laboratory Work Order				B686741	C131657	C202060	C230164	C230164		C291884	C291884		C336439	C387774	C434263	C476327
Laboratory Sample ID				PR2485	ZU0431	AMZ442	ASP036	ASP044		BHL363	BHL367		BQW247	CDB055	CNN527	CWJ884
Location Description				Tier 2	Tier 2	Tier 2	Tier 2	Tier 2		Tier 2	Tier 2		Tier 2	Tier 2	Tier 2	Tier 2
Lithology				Bedrock	Bedrock	Bedrock	Bedrock	Bedrock		Bedrock	Bedrock		Bedrock	Bedrock	Bedrock	Bedrock
Sample Type								Field Duplicate	RPD (%)		Field Duplicate	RPD (%)				
Sample Location	**Units**	**2024 AEPA Tier 1**	**UCL**													
Chromium	mg/L	0.05[A]	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	nc	-	<0.0010	<0.0010	<0.0010
Cobalt	mg/L	n/v	0.001[B]	**0.0012[B]**	0.00087	0.00098	0.00099	0.00084	nc	0.0010	0.00097	nc	-	0.0010	0.00084	0.00098
Copper	mg/L	0.007[A]	n/v	<0.00020	0.00020	0.00097	<0.0010	<0.0010	nc	<0.0010	0.0015	nc	-	<0.0010	<0.0010	<0.0010
Iron	mg/L	0.3[A]	n/v	<0.060	0.069	<0.060	<0.060	<0.060	nc	<0.060	<0.060	nc	<0.060	<0.060	<0.060	<0.060
Lead	mg/L	0.001/0.007 $_{n3}$[A]	n/v	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	nc	-	<0.00020	<0.00020	<0.00020
Lithium	mg/L	n/v	n/v	0.022	<0.020	<0.020	<0.020	<0.020	nc	<0.020	0.022	nc	-	<0.020	0.021	<0.020
Magnesium	mg/L	n/v	146[B]	110	100	100	110	120	9%	95	97	2%	120	120	110	100
Manganese	mg/L	0.02[A]	1.10[B]	**0.88[A]**	**0.82[A]**	**0.83[A]**	**0.82[A]**	**0.84[A]**	2%	**0.77[A]**	**0.81[A]**	5%	**0.95[A]**	**0.93[A]**	**0.86[A]**	**0.83[A]**
Mercury	mg/L	0.000005[A]	0.0003855[B]	0.0000029	<0.0000019	<0.0000019	<0.0000019	<0.0000019	nc	<0.0000019	<0.0000019	nc	<0.0000019	<0.0000019	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	0.00392[B]	0.0028	0.0017	0.0019	0.0019	0.0019	0%	0.0020	0.0020	0%	-	0.0022	0.0028	0.0020
Nickel	mg/L	0/0.17 $_{n3}$[A]	0.0021[B]	**0.0010[A]**	**0.00083[A]**	**0.0013[A]**	**0.00099[A]**	**0.00093[A]**	nc	**0.0012[A]**	**0.0012[A]**	nc	-	**0.0011[A]**	**0.0014[A]**	**0.0015[A]**
Phosphorus	mg/L	n/v	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	nc	-	<0.10	<0.10	<0.10
Potassium	mg/L	n/v	5.6[B]	4.8	3.6	3.8	4.2	4.4	5%	3.6	3.7	3%	4.1	4.2	4.0	3.8
Selenium	mg/L	0.002[A]	n/v	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	0.00027	nc	-	<0.00020	<0.00020	<0.00020
Silicon	mg/L	n/v	6.2[B]	4.7	4.3	4.4	4.5	4.6	2%	3.9	4.1	5%	-	5.3	4.5	4.4
Silver	mg/L	0.00025[A]	n/v	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	nc	<0.00010	<0.00010	nc	-	<0.00010	<0.00010	<0.00010
Sodium	mg/L	200[A]	202[B]	160	140	160	170	170	0%	160	160	0%	170	170	160	150
Strontium	mg/L	n/v	1.9[B]	1.6	1.4	1.6	1.6	1.7	6%	1.6	1.6	0%	-	1.7	1.6	1.6
Sulfur	mg/L	n/v	460[B]	340	330	310	310	310	0%	280	280	0%	-	390	330	310
Thallium	mg/L	n/v	n/v	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	nc	-	<0.00020	<0.00020	<0.00020
Tin	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	nc	-	<0.0010	<0.0010	<0.0010
Titanium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	nc	-	<0.0010	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	0.006[B]	0.0054	0.0043	0.0042	0.0048	0.0046	4%	0.0045	0.0045	0%	-	0.0050	0.0042	0.0049
Vanadium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	0.0012	0.0011	nc	<0.0010	<0.0010	nc	-	<0.0010	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	n/v	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	nc	<0.0030	<0.0030	nc	-	<0.0030	<0.0030	0.0031
Metals - Total																
Mercury	mg/L	0.000005[A]	0.0003855[B]	***<0.0020 DB***	**0.0000473[A]**	**0.000038[A]**	**0.000055[A]**	**0.000053[A]**	nc	**0.000393[AB]**	**0.000338[A]**	15%	**0.000141[A]**	**0.0000241[A]**	**0.000132 DB[A]**	<0.0000019
Phosphorus	mg/L	n/v	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-
Microbiological Parameters																
Escherichia coli (E.Coli)	mpn/100mL	n/v	n/v	<10 DB	<10 MI	<10 VV	<10	<10	nc	<1.0	<1.0	nc	<2.0 Z8	<1.0	<100 MI	<1.0
Fecal Coliforms	mpn/100mL	n/v	n/v	<10 DB	<10 MI	<10	<10	<10	nc	<1.0	<1.0	nc	<5.0 Z8	<1.0	<100 MI	<1.0
Heterotrophic Plate Count	cfu/mL	n/v	n/v	4,900 DB	5,500	10,000 VV	2,700	1,600	**51%**	380	230	**49%**	660	300	-	-
Heterotrophic Plate Count	mpn/100mL	n/v	n/v	-	-	-	-	-	-	-	-	-	-	-	>12000 MI	>2400
Total Coliforms	mpn/100mL	n/v	n/v	230 DB	<10 MI	680 VV	260	500	**63%**	<1.0	<1.0	nc	<2.0 Z8	1.0	<100 MI	<1.0

See notes on the last page

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location				MW16-2-6									
Sample Date				30-Sep-16	12-May-21	24-Nov-21	4-May-22	15-Nov-22	15-May-23	23-Oct-23	15-May-24	21-Sep-24	3-Jun-25
Sample ID				MW16-2-6	MW16-2-6	MW16-2-6	MW16-2-6	MW16-2-6	MW16-2-6	MW16-2-6	MW 16-2-6	MW16-2-6	MW16-2-6
Sampling Company				STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory				MAXX	BV	AGAT	BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order				B686123	C131657	21C834850	C229742	C290290	C334367	C386148	C435079	C475057	C550515
Laboratory Sample ID				PQ7069	ZU0435	3249831	ASN088	BHB173	BQM166	CCP849	CNR021	CWB147	DMG754
Location Description				Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
Lithology				Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated
Sample Type	Units	2024 AEPA Tier 1	UCL										
Field Parameters													
Dissolved Oxygen, Field	mg/L	n/v	n/v	-	3.79	3.92	2.33	3.7	3.6	6.1	6.1	3.96	10.47
Electrical Conductivity, Field	µS/cm	1,000[A]	n/v	**5,210[A]**	**6,179[A]**	**6,105[A]**	**6,392[A]**	**5,807[A]**	**5,689[A]**	**6,534[A]**	6.534	**6,533[A]**	**6,206[A]**
Oxidation Reduction Potential, field	mV	n/v	n/v	-	92.4	95.3	-21.3	-33.2	156.9	27.4	27.4	105.8	108.3
pH, Field	S.U.	6.5-8.5[A]	n/v	7.1	6.86	6.93	**6.38[A]**	7.20	6.94	6.66	6.66	6.91	7.05
Temperature, Field	deg C	n/v	n/v	8.6	7.4	5.09	9	4.4	14.4	2.8	2.8	7.3	9.27
Calculated Parameters													
Anion Sum	meq/L	n/v	n/v	83	97	-	94	99	95	89	89	84	96
Cation Sum	meq/L	n/v	n/v	83	96	-	96	100	94	100	97	120	91
Hardness (as CaCO3)	mg/L	n/v	n/v	2,600	3,100	3,390	3,100	3,000	3,000	3,200	3,100	2,600	2,900
Ion Balance	%	n/v	n/v	1.0	0.61	114	1.3	2.6	0.38	5.4	4.1	16	-
Ion Balance % Difference	%	n/v	n/v	-	-	-	-	-	-	-	-	-	2.4
Nitrate	mg/L	13_f[A]	n/v	<0.22	<0.22	<0.5	<0.44	<2.2	<1.1	<0.22	<0.22	<0.44	<0.89
Nitrate + Nitrite (as N)	mg/L	100[A]	n/v	0.024	<0.050 MI	<0.02	<0.10 DB	<0.50 MI	<0.25 Z8	<0.050 Z8	<0.050 MI	<0.10 MI	<0.20 MI
Nitrite	mg/L	$0.197/1.97_{n4.a}$[A]	n/v	0.078	<0.033	<0.10	<0.033	<0.033	<0.033	<0.033	<0.033	<0.033	<0.13
Total Dissolved Solids	mg/L	500[A]	7,318[B]	**5,300[A]**	**6,100[A]**	**6,140[A]**	**6,000[A]**	**6,400[A]**	**6,000[A]**	**5,900[A]**	**5,800[A]**	**6,100[A]**	**6,000[A]**
Sodium Adsorption Ratio (SAR)	none	5[A]	n/v	-	-	**6.60[A]**	-	-	-	-	-	-	-
BTEX and Petroleum Hydrocarbons													
Benzene	mg/L	0.005[A]	n/v	0.00044	<0.00040	<0.0005	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	n/v	<0.00040	<0.00040	<0.0003	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	n/v	<0.00040	<0.00040	<0.0005	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	n/v	<0.00080	<0.00080	-	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	n/v	<0.00040	<0.00040	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	n/v	<0.00080	<0.00089	<0.0005	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	n/v	<0.10	<0.10	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	n/v	<0.10	<0.10	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	n/v	0.47	**5.9[A]**	<0.1	0.28	<0.10	0.11	<0.10	0.80	0.17	<0.10
Miscellaneous Inorganics													
Dissolved Organic Carbon (DOC)	mg/L	n/v	7.9[B]	6.2	4.2	4.774	4.1	4.4	3.3	3.2	4.0	3.7	3.5
Electrical Conductivity, Lab	µS/cm	1,000[A]	7,834[B]	**5,900[A]**	**6,400[A]**	**6,550[A]**	**6,500[A]**	**6,400[A]**	**6,600[A]**	**6,100[A]**	**6,500[A]**	**6,500[A]**	**6,500[A]**
Sediment	none	n/v	n/v	-	-	NotPresent	-	-	-	-	-	-	-
pH, lab	S.U.	6.5-8.5[A]	9.4864[B]	7.95	7.31	7.82	7.41	7.48	7.66	8.12	7.90	7.84	7.95
Anions													
Alkalinity (P as CaCO3)	mg/L	n/v	n/v	<0.50	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	n/v	520	650	615	650	650	610	460	660	650	670
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	n/v	630	790	751	800	800	740	560	800	790	820
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	n/v	<0.50	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	n/v	<0.50	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	4,776[B]	**3,500 CD[A]**	**4,000 CD[A]**	**3,880[A]**	**3,900[A]**	**4,100[A]**	**4,000[A]**	**3,800[A]**	**3,700[A]**	**3,400[A]**	**3,900[A]**
Chloride	mg/L	100[A]	7[B]	6.0	2.9	1.2	1.8	1.5	1.4	1.5	1.5	1.7	2.0
Fluoride	mg/L	1[A]	n/v	-	-	<0.03	-	-	-	-	-	-	-
Nutrients													
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	n/v	0.024	<0.010	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.040
Orthophosphate (as P)	mg/L	n/v	0.01[B]	0.0041	0.0059	***<0.15***	<0.0030	0.0051	0.0049	0.0043	0.0043	0.0040	0.0036
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	0.35[B]	**0.27[A]**	**0.20[A]**	**0.15[A]**	**0.16[A]**	**0.13[A]**	**0.17[A]**	**0.17[A]**	**0.20[A]**	**0.19[A]**	**0.21[A]**
Nitrate (as N)	mg/L	3[A]	n/v	<0.050 MI	<0.050	<0.02	<0.10	<0.50	<0.25	<0.050	<0.050	<0.10	<0.20
Phosphorus, Dissolved	mg/L	n/v	n/v	-	-	-	-	-	-	-	-	-	<0.0030 P2
Phosphorus, Total (Dissolved)	mg/L	n/v	n/v	0.0094	0.0060	-	0.0032	<0.0030	<0.0030 P2	<0.0030 P2	<0.0030 P2	<0.0030 P2	-
Total Kjeldahl Nitrogen	mg/L	n/v	10.4[B]	5.1 DB	7.2	2.3	<2.0	<0.50	1.36	0.461	4.6	1.4	<2.0
Nitrogen	mg/L	n/v	n/v	-	7.2 DB	-	<2.0 DB	0.50 DB	1.4 DB	0.461	4.6	1.4 DB	<2.0 DB NNA
Metals - Dissolved													
Aluminum	mg/L	$0.007/0.05_{n1,e}$[A]	n/v	**0.016[A]**	0.0069	**0.021[A]**	0.0036	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Antimony	mg/L	0.006[A]	n/v	0.00073	<0.00060	<0.001	<0.00060	0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	0.00324[B]	**0.0044[B]**	0.00035	<0.001	0.0010	0.00038	0.00048	0.00047	0.00056	0.0010	0.00032
Barium	mg/L	2[A]	n/v	0.018	<0.010	<0.05	<0.010	0.015	<0.010	<0.010	<0.010	<0.010	<0.010
Beryllium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron	mg/L	1[A]	0.14[B]	0.11	0.10	0.11	0.11	0.11	0.11	0.12	0.10	0.10	0.095

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location				MW16-2-6									
Sample Date				30-Sep-16	12-May-21	24-Nov-21	4-May-22	15-Nov-22	15-May-23	23-Oct-23	15-May-24	21-Sep-24	3-Jun-25
Sample ID				MW16-2-6	MW16-2-6	MW16-2-6	MW16-2-6	MW16-2-6	MW16-2-6	MW16-2-6	MW 16-2-6	MW16-2-6	MW16-2-6
Sampling Company				STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory				MAXX	BV	AGAT	BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order				B686123	C131657	21C834850	C229742	C290290	C334367	C386148	C435079	C475057	C550515
Laboratory Sample ID				PQ7069	ZU0435	3249831	ASN088	BHB173	BQM166	CCP849	CNR021	CWB147	DMG754
Location Description				Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
Lithology				Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated
Sample Type	Units	2024 AEPA Tier 1	UCL										
Cadmium	mg/L	0.00004/0.00037$_{n3}$[A]	0.000389[B]	**0.000092[A]**	0.000039	**0.000124[A]**	**0.00027[A]**	**0.00015[A]**	**0.000075[A]**	**0.00013[A]**	**0.00012[A]**	**0.00017[A]**	0.000026
Calcium	mg/L	n/v	509[B]	390	400	451	410	410	410	430	420	370	380
Chromium	mg/L	0.05[A]	n/v	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt	mg/L	n/v	0.008[B]	0.0060	0.0021	0.0027	0.0029	0.0025	0.0025	0.0023	0.0020	0.0033	0.0019
Copper	mg/L	0.007[A]	0.009[B]	0.00084	0.00090	0.0034	0.0015	**0.010[AB]**	<0.0010	<0.0010	0.0012	0.0016	<0.0010
Iron	mg/L	0.3[A]	n/v	<0.060	<0.060	<0.1	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	0.065
Lead	mg/L	0.001/0.007$_{n3}$[A]	n/v	<0.00020	<0.00020	<0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Lithium	mg/L	n/v	0.14[B]	0.11	0.099	-	0.11	0.12	0.11	0.12	0.12	0.11	0.10
Magnesium	mg/L	n/v	670[B]	400	520 CD	549	490	480	480	510	500	410	470
Manganese	mg/L	0.02[A]	1.92[B]	**1.5[A]**	**1.3[A]**	**1.31[A]**	**1.3[A]**	**1.3[A]**	**1.3[A]**	**1.4[A]**	**1.3[A]**	**0.95[A]**	**1.1[A]**
Mercury	mg/L	0.000005[A]	0.0005972[B]	<0.0000020	<0.0000019	<0.0000025	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	0.00515[B]	**0.0071[B]**	0.00091	<0.001	0.00092	0.00083	0.0010	0.00080	0.00062	0.0014	0.00068
Nickel	mg/L	0/0.17$_{n3}$[A]	0.0209[B]	**0.016[A]**	**0.0059[A]**	**0.007[A]**	**0.0071[A]**	**0.0059[A]**	**0.0061[A]**	**0.0063[A]**	**0.0048[A]**	**0.0081[A]**	**0.0056[A]**
Phosphorus	mg/L	n/v	n/v	<0.10	<0.10	<0.08	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Potassium	mg/L	n/v	11[B]	9.4	7.5	8.8	8.3	8.4	8.0	9.0	8.3	7.8	7.4
Selenium	mg/L	0.002[A]	n/v	0.0013	<0.00020	<0.0005	0.00024	0.00079	<0.00020	0.00027	<0.00080 MI	0.00052	<0.00020
Silicon	mg/L	n/v	6.8[B]	5.9	4.8	-	5.2	5.3	5.2	5.3	5.0	4.5	4.8
Silver	mg/L	0.00025[A]	n/v	<0.00010	<0.00010	<0.00005	<0.00010	**0.0034[A]**	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium	mg/L	200[A]	1,875[B]	**690 CD[A]**	**750 CD[A]**	**882[A]**	**800[A]**	**1,000[A]**	**780[A]**	**830[A]**	**790[A]**	**1,500[A]**	**780[A]**
Strontium	mg/L	n/v	8.7[B]	4.6	5.8 CD	-	6.0	6.2	6.3	6.4	6.3	4.8	6.1
Sulfur	mg/L	n/v	3,478[B]	1,200 CD	1,400 CD	-	1,300	2,000	1,300	1,400	1,400	2,600	1,400
Thallium	mg/L	n/v	n/v	<0.00020	<0.00020	<0.0001	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Tin	mg/L	n/v	n/v	<0.0010	<0.0010	-	<0.0010	0.0026	<0.0010	0.0016	<0.0010	<0.0010	<0.0010
Titanium	mg/L	n/v	n/v	<0.0010	<0.0010	0.002	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	0.047[B]	**0.040[A]**	**0.029[A]**	**0.031[A]**	**0.029[A]**	**0.029[A]**	**0.031[A]**	**0.028[A]**	**0.025[A]**	**0.028[A]**	**0.026[A]**
Vanadium	mg/L	n/v	n/v	0.0016	<0.0010	-	0.0013	<0.0010	<0.0010	<0.0010	<0.0010	0.0011	<0.0010
Zinc	mg/L	0.03[A]	n/v	0.016	0.0031	<0.005	<0.0030	<0.0030	<0.0030	<0.0030	0.0047	0.0050	<0.0030
Metals - Total													
Mercury	mg/L	0.000005[A]	0.0005972[B]	***<0.0060 DB***	**0.000277 DB[A]**	**0.000032[A]**	**0.00071[AB]**	**0.000028[A]**	**0.000051[A]**	**0.0000088[A]**	**0.00027 DB[A]**	**0.000088 DB[A]**	**0.000189 DB[A]**
Phosphorus	mg/L	n/v	n/v	-	-	2.61	-	-	-	-	-	-	-
Microbiological Parameters													
Escherichia coli (E.Coli)	mpn/100mL	n/v	n/v	<100 DB	<100 MI	<1	<2.0 AT	<5.0 MI	<5.0 Z8	<1.0	<100 SVH	<2.0 MI	<10 Z8
Fecal Coliforms	mpn/100mL	n/v	n/v	<100 DB	<100 MI	2	<10 AT	<5.0 MI	<5.0 Z8	<1.0	<100 MI SVH	2.0 MI	<10 Z8
Heterotrophic Plate Count	cfu/mL	n/v	n/v	49,000 DB	6,100 MI	8,700	6,200 DVM	>6000	1,600 Z8	1,500	-	-	-
Heterotrophic Plate Count	mpn/100mL	n/v	n/v	-	-	-	-	-	-	-	2,400 SVH	>2400	>24000 MI
Total Coliforms	mpn/100mL	n/v	n/v	<100 DB	<100 MI	7	<2.0 AT	<5.0 MI	5.0 Z8	12	<100 SVH	<2.0 MI	<10 Z8

See notes on the last page

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-3-7									
Sample Date			28-Sep-16	12-May-21	12-May-21		24-Nov-21	4-May-22	15-May-23	23-Oct-23	14-May-24	21-Sep-24
Sample ID			MW16-3-7	MW16-3-7	QC21-01		MW16-3-7	MW16-3-7	MW16-3-7	MW16-3-7	MW16-3-7	MW16-3-7
Sampling Company			STANTEC	STANTEC	STANTEC		STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			MAXX	BV	BV		AGAT	BV	BV	BV	BV	BV
Laboratory Work Order			B685112	C131657	C131657		21C834850	C229742	C334367	C386148	C434263	C475057
Laboratory Sample ID			PQ0282	ZU0434	ZU0429		3249830	ASN087	BQM165	CCP848	CNN525	CWB146
Location Description			EIA Project Well	EIA Project Well	EIA Project Well		EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated	Unconsolidated	Unconsolidated Field Duplicate	RPD (%)	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated
Field Parameters												
Dissolved Oxygen, Field	mg/L	n/v	-	8.41	-	-	6.99	4.05	10.5	3.0	23.4	3.46
Electrical Conductivity, Field	µS/cm	1,000[A]	**2,410[A]**	**1,307[A]**	-	-	**1,845[A]**	**2,566[A]**	**2,481[A]**	**2,549[A]**	1.487	**2,864[A]**
Oxidation Reduction Potential, field	mV	n/v	-	51.9	-	-	104.4	85.6	215.8	37.5	28.9	68.6
pH, Field	S.U.	6.5-8.5[A]	7.3	7.30	-	-	7.1	6.64	7.34	7.27	7.74	7.14
Temperature, Field	deg C	n/v	9.4	8.4	-	-	7.46	10.4	13.9	3.38	5.8	9.2
Calculated Parameters												
Anion Sum	meq/L	n/v	32	29	30	nc	-	33	33	29	16	32
Cation Sum	meq/L	n/v	33	28	28	nc	-	35	32	30	18	28
Hardness (as CaCO3)	mg/L	n/v	950	770	780	1%	823	1,000	910	820	490	820
Ion Balance	%	n/v	1.0	2.6	2.8	nc	120	2.4	1.0	1.6	5.9	6.4
Nitrate	mg/L	13_f[A]	1.3	1.1	1.2	9%	0.8	<0.22	1.0	<0.22	6.2	0.64
Nitrate + Nitrite (as N)	mg/L	100[A]	0.30	0.26	0.26	0%	0.18	<0.050 DB	0.23	<0.050 Z8	1.4	0.15
Nitrite	mg/L	$0.197/1.97_{n4.o}$[A]	0.051	<0.033	<0.033	nc	<0.05	<0.033	<0.033	<0.033	<0.033	<0.033
Total Dissolved Solids	mg/L	500[A]	**2,000[A]**	**1,800[A]**	**1,800[A]**	0%	**1,550[A]**	**2,000[A]**	**2,000[A]**	**1,800[A]**	**940[A]**	**1,900[A]**
Sodium Adsorption Ratio (SAR)	none	5[A]	-	-	-	-	4.39	-	-	-	-	-
BTEX and Petroleum Hydrocarbons												
Benzene	mg/L	0.005[A]	<0.00040	<0.00040	<0.00040	nc	<0.0005	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	<0.00040	<0.00040	<0.00040	nc	<0.0003	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	<0.00040	<0.00040	<0.00040	nc	<0.0005	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	<0.00080	<0.00080	<0.00080	nc	-	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	<0.00040	<0.00040	<0.00040	nc	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	<0.00080	<0.00089	<0.00089	nc	<0.0005	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10	<0.10	<0.10	nc	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10	<0.10	<0.10	nc	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10	<0.10	<0.10	nc	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10
Miscellaneous Inorganics												
Dissolved Organic Carbon (DOC)	mg/L	n/v	8.0	5.1	4.4	15%	6.396	3.7	2.8	2.1	3.0	3.2
Electrical Conductivity, Lab	µS/cm	1,000[A]	**2,600[A]**	**2,400[A]**	**2,400[A]**	0%	**2,140[A]**	**2,500[A]**	**2,700[A]**	**2,400[A]**	**1,700[A]**	**2,500[A]**
Sediment	none	n/v	-	-	-	-	NotPresent	-	-	-	-	-
pH, lab	S.U.	6.5-8.5[A]	8.16	7.48	7.46	nc	8.07	7.81	7.86	8.06	7.98	7.96
Anions												
Alkalinity (P as CaCO3)	mg/L	n/v	<0.50	<1.0	<1.0	nc	<5	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	450	420	420	0%	387	470	440	370	190	430
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	550	510	510	0%	472	570	540	460	240	530
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<0.50	<1.0	<1.0	nc	<5	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<0.50	<1.0	<1.0	nc	<5	<1.0	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	**1,100 CD[A]**	**910 CD[A]**	**940 CD[A]**	3%	**710[A]**	**1,100[A]**	**1,000[A]**	**1,000[A]**	**180[A]**	**920[A]**
Chloride	mg/L	100[A]	12	62	63	2%	63.7	41	79	37	**290[A]**	**160[A]**
Fluoride	mg/L	1[A]	-	-	-	-	0.13	-	-	-	-	-
Nutrients												
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	**0.20[A]**	**0.073[A]**	**0.065[A]**	nc	**0.05[A]**	-	-	-	-	-
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	0.016	<0.010	<0.010	nc	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010
Orthophosphate (as P)	mg/L	n/v	0.0099 OG	0.013	0.013	nc	<0.15	0.0046	0.0077	0.0092	0.0086	0.013
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	-	-	-	-	-	**0.051[A]**	0.030	0.025	0.019	0.020
Nitrate (as N)	mg/L	3[A]	0.29	0.26	0.26	0%	0.18	<0.050	0.23	<0.050	1.4	0.15
Phosphorus, Total (Dissolved)	mg/L	n/v	0.0067	0.021	0.021	0%	-	0.0089	0.0060 P2	0.0061 P2	0.0081 P2	0.010 P2
Total Kjeldahl Nitrogen	mg/L	n/v	1.7 DB	1.11	1.00	10%	2.0	0.72	1.05	0.450	0.97	0.32
Nitrogen	mg/L	n/v	-	1.4 DB	1.3 DB	7%	-	0.72 DB	1.3 DB	0.450	2.4	0.47 DB
Metals - Dissolved												
Aluminum	mg/L	$0.007/0.05_{n1,e}$[A]	0.0064	<0.0030	<0.0030	nc	**0.045[A]**	**0.0089[A]**	<0.0030	0.0059	<0.0030	0.0057
Antimony	mg/L	0.006[A]	<0.00060	<0.00060	<0.00060	nc	<0.001	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	0.00078	<0.00020	0.00024	nc	<0.001	0.00045	0.00038	0.00039	0.00030	0.00041
Barium	mg/L	2[A]	0.035	0.025	0.024	nc	<0.05	0.025	0.022	0.016	0.056	0.077
Beryllium	mg/L	n/v	<0.0010	<0.0010	<0.0010	nc	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron	mg/L	1[A]	0.10	0.088	0.089	nc	0.08	0.10	0.096	0.10	0.031	0.084
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	0.000036	0.000020	<0.000020	nc	**0.000058[A]**	**0.000054[A]**	**0.000074[A]**	**0.000081[A]**	**0.000044[A]**	0.000036

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-3-7									
Sample Date			28-Sep-16	12-May-21	12-May-21		24-Nov-21	4-May-22	15-May-23	23-Oct-23	14-May-24	21-Sep-24
Sample ID			MW16-3-7	MW16-3-7	QC21-01		MW16-3-7	MW16-3-7	MW16-3-7	MW16-3-7	MW16-3-7	MW16-3-7
Sampling Company			STANTEC	STANTEC	STANTEC		STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			MAXX	BV	BV		AGAT	BV	BV	BV	BV	BV
Laboratory Work Order			B685112	C131657	C131657		21C834850	C229742	C334367	C386148	C434263	C475057
Laboratory Sample ID			PQ0282	ZU0434	ZU0429		3249830	ASN087	BQM165	CCP848	CNN525	CWB146
Location Description			EIA Project Well	EIA Project Well	EIA Project Well		EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated	Unconsolidated	Unconsolidated Field Duplicate	RPD (%)	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated
Calcium	mg/L	n/v	170	140	140	0%	130	160	160	130	97	140
Chromium	mg/L	0.05[A]	<0.0010	<0.0010	<0.0010	nc	0.0018	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt	mg/L	n/v	0.0023	0.00087	0.00085	nc	<0.0009	0.00063	0.00064	0.00078	<0.00030	<0.00030
Copper	mg/L	0.007[A]	0.00085	0.00029	0.00023	nc	0.0042	<0.0010	0.0010	<0.0010	0.0012	<0.0010
Iron	mg/L	0.3[A]	0.17	<0.060	<0.060	nc	<0.1	<0.060	<0.060	<0.060	<0.060	<0.060
Lead	mg/L	0.001/0.007$_{n3}$[A]	<0.00020	<0.00020	<0.00020	nc	**0.0012[A]**	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Lithium	mg/L	n/v	0.057	0.041	0.041	nc	-	0.055	0.055	0.053	0.026	0.047
Magnesium	mg/L	n/v	130	110	110	0%	121	150	130	120	59	110
Manganese	mg/L	0.02[A]	**0.39[A]**	**0.26[A]**	**0.26[A]**	0%	**0.201[A]**	**0.23[A]**	**0.24[A]**	0.012	0.020	**0.052[A]**
Mercury	mg/L	0.000005[A]	<0.0000020	<0.0000019	<0.0000019	nc	<0.0000025	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	0.0020	0.0011	0.0011	0%	0.002	0.0011	0.00089	0.0011	0.0018	0.0030
Nickel	mg/L	0/0.17$_{n3}$[A]	**0.0065[A]**	**0.0028[A]**	**0.0026[A]**	7%	**0.005[A]**	**0.0030[A]**	**0.0025[A]**	**0.0026[A]**	**0.0016[A]**	**0.0024[A]**
Phosphorus	mg/L	n/v	<0.10	<0.10	<0.10	nc	<0.08	<0.10	<0.10	<0.10	<0.10	<0.10
Potassium	mg/L	n/v	6.1	4.1	4.1	0%	4.7	4.8	4.4	4.7	3.9	4.8
Selenium	mg/L	0.002[A]	0.00026	<0.00020	<0.00020	nc	<0.0005	<0.00020	<0.00020	0.00024	0.00043	0.00031
Silicon	mg/L	n/v	5.1	4.2	4.1	2%	-	4.9	4.4	4.1	2.9	4.2
Silver	mg/L	0.00025[A]	<0.00010	<0.00010	<0.00010	nc	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium	mg/L	200[A]	**320[A]**	**280[A]**	**280[A]**	0%	**289[A]**	**330[A]**	**320[A]**	**320[A]**	190	**280[A]**
Strontium	mg/L	n/v	1.6	1.5	1.5	0%	-	1.7	1.8	1.5	0.86	1.3
Sulfur	mg/L	n/v	370	300	290	3%	-	380	340	300	67	260
Thallium	mg/L	n/v	<0.00020	<0.00020	<0.00020	nc	<0.0001	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Tin	mg/L	n/v	<0.0010	<0.0010	<0.0010	nc	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Titanium	mg/L	n/v	<0.0010	<0.0010	<0.0010	nc	0.002	0.0027	<0.0010	0.0018	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	**0.014[A]**	**0.012[A]**	**0.011[A]**	9%	**0.012[A]**	**0.014[A]**	**0.014[A]**	**0.012[A]**	0.0043	**0.014[A]**
Vanadium	mg/L	n/v	<0.0010	<0.0010	<0.0010	nc	-	0.0013	0.0010	0.0010	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	<0.0030	<0.0030	<0.0030	nc	0.007	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Metals - Total												
Mercury	mg/L	0.000005[A]	***<0.0060 DB***	**0.00117 DB[A]**	**0.00021 DB[A]**	nc	**0.000016[A]**	**0.000047[A]**	**0.000059[A]**	0.0000022	**0.000047 DB[A]**	**0.0000167[A]**
Phosphorus	mg/L	n/v	-	-	-	-	1.19	-	-	-	-	-
Microbiological Parameters												
Escherichia coli (E.Coli)	mpn/100mL	n/v	<10 DB	<100 MI	<10 MI	nc	24	<2.0 AT	<5.0 Z8	<5.0 Z8	<10 MI	<2.0 MI
Fecal Coliforms	mpn/100mL	n/v	<10 DB	<100 MI	10 MI	nc	40	<10 AT	<5.0 Z8	5.0 Z8	10 MI	<2.0 MI
Heterotrophic Plate Count	cfu/mL	n/v	>6000	5,700 MI	6,800 MI	18%	10,900	2,600	1,200 Z8	1,300	-	-
Heterotrophic Plate Count	mpn/100mL	n/v	-	-	-	-	-	-	-	-	>4800 MI	>2400
Total Coliforms	mpn/100mL	n/v	450 DB	<100 MI	41 MI	nc	238	<2.0 AT	<5.0 Z8	170 Z8	<10 MI	<2.0 MI

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-4-16
Sample Date			4-Oct-16
Sample ID			MW16-4-16
Sampling Company			STANTEC
Laboratory			MAXX
Laboratory Work Order			B687243
Laboratory Sample ID			PR5506
Location Description			EIA Project Well
Sample Type	**Units**	**2024 AEPA Tier 1**	
Calculated Parameters			
Anion Sum	meq/L	n/v	55
Cation Sum	meq/L	n/v	51
Hardness (as CaCO3)	mg/L	n/v	1,700
Ion Balance	%	n/v	0.94
Nitrate	mg/L	13_f [A]	0.045
Nitrate + Nitrite (as N)	mg/L	100 [A]	<0.020
Nitrite	mg/L	$0.197/1.97_{n4.a}$ [A]	<0.033
Total Dissolved Solids	mg/L	500 [A]	**3,400** [A]
BTEX and Petroleum Hydrocarbons			
Benzene	mg/L	0.005 [A]	<0.00040
Toluene	mg/L	0.024 [A]	<0.00040
Ethylbenzene	mg/L	0.0016 [A]	<0.00040
Xylene, m & p-	mg/L	n/v	<0.00080
Xylene, o-	mg/L	n/v	<0.00040
Xylenes, Total	mg/L	0.02 [A]	<0.00080
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2 [A]	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1 [A]	<0.10
Miscellaneous Inorganics			
Dissolved Organic Carbon (DOC)	mg/L	n/v	5.2
Electrical Conductivity, Lab	µS/cm	1,000 [A]	**4,000** [A]
pH, lab	S.U.	6.5-8.5 [A]	7.45
Anions			
Alkalinity (P as CaCO3)	mg/L	n/v	<0.50
Alkalinity, Total (as CaCO3)	mg/L	n/v	460
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	560
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<0.50
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<0.50
Sulfate	mg/L	$128/429_{n3}$ [A]	**2,200 CD** [A]
Chloride	mg/L	100 [A]	3.0
Nutrients			
Ammonia (as N)	mg/L	$0.035/125_{n2}$ [A]	**1.0** [A]
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$ [A]	<0.010
Orthophosphate (as P)	mg/L	n/v	<0.0030
Nitrate (as N)	mg/L	3 [A]	0.010
Phosphorus, Total (Dissolved)	mg/L	n/v	<0.0030
Total Kjeldahl Nitrogen	mg/L	n/v	1.1
Metals - Dissolved			
Aluminum	mg/L	$0.007/0.05_{n1.e}$ [A]	<0.0030
Antimony	mg/L	0.006 [A]	<0.00060
Arsenic	mg/L	0.005 [A]	0.0019
Barium	mg/L	2 [A]	<0.010
Beryllium	mg/L	n/v	<0.0010
Boron	mg/L	1 [A]	0.11
Cadmium	mg/L	$0.00004/0.00037_{n3}$ [A]	<0.000020
Calcium	mg/L	n/v	380
Chromium	mg/L	0.05 [A]	<0.0010
Cobalt	mg/L	n/v	0.00031
Copper	mg/L	0.007 [A]	<0.00020
Iron	mg/L	0.3 [A]	**2.2** [A]
Lead	mg/L	$0.001/0.007_{n3}$ [A]	<0.00020
Lithium	mg/L	n/v	0.074
Magnesium	mg/L	n/v	180
Manganese	mg/L	0.02 [A]	**0.60** [A]
Mercury	mg/L	0.000005 [A]	<0.0000020
Molybdenum	mg/L	n/v	0.0015
Nickel	mg/L	$0/0.17_{n3}$ [A]	***<0.00050***

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-4-16
Sample Date			4-Oct-16
Sample ID			MW16-4-16
Sampling Company			STANTEC
Laboratory			MAXX
Laboratory Work Order			B687243
Laboratory Sample ID			PR5506
Location Description			EIA Project Well
Sample Type	**Units**	**2024 AEPA Tier 1**	
Phosphorus	mg/L	n/v	<0.10
Potassium	mg/L	n/v	8.5
Selenium	mg/L	0.002[A]	<0.00020
Silicon	mg/L	n/v	4.4
Silver	mg/L	0.00025[A]	<0.00010
Sodium	mg/L	200[A]	**390[A]**
Strontium	mg/L	n/v	5.9 CD
Sulfur	mg/L	n/v	720 CD
Thallium	mg/L	n/v	<0.00020
Tin	mg/L	n/v	<0.0010
Titanium	mg/L	n/v	<0.0010
Uranium	mg/L	0.01[A]	0.0022
Vanadium	mg/L	n/v	<0.0010
Zinc	mg/L	0.03[A]	<0.0030
Metals - Total			
Mercury	mg/L	0.000005[A]	***<0.0060 DB***
Microbiological Parameters			
Escherichia coli (E.Coli)	mpn/100mL	n/v	<2.0 DB
Fecal Coliforms	mpn/100mL	n/v	<2.0 DB
Heterotrophic Plate Count	cfu/mL	n/v	630 DB
Total Coliforms	mpn/100mL	n/v	<2.0 DB

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-4-22													
Sample Date			4-Oct-16	12-May-21	24-Nov-21	4-May-22	21-Nov-22	19-May-23	19-May-23		23-Oct-23	15-May-24	24-Sep-24	24-Sep-24		
Sample ID			MW16-4-20	MW16-4-22	MW16-4-22	MW16-4-22	MW16-4-22	MW16-4-22	WS2023-4		MW16-4-22	MW 16-4-22	MW16-4-22	SR24-08		
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC		STANTEC	STANTEC	STANTEC	STANTEC		
Laboratory			MAXX	BV	AGAT	BV	BV	BV	BV		BV	BV	BV	BV		
Laboratory Work Order			B687243	C131657	21C834850	C229742	C291884	C335907	C335907		C386148	C435079	C475814	C475814		
Laboratory Sample ID			PR5501	ZU0433	3249832	ASN089	BHL365	BQT301	BQT303		CCP850	CNR023	CWH292	CWH297		
Location Description			EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well		EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well		
Sample Type	Units	2024 AEPA Tier 1	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock Field Duplicate	RPD (%)	Bedrock	Bedrock	Bedrock	Bedrock Field Duplicate	RPD (%)	
Field Parameters																
Dissolved Oxygen, Field	mg/L	n/v	-	6.51	3.59	2.73	10.4	2.0	-	-	4.2	2.6	1.25	-	-	
Electrical Conductivity, Field	µS/cm	1,000[A]	**3,550[A]**	**2,857[A]**	**4,143[A]**	**4,362[A]**	**4,085[A]**	**3,934[A]**	-	-	**4,497[A]**	4.078	**4,356[A]**	-	-	
Oxidation Reduction Potential, field	mV	n/v	-	11.9	37.2	-28.7	-22.8	-75.0	-	-	-29.7	-68.3	-6.8	-	-	
pH, Field	S.U.	6.5-8.5[A]	7.2	6.75	6.88	**6.33[A]**	6.99	7.04	-	-	6.75	7.45	6.74	-	-	
Temperature, Field	deg C	n/v	6.2	8.5	5.38	14.7	4.2	17.9	-	-	2.0	7.5	10.1	-	-	
Calculated Parameters																
Anion Sum	meq/L	n/v	54	61	-	60	61	56	58	nc	59	57	57	67	nc	
Cation Sum	meq/L	n/v	50	57	-	59	55	62	63	nc	64	61	61	59	nc	
Hardness (as CaCO3)	mg/L	n/v	1,700	1,900	1,660	2,000	1,800	2,100	2,200	5%	2,200	2,100	2,100	2,000	5%	
Ion Balance	%	n/v	0.94	3.4	94	1.1	4.8	5.3	4.7	nc	4.0	3.9	3.5	6.6	nc	
Nitrate	mg/L	13_f[A]	<0.044	<0.22	<0.5	<0.22	<0.044	<0.22	<0.22	nc	<0.22	<0.22	0.31	1.2	nc	
Nitrate + Nitrite (as N)	mg/L	100[A]	<0.020	<0.050 MI	<0.02	<0.050 DB	<0.010	<0.050 Z8	<0.050 Z8	nc	<0.050 Z8	<0.050	0.069 MI	0.28 MI	nc	
Nitrite	mg/L	$0.197/1.97_{n4.o}$[A]	<0.033	<0.033	<0.10	<0.033	<0.033	<0.033	<0.033	nc	<0.033	<0.033	<0.033	<0.033	nc	
Total Dissolved Solids	mg/L	500[A]	**3,400[A]**	**3,800[A]**	**3,600[A]**	**3,800[A]**	**3,800[A]**	**3,700[A]**	**3,800[A]**	3%	**3,900[A]**	**3,700[A]**	**3,700[A]**	**4,100[A]**	10%	
Sodium Adsorption Ratio (SAR)	none	5[A]	-	-	4.98	-	-	-	-	-	-	-	-	-	-	
BTEX and Petroleum Hydrocarbons																
Benzene	mg/L	0.005[A]	<0.00040	<0.00040	<0.0005	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	nc	
Toluene	mg/L	0.024[A]	<0.00040	<0.00040	<0.0003	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	nc	
Ethylbenzene	mg/L	0.0016[A]	<0.00040	<0.00040	<0.0005	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	nc	
Xylene, m & p-	mg/L	n/v	<0.00080	<0.00080	-	<0.00080	<0.00080	<0.00080	<0.00080	nc	<0.00080	<0.00080	<0.00080	<0.00080	nc	
Xylene, o-	mg/L	n/v	<0.00040	<0.00040	-	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	nc	
Xylenes, Total	mg/L	0.02[A]	<0.00080	<0.00089	<0.0005	<0.00089	<0.00089	<0.00089	<0.00089	nc	<0.00089	<0.00089	<0.00089	<0.00089	nc	
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10	<0.10	<0.1	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	nc	
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10	<0.10	<0.1	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	nc	
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10	<0.10	<0.1	<0.10	<0.10	<0.10	<0.30 VV	nc	<0.10	<0.10	<0.10	<0.10	nc	
Miscellaneous Inorganics																
Dissolved Organic Carbon (DOC)	mg/L	n/v	5.1	6.5	5.386	5.6	6.1	8.6	7.1	19%	4.5	5.5	4.8	5.4	12%	
Electrical Conductivity, Lab	µS/cm	1,000[A]	**4,000[A]**	**4,200[A]**	**4,310[A]**	**4,300[A]**	**4,100[A]**	**4,300[A]**	**4,300[A]**	0%	**4,400[A]**	**4,300[A]**	**4,300[A]**	**4,300[A]**	0%	
Sediment	none	n/v	-	-	NotPresent	-	-	-	-	-	-	-	-	-	-	
pH, lab	S.U.	6.5-8.5[A]	7.52	7.37	7.79	7.64	7.48	7.71	7.53	nc	7.61	7.85	7.88	7.67	nc	
Anions																
Alkalinity (P as CaCO3)	mg/L	n/v	<0.50	<1.0	<5	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	nc	
Alkalinity, Total (as CaCO3)	mg/L	n/v	460	470	448	490	470	470	470	0%	480	480	480	530	10%	
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	570	580	547	590	580	580	570	2%	590	580	580	650	11%	
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<0.50	<1.0	<5	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	nc	
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<0.50	<1.0	<5	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	nc	
Sulfate	mg/L	$128/429_{n3}$[A]	**2,100 CD[A]**	**2,500 CD[A]**	**2,320[A]**	**2,400[A]**	**2,500[A]**	**2,200[A]**	**2,300[A]**	4%	**2,400[A]**	**2,300[A]**	**2,300[A]**	**2,700[A]**	16%	
Chloride	mg/L	100[A]	3.0	2.1	<1.0	1.1	<1.0	<1.0	<1.0	nc	1.3	1.1	1.8	<1.0	nc	
Fluoride	mg/L	1[A]	-	-	<0.03	-	-	-	-	-	-	-	-	-	-	
Nutrients																
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	**0.96[A]**	**0.97[A]**	**0.93[A]**	-	-	-	-	-	-	-	-	-	-	
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.010	nc	<0.010	<0.010	<0.010	<0.010	nc	
Orthophosphate (as P)	mg/L	n/v	<0.0030	<0.0030	<0.15	<0.0030	<0.0030	<0.0030	<0.0030	nc	<0.0030	<0.0030	<0.0030	<0.0030	nc	
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	-	-	-	**1.0[A]**	**1.0[A]**	**1.0[A]**	**1.0[A]**	0%	**0.92[A]**	**1.1[A]**	**0.99[A]**	**1.0[A]**	1%	
Nitrate (as N)	mg/L	3[A]	<0.010	<0.050	<0.02	<0.050	<0.010	<0.050	<0.050	nc	<0.050	<0.050	0.069	0.28	nc	
Phosphorus, Total (Dissolved)	mg/L	n/v	<0.0030 MA	0.017	-	0.0041	<0.0030	<0.0030	<0.0030	nc	0.014	<0.0030	<0.0030	<0.0030	nc	
Total Kjeldahl Nitrogen	mg/L	n/v	1.1	1.46	2.8	1.57	<2.0	1.43	1.01	**34%**	1.20	1.22	1.2	1.1	nc	
Nitrogen	mg/L	n/v	-	1.5 DB	-	1.6 DB	<2.0 DB	1.4	1.0 DB	**33%**	1.20	1.2	1.3	1.4	7%	
Metals - Dissolved																
Aluminum	mg/L	$0.007/0.05_{n1,e}$[A]	<0.0030	**0.14[A]**	0.005	<0.0030	<0.0030	0.0030	<0.0030	nc	<0.0030	<0.0030	0.0059	0.0031	nc	
Antimony	mg/L	0.006[A]	<0.00060	<0.00060	<0.001	<0.00060	<0.00060	<0.00060	<0.00060	nc	<0.00060	<0.00060	<0.00060	<0.00060	nc	
Arsenic	mg/L	0.005[A]	0.0017	0.0020	0.001	0.00075	0.00099	0.0016	0.0016	0%	0.0011	0.00096	0.0011	0.0010	10%	
Barium	mg/L	2[A]	<0.010	<0.010	<0.05	<0.010	<0.010	<0.010	<0.010	nc	<0.010	0.014	<0.010	<0.010	nc	
Beryllium	mg/L	n/v	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	nc	
Boron	mg/L	1[A]	0.11	0.12	0.12	0.13	0.097	0.12	0.18	nc	0.12	0.12	0.12	0.13	8%	
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	<0.000020	<0.000020	<0.000016	0.000026	**0.000054[A]**	<0.000020	<0.000020	nc	0.000026	<0.000020	<0.000020	<0.000020	nc	

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-4-22													
Sample Date			4-Oct-16	12-May-21	24-Nov-21	4-May-22	21-Nov-22	19-May-23	19-May-23		23-Oct-23	15-May-24	24-Sep-24	24-Sep-24		
Sample ID			MW16-4-20	MW16-4-22	MW16-4-22	MW16-4-22	MW16-4-22	MW16-4-22	WS2023-4		MW16-4-22	MW 16-4-22	MW16-4-22	SR24-08		
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC		STANTEC	STANTEC	STANTEC	STANTEC		
Laboratory			MAXX	BV	AGAT	BV	BV	BV	BV		BV	BV	BV	BV		
Laboratory Work Order			B687243	C131657	21C834850	C229742	C291884	C335907	C335907		C386148	C435079	C475814	C475814		
Laboratory Sample ID			PR5501	ZU0433	3249832	ASN089	BHL365	BQT301	BQT303		CCP850	CNR023	CWH292	CWH297		
Location Description			EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well		EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well		
Sample Type	Units	2024 AEPA Tier 1	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	RPD (%)	Bedrock	Bedrock	Bedrock	Bedrock	RPD (%)	
									Field Duplicate					Field Duplicate		
Calcium	mg/L	n/v	380	440	340	450	420	480	490	2%	480	470	460	450	2%	
Chromium	mg/L	0.05[A]	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	nc	
Cobalt	mg/L	n/v	0.00034	0.00055	0.0013	0.00033	0.00044	0.00035	0.00035	nc	0.00055	<0.00030	0.00039	0.00033	nc	
Copper	mg/L	0.007[A]	<0.00020	0.00026	<0.0008	<0.0010	<0.0010	0.0016	0.0016	nc	<0.0010	<0.0010	0.0050	0.0045	nc	
Iron	mg/L	0.3[A]	**2.2[A]**	**3.1[A]**	**1.7[A]**	<0.060	0.18	**1.4[A]**	**1.3[A]**	7%	**0.42[A]**	0.18	<0.060	<0.060	nc	
Lead	mg/L	0.001/0.007$_{n3}$[A]	<0.00020	<0.00020	<0.0002	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	<0.00020	nc	
Lithium	mg/L	n/v	0.070	0.082	-	0.078	0.073	0.098	0.10	nc	0.088	0.11	0.11	0.083	nc	
Magnesium	mg/L	n/v	180	200	197	210	190	230	230	0%	240	220	230	210	9%	
Manganese	mg/L	0.02[A]	**0.60[A]**	**0.90[A]**	**0.803[A]**	**0.78[A]**	**0.74[A]**	**0.84[A]**	**0.85[A]**	1%	**0.97[A]**	**0.80[A]**	**0.82[A]**	**0.79[A]**	4%	
Mercury	mg/L	0.000005[A]	<0.0000020	<0.0000019	<0.0000025	<0.0000019	<0.0000019	<0.0000019	<0.0000019	nc	<0.0000019	<0.0000019	<0.0000019	<0.0000019	nc	
Molybdenum	mg/L	n/v	0.0016	0.00090	0.004	0.00095	0.0012	0.00075	0.00088	nc	0.00087	0.00082	0.00092	0.00095	nc	
Nickel	mg/L	0/0.17$_{n3}$[A]	***<0.00050***	**0.0013[A]**	**0.004[A]**	**0.00083[A]**	**0.0013[A]**	**0.00091[A]**	***<0.00050***	nc	**0.0014[A]**	**0.00054[A]**	**0.0020[A]**	**0.0018[A]**	nc	
Phosphorus	mg/L	n/v	<0.10	<0.10	<0.08	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	nc	
Potassium	mg/L	n/v	8.2	8.5	8.9	9.4	8.7	9.7	9.9	2%	10	9.4	9.2	9.0	2%	
Selenium	mg/L	0.002[A]	<0.00020	<0.00020	0.0011	<0.00020	<0.00020	<0.00020	0.00050	nc	<0.00020	<0.00080 MI	<0.00020	<0.00020	nc	
Silicon	mg/L	n/v	4.3	5.4	-	4.8	4.2	5.0	5.0	0%	4.9	4.8	4.7	4.6	2%	
Silver	mg/L	0.00025[A]	<0.00010	<0.00010	0.00005	<0.00010	<0.00010	<0.00010	<0.00010	nc	<0.00010	<0.00010	<0.00010	<0.00010	nc	
Sodium	mg/L	200[A]	**370[A]**	**400[A]**	**466[A]**	**430[A]**	**420[A]**	**450[A]**	**450[A]**	0%	**470[A]**	**440[A]**	**440[A]**	**420[A]**	5%	
Strontium	mg/L	n/v	6.0 CD	6.1 CD	-	6.7	6.6	6.7	6.5	3%	7.1	6.9	7.1	6.9	3%	
Sulfur	mg/L	n/v	730 CD	690 CD	-	850	750	790	800	1%	870	850	870	840	4%	
Thallium	mg/L	n/v	<0.00020	<0.00020	0.0001	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	<0.00020	nc	
Tin	mg/L	n/v	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	nc	
Titanium	mg/L	n/v	<0.0010	0.0029	0.002	0.0011	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	nc	
Uranium	mg/L	0.01[A]	0.0023	0.0023	0.002	0.0022	0.0022	0.0023	0.0023	0%	0.0021	0.0021	0.0022	0.0023	4%	
Vanadium	mg/L	n/v	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	nc	
Zinc	mg/L	0.03[A]	<0.0030	<0.0030	<0.005	<0.0030	0.0049	<0.0030	<0.0030	nc	0.0033	0.0038	0.011	0.010	nc	
Metals - Total																
Mercury	mg/L	0.000005[A]	***<0.0020 DB***	**0.000114 DB[A]**	<0.0000025	***<0.000019***	**0.000111[A]**	**0.0000118[A]**	**0.0000107[A]**	10%	0.0000019	0.0000039	<0.0000019	<0.0000019	nc	
Phosphorus	mg/L	n/v	-	-	1.01	-	-	-	-	-	-	-	-	-	-	
Microbiological Parameters																
Escherichia coli (E.Coli)	mpn/100mL	n/v	<2.0 DB	<100 MI	<1	<2.0 AT	<1.0	<1.0	<1.0	nc	<2.0 Z8	<1.0	<1.0	<1.0	nc	
Fecal Coliforms	mpn/100mL	n/v	<2.0 DB	<100 MI	3	<10 AT	<1.0	<1.0	<1.0	nc	<2.0 Z8	<1.0	<1.0	<1.0	nc	
Heterotrophic Plate Count	cfu/mL	n/v	550 DB	4,100 MI	500	3,300	65	1,500	1,200	22%	>6000	-	-	-	-	
Heterotrophic Plate Count	mpn/100mL	n/v	-	-	-	-	-	-	-	-	-	21 SVH	>2400	>2400	nc	
Total Coliforms	mpn/100mL	n/v	<2.0 DB	<100 MI	7	<2.0 AT	<1.0	<1.0	<1.0	nc	<2.0 Z8	5.2	<1.0	<1.0	nc	

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-5-11	
Sample Date			4-Oct-16	14-May-21
Sample ID			MW16-5-11	MW16-5-4
Sampling Company			STANTEC	STANTEC
Laboratory			MAXX	BV
Laboratory Work Order			B687243	C132332
Laboratory Sample ID			PR5502	ZU4969
Location Description			Tier 2	Tier 2
Sample Type	Units	2024 AEPA Tier 1	Bedrock	Bedrock
Field Parameters				
Dissolved Oxygen, Field	mg/L	n/v	-	12.81
Electrical Conductivity, Field	µS/cm	1,000[A]	710	707.5
Oxidation Reduction Potential, field	mV	n/v	-	73.6
pH, Field	S.U.	6.5-8.5[A]	7.1	7.40
Temperature, Field	deg C	n/v	6.7	7.4
Calculated Parameters				
Anion Sum	meq/L	n/v	8.8	8.3
Cation Sum	meq/L	n/v	8.7	8.1
Hardness (as CaCO3)	mg/L	n/v	340	320
Ion Balance	%	n/v	0.99	1.2
Nitrate	mg/L	13_f[A]	3.3	2.7
Nitrate + Nitrite (as N)	mg/L	100[A]	0.76	0.62
Nitrite	mg/L	$0.197/1.97_{n4,a}$[A]	<0.033	<0.033
Total Dissolved Solids	mg/L	500[A]	440	410
BTEX and Petroleum Hydrocarbons				
Benzene	mg/L	0.005[A]	0.00055	<0.00040
Toluene	mg/L	0.024[A]	0.0013	<0.00040
Ethylbenzene	mg/L	0.0016[A]	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	<0.00080	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10	<0.10
Miscellaneous Inorganics				
Dissolved Organic Carbon (DOC)	mg/L	n/v	2.8	3.6
Electrical Conductivity, Lab	µS/cm	1,000[A]	780	720
pH, lab	S.U.	6.5-8.5[A]	7.96	7.96
Anions				
Alkalinity (P as CaCO3)	mg/L	n/v	<0.50	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	380	370
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	470	450
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<0.50	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<0.50	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	43	36
Chloride	mg/L	100[A]	4.8	3.3
Nutrients				
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	**0.062**[A]	**0.14**[A]
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	<0.010	<0.010
Orthophosphate (as P)	mg/L	n/v	<0.0030	<0.0030
Nitrate (as N)	mg/L	3[A]	0.76	0.62
Phosphorus, Total (Dissolved)	mg/L	n/v	0.0034	0.0059
Total Kjeldahl Nitrogen	mg/L	n/v	7.5 DB	2.4
Nitrogen	mg/L	n/v	-	3.0 DB
Metals - Dissolved				
Aluminum	mg/L	$0.007/0.05_{n1,e}$[A]	**0.011**[A]	**0.018**[A]
Antimony	mg/L	0.006[A]	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	0.0010	0.00047
Barium	mg/L	2[A]	0.068	0.071
Beryllium	mg/L	n/v	<0.0010	<0.0010
Boron	mg/L	1[A]	0.036	0.043
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	<0.000020	0.000022
Calcium	mg/L	n/v	76	69
Chromium	mg/L	0.05[A]	<0.0010	<0.0010
Cobalt	mg/L	n/v	0.0010	0.00040
Copper	mg/L	0.007[A]	<0.00020	0.0013
Iron	mg/L	0.3[A]	0.061	<0.060
Lead	mg/L	$0.001/0.007_{n3}$[A]	<0.00020	<0.00020

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-5-11	
Sample Date			4-Oct-16	14-May-21
Sample ID			MW16-5-11	MW16-5-4
Sampling Company			STANTEC	STANTEC
Laboratory			MAXX	BV
Laboratory Work Order			B687243	C132332
Laboratory Sample ID			PR5502	ZU4969
Location Description			Tier 2	Tier 2
Sample Type	Units	2024 AEPA Tier 1	Bedrock	Bedrock
Lithium	mg/L	n/v	<0.020	0.022
Magnesium	mg/L	n/v	38	37
Manganese	mg/L	0.02[A]	**0.15[A]**	**0.11[A]**
Mercury	mg/L	0.000005[A]	<0.0000020	<0.0000019
Molybdenum	mg/L	n/v	0.012	0.0056
Nickel	mg/L	$0/0.17_{n3}$[A]	**0.0020[A]**	**0.0010[A]**
Phosphorus	mg/L	n/v	<0.10	<0.10
Potassium	mg/L	n/v	3.7	3.7
Selenium	mg/L	0.002[A]	**0.0031[A]**	**0.0025[A]**
Silicon	mg/L	n/v	4.2	4.5
Silver	mg/L	0.00025[A]	<0.00010	<0.00010
Sodium	mg/L	200[A]	39	35
Strontium	mg/L	n/v	0.82	0.93
Sulfur	mg/L	n/v	13	11
Thallium	mg/L	n/v	<0.00020	<0.00020
Tin	mg/L	n/v	<0.0010	<0.0010
Titanium	mg/L	n/v	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	0.0053	0.0067
Vanadium	mg/L	n/v	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	<0.0030	<0.0030
Metals - Total				
Mercury	mg/L	0.000005[A]	***<0.020 DB***	**0.000383 DB[A]**
Microbiological Parameters				
Escherichia coli (E.Coli)	mpn/100mL	n/v	<100 DB	<100 MI
Fecal Coliforms	mpn/100mL	n/v	<100 DB	<100 MI
Heterotrophic Plate Count	cfu/mL	n/v	44,000 DB	18,000 MI
Total Coliforms	mpn/100mL	n/v	<100 DB	<100 MI

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location							MW16-6-11				
Sample Date			27-Sep-16	12-May-21	1-Dec-21	5-May-22	22-Nov-22	17-May-23	27-Oct-23	17-May-24	21-Sep-24
Sample ID			MW16-6-11	MW16-6-11	MW16-6-11	MW16-6-11	MW16-6-11	MW16-6-11	MW16-6-11	MW16-6-11	MW16-6-11
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			MAXX	BV	AGAT	BV	BV	BV	BV	BV	BV
Laboratory Work Order			B684487	C131657	21C838865	C230164	C292215	C335152	C387774	C435488	C475057
Laboratory Sample ID			PP7331	ZU0436	3284937	ASP040	BHN144	BQP595	CDB049	CNT051	CWB152
Location Description			EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated
Field Parameters											
Dissolved Oxygen, Field	mg/L	n/v	-	3.72	14.78	2.59	10.9	6.7	4.5	7.2	4.39
Electrical Conductivity, Field	µS/cm	1,000[A]	**3,070[A]**	**3,269[A]**	**3,104[A]**	**3,157[A]**	**2,088[A]**	**2,961[A]**	**3,147[A]**	3.078	**3,304[A]**
Oxidation Reduction Potential, field	mV	n/v	-	53.9	87.5	14.2	-45.6	118.1	108.7	12.6	107.1
pH, Field	S.U.	6.5-8.5[A]	7.3	6.95	7.13	6.97	7.40	7.41	7.16	6.90	7.42
Temperature, Field	deg C	n/v	7.7	13.4	5.78	8	4.4	6.2	7.4	7.7	8.3
Calculated Parameters											
Anion Sum	meq/L	n/v	43	46	-	43	44	42	40	42	46
Cation Sum	meq/L	n/v	41	43	-	45	45	42	44	43	41
Hardness (as CaCO3)	mg/L	n/v	1,300	1,400	1,530	1,400	1,400	1,400	1,400	1,400	1,300
Ion Balance	%	n/v	0.95	3.9	119	2.4	1.4	0.34	4.9	1.4	5.8
Nitrate	mg/L	13[A]	<0.044	<0.22	<0.5	<0.22	0.13	<0.44	0.21	0.079	0.076
Nitrate + Nitrite (as N)	mg/L	100[A]	<0.020	<0.050 MI	<0.02	<0.050 MSE AT	0.029	<0.10 Z8	0.048	0.018	0.017
Nitrite	mg/L	0.197/1.97$_{n4.a}$[A]	<0.033	<0.033	<0.10	<0.033	<0.033	<0.033	<0.033	<0.033	<0.033
Total Dissolved Solids	mg/L	500[A]	**2,700[A]**	**2,900[A]**	**2,730[A]**	**2,800[A]**	**2,900[A]**	**2,700[A]**	**2,600[A]**	**2,700[A]**	**2,800[A]**
Sodium Adsorption Ratio (SAR)	none	5[A]	-	-	4.32	-	-	-	-	-	-
BTEX and Petroleum Hydrocarbons											
Benzene	mg/L	0.005[A]	<0.00040	<0.00040	<0.0005	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	<0.00040	<0.00040	<0.0003	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	<0.00040	<0.00040	<0.0005	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	<0.00080	<0.00080	-	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	<0.00040	<0.00040	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	<0.00080	<0.00089	<0.0005	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10	<0.10	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10	<0.10	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10	<0.10	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Miscellaneous Inorganics											
Dissolved Organic Carbon (DOC)	mg/L	n/v	4.3	3.3	3	2.8	2.8	3.4	2.2	2.9 PRH	2.0
Electrical Conductivity, Lab	µS/cm	1,000[A]	**3,300[A]**	**3,400[A]**	**3,320[A]**	**3,200[A]**	**3,200[A]**	**3,300[A]**	**3,300[A]**	**3,300[A]**	**3,400[A]**
pH, lab	S.U.	6.5-8.5[A]	7.53	7.46	8.07	7.71	7.76	7.42	7.94	7.80	7.80
Anions											
Alkalinity (P as CaCO3)	mg/L	n/v	<0.50	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	330	370	276	400	360	370	350	370	430
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	410	460	336	480	440	460	430	460	520
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<0.50	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<0.50	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	128/429$_{n3}$[A]	**1,800 CD[A]**	**1,900 CD[A]**	**1,660[A]**	**1,700[A]**	**1,800[A]**	**1,700[A]**	**1,600[A]**	**1,600[A]**	**1,800[A]**
Chloride	mg/L	100[A]	4.3	2.1	1.0	1.6	1.3	1.7	1.1	12	1.8
Fluoride	mg/L	1[A]	-	-	0.11	-	-	-	-	-	-
Nutrients											
Ammonia (as N)	mg/L	0.035/125$_{n2}$[A]	**0.37[A]**	**0.32[A]**	**0.38[A]**	-	-	-	-	-	-
Nitrite (as N)	mg/L	0.06/0.6$_{n4}$[A]	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Orthophosphate (as P)	mg/L	n/v	<0.0030	0.0040	<0.15	0.0034	0.0039	0.0048	0.0040	<0.0030	<0.0030
Ammonia (as N)	mg/L	0.035/125$_{n2}$[A]	-	-	-	**0.39[A]**	**0.32[A]**	**0.33[A]**	**0.35[A]**	**0.29[A]**	**0.26[A]**
Nitrate (as N)	mg/L	3[A]	<0.010	<0.050	<0.02	<0.050	0.029	<0.10	0.048	0.018	0.017
Phosphorus, Total (Dissolved)	mg/L	n/v	<0.0030	0.0032	-	0.0052	0.0051	<0.0030 P2	<0.0030 P2	<0.0030 PRH	<0.0030
Total Kjeldahl Nitrogen	mg/L	n/v	6.5 DB	0.92	17.92	12.5	0.73	1.52	19	1.42	2.1
Nitrogen	mg/L	n/v	-	0.92 DB	-	12 DB	0.76 DB	1.5 DB	19 DB	1.4 DB	2.1 DB
Metals - Dissolved											
Aluminum	mg/L	0.007/0.05$_{n1.e}$[A]	0.0041	<0.0030	**0.117[A]**	<0.0030	<0.0030	**2.5[A]**	<0.0030	0.0064	<0.0030
Antimony	mg/L	0.006[A]	<0.00060	<0.00060	<0.001	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	0.00050	0.00039	0.002	0.00054	0.00037	0.0011	0.00043	0.00042	0.00026
Barium	mg/L	2[A]	0.021	0.011	<0.05	0.017	0.012	0.012	0.012	0.016	0.010
Beryllium	mg/L	n/v	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron	mg/L	1[A]	0.13	0.13	0.13	0.14	0.14	0.14	0.12	0.13	0.13
Cadmium	mg/L	0.00004/0.00037$_{n3}$[A]	**0.000058[A]**	0.000030	**0.000096[A]**	0.000037	**0.00015[A]**	**0.00022[A]**	**0.000075[A]**	**0.00010[A]**	**0.00012[A]**
Calcium	mg/L	n/v	310	320	361	320	330	310	330	320	310

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location							MW16-6-11				
Sample Date			27-Sep-16	12-May-21	1-Dec-21	5-May-22	22-Nov-22	17-May-23	27-Oct-23	17-May-24	21-Sep-24
Sample ID			MW16-6-11	MW16-6-11	MW16-6-11	MW16-6-11	MW16-6-11	MW16-6-11	MW16-6-11	MW16-6-11	MW16-6-11
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			MAXX	BV	AGAT	BV	BV	BV	BV	BV	BV
Laboratory Work Order			B684487	C131657	21C838865	C230164	C292215	C335152	C387774	C435488	C475057
Laboratory Sample ID			PP7331	ZU0436	3284937	ASP040	BHN144	BQP595	CDB049	CNT051	CWB152
Location Description			EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated
Chromium	mg/L	0.05[A]	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	0.0023	<0.0010	<0.0010	<0.0010
Cobalt	mg/L	n/v	0.0041	0.0023	0.0018	0.0013	0.0019	0.0028	0.0015	0.0014	0.0016
Copper	mg/L	0.007[A]	<0.00020	0.00038	0.0009	<0.0010	<0.0010	0.0035	<0.0010	<0.0010	<0.0010
Iron	mg/L	0.3[A]	0.11	0.16	<0.1	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060
Lead	mg/L	0.001/0.007$_{n3}$[A]	<0.00020	<0.00020	<0.0002	<0.00020	<0.00020	0.0010	<0.00020	<0.00020	<0.00020
Lithium	mg/L	n/v	0.049	0.044	-	0.047	0.052	0.056	0.050	0.049	0.044
Magnesium	mg/L	n/v	140	140	152	150	140	140	130	140	130
Manganese	mg/L	0.02[A]	**0.85[A]**	**1.2[A]**	**1.10[A]**	**0.68[A]**	**0.95[A]**	**0.96[A]**	**0.96[A]**	**0.83[A]**	**0.91[A]**
Mercury	mg/L	0.000005[A]	<0.0000020	<0.0000019	-	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	0.0014	0.00065	0.001	0.0018	0.00087	0.00088	0.0010	0.013	0.00087
Nickel	mg/L	0/0.17$_{n3}$[A]	**0.0064[A]**	**0.0046[A]**	**0.004[A]**	**0.0032[A]**	**0.0043[A]**	**0.0062[A]**	**0.0036[A]**	**0.0037[A]**	**0.0035[A]**
Phosphorus	mg/L	n/v	<0.10	<0.10	<0.08	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Potassium	mg/L	n/v	8.5	6.4	7.5	8.1	7.0	6.6	7.9	7.7	6.6
Selenium	mg/L	0.002[A]	0.00044	<0.00020	<0.0005	0.00069	0.00062	0.00023	0.00046	0.00022	0.00025
Silicon	mg/L	n/v	5.0	4.8	-	4.1	4.2	4.5	4.3	4.3	4.3
Silver	mg/L	0.00025[A]	<0.00010	<0.00010	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium	mg/L	200[A]	**330[A]**	**350[A]**	**388[A]**	**380[A]**	**380[A]**	**330[A]**	**380[A]**	**360[A]**	**340[A]**
Strontium	mg/L	n/v	2.4	2.9	-	3.0	3.1	2.7	3.1	2.8	2.5
Sulfur	mg/L	n/v	580 CD	530 CD	-	570	550	580	610	490	550
Thallium	mg/L	n/v	<0.00020	<0.00020	<0.0001	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Tin	mg/L	n/v	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Titanium	mg/L	n/v	<0.0010	<0.0010	0.002	<0.0010	<0.0010	0.068	<0.0010	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	0.0085	0.0067	0.008	0.0067	0.0069	0.0069	0.0059	0.0056	0.0060
Vanadium	mg/L	n/v	<0.0010	<0.0010	-	<0.0010	<0.0010	0.0022	<0.0010	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	<0.0030	<0.0030	<0.005	<0.0030	<0.0030	0.0083	<0.0030	**0.067[A]**	0.0041
Metals - Total											
Mercury	mg/L	0.000005[A]	***<0.02 DB***	**0.000361 DB[A]**	**0.000080[A]**	**0.00376[A]**	**0.000087[A]**	**0.00046[A]**	**0.000111[A]**	**0.00030 DB[A]**	**0.000727 DB[A]**
Phosphorus	mg/L	n/v	-	-	14.0	-	-	-	-	-	-
Microbiological Parameters											
Escherichia coli (E.Coli)	mpn/100mL	n/v	<100	<100 MI	1	<100	<1.0	<10 Z8	<100 Z8	<100 MI	<1.0
Fecal Coliforms	mpn/100mL	n/v	<100 DB	<100 MI	9	<100	<1.0	<10 Z8	<100 Z8	<100 MI	<1.0
Heterotrophic Plate Count	cfu/mL	n/v	56,000 DB	7,100 MI	12,100	22,000	71	3,100 Z8	2,900 Z8	-	-
Heterotrophic Plate Count	mpn/100mL	n/v	-	-	-	-	-	-	-	>12000 MI	>2400
Total Coliforms	mpn/100mL	n/v	9,300	<100 MI	113	<100	<1.0	<10 Z8	2,000 Z8	1,500 MI	1.0

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-6-20													
Sample Date			27-Sep-16	12-May-21	1-Dec-21	5-May-22	21-Nov-22	17-May-23	27-Oct-23	27-Oct-23		17-May-24	17-May-24		21-Sep-24
Sample ID			MW16-6-20	MW16-6-20	MW16-6-20	MW16-6-20	MW16-6-20	MW16-6-20	MW16-6-20	23-13		MW16-6-20	SR24-04		MW16-6-20
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC		STANTEC	STANTEC		STANTEC
Laboratory			MAXX	BV	AGAT	BV	BV	BV	BV	BV		BV	BV		BV
Laboratory Work Order			B684487	C131657	21C838865	C230164	C291884	C335152	C387774	C387774		C435488	C435488		C475057
Laboratory Sample ID			PP7332	ZU0437	3284936	ASP042	BHL364	BQP596	CDB050	CDB057		CNT052	CNT053		CWB151
Location Description			EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well		EIA Project Well	EIA Project Well		EIA Project Well
Sample Type	Units	2024 AEPA Tier 1	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock Field Duplicate	RPD (%)	Bedrock	Bedrock Field Duplicate	RPD (%)	Bedrock
Field Parameters															
Dissolved Oxygen, Field	mg/L	n/v	-	3.26	10.78	5.24	4.6	6.5	0.8	-	-	3.5	-	-	1.85
Electrical Conductivity, Field	µS/cm	1,000[A]	**1,715[A]**	**2,104[A]**	**2,079[A]**	**2,255[A]**	**2,195[A]**	**2,042[A]**	**2,172[A]**	-	-	2.045	-	-	**2,310[A]**
Oxidation Reduction Potential, field	mV	n/v	-	-52.6	48.8	12.1	-23.8	73.7	-58.8	-	-	-87.6	-	-	-53.5
pH, Field	S.U.	6.5-8.5[A]	7.5	7.75	8.01	7.67	8.31	7.62	7.88	-	-	7.96	-	-	7.79
Temperature, Field	deg C	n/v	9.6	7.3	4.23	8.1	4.3	8.5	3.8	-	-	5.7	-	-	7
Calculated Parameters															
Anion Sum	meq/L	n/v	21	28	-	49	24	24	22	23	nc	25	25	nc	26
Cation Sum	meq/L	n/v	21	22	-	26	23	23	26	26	nc	24	24	nc	23
Hardness (as CaCO3)	mg/L	n/v	340	250	234	210	190	200	230	220	4%	200	200	0%	190
Ion Balance	%	n/v	0.98	12	112	32	2.4	2.8	8.2	5.7	nc	2.3	2.6	nc	7.6
Nitrate	mg/L	13_A[A]	0.086	<0.044	<0.5	<0.044	0.063	0.060	<0.044	<0.044	nc	<0.22	<0.22	nc	<0.044
Nitrate + Nitrite (as N)	mg/L	100[A]	<0.020	<0.010	<0.02	<0.010	0.014	0.013	<0.010	<0.010	nc	<0.050 MI	<0.050 MI	nc	<0.010
Nitrite	mg/L	$0.197/1.97_{n4.a}$[A]	<0.033	<0.033	<0.05	<0.033	<0.033	<0.033	<0.033	<0.033	nc	<0.033	<0.033	nc	<0.033
Total Dissolved Solids	mg/L	500[A]	**1,400[A]**	**1,700[A]**	**1,500[A]**	**2,400[A]**	**1,600[A]**	**1,600[A]**	**1,500[A]**	**1,600[A]**	6%	**1,600[A]**	**1,600[A]**	0%	**1,600[A]**
Sodium Adsorption Ratio (SAR)	none	5[A]	-	-	**12.9[A]**	-	-	-	-	-	-	-	-	-	-
BTEX and Petroleum Hydrocarbons															
Benzene	mg/L	0.005[A]	<0.00040	<0.00040	<0.0005	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	nc	<0.00040
Toluene	mg/L	0.024[A]	<0.00040	<0.00040	<0.0003	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	nc	<0.00040
Ethylbenzene	mg/L	0.0016[A]	<0.00040	<0.00040	<0.0005	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	nc	<0.00040
Xylene, m & p-	mg/L	n/v	<0.00080	<0.00080	-	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	nc	<0.00080	<0.00080	nc	<0.00080
Xylene, o-	mg/L	n/v	<0.00040	<0.00040	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	nc	<0.00040
Xylenes, Total	mg/L	0.02[A]	<0.00080	<0.00089	<0.0005	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	nc	<0.00089	<0.00089	nc	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10	<0.10	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	nc	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10	<0.10	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	nc	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10	<0.10	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	nc	<0.10
Miscellaneous Inorganics															
Dissolved Organic Carbon (DOC)	mg/L	n/v	4.1	3.0	4	3.0	2.6	1.8	2.1	3.1 DSM	nc	2.2 PRH	2.2 PRH	nc	2.0
Electrical Conductivity, Lab	µS/cm	1,000[A]	**2,000[A]**	**2,300[A]**	**2,290[A]**	**2,200[A]**	**2,200[A]**	**2,200[A]**	**2,200[A]**	**2,200[A]**	0%	**2,200[A]**	**2,200[A]**	0%	**2,200[A]**
pH, lab	S.U.	6.5-8.5[A]	7.99	8.10	8.49	8.18	8.11	7.97	8.30	8.41	nc	8.29	8.30	nc	8.23
Anions															
Alkalinity (P as CaCO3)	mg/L	n/v	<0.50	<1.0	6	<1.0	<1.0	<1.0	<1.0	5.7	nc	<1.0	<1.0	nc	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	260	460	243	1,500	290	290	270	310	14%	290	290	0%	310
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	320	560	281	1,900	360	360	330	360	9%	350	350	0%	380
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<0.50	<1.0	7	<1.0	<1.0	<1.0	<1.0	6.8	nc	<1.0	<1.0	nc	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<0.50	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0	nc	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	**770 CD[A]**	**920 CD[A]**	**814[A]**	**890[A]**	**880[A]**	**870[A]**	**790[A]**	**820[A]**	4%	**940[A]**	**930[A]**	1%	**960[A]**
Chloride	mg/L	100[A]	4.0	3.2	1.0	1.7	<1.0	2.3	<1.0	1.1	nc	<1.0	<1.0	nc	1.6
Fluoride	mg/L	1[A]	-	-	0.91	-	-	-	-	-	-	-	-	-	-
Nutrients															
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	**0.49[A]**	**1.1[A]**	**2.04[A]**	-	-	-	-	-	-	-	-	-	-
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	nc	<0.010	<0.010	nc	<0.010
Orthophosphate (as P)	mg/L	n/v	<0.0030	0.0031	<0.15	<0.0030	0.0037	0.0036	0.0032	0.0030	nc	<0.0030	<0.0030	nc	<0.0030
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	-	-	-	**1.3[A]**	**1.2[A]**	**1.1[A]**	**1.1[A]**	**1.1[A]**	0%	**1.1[A]**	**1.1[A]**	0%	**1.1[A]**
Nitrate (as N)	mg/L	3[A]	0.020	<0.010	<0.02	<0.010	0.014	0.013	<0.010	<0.010	nc	<0.050	<0.050	nc	<0.010
Phosphorus, Total (Dissolved)	mg/L	n/v	<0.0030	0.0087	-	0.019	<0.0030	<0.0030 P2	<0.0030 P2	<0.0030 P2	nc	<0.0030 PRH	<0.0030 PRH	nc	0.089
Total Kjeldahl Nitrogen	mg/L	n/v	1.3	1.25	16.64	4.3	<2.0	2.34	1.31	1.45	10%	1.22	1.27	4%	1.4
Nitrogen	mg/L	n/v	-	1.2	-	4.3 DB	<2.0 DB	2.4	1.3	1.5	14%	1.2	1.3	8%	1.4
Metals - Dissolved															
Aluminum	mg/L	$0.007/0.05_{n1,e}$[A]	0.0067	<0.0030	**0.397[A]**	<0.0030	<0.0030	0.0031	<0.0030	<0.0030	nc	<0.0030	<0.0030	nc	<0.0030
Antimony	mg/L	0.006[A]	<0.00060	<0.00060	<0.001	0.00065	<0.00060	<0.00060	<0.00060	<0.00060	nc	<0.00060	<0.00060	nc	<0.00060
Arsenic	mg/L	0.005[A]	0.00043	0.00041	<0.001	0.00081	<0.00020	0.00039	<0.00020	<0.00020	nc	<0.00020	<0.00020	nc	<0.00020
Barium	mg/L	2[A]	0.031	0.014	<0.05	0.023	0.018	0.020	<0.050	0.011	nc	<0.010	<0.010	nc	<0.010
Beryllium	mg/L	n/v	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	nc	<0.0010
Boron	mg/L	1[A]	0.093	0.11	0.11	0.12	0.092	0.12	0.15	0.10	nc	0.12	0.12	0%	0.11
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	<0.000020	<0.000020	<0.000016	**0.000069[A]**	<0.000020	<0.000020	<0.000020	<0.000020	nc	<0.000020	<0.000020	nc	<0.000020
Calcium	mg/L	n/v	76	63	63.2	55	50	54	60	59	2%	53	52	2%	50

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-6-20													
Sample Date			27-Sep-16	12-May-21	1-Dec-21	5-May-22	21-Nov-22	17-May-23	27-Oct-23	27-Oct-23		17-May-24	17-May-24		21-Sep-24
Sample ID			MW16-6-20	MW16-6-20	MW16-6-20	MW16-6-20	MW16-6-20	MW16-6-20	MW16-6-20	23-13		MW16-6-20	SR24-04		MW16-6-20
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC		STANTEC	STANTEC		STANTEC
Laboratory			MAXX	BV	AGAT	BV	BV	BV	BV	BV		BV	BV		BV
Laboratory Work Order			B684487	C131657	21C838865	C230164	C291884	C335152	C387774	C387774		C435488	C435488		C475057
Laboratory Sample ID			PP7332	ZU0437	3284936	ASP042	BHL364	BQP596	CDB050	CDB057		CNT052	CNT053		CWB151
Location Description			EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well		EIA Project Well	EIA Project Well		EIA Project Well
Sample Type	Units	2024 AEPA Tier 1	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock Field Duplicate	RPD (%)	Bedrock	Bedrock Field Duplicate	RPD (%)	Bedrock
Chromium	mg/L	0.05[A]	<0.0010	<0.0010	0.0008	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	nc	<0.0010
Cobalt	mg/L	n/v	0.00056	0.00049	<0.0009	0.00069	0.00033	0.00040	<0.00030	<0.00030	nc	<0.00030	<0.00030	nc	<0.00030
Copper	mg/L	0.007[A]	0.00056	**0.013[A]**	0.0011	<0.0010	<0.0010	0.0011	0.0026	0.0030	nc	<0.0010	<0.0010	nc	0.0017
Iron	mg/L	0.3[A]	<0.060	0.25	0.2	<0.060	<0.060	<0.060	<0.30	<0.060	nc	<0.060	<0.060	nc	<0.060
Lead	mg/L	0.001/0.007$_{n3}$[A]	<0.00020	0.00045	0.0006	0.00027	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	nc	<0.00020
Lithium	mg/L	n/v	0.044	0.048	-	0.070	0.060	0.080	<0.10	0.070	nc	0.069	0.064	nc	0.062
Magnesium	mg/L	n/v	36	22	18.5	17	15	17	19	17	11%	17	16	6%	15
Manganese	mg/L	0.02[A]	**0.16[A]**	**0.22[A]**	**0.119[A]**	**0.17[A]**	**0.11[A]**	**0.14[A]**	**0.11[A]**	**0.097[A]**	13%	**0.074[A]**	**0.077[A]**	4%	**0.068[A]**
Mercury	mg/L	0.000005[A]	<0.0000020	<0.0000019	-	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	nc	<0.0000019	<0.0000019	nc	<0.0000019
Molybdenum	mg/L	n/v	0.0060	0.0026	0.004	0.0043	0.0022	0.0026	0.0022	0.0023	4%	0.0024	0.0024	0%	0.0025
Nickel	mg/L	0/0.17$_{n3}$[A]	***<0.00050***	**0.0013[A]**	***<0.003***	**0.0013[A]**	**0.00062[A]**	**0.00061[A]**	***<0.00050***	***<0.00050***	nc	***<0.00050***	***<0.00050***	nc	***<0.00050***
Phosphorus	mg/L	n/v	<0.10	<0.10	<0.08	<0.10	<0.10	<0.10	<0.50	<0.10	nc	<0.10	<0.10	nc	<0.10
Potassium	mg/L	n/v	4.9	4.2	4.8	5.5	4.0	4.2	4.2	4.9	nc	4.0	4.0	0%	3.9
Selenium	mg/L	0.002[A]	<0.00020	<0.00020	<0.0005	0.00022	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	nc	<0.00020
Silicon	mg/L	n/v	3.4	3.5	-	2.7	2.8	3.3	3.9	3.4	nc	3.2	3.2	0%	3.1
Silver	mg/L	0.00025[A]	<0.00010	<0.00010	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	nc	<0.00010	<0.00010	nc	<0.00010
Sodium	mg/L	200[A]	**320[A]**	**390[A]**	**452[A]**	**490[A]**	**440[A]**	**420[A]**	**490[A]**	**490[A]**	0%	**460[A]**	**450[A]**	2%	**430[A]**
Strontium	mg/L	n/v	0.78	1.1	-	1.0	1.1	1.0	1.1	1.1	0%	1.0	1.0	0%	0.93
Sulfur	mg/L	n/v	250	300	-	280	230	280	330	250	28%	260	270	4%	260
Thallium	mg/L	n/v	<0.00020	<0.00020	<0.0001	0.00025	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	nc	<0.00020
Tin	mg/L	n/v	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	nc	<0.0010
Titanium	mg/L	n/v	<0.0010	<0.0010	0.003	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	nc	<0.0010
Uranium	mg/L	0.01[A]	0.0021	0.00071	<0.001	0.00092	<0.00010	0.00011	<0.00010	<0.00010	nc	<0.00010	<0.00010	nc	<0.00010
Vanadium	mg/L	n/v	<0.0010	<0.0010	-	0.0024	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	nc	<0.0010
Zinc	mg/L	0.03[A]	<0.0030	0.0036	0.007	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	nc	<0.0030	<0.0030	nc	0.0040
Metals - Total															
Mercury	mg/L	0.000005[A]	***<0.00020 DB***	**0.0000064[A]**	**0.000022[A]**	**0.000208[A]**	**0.000141[A]**	**0.000049[A]**	0.0000030	0.0000033	nc	<0.0000019	<0.0000019	nc	<0.0000019
Phosphorus	mg/L	n/v	-	-	<0.08	-	-	-	-	-	-	-	-	-	-
Microbiological Parameters															
Escherichia coli (E.Coli)	mpn/100mL	n/v	<1.0	<1.0	2	<100	<1.0	<10 Z8	<1.0	<1.0	nc	<1.0	<1.0	nc	<1.0
Fecal Coliforms	mpn/100mL	n/v	<1.0	<100 MI	5	<100	<1.0	<10 Z8	<1.0	<1.0	nc	<1.0	<1.0	nc	<1.0
Heterotrophic Plate Count	cfu/mL	n/v	>6000	4,000	13,800	26,000	8.0	10 Z9	97 SC1	120	21%	-	-	-	-
Heterotrophic Plate Count	mpn/100mL	n/v	-	-	-	-	-	-	-	-	-	1,600	1,700	6%	>2400
Total Coliforms	mpn/100mL	n/v	>2400	4.1	204	<100	<1.0	<10 Z8	1,600	770	**70%**	<1.0	<1.0	nc	56

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location				MW16-7-5												
Sample Date				27-Sep-16	13-May-21	13-May-21		1-Dec-21	5-May-22	16-Nov-22	17-May-23	23-Oct-23	14-May-24	21-Sep-24	3-Jun-25
Sample ID				MW16-7-5	MW16-7-5	QC21-02		MW16-7-5	MW16-7-5	MW16-7-5	MW16-7-5	MW16-7-5	MW16-7-5	MW16-7-5	MW16-7-5
Sampling Company				STANTEC	STANTEC	STANTEC		STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory				MAXX	BV	BV		AGAT	BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order				B684487	C132075	C132075		21C838865	C230164	C290717	C335152	C386148	C434263	C475057	C550515
Laboratory Sample ID				PP7333	ZU2983	ZU2990		3284938	ASP038	BHD546	BQP594	CCP852	CNN526	CWB148	DMG752
Location Description				Tier 2	Tier 2	Tier 2		Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
Lithology				Unconsolidated	Unconsolidated	Unconsolidated		Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated
Sample Type	Units	2024 AEPA Tier 1	UCL			Field Duplicate	RPD (%)								
Field Parameters															
Dissolved Oxygen, Field	mg/L	n/v	n/v	-	13.59	-	-	8.14	2.9	5.3	11.2	6.2	4.5	4.16	6.41
Electrical Conductivity, Field	µS/cm	1,000[A]	n/v	**3,660[A]**	**3,246[A]**	-	-	**3,318[A]**	**3,271[A]**	**3,116[A]**	**2,715[A]**	**2,876[A]**	2.577	**2,848[A]**	**2,623[A]**
Oxidation Reduction Potential, field	mV	n/v	n/v	-	63.0	-	-	95.7	5.8	-43.5	121.4	-26.5	44.8	106.7	162
pH, Field	S.U.	6.5-8.5[A]	n/v	7.5	7.26	-	-	7.28	7.09	7.07	7.53	7.05	7.10	7.27	7.25
Temperature, Field	deg C	n/v	n/v	7.6	6.5	-	-	5.94	7.4	11.3	6.2	4.4	10.7	6.8	6.94
Calculated Parameters															
Anion Sum	meq/L	n/v	n/v	55	36	42	nc	-	38	44	39	38	35	34	34
Cation Sum	meq/L	n/v	n/v	49	44	44	nc	-	43	40	39	39	35	33	30
Hardness (as CaCO3)	mg/L	n/v	n/v	1,600	1,400	1,400	0%	1,440	1,300	1,200	1,200	1,100	990	910	840
Ion Balance	%	n/v	n/v	0.90	9.8	2.5	nc	120	6.8	5.1	0.49	1.2	0.014	2.3	-
Ion Balance % Difference	%	n/v	n/v	-	-	-	-	-	-	-	-	-	-	-	5.6
Nitrate	mg/L	13[A]	n/v	<0.044	0.062	0.059	nc	2.2	0.088	<0.22	0.094	<0.044	<0.044	<0.22	<0.18
Nitrate + Nitrite (as N)	mg/L	100[A]	n/v	<0.020	0.014	0.013	nc	0.50	0.020	<0.050 MI	0.021	<0.010	<0.010	<0.050 MI	<0.040
Nitrite	mg/L	$0.197/1.97_{n4.a}$[A]	n/v	<0.033	<0.033	<0.033	nc	<0.10	<0.033	<0.033	<0.033	<0.033	<0.033	<0.033	<0.13
Total Dissolved Solids	mg/L	500[A]	4,133[B]	**3,400[A]**	**2,400[A]**	**2,700[A]**	12%	**2,560[A]**	**2,500[A]**	**2,700[A]**	**2,400[A]**	**2,400[A]**	**2,200[A]**	**2,100[A]**	**2,000[A]**
Sodium Adsorption Ratio (SAR)	none	5[A]	n/v	-	-	-	-	4.64	-	-	-	-	-	-	-
BTEX and Petroleum Hydrocarbons															
Benzene	mg/L	0.005[A]	n/v	<0.00040	<0.00040	<0.00040	nc	<0.0005	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	n/v	<0.00040	<0.00040	<0.00040	nc	<0.0003	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	n/v	<0.00040	<0.00040	<0.00040	nc	<0.0005	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	n/v	<0.00080	<0.00080	<0.00080	nc	-	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	n/v	<0.00040	<0.00040	<0.00040	nc	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	n/v	<0.00080	<0.00089	<0.00089	nc	<0.0005	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	n/v	<0.10	<0.10	<0.10	nc	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	n/v	<0.10	<0.10	<0.10	nc	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	n/v	<0.10	<0.10	<0.10	nc	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Miscellaneous Inorganics															
Dissolved Organic Carbon (DOC)	mg/L	n/v	12.8[B]	9.2	3.6	4.5	22%	4	3.8	4.8	5.2	2.2	2.6	1.7	2.4
Electrical Conductivity, Lab	µS/cm	1,000[A]	4,786[B]	**3,900[A]**	**3,400[A]**	**3,300[A]**	3%	**3,470[A]**	**3,200[A]**	**3,300[A]**	**3,000[A]**	**2,800[A]**	**2,800[A]**	**2,800[A]**	**2,700[A]**
pH, lab	S.U.	6.5-8.5[A]	9.64[B]	7.57	7.91	7.91	nc	8.19	7.82	7.53	7.58	8.16	7.90	7.94	8.06
Anions															
Alkalinity (P as CaCO3)	mg/L	n/v	n/v	<0.50	<1.0	<1.0	nc	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	n/v	380	440	440	0%	415	400	450	470	470	480	550	500
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	n/v	470	540	540	0%	507	490	540	570	570	590	670	610
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	n/v	<0.50	<1.0	<1.0	nc	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	n/v	<0.50	<1.0	<1.0	nc	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	2,817[B]	**2,200 CD[A]**	**1,300 CD[A]**	**1,600 CD[A]**	21%	**1,450[A]**	**1,400[A]**	**1,700[A]**	**1,400[A]**	**1,400[A]**	**1,200[A]**	**1,100[A]**	**1,100[A]**
Chloride	mg/L	100[A]	21[B]	14	8.8	8.7	1%	6.9	5.8	8.8	5.9	4.6	3.5	3.4	2.6
Fluoride	mg/L	1[A]	n/v	-	-	-	-	<0.03	-	-	-	-	-	-	-
Nutrients															
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	n/v	<0.010	<0.010	<0.010	nc	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.040
Orthophosphate (as P)	mg/L	n/v	0.02[B]	0.012 OG	0.011	0.011	nc	***<0.15***	0.011	0.0075	0.0072	0.0097	<0.0030	0.0085	0.0069
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	0.18[B]	**0.16[A]**	**0.11[A]**	**0.12[A]**	9%	**0.06[A]**	0.029	0.019	**0.055[A]**	**0.037[A]**	0.035	0.019	**0.036[A]**
Nitrate (as N)	mg/L	3[A]	n/v	<0.010	0.014	0.013	nc	0.50	0.020	<0.050	0.021	<0.010	<0.010	<0.050	<0.040
Phosphorus, Dissolved	mg/L	n/v	n/v	-	-	-	-	-	-	-	-	-	-	-	0.0059 P2
Phosphorus, Total (Dissolved)	mg/L	n/v	0.02[B]	0.0065	0.012	0.015	nc	-	0.010	0.0073	0.0031 P2	0.015	0.0047	0.0056 P2	-
Total Kjeldahl Nitrogen	mg/L	n/v	3.6[B]	0.62	<1.0	1.0	nc	0.89	1.80	1.02	2.70	0.649	1.01	0.92	0.47
Nitrogen	mg/L	n/v	n/v	-	<1.0 DB	1.0 DB	nc	-	1.8 DB	1.0 DB	2.7	0.649	1.0 DB	0.92 DB	0.47 DB
Metals - Dissolved															
Aluminum	mg/L	$0.007/0.05_{n1.e}$[A]	n/v	0.0048	<0.0030	0.0035	nc	**0.039[A]**	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Antimony	mg/L	0.006[A]	n/v	<0.00060	<0.00060	<0.00060	nc	<0.001	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	0.00149[B]	0.0010	0.00046	0.00047	nc	<0.001	0.00063	0.00041	0.00031	0.00054	0.00023	0.00028	0.00026
Barium	mg/L	2[A]	0.04[B]	0.032	0.013	0.013	nc	***<0.05***	0.019	0.020	0.018	0.019	0.015	0.017	0.020
Beryllium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	nc	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron	mg/L	1[A]	0.16[B]	0.12	0.10	0.10	0%	0.11	0.10	0.099	0.094	0.13	0.093	0.11	0.099
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	0.000187[B]	**0.00013[A]**	0.000021	0.000021	nc	0.000028	<0.00002	**0.000083[A]**	**0.000077[A]**	<0.000020	**0.000057[A]**	0.000036	0.000029

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location				MW16-7-5												
Sample Date				27-Sep-16	13-May-21	13-May-21		1-Dec-21	5-May-22	16-Nov-22	17-May-23	23-Oct-23	14-May-24	21-Sep-24	3-Jun-25
Sample ID				MW16-7-5	MW16-7-5	QC21-02		MW16-7-5	MW16-7-5	MW16-7-5	MW16-7-5	MW16-7-5	MW16-7-5	MW16-7-5	MW16-7-5
Sampling Company				STANTEC	STANTEC	STANTEC		STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory				MAXX	BV	BV		AGAT	BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order				B684487	C132075	C132075		21C838865	C230164	C290717	C335152	C386148	C434263	C475057	C550515
Laboratory Sample ID				PP7333	ZU2983	ZU2990		3284938	ASP038	BHD546	BQP594	CCP852	CNN526	CWB148	DMG752
Location Description				Tier 2	Tier 2	Tier 2		Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
Lithology				Unconsolidated	Unconsolidated	Unconsolidated		Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated
Sample Type	Units	2024 AEPA Tier 1	UCL			Field Duplicate	RPD (%)								
Calcium	mg/L	n/v	341[B]	250	210	210	0%	234	200	190	190	180	160	150	140
Chromium	mg/L	0.05[A]	n/v	<0.0010	<0.0010	<0.0010	nc	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt	mg/L	n/v	n/v	0.0051	0.00077	0.00080	nc	0.0018	0.00085	<0.00030	<0.00030	0.00093	<0.00030	<0.00030	<0.00030
Copper	mg/L	0.007[A]	n/v	0.00097	0.00023	0.00029	nc	<0.0008	<0.0010	0.0011	0.0056	<0.0010	<0.0010	<0.0010	<0.0010
Iron	mg/L	0.3[A]	n/v	<0.060	<0.060	<0.060	nc	<0.1	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060
Lead	mg/L	0.001/0.007$_{n3}$[A]	n/v	<0.00020	<0.00020	<0.00020	nc	<0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Lithium	mg/L	n/v	0.11[B]	0.077	0.070	0.069	nc	-	0.060	0.070	0.073	0.068	0.060	0.045	0.047
Magnesium	mg/L	n/v	330[B]	230	210	210	0%	209	190	170	170	160	140	130	120
Manganese	mg/L	0.02[A]	0.89[B]	**0.81[A]**	**0.30[A]**	**0.29[A]**	3%	**0.389[A]**	**0.22[A]**	<0.0040	**0.12[A]**	**0.21 MSY[A]**	**0.15[A]**	**0.078[A]**	**0.13[A]**
Mercury	mg/L	0.000005[A]	0.0002642[B]	0.0000020	<0.0000019	<0.0000019	nc	-	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	**0.0000293 CZA[A]**
Molybdenum	mg/L	n/v	0.0036[B]	0.0026	0.0011	0.0010	10%	0.002	0.0014	0.0013	0.0014	0.0013	0.0010	0.0012	0.00091
Nickel	mg/L	0/0.17$_{n3}$[A]	0.0126[B]	**0.011[A]**	**0.0035[A]**	**0.0034[A]**	3%	**0.006[A]**	**0.0027[A]**	**0.0035[A]**	**0.0027[A]**	**0.0031[A]**	**0.0021[A]**	**0.0023[A]**	**0.0019[A]**
Phosphorus	mg/L	n/v	n/v	<0.10	<0.10	<0.10	nc	<0.08	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Potassium	mg/L	n/v	7.3[B]	5.9	4.5	4.5	0%	5.0	5.5	5.1	4.9	5.7 MSY	4.7	4.7	4.0
Selenium	mg/L	0.002[A]	0.001[B]	0.00046	0.00021	<0.00020	nc	<0.0005	0.00094	0.00055	0.00025	0.00039	<0.00020	<0.00020	0.00022
Silicon	mg/L	n/v	6.5[B]	5.6	5.0	5.0	0%	-	4.6	4.2	4.6	5.0	4.4	4.6	4.4
Silver	mg/L	0.00025[A]	n/v	<0.00010	<0.00010	<0.00010	nc	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium	mg/L	200[A]	513[B]	**400[A]**	**370[A]**	**370[A]**	0%	**405[A]**	**400[A]**	**370[A]**	**350[A]**	**390[A]**	**350[A]**	**330[A]**	**300[A]**
Strontium	mg/L	n/v	3.4[B]	2.4	2.3	2.3	0%	-	2.1	2.1	1.9	1.9	1.6	1.6	1.4
Sulfur	mg/L	n/v	988[B]	700 CD	610 CD	620 CD	2%	-	530	480	460	370	400	350	360
Thallium	mg/L	n/v	n/v	<0.00020	<0.00020	<0.00020	nc	<0.0001	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Tin	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	nc	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Titanium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	nc	0.002	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	0.028[B]	**0.020[A]**	**0.014[A]**	**0.014[A]**	0%	**0.018[A]**	**0.016[A]**	**0.016[A]**	**0.015[A]**	**0.014[A]**	**0.011[A]**	**0.012[A]**	0.010
Vanadium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	nc	-	0.0013	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	n/v	<0.0030	<0.0030	<0.0030	nc	<0.005	<0.0030	0.0036	<0.0030	<0.0030	<0.0030	0.0035	<0.0030
Metals - Total															
Mercury	mg/L	0.000005[A]	0.0002642[B]	***<0.0020 DB***	**0.0000292[A]**	**0.0000154[A]**	**62%**	**0.000013[A]**	**0.000114[A]**	**0.00021[A]**	**0.000196[A]**	**0.0000062[A]**	**0.000050 DB[A]**	**0.000032 DB[A]**	<0.0000019
Phosphorus	mg/L	n/v	n/v	-	-	-	-	1.11	-	-	-	-	-	-	-
Microbiological Parameters															
Escherichia coli (E.Coli)	mpn/100mL	n/v	n/v	<10	<10 SVH MI	<10 SVH MI	nc	14	<100	<100	<10 Z8	<100 Z8	<10 MI	<5.0 MI	<5.0 Z8
Fecal Coliforms	mpn/100mL	n/v	n/v	<10 DB	20 SVH MI	20 SVH MI	nc	35	<100	<100 MI	10 Z8	<100 Z8	<10 MI	<5.0 MI	<5.0 Z8
Heterotrophic Plate Count	cfu/mL	n/v	n/v	920	210	240	13%	1,760	2,400	130 SC1	1,900 Z8	710	-	-	-
Heterotrophic Plate Count	mpn/100mL	n/v	n/v	-	-	-	-	-	-	-	-	-	>4800 MI	>2400	>12000 MI
Total Coliforms	mpn/100mL	n/v	n/v	1,700	<10 SVH MI	<10 SVH MI	nc	365	<100	1,300 MI	140 Z8	310 Z8	62 MI	2,900 MI	79 Z8

See notes on the last page

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location				MW16-8-8											
Sample Date				4-Oct-16	13-May-21	13-Jan-22	6-May-22	6-May-22	23-Nov-22	19-May-23	27-Oct-23	17-May-24	24-Sep-24	6-Jun-25
Sample ID				MW16-8-8	MW16-8-8	MW16-8-8	MW16-8-8	MW16-8-8	MW16-8-8	MW16-8-8	MW16-8-8	MW16-8-8	MW16-8-8	MW16-8-8
Sampling Company				STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory				MAXX	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order				B687243	C132075	C202060	C230432	SRI-2022-FIELD_DATA	C292418	C335907	C387774	C435488	C475814	C551949
Laboratory Sample ID				PR5504	ZU2984	AMZ443	ASQ366	UNKNOWN	BHO195	BQT299	CDB048	CNT049	CWH294	DMO156
Location Description				Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
Lithology				Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated
Sample Type	Units	2024 AEPA Tier 1	UCL											
Field Parameters														
Dissolved Oxygen, Field	mg/L	n/v	n/v	-	14.49	3.65	4.15	4.15	5.9	8.0	3.5	8.1	3.57	3.55
Electrical Conductivity, Field	µS/cm	1,000[A]	n/v	**1,003[A]**	**1,081[A]**	**1,410[A]**	**1,157[A]**	**1,157[A]**	**1,099[A]**	**1,250[A]**	**1,124[A]**	0.934	**1,160[A]**	**1,211[A]**
Oxidation Reduction Potential, field	mV	n/v	n/v	-	88.7	73.6	68.1	68.1	-41.2	196.9	195.1	-15.5	127.4	82.3
pH, Field	S.U.	6.5-8.5[A]	n/v	7.1	7.38	7.59	7.43	7.43	7.31	7.53	7.29	7.27	7.27	7.2
Temperature, Field	deg C	n/v	n/v	7.7	7.1	6	9.5	9.5	4.6	14.0	6.1	6.6	10.8	10.39
Calculated Parameters														
Anion Sum	meq/L	n/v	n/v	12	12	13	14	-	14	13	14	14	14	14
Cation Sum	meq/L	n/v	n/v	12	13	14	16	-	14	14	15	15	15	15
Hardness (as CaCO3)	mg/L	n/v	n/v	550	590	620	710	-	640	660	670	680	670	670
Ion Balance	%	n/v	n/v	1.0	3.3	1.7	5.8	-	1.6	3.6	6.7	4.2	2.8	-
Ion Balance % Difference	%	n/v	n/v	-	-	-	-	-	-	-	-	-	-	2.0
Nitrate	mg/L	13_f[A]	n/v	6.9	3.6	3.6	3.3	-	2.8	2.0	1.4	2.6	2.8	2.3
Nitrate + Nitrite (as N)	mg/L	100[A]	n/v	1.6	0.81 MI	0.81	0.74	-	0.63	0.46	0.31	0.59	0.64	0.53
Nitrite	mg/L	$0.197/1.97_{n4.\alpha}$[A]	n/v	<0.033	<0.033	<0.033	<0.033	-	<0.033	<0.033	<0.033	<0.033	<0.033	<0.13
Total Dissolved Solids	mg/L	500[A]	931[B]	**640[A]**	**660[A]**	**720[A]**	**770[A]**	-	**740[A]**	**740[A]**	**780[A]**	**750[A]**	**760[A]**	**760[A]**
BTEX and Petroleum Hydrocarbons														
Benzene	mg/L	0.005[A]	n/v	<0.00040	<0.00040	<0.00040	<0.00040	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	n/v	<0.00040	<0.00040	<0.00040	<0.00040	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	n/v	<0.00040	<0.00040	<0.00040	<0.00040	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	n/v	<0.00080	<0.00080	<0.00080	<0.00080	-	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	n/v	<0.00040	<0.00040	<0.00040	<0.00040	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	n/v	<0.00080	<0.00089	<0.00089	<0.00089	-	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	n/v	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	n/v	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	n/v	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Miscellaneous Inorganics														
Dissolved Organic Carbon (DOC)	mg/L	n/v	6.8[B]	2.8	1.6	1.8	2.8	-	2.2	5.1	2.5	2.0 PRH	1.8	2.0
Electrical Conductivity, Lab	µS/cm	1,000[A]	1,372[B]	**1,100[A]**	**1,100[A]**	**1,100[A]**	**1,100[A]**	-	**1,100[A]**	**1,100[A]**	**1,100[A]**	**1,200[A]**	**1,100[A]**	**1,200[A]**
pH, lab	S.U.	6.5-8.5[A]	9.51[B]	7.90	7.81	7.50	7.78	-	7.80	7.72	7.73	7.73	7.83	7.84
Anions														
Alkalinity (P as CaCO3)	mg/L	n/v	n/v	<0.50	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	n/v	370	370	400	430	-	420	410	340	420	430	430
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	n/v	450	460	490	520	-	510	500	420	510	530	530
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	n/v	<0.50	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	n/v	<0.50	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	320[B]	**140[A]**	**180 CD[A]**	**210[A]**	**210[A]**	-	**220[A]**	**210[A]**	**230[A]**	**220[A]**	**220[A]**	**220[A]**
Chloride	mg/L	100[A]	99[B]	60	27	28	28	-	28	27	66	25	26	28
Nutrients														
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	n/v	<0.010	<0.010	<0.010	<0.010	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.040
Orthophosphate (as P)	mg/L	n/v	n/v	<0.0030	0.0049	0.0043	<0.0030	-	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	-
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	n/v	**0.055[A]**	<0.015	<0.015	<0.015	-	**0.10[A]**	<0.015	<0.015	<0.015	<0.015	<0.015
Nitrate (as N)	mg/L	3[A]	2.2[B]	1.6	0.81	0.81	0.74	-	0.63	0.46	0.31	0.59	0.64	0.53
Phosphorus, Dissolved	mg/L	n/v	n/v	-	-	-	-	-	-	-	-	-	-	<0.0030
Phosphorus, Total (Dissolved)	mg/L	n/v	n/v	0.0045	0.0053	1.4 DB	<0.0030	-	0.0050	<0.0030	<0.0030	<0.0030 PRH	<0.0030	-
Phosphorus, Total	mg/L	n/v	n/v	-	-	-	-	-	-	-	-	-	-	2.4
Total Kjeldahl Nitrogen	mg/L	n/v	9.3[B]	0.95	0.182	0.131	**14.2[B]**	-	<0.40	3.36	2.8	0.83	<0.20	0.53
Nitrogen	mg/L	n/v	n/v	-	0.99	0.94	15 DB	-	0.65 DB	3.8	3.1 DB	1.4 DB	0.58 DB NNA	1.1 DB
Metals - Dissolved														
Aluminum	mg/L	$0.007/0.05_{n1.e}$[A]	n/v	<0.0030	**0.0096[A]**	0.0049	0.0033	-	<0.0030	0.0045	<0.0030	<0.0030	0.0067	<0.0030
Antimony	mg/L	0.006[A]	n/v	<0.00060	<0.00060	<0.00060	<0.00060	-	<0.00060	0.0011	0.00068	<0.00060	0.00063	<0.00060
Arsenic	mg/L	0.005[A]	n/v	<0.00020	0.00025	<0.00020	0.00030	-	0.00036	0.00029	<0.00020	<0.00020	<0.00020	<0.00020
Barium	mg/L	2[A]	0.07[B]	0.039	0.044	0.045	0.046	-	0.048	0.062	0.050	0.045	0.043	0.039
Beryllium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron	mg/L	1[A]	0.08[B]	0.043	0.052	0.042	0.047	-	0.060	0.042	0.030	0.040	0.039	0.041
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	n/v	0.000040	<0.000020	<0.00002	<0.00002	-	<0.000020	0.000023	0.000022	<0.000020	<0.000020	<0.000020
Calcium	mg/L	n/v	181[B]	120	130	130	150	-	140	140	150	150	140	140

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location				MW16-8-8											
Sample Date				4-Oct-16	13-May-21	13-Jan-22	6-May-22	6-May-22	23-Nov-22	19-May-23	27-Oct-23	17-May-24	24-Sep-24	6-Jun-25
Sample ID				MW16-8-8	MW16-8-8	MW16-8-8	MW16-8-8	MW16-8-8	MW16-8-8	MW16-8-8	MW16-8-8	MW16-8-8	MW16-8-8	MW16-8-8
Sampling Company				STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory				MAXX	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order				B687243	C132075	C202060	C230432	SRI-2022-FIELD_DATA	C292418	C335907	C387774	C435488	C475814	C551949
Laboratory Sample ID				PR5504	ZU2984	AMZ443	ASQ366	UNKNOWN	BHO195	BQT299	CDB048	CNT049	CWH294	DMO156
Location Description				Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
Lithology				Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated
Sample Type	Units	2024 AEPA Tier 1	UCL											
Chromium	mg/L	0.05[A]	n/v	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt	mg/L	n/v	n/v	0.00057	<0.00030	<0.00030	<0.00030	-	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Copper	mg/L	0.007[A]	0.0035[B]	0.00032	0.0020	0.00053	<0.0010	-	0.0014	0.0011	<0.0010	<0.0010	<0.0010	0.0011
Iron	mg/L	0.3[A]	n/v	<0.060	<0.060	<0.060	<0.060	-	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060
Lead	mg/L	0.001/0.007$_{n3}$[A]	n/v	<0.00020	<0.00020	<0.00020	<0.00020	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Lithium	mg/L	n/v	n/v	<0.020	0.020	<0.020	<0.020	-	<0.020	0.039	<0.020	<0.020	0.032	<0.020
Magnesium	mg/L	n/v	99[B]	60	67	70	82	-	71	75	71	77	78	75
Manganese	mg/L	0.02[A]	0.09[B]	**0.12[AB]**	0.013	**0.025[A]**	0.019	-	**0.030[A]**	**0.044[A]**	0.010	0.0040	0.0095	0.0043
Mercury	mg/L	0.000005[A]	0.0024058[B]	<0.0000020	<0.0000019	<0.0000019	<0.0000019	-	<0.0000019	<0.0000019	0.0000025	<0.0000019	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	0.00204[B]	0.0011	0.00073	0.00078	0.0010	-	0.00086	0.0010	0.0010	0.0016	0.00092	0.00079
Nickel	mg/L	0/0.17$_{n3}$[A]	0.0033[B]	**0.0025[A]**	**0.0011[A]**	**0.0011[A]**	**0.00082[A]**	-	**0.0011[A]**	**0.0013[A]**	**0.0010[A]**	**0.00073[A]**	**0.00088[A]**	**0.00068[A]**
Phosphorus	mg/L	n/v	n/v	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Potassium	mg/L	n/v	7.8[B]	5.8	5.7	6.1	6.8	-	6.0	6.3	6.8	5.9	6.1	5.9
Selenium	mg/L	0.002[A]	0.013[B]	**0.011[A]**	**0.0044[A]**	**0.0038[A]**	**0.0035[A]**	-	**0.0040[A]**	0.0020	**0.0022[A]**	**0.0024[A]**	**0.0024[A]**	**0.0030[A]**
Silicon	mg/L	n/v	5.4[B]	4.2	4.9	4.4	4.6	-	4.3	4.6	4.2	4.1	4.3	4.5
Silver	mg/L	0.00025[A]	n/v	<0.00010	<0.00010	<0.00010	<0.00010	-	<0.00010	<0.00010	**0.00042[A]**	<0.00010	<0.00010	<0.00010
Sodium	mg/L	200[A]	50[B]	25	24	25	28	-	26	26	42	26	26	26
Strontium	mg/L	n/v	1.7[B]	0.90	1.1	1.2	1.3	-	1.2	1.2	1.3	1.2	1.2	1.1
Sulfur	mg/L	n/v	153[B]	45	73	62	68	-	66	66	120	66	74	77
Thallium	mg/L	n/v	n/v	<0.00020	<0.00020	<0.00020	<0.00020	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Tin	mg/L	n/v	0.0144[B]	<0.0010	<0.0010	<0.0010	0.0021	-	0.0018	0.012	0.0037	0.0039	0.0036	0.0040
Titanium	mg/L	n/v	n/v	<0.0010	<0.0010	0.0012	0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	0.018[B]	**0.011[A]**	**0.011[A]**	**0.012[A]**	**0.013[A]**	-	**0.013[A]**	**0.013[A]**	**0.014[A]**	**0.013[A]**	**0.014[A]**	0.010
Vanadium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	n/v	<0.0030	0.0036	<0.0030	<0.0030	-	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Metals - Total														
Mercury	mg/L	0.000005[A]	0.0024058[B]	***<0.02 DB***	**0.0000091[A]**	**0.000146[A]**	**0.00278[AB]**	-	**0.000105[A]**	**0.000857[A]**	**0.000123[A]**	**0.000289 DB[A]**	**0.00213 DB[A]**	**0.000223 DB[A]**
Microbiological Parameters														
Escherichia coli (E.Coli)	mpn/100mL	n/v	n/v	<100 DB	<1.0	<10 VV	<100 DVM	-	<1.0	<10 Z8	<100 Z8	<100 MI	<5.0 MI	<10 Z8
Fecal Coliforms	mpn/100mL	n/v	n/v	<100 DB	<1.0	<10 VV	<100 DVM	-	<1.0	<10 Z8	<100 Z8	<100 MI	<2.0 MI	<10 Z8
Heterotrophic Plate Count	cfu/mL	n/v	n/v	34,000 DB	1,100	16,000 VV	470 AT	-	45	13,000 Z8	900 Z8 SVH	-	-	-
Heterotrophic Plate Count	mpn/100mL	n/v	n/v	-	-	-	-	-	-	-	-	>12000 MI	>2400	20,000 Z8
Total Coliforms	mpn/100mL	n/v	n/v	<100 DB	>2400	200 VV	530 DVM	-	<1.0	3,700 Z8	6,300 Z8	1,900 MI	37 MI	<10 Z8

See notes on the last page

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location				MW16-8-19															
Sample Date				4-Oct-16	13-May-21	13-May-21		13-Jan-22	6-May-22	23-Nov-22		23-Nov-22	19-May-23	27-Oct-23	27-Oct-23		17-May-24	24-Sep-24	6-Jun-25
Sample ID				MW16-8-19	MW16-8-19	QC21-03		MW16-8-19	MW16-8-9	22-15		MW16-8-19	MW16-8-19	MW16-8-19	23-12		MW16-8-19	MW16-8-19	MW16-8-19
Sampling Company				STANTEC	STANTEC	STANTEC		STANTEC	STANTEC	STANTEC		STANTEC	STANTEC	STANTEC	STANTEC		STANTEC	STANTEC	STANTEC
Laboratory				MAXX	BV	BV		BV	BV	BV		BV	BV	BV	BV		BV	BV	BV
Laboratory Work Order				B687243	C132075	C132075		C202060	C230432	C292418		C292418	C335907	C387774	C387774		C435488	C475814	C551949
Laboratory Sample ID				PR5505	ZU2985	ZU2991		AMZ444	ASQ367	BHO197		BHO194	BQT300	CDB047	CDB056		CNT050	CWH295	DMO157
Location Description				Tier 2	Tier 2	Tier 2		Tier 2	Tier 2	Tier 2		Tier 2	Tier 2	Tier 2	Tier 2		Tier 2	Tier 2	Tier 2
Lithology				Bedrock	Bedrock	Bedrock		Bedrock	Bedrock	Bedrock		Bedrock	Bedrock	Bedrock	Bedrock		Bedrock	Bedrock	Bedrock
Sample Type	Units	2024 AEPA Tier 1	UCL			Field Duplicate	RPD (%)			Field Duplicate	RPD (%)				Field Duplicate	RPD (%)			
Field Parameters																			
Dissolved Oxygen, Field	mg/L	n/v	n/v	-	2.75	-	-	4.81	3.3	-	-	6.9	7.6	1.7	-	-	3.4	3.76	1.15
Electrical Conductivity, Field	µS/cm	1,000[A]	n/v	**1,130[A]**	**1,246[A]**	-	-	**1,282[A]**	**1,292[A]**	-	-	**1,284[A]**	**1,227[A]**	**1,267[A]**	-	-	1.195	**1,328[A]**	**1,320[A]**
Oxidation Reduction Potential, field	mV	n/v	n/v	-	88.4	-	-	84.1	84.5	-	-	-53.6	200.2	204.0	-	-	9.1	138.5	88.3
pH, Field	S.U.	6.5-8.5[A]	n/v	7.4	7.09	-	-	7.4	6.97	-	-	7.67	7.29	7.04	-	-	6.91	7.15	6.99
Temperature, Field	deg C	n/v	n/v	6.8	6.9	-	-	4.8	7.5	-	-	4.1	11.9	5.3	-	-	5.0	9.8	8.2
Calculated Parameters																			
Anion Sum	meq/L	n/v	n/v	15	14	14	nc	14	13	14	nc	14	15	13	14	nc	15	13	15
Cation Sum	meq/L	n/v	n/v	14	15	15	nc	16	16	15	nc	14	16	17	15	nc	16	15	16
Hardness (as CaCO3)	mg/L	n/v	n/v	580	640	620	3%	670	680	630	5%	600	690	710	640	10%	680	620	650
Ion Balance	%	n/v	n/v	0.93	3.1	0.69	nc	5.7	9.3	4.9	nc	2.7	5.8	14	3.6	nc	5.1	4.7	-
Ion Balance % Difference	%	n/v	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2
Nitrate	mg/L	13_f[A]	n/v	3.1	3.8	3.9	3%	4.1	3.9	3.2	0%	3.2	3.2	2.6	2.6	0%	2.1	2.6	2.1
Nitrate + Nitrite (as N)	mg/L	100[A]	n/v	0.70	0.87 MI	0.87 MI	0%	0.92	0.88	0.73	1%	0.72	0.72	0.60	0.59	2%	0.47	0.59	0.47
Nitrite	mg/L	$0.197/1.97_{n4.a}$[A]	n/v	<0.033	<0.033	<0.033	nc	<0.033	<0.033	<0.033	nc	<0.033	<0.033	<0.033	<0.033	nc	<0.033	<0.033	<0.13
Total Dissolved Solids	mg/L	500[A]	925[B]	**750[A]**	**750[A]**	**750[A]**	0%	**760[A]**	**740[A]**	**730[A]**	1%	**720[A]**	**780[A]**	**750[A]**	**760[A]**	1%	**790[A]**	**720[A]**	**790[A]**
BTEX and Petroleum Hydrocarbons																			
Benzene	mg/L	0.005[A]	n/v	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	n/v	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	n/v	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	n/v	<0.00080	<0.00080	<0.00080	nc	<0.00080	<0.00080	<0.00080	nc	<0.00080	<0.00080	<0.00080	<0.00080	nc	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	n/v	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	n/v	<0.00080	<0.00089	<0.00089	nc	<0.00089	<0.00089	<0.00089	nc	<0.00089	<0.00089	<0.00089	<0.00089	nc	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	n/v	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	n/v	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	n/v	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10
Miscellaneous Inorganics																			
Dissolved Organic Carbon (DOC)	mg/L	n/v	4.9[B]	1.3	0.63	0.68	nc	0.95	1.8	1.8	nc	1.4	3.5	1.4	1.4	nc	1.4 PRH	2.1	1.5
Electrical Conductivity, Lab	µS/cm	1,000[A]	1,568[B]	**1,300[A]**	**1,300[A]**	**1,300[A]**	0%	**1,300[A]**	**1,200[A]**	**1,300[A]**	0%	**1,300[A]**	**1,300[A]**	**1,200[A]**	**1,300[A]**	8%	**1,300[A]**	**1,300[A]**	**1,300[A]**
pH, lab	S.U.	6.5-8.5[A]	9.44[B]	7.74	7.69	7.69	nc	7.43	7.65	7.68	nc	7.69	7.79	7.82	7.82	nc	7.85	7.65	7.77
Anions																			
Alkalinity (P as CaCO3)	mg/L	n/v	n/v	<0.50	<1.0	<1.0	nc	<1.0	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	n/v	460	440	440	0%	450	420	440	2%	430	470	390	460	16%	470	420	480
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	n/v	560	530	530	0%	540	510	530	0%	530	570	470	560	17%	580	520	590
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	n/v	<0.50	<1.0	<1.0	nc	<1.0	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	n/v	<0.50	<1.0	<1.0	nc	<1.0	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	129[B]	110	82	92	11%	85	84	91	2%	93	84	92	89	3%	92	96	100
Chloride	mg/L	100[A]	147[B]	**110[A]**	**130[A]**	**130[A]**	0%	**120[A]**	**120 AT[A]**	**110[A]**	0%	**110[A]**	**120[A]**	**110[A]**	**110[A]**	0%	**120[A]**	**110[A]**	**120[A]**
Nutrients																			
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	n/v	<0.010	<0.010	<0.010	nc	<0.010	<0.010	<0.010	nc	<0.010	<0.010	<0.010	<0.010	nc	<0.010	<0.010	<0.040
Orthophosphate (as P)	mg/L	n/v	n/v	<0.0030	<0.0030	<0.0030	nc	<0.0030	<0.0030	<0.0030	nc	<0.0030	<0.0030	0.0040	<0.0030	nc	<0.0030	<0.0030	-
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	n/v	***<0.050***	0.018	<0.015	nc	<0.015	<0.015	0.020	nc	<0.015	<0.015	<0.015	<0.015	nc	<0.015	<0.015	<0.015
Nitrate (as N)	mg/L	3[A]	1.39[B]	0.70	0.87	0.87	0%	0.92	0.88	0.73	1%	0.72	0.72	0.60	0.59	2%	0.47	0.59	0.47
Phosphorus, Dissolved	mg/L	n/v	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0030
Phosphorus, Total (Dissolved)	mg/L	n/v	n/v	<0.0030	<0.0030	<0.0030	nc	0.11 DB	<0.0030	<0.0030	nc	<0.0030	<0.0030	<0.0030 P2	<0.0030	nc	<0.0030 PRH	<0.0030	-
Phosphorus, Total	mg/L	n/v	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0059
Total Kjeldahl Nitrogen	mg/L	n/v	1[B]	**1.3[B]**	0.177	0.37	nc	0.105	0.075	<0.20	nc	<0.20	<0.020	0.118	<0.020	nc	<0.020	<0.020	0.12
Nitrogen	mg/L	n/v	n/v	-	1.0	1.2 DB	18%	1.0	0.95	0.61 DB	nc	0.60 DB	0.57 NN	0.71	0.60	17%	0.49	0.45 NNA	0.59
Metals - Dissolved																			
Aluminum	mg/L	$0.007/0.05_{n1.e}$[A]	n/v	<0.0030	<0.0030	<0.0030	nc	<0.0030	<0.0030	<0.0030	nc	<0.0030	0.0037	<0.0030	<0.0030	nc	<0.0030	0.0034	<0.0030
Antimony	mg/L	0.006[A]	n/v	<0.00060	<0.00060	<0.00060	nc	<0.00060	<0.00060	<0.00060	nc	<0.00060	<0.00060	<0.00060	<0.00060	nc	<0.00060	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	n/v	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020
Barium	mg/L	2[A]	0.08[B]	0.054	0.062	0.061	2%	0.063	0.067	0.063	0%	0.063	0.067	0.071	0.062	14%	0.062	0.064	0.060
Beryllium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010
Boron	mg/L	1[A]	0.06[B]	0.043	0.053	0.051	nc	0.047	0.052	0.044	nc	0.051	0.047	0.045	0.033	nc	0.047	0.044	0.047
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	0.000048[B]	0.000029	0.000020	0.000022	nc	0.000023	0.000028	<0.000020	nc	0.000034	0.000031	0.000028	0.000024	nc	0.000025	0.000035	0.000025
Calcium	mg/L	n/v	199[B]	130	150	140	7%	150	150	150	7%	140	160	170	150	13%	160	140	150
Chromium	mg/L	0.05[A]	n/v	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	0.0017	nc	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location				MW16-8-19															
Sample Date				4-Oct-16	13-May-21	13-May-21		13-Jan-22	6-May-22	23-Nov-22		23-Nov-22	19-May-23	27-Oct-23	27-Oct-23		17-May-24	24-Sep-24	6-Jun-25
Sample ID				MW16-8-19	MW16-8-19	QC21-03		MW16-8-19	MW16-8-9	22-15		MW16-8-19	MW16-8-19	MW16-8-19	23-12		MW16-8-19	MW16-8-19	MW16-8-19
Sampling Company				STANTEC	STANTEC	STANTEC		STANTEC	STANTEC	STANTEC		STANTEC	STANTEC	STANTEC	STANTEC		STANTEC	STANTEC	STANTEC
Laboratory				MAXX	BV	BV		BV	BV	BV		BV	BV	BV	BV		BV	BV	BV
Laboratory Work Order				B687243	C132075	C132075		C202060	C230432	C292418		C292418	C335907	C387774	C387774		C435488	C475814	C551949
Laboratory Sample ID				PR5505	ZU2985	ZU2991		AMZ444	ASQ367	BHO197		BHO194	BQT300	CDB047	CDB056		CNT050	CWH295	DMO157
Location Description				Tier 2	Tier 2	Tier 2		Tier 2	Tier 2	Tier 2		Tier 2	Tier 2	Tier 2	Tier 2		Tier 2	Tier 2	Tier 2
Lithology				Bedrock	Bedrock	Bedrock		Bedrock	Bedrock	Bedrock		Bedrock	Bedrock	Bedrock	Bedrock		Bedrock	Bedrock	Bedrock
Sample Type						Field Duplicate	RPD (%)			Field Duplicate	RPD (%)				Field Duplicate	RPD (%)			
Cobalt	mg/L	n/v	n/v	<0.00030	<0.00030	<0.00030	nc	<0.00030	<0.00030	<0.00030	nc	<0.00030	<0.00030	<0.00030	<0.00030	nc	<0.00030	<0.00030	<0.00030
Copper	mg/L	0.007[A]	n/v	<0.00020	0.00022	0.00029	nc	0.00051	<0.0010	0.0012	nc	0.0015	0.0020	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010
Iron	mg/L	0.3[A]	n/v	<0.060	<0.060	<0.060	nc	<0.060	<0.060	<0.060	nc	<0.060	<0.060	<0.060	<0.060	nc	<0.060	<0.060	<0.060
Lead	mg/L	0.001/0.007$_{n3}$[A]	n/v	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020
Lithium	mg/L	n/v	n/v	<0.020	0.021	<0.020	nc	0.028	<0.020	0.023	nc	<0.020	0.028	<0.020	<0.020	nc	0.023	<0.020	0.079
Magnesium	mg/L	n/v	87[B]	60	67	65	3%	70	72	64	6%	60	72	71	66	7%	71	64	68
Manganese	mg/L	0.02[A]	n/v	0.0062	0.0058	0.0053	nc	<0.0040	<0.0040	<0.0040	nc	<0.0040	<0.0040	<0.0040	<0.0040	nc	<0.0040	<0.0040	<0.0040
Mercury	mg/L	0.000005[A]	0.0000283[B]	<0.000002	<0.0000019	<0.0000019	nc	0.0000022	<0.0000019	<0.0000019	nc	<0.0000019	<0.0000019	<0.0000019	<0.0000019	nc	<0.0000019	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	0.00174[B]	0.00085	0.0011	0.0011	0%	0.00068	0.00060	0.00063	nc	0.00058	0.00067	0.00070	0.00063	nc	0.0012	0.00064	0.00048
Nickel	mg/L	0/0.17$_{n3}$[A]	n/v	***<0.00050***	***<0.00050***	***<0.00050***	nc	***<0.00050***	***<0.00050***	**0.0011[A]**	nc	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***	nc	***<0.00050***	***<0.00050***	***<0.00050***
Phosphorus	mg/L	n/v	n/v	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10
Potassium	mg/L	n/v	8.5[B]	5.7	6.1	5.9	3%	6.5	6.8	6.1	3%	5.9	6.7	7.4	6.2	18%	6.5	6.0	6.1
Selenium	mg/L	0.002[A]	0.012[B]	**0.0080[A]**	**0.0061[A]**	**0.0064[A]**	5%	**0.0086[A]**	**0.0077[A]**	**0.0090[A]**	5%	**0.0086[A]**	**0.0075[A]**	**0.0071[A]**	**0.0073[A]**	3%	**0.0066[A]**	**0.0059[A]**	**0.0049[A]**
Silicon	mg/L	n/v	5.3[B]	3.7	4.6	4.5	2%	4.1	4.1	3.9	5%	3.7	4.2	4.2	4.1	2%	4.2	3.8	4.3
Silver	mg/L	0.00025[A]	n/v	<0.00010	<0.00010	<0.00010	nc	<0.00010	<0.00010	<0.00010	nc	<0.00010	<0.00010	<0.00010	<0.00010	nc	<0.00010	<0.00010	<0.00010
Sodium	mg/L	200[A]	72[B]	47	51	49	4%	56	56	54	4%	52	56	62	54	14%	58	51	54
Strontium	mg/L	n/v	1.9[B]	1.3	1.4	1.4	0%	1.5	1.5	1.5	0%	1.5	1.5	1.7	1.5	13%	1.5	1.5	1.4
Sulfur	mg/L	n/v	41[B]	29	31	30	3%	27	27	28	4%	27	28	28	30	7%	31	29	36
Thallium	mg/L	n/v	n/v	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020
Tin	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010
Titanium	mg/L	n/v	n/v	0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	0.007[B]	0.0053	0.0044	0.0046	4%	0.0049	0.0050	0.0051	4%	0.0053	0.0056	0.0057	0.0056	2%	0.0053	0.0059	0.0049
Vanadium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	n/v	<0.0030	<0.0030	<0.0030	nc	<0.0030	<0.0030	<0.0030	nc	<0.0030	<0.0030	<0.0030	<0.0030	nc	<0.0030	<0.0030	<0.0030
Metals - Total																			
Mercury	mg/L	0.000005[A]	0.0000283[B]	***<0.000100 DB***	**0.0000262[A]**	**0.0000260[A]**	1%	**0.0000104[A]**	**0.0000058[A]**	<0.0000019	nc	0.0000036	0.0000036	<0.0000019	<0.0000019	nc	<0.0000019	0.0000026	<0.0000019
Microbiological Parameters																			
Escherichia coli (E.Coli)	mpn/100mL	n/v	n/v	<1.0	<10 MI	<10 MI	nc	<1.0	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0	<1.0
Fecal Coliforms	mpn/100mL	n/v	n/v	<1.0	<10 MI	<10 MI	nc	<1.0	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<5.0 MI	<1.0
Heterotrophic Plate Count	cfu/mL	n/v	n/v	620	210	110	**63%**	140	73	50	**35%**	35	230	13 SVH	18	**32%**	-	-	-
Heterotrophic Plate Count	mpn/100mL	n/v	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	1,200	1,000	870
Total Coliforms	mpn/100mL	n/v	n/v	27	<10 MI	<10 MI	nc	<1.0	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	nc	<1.0	6.3	<1.0

See notes on the last page

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-9-6
Sample Date			30-Sep-16
Sample ID			MW16-9-6
Sampling Company			STANTEC
Laboratory			MAXX
Laboratory Work Order			B686123
Laboratory Sample ID			PQ7066
Location Description			EIA Project Well
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated
Field Parameters			
Electrical Conductivity, Field	µS/cm	1,000[A]	**1,515[A]**
pH, Field	S.U.	6.5-8.5[A]	7.2
Temperature, Field	deg C	n/v	11
Calculated Parameters			
Anion Sum	meq/L	n/v	21
Cation Sum	meq/L	n/v	22
Hardness (as CaCO3)	mg/L	n/v	930
Ion Balance	%	n/v	1.1
Nitrate	mg/L	13_f[A]	0.065
Nitrate + Nitrite (as N)	mg/L	100[A]	<0.020
Nitrite	mg/L	$0.197/1.97_{n4.a}$[A]	<0.033
Total Dissolved Solids	mg/L	500[A]	**1,200[A]**
BTEX and Petroleum Hydrocarbons			
Benzene	mg/L	0.005[A]	<0.00040
Toluene	mg/L	0.024[A]	<0.00040
Ethylbenzene	mg/L	0.0016[A]	<0.00040
Xylene, m & p-	mg/L	n/v	<0.00080
Xylene, o-	mg/L	n/v	<0.00040
Xylenes, Total	mg/L	0.02[A]	<0.00080
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10
Miscellaneous Inorganics			
Dissolved Organic Carbon (DOC)	mg/L	n/v	4.7
Electrical Conductivity, Lab	µS/cm	1,000[A]	**1,700[A]**
pH, lab	S.U.	6.5-8.5[A]	7.88
Anions			
Alkalinity (P as CaCO3)	mg/L	n/v	<0.50
Alkalinity, Total (as CaCO3)	mg/L	n/v	510
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	630
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<0.50
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<0.50
Sulfate	mg/L	$128/429_{n3}$[A]	**490 CD[A]**
Chloride	mg/L	100[A]	1.6
Nutrients			
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	**0.16[A]**
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	<0.010
Orthophosphate (as P)	mg/L	n/v	0.0036
Nitrate (as N)	mg/L	3[A]	0.015
Phosphorus, Total (Dissolved)	mg/L	n/v	0.0059
Total Kjeldahl Nitrogen	mg/L	n/v	0.20
Metals - Dissolved			
Aluminum	mg/L	$0.007/0.05_{n1.e}$[A]	<0.0030
Antimony	mg/L	0.006[A]	<0.00060
Arsenic	mg/L	0.005[A]	0.00093
Barium	mg/L	2[A]	0.039
Beryllium	mg/L	n/v	<0.0010
Boron	mg/L	1[A]	0.14
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	**0.000073[A]**
Calcium	mg/L	n/v	220
Chromium	mg/L	0.05[A]	0.0043
Cobalt	mg/L	n/v	0.0037
Copper	mg/L	0.007[A]	0.00064
Iron	mg/L	0.3[A]	0.13
Lead	mg/L	$0.001/0.007_{n3}$[A]	<0.00020
Lithium	mg/L	n/v	0.030
Magnesium	mg/L	n/v	94

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-9-6
Sample Date			30-Sep-16
Sample ID			MW16-9-6
Sampling Company			STANTEC
Laboratory			MAXX
Laboratory Work Order			B686123
Laboratory Sample ID			PQ7066
Location Description			EIA Project Well
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated
Manganese	mg/L	0.02[A]	**0.93[A]**
Mercury	mg/L	0.000005[A]	<0.0000020
Molybdenum	mg/L	n/v	0.00082
Nickel	mg/L	0/0.17$_{n3}$[A]	**0.0071[A]**
Phosphorus	mg/L	n/v	<0.10
Potassium	mg/L	n/v	5.6
Selenium	mg/L	0.002[A]	<0.00020
Silicon	mg/L	n/v	5.5
Silver	mg/L	0.00025[A]	<0.00010
Sodium	mg/L	200[A]	71
Strontium	mg/L	n/v	1.4
Sulfur	mg/L	n/v	180
Thallium	mg/L	n/v	<0.00020
Tin	mg/L	n/v	<0.0010
Titanium	mg/L	n/v	<0.0010
Uranium	mg/L	0.01[A]	0.0086
Vanadium	mg/L	n/v	<0.0010
Zinc	mg/L	0.03[A]	<0.0030
Metals - Total			
Mercury	mg/L	0.000005[A]	***<0.000020 DB***
Microbiological Parameters			
Escherichia coli (E.Coli)	mpn/100mL	n/v	<1.0
Fecal Coliforms	mpn/100mL	n/v	<1.0
Heterotrophic Plate Count	cfu/mL	n/v	1,100
Total Coliforms	mpn/100mL	n/v	390

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location																			
Sample Date			4-Oct-16	13-May-21	24-Nov-21	24-Nov-21		9-May-22	9-May-22		MW16-10-15 17-Nov-22	17-May-23	23-Oct-23	14-May-24	21-Sep-24	21-Sep-24		5-Jun-25
Sample ID			MW16-10-15	MW16-10-15	MW16-10-15	21-2		MW16-10-15	MW22-10-4		RMW16-10-15	MW16-10-15	MW16-10-15	MW16-10-15	MW16-10-15	SR24-07		MW16-10-15
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC		STANTEC	STANTEC		STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC		STANTEC
Laboratory			MAXX	BV	AGAT	AGAT		BV	BV		BV	BV	BV	BV	BV	BV		BV
Laboratory Work Order			B687243	C132075	21C834850	21C834850		C230795	C230795		C291130	C335152	C386148	C434263	C475057	C475057		C551520
Laboratory Sample ID			PR5503	ZU2987	3249833	3249836		ASS483	ASS485		BHF765	BQP597	CCP853	CNN528	CWB149	CWB154		DML532
Location Description			Tier 2	Tier 2	Tier 2	Tier 2		Tier 2	Tier 2		Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2		Tier 2
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated Field Duplicate	RPD (%)	Unconsolidated	Unconsolidated Field Duplicate	RPD (%)	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated Field Duplicate	RPD (%)	Unconsolidated
Field Parameters																		
Dissolved Oxygen, Field	mg/L	n/v	-	20.18	3.1	-	-	5.02	-	-	7.1	5.6	3.5	5.9	3.99	-	-	10.88
Electrical Conductivity, Field	µS/cm	1,000[A]	**2,890[A]**	**3,992[A]**	**3,930[A]**	-	-	**4,422[A]**	-	-	**4,183[A]**	**4,101[A]**	**4,569[A]**	4.251	**4,720[A]**	-	-	**4,704[A]**
Oxidation Reduction Potential, field	mV	n/v	-	-54.3	60.5	-	-	-0.25	-	-	-143.0	136.4	-5.6	24.6	121.4	-	-	128.7
pH, Field	S.U.	6.5-8.5[A]	7.2	6.80	**6.49[A]**	-	-	6.86	-	-	6.78	7.26	6.87	6.98	7.05	-	-	6.9
Temperature, Field	deg C	n/v	9	9.5	5.03	-	-	9	-	-	1.8	8.5	0.8	8.7	8.8	-	-	8.54
Calculated Parameters																		
Anion Sum	meq/L	n/v	45	61	-	-	-	64	65	nc	66	63	64	59	73	61	nc	68
Cation Sum	meq/L	n/v	42	62	-	-	-	63	63	nc	64	65	70	65	69	59	nc	69
Hardness (as CaCO3)	mg/L	n/v	1,400	2,300	2,510	2,660	6%	2,500	2,400	4%	2,400	2,500	2,600	2,400	2,500	2,100	17%	2,500
Ion Balance	%	n/v	0.94	0.93	113	119	5%	0.85	1.3	nc	1.3	1.6	4.9	4.4	2.7	1.5	nc	-
Ion Balance % Difference	%	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.73
Nitrate	mg/L	13_f[A]	0.12	<0.22	<0.5	<0.5	nc	<0.22	<0.22	nc	2.2	<1.1	0.24	0.22	0.31	0.49	nc	<0.89
Nitrate + Nitrite (as N)	mg/L	100[A]	0.027	<0.050 MI	<0.02	<0.02	nc	<0.050 AT	<0.050 AT	nc	0.50	<0.25 Z8	0.054 Z8	0.050 MI	0.069 MI	0.11 MI	nc	<0.20 MI
Nitrite	mg/L	$0.197/1.97_{n4,a}$[A]	<0.033	<0.033	<0.10	<0.10	nc	<0.033	<0.033	nc	<0.033	<0.033	<0.033	<0.033	<0.033	<0.033	nc	<0.13
Total Dissolved Solids	mg/L	500[A]	**2,800[A]**	**3,900[A]**	**3,960[A]**	**4,010[A]**	1%	**4,000[A]**	**4,100[A]**	2%	**4,100[A]**	**4,000[A]**	**4,100[A]**	**3,800[A]**	**4,600[A]**	**3,800[A]**	19%	**4,300[A]**
Sodium Adsorption Ratio (SAR)	none	5[A]	-	-	3.48	3.45	nc	-	-	-	-	-	-	-	-	-	-	-
BTEX and Petroleum Hydrocarbons																		
Benzene	mg/L	0.005[A]	<0.00040	<0.00040	<0.0005	<0.0005	nc	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040
Toluene	mg/L	0.024[A]	<0.00040	<0.00040	<0.0003	<0.0003	nc	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040
Ethylbenzene	mg/L	0.0016[A]	<0.00040	<0.00040	<0.0005	<0.0005	nc	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040
Xylene, m & p-	mg/L	n/v	<0.00080	<0.00080	-	-	-	<0.00080	<0.00080	nc	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	nc	<0.00080
Xylene, o-	mg/L	n/v	<0.00040	<0.00040	-	-	-	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040
Xylenes, Total	mg/L	0.02[A]	<0.00080	<0.00089	<0.0005	<0.0005	nc	<0.00089	<0.00089	nc	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	nc	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10	<0.10	<0.1	<0.1	nc	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10	<0.10	<0.1	<0.1	nc	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10	<0.10	<0.1	<0.1	nc	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10
Miscellaneous Inorganics																		
Dissolved Organic Carbon (DOC)	mg/L	n/v	4.2	2.3	4.391	3.972	nc	2.6	2.3	nc	2.5	2.3	1.6	2.7	1.8	1.8	nc	1.8
Electrical Conductivity, Lab	µS/cm	1,000[A]	**3,000[A]**	**4,300[A]**	**4,390[A]**	**4,380[A]**	0%	**4,300[A]**	**4,400[A]**	2%	**4,300[A]**	**4,400[A]**	**4,300[A]**	**4,600[A]**	**4,700[A]**	**4,700[A]**	0%	**4,700[A]**
Sediment	none	n/v	-	-	NotPresent	NotPresent	nc	-	-	-	-	-	-	-	-	-	-	-
pH, lab	S.U.	6.5-8.5[A]	7.65	7.52	7.87	7.90	nc	7.29	7.31	nc	7.57	7.25	7.97	7.65	7.59	7.57	nc	7.88
Anions																		
Alkalinity (P as CaCO3)	mg/L	n/v	<5.0	<1.0	<5	<5	nc	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	nc	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	380	480	472	452	4%	490	500	2%	470	510	490	510	530	540	2%	550
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	470	580	575	551	4%	600	610	2%	580	620	590	620	640	660	3%	670
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<5.0	<1.0	<5	<5	nc	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	nc	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<5.0	<1.0	<5	<5	nc	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	nc	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	**1,800 CD[A]**	**2,500 CD[A]**	**2,450[A]**	**2,450[A]**	0%	**2,600[A]**	**2,600[A]**	0%	**2,700[A]**	**2,500[A]**	**2,600[A]**	**2,400[A]**	**3,000[A]**	**2,400[A]**	22%	**2,700[A]**
Chloride	mg/L	100[A]	7.1	3.7	2.3	2.4	nc	2.6	2.8	nc	3.0	2.3	2.6	2.9	2.5	2.4	nc	3.0
Fluoride	mg/L	1[A]	-	-	<0.03	<0.03	nc	-	-	-	-	-	-	-	-	-	-	-
Nutrients																		
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	**0.59[A]**	**0.43[A]**	**0.46[A]**	**0.45[A]**	2%	-	-	-	-	-	-	-	-	-	-	-
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	<0.010	<0.010	<0.01	<0.01	nc	<0.010	<0.010	nc	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	nc	<0.040
Orthophosphate (as P)	mg/L	n/v	<0.0030	<0.0030	<0.15	<0.15	nc	<0.0030	<0.0030	nc	0.0031	0.0048	0.0043	<0.0030	<0.0030	<0.0030	nc	-
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	-	-	-	-	-	**0.46[A]**	**0.44[A]**	4%	**0.44[A]**	**0.45[A]**	**0.42[A]**	**0.44[A]**	**0.37[A]**	**0.37[A]**	0%	**0.41[A]**
Nitrate (as N)	mg/L	3[A]	0.027	<0.050	<0.02	<0.02	nc	<0.050	<0.050	nc	0.50	<0.25	0.054	0.050	0.069	0.11	nc	<0.20
Phosphorus, Dissolved	mg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0030
Phosphorus, Total (Dissolved)	mg/L	n/v	0.0035	0.017	-	-	-	0.021	0.021	0%	0.0036	0.010	0.0057	0.0065	0.0058	<0.0030	nc	-
Phosphorus, Total	mg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.7
Total Kjeldahl Nitrogen	mg/L	n/v	5.4 CD	1.88	11.1	12.0	8%	1.5	2.5	nc	1.5	1.08	0.845	2.35	1.3	1.1	17%	<2.0
Nitrogen	mg/L	n/v	-	1.9 DB	-	-	-	1.5 DB	2.5 DB	nc	2.0 DB	1.1 DB	0.899	2.4	1.4 DB	1.2 DB	15%	<2.0 DB NNA
Metals - Dissolved																		
Aluminum	mg/L	$0.007/0.05_{n1,e}$[A]	0.0042	<0.0030	**0.069[A]**	0.007	nc	<0.0030	<0.0030	nc	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	nc	0.0064
Antimony	mg/L	0.006[A]	0.00079	<0.00060	<0.001	0.002	nc	<0.00060	<0.00060	nc	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	nc	<0.00060
Arsenic	mg/L	0.005[A]	0.0012	0.00053	<0.001	0.001	nc	0.00034	0.00032	nc	0.00037	0.00030	0.00026	0.00023	0.00023	0.00026	nc	0.00026
Barium	mg/L	2[A]	0.022	0.015	<0.05	<0.05	nc	0.012	0.012	nc	0.015	0.013	<0.050 MSY	0.011	0.014	<0.010	nc	<0.010

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location											MW16-10-15							
Sample Date			4-Oct-16	13-May-21	24-Nov-21	24-Nov-21		9-May-22	9-May-22		17-Nov-22	17-May-23	23-Oct-23	14-May-24	21-Sep-24	21-Sep-24		5-Jun-25
Sample ID			MW16-10-15	MW16-10-15	MW16-10-15	21-2		MW16-10-15	MW22-10-4		RMW16-10-15	MW16-10-15	MW16-10-15	MW16-10-15	MW16-10-15	SR24-07		MW16-10-15
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC		STANTEC	STANTEC		STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC		STANTEC
Laboratory			MAXX	BV	AGAT	AGAT		BV	BV		BV	BV	BV	BV	BV	BV		BV
Laboratory Work Order			B687243	C132075	21C834850	21C834850		C230795	C230795		C291130	C335152	C386148	C434263	C475057	C475057		C551520
Laboratory Sample ID			PR5503	ZU2987	3249833	3249836		ASS483	ASS485		BHF765	BQP597	CCP853	CNN528	CWB149	CWB154		DML532
Location Description			Tier 2	Tier 2	Tier 2	Tier 2		Tier 2	Tier 2		Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2		Tier 2
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated	Unconsolidated	Unconsolidated	Field Duplicate	RPD (%)	Unconsolidated	Field Duplicate	RPD (%)	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Field Duplicate	RPD (%)	Unconsolidated
Beryllium	mg/L	n/v	<0.0010	<0.0010	<0.0005	<0.0005	nc	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010
Boron	mg/L	1[A]	0.12	0.22	0.21	0.22	5%	0.21	0.22	5%	0.23	0.22	0.38	0.20	0.22	0.19	15%	0.21
Cadmium	mg/L	0.00004/0.00037$_{n3}$[A]	**0.00010[A]**	<0.000020	**0.000262[A]**	**0.000183[A]**	36%	**0.000067[A]**	**0.000099[A]**	nc	**0.0009 DUP 0.00090[A]**	**0.00021[A]**	**0.000080[A]**	**0.00014[A]**	**0.00014[A]**	**0.00013[A]**	7%	**0.000071[A]**
Calcium	mg/L	n/v	320	470	514	555	8%	460	470	2%	480	490	510	460	480	430	11%	490
Chromium	mg/L	0.05[A]	<0.0010	<0.0010	0.0008	<0.0005	nc	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010
Cobalt	mg/L	n/v	0.0043	0.0041	0.0050	0.0037	nc	0.0044	0.0045	2%	0.0044	0.0041	0.0039	0.0038	0.0038	0.0039	3%	0.0034
Copper	mg/L	0.007[A]	<0.00020	<0.00020	**0.0127[A]**	0.0018	nc	<0.0010	<0.0010	nc	<0.0010	0.0027	<0.0010	<0.0010	<0.0010	<0.0010	nc	0.0014
Iron	mg/L	0.3[A]	<0.060	**0.35[A]**	<0.1	<0.1	nc	<0.060	<0.060	nc	<0.060	<0.060	<0.30	<0.060	<0.060	<0.060	nc	<0.060
Lead	mg/L	0.001/0.007$_{n3}$[A]	<0.00020	<0.00020	0.0005	<0.0002	nc	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020
Lithium	mg/L	n/v	0.055	0.050	-	-	-	0.025	0.045	nc	0.040	0.058	<0.10	0.064	0.069	0.059	nc	0.14
Magnesium	mg/L	n/v	140	280	299	310	4%	310	290	7%	290	310	320	300	310	250	21%	310
Manganese	mg/L	0.02[A]	**1.0[A]**	**3.0[A]**	**2.80[A]**	**2.84[A]**	1%	**2.8[A]**	**1.9[A]**	38%	**2.9[A]**	**2.8[A]**	**2.9[A]**	**2.7[A]**	**2.7[A]**	**2.5[A]**	8%	**2.8[A]**
Mercury	mg/L	0.000005[A]	<0.0000020	<0.0000019	<0.0000025	<0.0000025	nc	<0.0000019	<0.0000019	nc	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	nc	<0.0000019
Molybdenum	mg/L	n/v	0.0034	0.00047	<0.001	0.005	nc	0.00066	0.00076	nc	0.00084	0.00055	0.00065	0.0014	0.00056	0.00064	nc	0.00051
Nickel	mg/L	0/0.17$_{n3}$[A]	**0.013[A]**	**0.0070[A]**	**0.013[A]**	**0.009[A]**	nc	**0.0080[A]**	**0.0082[A]**	2%	**0.0084[A]**	**0.0076[A]**	**0.0077[A]**	**0.0072[A]**	**0.0070[A]**	**0.0072[A]**	3%	**0.0066[A]**
Phosphorus	mg/L	n/v	<0.10	<0.10	<0.08	<0.08	nc	<0.10	<0.10	nc	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10	nc	<0.10
Potassium	mg/L	n/v	11	10	11.2	11.7	4%	10	11	10%	10	10	11	10	10	9.5	5%	11
Selenium	mg/L	0.002[A]	0.00038	0.00052	<0.0005	**0.0043[A]**	nc	<0.00020	0.00024	nc	0.00095	<0.00020	<0.00020	0.00021	<0.00020	<0.00020	nc	<0.00020
Silicon	mg/L	n/v	4.5	6.0	-	-	-	5.4	4.6	16%	5.1	5.2	5.5	5.1	5.5	4.8	14%	5.5
Silver	mg/L	0.00025[A]	<0.00010	<0.00010	<0.00005	<0.00005	nc	<0.00010	<0.00010	nc	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	nc	<0.00010
Sodium	mg/L	200[A]	**330[A]**	**350[A]**	**401[A]**	**409[A]**	2%	**320[A]**	**360[A]**	12%	**370[A]**	**340[A]**	**410[A]**	**390[A]**	**430[A]**	**390[A]**	10%	**430[A]**
Strontium	mg/L	n/v	3.4	6.6 CD	-	-	-	7.1	6.6	7%	7.2	7.2	7.4	6.8	7.7	6.3	20%	7.0
Sulfur	mg/L	n/v	650 CD	920 CD	-	-	-	890	890	0%	790	900	840	920	1,000	900	11%	960
Thallium	mg/L	n/v	<0.00020	<0.00020	<0.0001	0.0001	nc	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020
Tin	mg/L	n/v	<0.0010	<0.0010	-	-	-	0.0011	0.0012	nc	0.0013	0.0011	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010
Titanium	mg/L	n/v	<0.0010	<0.0010	0.003	0.002	nc	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010
Uranium	mg/L	0.01[A]	**0.012[A]**	0.0080	**0.011[A]**	**0.013[A]**	17%	0.010	**0.011[A]**	10%	0.010	**0.011[A]**	**0.011[A]**	**0.012[A]**	**0.013[A]**	**0.013[A]**	0%	**0.012[A]**
Vanadium	mg/L	n/v	<0.0010	<0.0010	-	-	-	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010
Zinc	mg/L	0.03[A]	<0.0030	<0.0030	**0.035[A]**	<0.005	nc	<0.0030	<0.0030	nc	0.0076	<0.0030	0.0032	<0.0030	<0.0030	0.0032	nc	0.0031
Metals - Total																		
Mercury	mg/L	0.000005[A]	***<0.02 DB***	**0.000195 DB[A]**	**0.000092[A]**	**0.000058[A]**	45%	**0.000169[A]**	**0.00015[A]**	12%	**0.00048[A]**	**0.000196[A]**	**0.000049[A]**	**0.00021 DB[A]**	**0.000038 DB[A]**	**0.000047 DB[A]**	nc	**0.000210 DB[A]**
Phosphorus	mg/L	n/v	-	-	9.25	8.99	3%	-	-	-	-	-	-	-	-	-	-	-
Microbiological Parameters																		
Escherichia coli (E.Coli)	mpn/100mL	n/v	<100 DB	<10 MI	6	8	29%	<10 AT	<10 AT	nc	<100 MI	<10 Z8	<100 Z8	<100 MI	<5.0 MI	<5.0 MI	nc	<20 Z8
Fecal Coliforms	mpn/100mL	n/v	100 DB	<10 MI	23	12	63%	<50 AT	<50 AT	nc	<100 MI	<10 Z8	<100 Z8	<100 MI	<5.0 MI	<5.0 MI	nc	<20 Z8
Heterotrophic Plate Count	cfu/mL	n/v	>6000 DB	5,400 MI	91,500	79,000	15%	1,200 AT	2,000 AT	50%	1,500	820	2,600	-	-	-	-	-
Heterotrophic Plate Count	mpn/100mL	n/v	-	-	-	-	-	-	-	-	-	-	-	>12000 MI	>2400	>2400	nc	>48000 MI
Total Coliforms	mpn/100mL	n/v	9,100 DB	310 MI	154	228	39%	<10 AT	<10 AT	nc	<100 MI	<10 Z8	<100 Z8	<100 MI	<5.0 MI	5.0 MI	nc	<20 Z8

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location									MW16-11-15							
Sample Date				30-Sep-16	13-May-21	22-Nov-21	6-May-22	17-Nov-22	18-May-23	25-Oct-23	14-May-24	14-May-24		21-Sep-24	5-Jun-25
Sample ID				MW16-11-15	MW16-11-15	RMW16-11-15	MW16-11-15	RMW16-11-15	MW16-11-15	MW16-11-15	MW16-11-15	SR24-01		MW16-11-15	MW16-11-15
Sampling Company				STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC		STANTEC	STANTEC
Laboratory				MAXX	BV	AGAT	BV	BV	BV	BV	BV	BV		BV	BV
Laboratory Work Order				B686123	C132075	21C833752	C230432	C291130	C335681	C386944	C434263	C434263		C475057	C551520
Laboratory Sample ID				PQ7068	ZU2986	3240639	ASQ363	BHF766	BQS281	CCW515	CNN529	CNN530		CWB150	DML531
Location Description				Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2		Tier 2	Tier 2
Lithology				Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	RPD	Unconsolidated	Unconsolidated
Sample Type	Units	2024 AEPA Tier 1	UCL									Field Duplicate	(%)		
Field Parameters															
Dissolved Oxygen, Field	mg/L	n/v	n/v	-	1.52	4.7	2.77	9.6	7.9	3.9	6.3	-	-	3.33	8.09
Electrical Conductivity, Field	µS/cm	1,000[A]	n/v	**2,750[A]**	**3,012[A]**	**2,842[A]**	**2,921[A]**	**3,087[A]**	**2,677[A]**	**4,525[A]**	2.883	-	-	**3,185[A]**	**3,211[A]**
Oxidation Reduction Potential, field	mV	n/v	n/v	-	48.7	47.5	-8.3	-18.5	86.2	-235.0	-39.2	-	-	30.6	-12
pH, Field	S.U.	6.5-8.5[A]	n/v	7.1	7.01	7.08	6.94	7.44	7.43	7.32	7.27	-	-	7.08	7.13
Temperature, Field	deg C	n/v	n/v	9.4	8.0	4.35	8.5	1.7	9.1	2.6	9.8	-	-	8.7	11.27
Calculated Parameters															
Anion Sum	meq/L	n/v	n/v	39	41	-	36	42	39	40	39	37	nc	38	41
Cation Sum	meq/L	n/v	n/v	38	42	-	38	42	41	40	41	41	nc	38	42
Hardness (as CaCO3)	mg/L	n/v	n/v	1,200	1,400	1,240	1,200	1,300	1,300	1,300	1,300	1,300	0%	1,200	1,400
Ion Balance	%	n/v	n/v	0.98	0.17	108	1.8	0.26	3.2	0.31	2.3	4.4	nc	0.037	-
Ion Balance % Difference	%	n/v	n/v	-	-	-	-	-	-	-	-	-	-	-	1.5
Nitrate	mg/L	13_f[A]	n/v	<0.044	<0.22	<0.5	<0.044	<0.044	<0.22	<0.22	<0.44	<0.22	nc	<0.22	<0.18
Nitrate + Nitrite (as N)	mg/L	100[A]	n/v	<0.020	<0.050 MI	<0.02	<0.010	<0.010	<0.050 Z8	<0.050 Z8	<0.10 MI	<0.050 MI	nc	<0.050 MI	<0.040
Nitrite	mg/L	$0.197/1.97_{n4.a}$[A]	n/v	<0.033	<0.033	<0.05	<0.033	<0.033	<0.033	<0.033	<0.033	<0.033	nc	<0.033	<0.13
Total Dissolved Solids	mg/L	500[A]	3,049[B]	**2,400[A]**	**2,600[A]**	**2,390[A]**	**2,300[A]**	**2,700[A]**	**2,500[A]**	**2,500[A]**	**2,500[A]**	**2,400[A]**	4%	**2,400[A]**	**2,600[A]**
Sodium Adsorption Ratio (SAR)	none	5[A]	n/v	-	-	4.23	-	-	-	-	-	-	-	-	-
BTEX and Petroleum Hydrocarbons															
Benzene	mg/L	0.005[A]	n/v	<0.00040	<0.00040	<0.0005	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	n/v	<0.00040	<0.00040	<0.0003	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	n/v	<0.00040	<0.00040	<0.0005	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	n/v	<0.00080	<0.00080	-	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	nc	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	n/v	<0.00040	<0.00040	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	n/v	<0.00080	<0.00089	<0.0005	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	nc	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	n/v	<0.10	<0.10	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	n/v	<0.10	<0.10	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	n/v	<0.10	<0.10	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10
Miscellaneous Inorganics															
Dissolved Organic Carbon (DOC)	mg/L	n/v	12.2[B]	3.1	2.4	6	3.0	2.8	9.6	2.8	2.6	2.7	4%	2.2	2.9
Electrical Conductivity, Lab	µS/cm	1,000[A]	3,749[B]	**3,100[A]**	**3,100[A]**	**3,000[A]**	**2,900[A]**	**3,100[A]**	**3,100[A]**	**3,000[A]**	**3,100[A]**	**3,100[A]**	0%	**3,100[A]**	**3,100[A]**
pH, lab	S.U.	6.5-8.5[A]	9.59[B]	7.99	7.69	8.07	7.86	7.75	7.63	8.02	7.79	7.73	nc	7.76	7.69
Anions															
Alkalinity (P as CaCO3)	mg/L	n/v	n/v	<0.50	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	n/v	410	410	400	370	410	400	360	410	410	0%	420	440
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	n/v	500	500	497	450	500	490	430	500	500	0%	520	530
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	n/v	<0.50	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	n/v	<0.50	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	1,859[B]	**1,500 CD[A]**	**1,600 CD[A]**	**1,380[A]**	**1,400[A]**	**1,600[A]**	**1,500[A]**	**1,600[A]**	**1,500[A]**	**1,400[A]**	7%	**1,400[A]**	**1,500[A]**
Chloride	mg/L	100[A]	n/v	1.7	1.5	<1.0	<1.0	<1.0	<1.0	1.3	<1.0	<1.0	nc	<1.0	<1.0
Fluoride	mg/L	1[A]	n/v	-	-	0.11	-	-	-	-	-	-	-	-	-
Nutrients															
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	n/v	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	nc	<0.010	<0.040
Orthophosphate (as P)	mg/L	n/v	n/v	<0.0030	<0.0030	<0.15	<0.0030	0.0033	<0.0030	<0.0030	<0.0030	<0.0030	nc	<0.0030	-
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	0.86[B]	**0.49[A]**	**0.39[A]**	**0.53[A]**	**0.46[A]**	-	**0.69[A]**	**0.39[A]**	**0.46[A]**	**0.46[A]**	0%	**0.46[A]**	**0.49[A]**
Nitrate (as N)	mg/L	3[A]	n/v	<0.010	<0.050	<0.02	<0.010	<0.010	<0.050	<0.050	<0.10	<0.050	nc	<0.050	<0.040
Phosphorus, Dissolved	mg/L	n/v	n/v	-	-	-	-	-	-	-	-	-	-	-	<0.0030
Phosphorus, Total (Dissolved)	mg/L	n/v	n/v	0.0033	<0.0030	-	<0.0030	<0.015 DB	<0.0030	<0.0030	0.0030	0.0037	nc	<0.0030	-
Phosphorus, Total	mg/L	n/v	n/v	-	-	-	-	-	-	-	-	-	-	-	1.8
Total Kjeldahl Nitrogen	mg/L	n/v	19.2[B]	3.7 DB	1.67	**39.8[B]**	4.0	<1.0	0.48	0.51	1.13	1.19	5%	1.1	0.91
Nitrogen	mg/L	n/v	n/v	-	1.7 DB	-	4.0 DB	<1.0 DB	0.48 DB NNA	0.51 DB	1.1 DB	1.2 DB	9%	1.1 DB	0.91 DB
Metals - Dissolved															
Aluminum	mg/L	$0.007/0.05_{n1.e}$[A]	n/v	<0.0030	0.0057	<0.004	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	nc	<0.0030	<0.0030
Antimony	mg/L	0.006[A]	n/v	<0.00060	<0.00060	<0.001	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	nc	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	0.0026[B]	0.0012	0.0011	0.002	0.00060	0.00042	0.00063	0.00025	0.00046	0.00053	nc	0.00035	0.0010
Barium	mg/L	2[A]	0.02[B]	0.016	0.012	***<0.05***	0.012	0.014	0.013	0.011	0.013	0.012	nc	0.011	<0.010
Beryllium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010
Boron	mg/L	1[A]	0.15[B]	0.10	0.12	0.09	0.12	0.12	0.11	0.10	0.10	0.10	0%	0.11	0.11
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	0.000313[B]	**0.000043[A]**	**0.000052[A]**	**0.000288[A]**	**0.000078[A]**	**0.00017[A]**	**0.000098[A]**	**0.000088[A]**	0.000023	0.000026	nc	**0.000097[A]**	0.000027

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location				MW16-11-15												
Sample Date				30-Sep-16	13-May-21	22-Nov-21	6-May-22	17-Nov-22	18-May-23	25-Oct-23	14-May-24	14-May-24		21-Sep-24	5-Jun-25
Sample ID				MW16-11-15	MW16-11-15	RMW16-11-15	MW16-11-15	RMW16-11-15	MW16-11-15	MW16-11-15	MW16-11-15	SR24-01		MW16-11-15	MW16-11-15
Sampling Company				STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC		STANTEC	STANTEC
Laboratory				MAXX	BV	AGAT	BV	BV	BV	BV	BV	BV		BV	BV
Laboratory Work Order				B686123	C132075	21C833752	C230432	C291130	C335681	C386944	C434263	C434263		C475057	C551520
Laboratory Sample ID				PQ7068	ZU2986	3240639	ASQ363	BHF766	BQS281	CCW515	CNN529	CNN530		CWB150	DML531
Location Description				Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2		Tier 2	Tier 2
Lithology				Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated		Unconsolidated	Unconsolidated
Sample Type	Units	2024 AEPA Tier 1	UCL									Field Duplicate	RPD (%)		
Calcium	mg/L	n/v	373[B]	290	330	297	280	320	310	290	310	320	3%	300	320
Chromium	mg/L	0.05[A]	n/v	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010
Cobalt	mg/L	n/v	0.002[B]	0.0016	0.0014	0.0018	0.0013	0.0014	0.0015	0.0014	0.0013	0.0013	nc	0.0014	0.0014
Copper	mg/L	0.007[A]	n/v	0.00029	0.00072	<0.0008	<0.0010	0.0011	0.0020	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010
Iron	mg/L	0.3[A]	n/v	**0.37[A]**	**0.52[A]**	<0.1	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	nc	<0.060	**0.69[A]**
Lead	mg/L	0.001/0.007$_{n3}$[A]	n/v	<0.00020	<0.00020	<0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020
Lithium	mg/L	n/v	0.18[B]	0.050	0.055	-	0.044	0.047	0.049	0.057	0.053	0.058	nc	0.036	0.13
Magnesium	mg/L	n/v	172[B]	110	140	122	120	130	130	140	130	130	0%	120	140
Manganese	mg/L	0.02[A]	1.76[B]	**0.77[A]**	**1.2[A]**	**0.721[A]**	**0.84[A]**	**1.1[A]**	**1.0[A]**	**1.2[A]**	**1.1[A]**	**1.1[A]**	0%	**1.1[A]**	**1.1[A]**
Mercury	mg/L	0.000005[A]	0.0010079[B]	0.0000036	<0.0000019	<0.0000025	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	nc	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	0.0022[B]	0.0015	0.00057	0.001	0.0011	0.00062	0.00050	0.00050	0.00095	**0.0031[B]**	nc	0.00068	0.00058
Nickel	mg/L	0/0.17$_{n3}$[A]	0.0031[B]	**0.0027[A]**	**0.0025[A]**	***<0.003***	**0.0022[A]**	**0.0023[A]**	**0.0023[A]**	**0.0024[A]**	**0.0021[A]**	**0.0020[A]**	nc	**0.0023[A]**	**0.0021[A]**
Phosphorus	mg/L	n/v	n/v	<0.10	<0.10	<0.08	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10
Potassium	mg/L	n/v	7.7[B]	6.0	5.9	6.9	6.3	5.9	6.5	5.9	5.7	5.8	2%	5.6	5.9
Selenium	mg/L	0.002[A]	n/v	<0.00020	<0.00020	0.0010	0.0010	0.00025	0.00044	<0.00020	<0.00020	<0.00020	nc	0.00023	<0.00020
Silicon	mg/L	n/v	6.1[B]	4.8	5.3	-	4.2	4.3	4.7	4.8	4.5	4.5	0%	4.4	4.8
Silver	mg/L	0.00025[A]	n/v	<0.00010	<0.00010	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	nc	<0.00010	<0.00010
Sodium	mg/L	200[A]	401[B]	**320[A]**	**320[A]**	**343[A]**	**320[A]**	**350[A]**	**340[A]**	**310[A]**	**320[A]**	**320[A]**	0%	**310[A]**	**340[A]**
Strontium	mg/L	n/v	3.7[B]	2.6	3.0	-	2.9	3.2	3.0	3.0	3.0	2.9	3%	2.7	3.0
Sulfur	mg/L	n/v	767[B]	480	590 CD	-	470	470	610	580	530	540	2%	490	560
Thallium	mg/L	n/v	n/v	<0.00020	<0.00020	<0.0001	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020
Tin	mg/L	n/v	n/v	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	0.0011	<0.0010	nc	<0.0010	<0.0010
Titanium	mg/L	n/v	n/v	<0.0010	<0.0010	0.003	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	0.008[B]	0.0071	0.0054	0.006	0.0061	0.0056	0.0051	0.0060	0.0053	0.0055	4%	0.0053	0.0049
Vanadium	mg/L	n/v	n/v	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	n/v	0.0053	<0.0030	<0.005	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	nc	<0.0030	<0.0030
Metals - Total															
Mercury	mg/L	0.000005[A]	0.0010079[B]	***<0.0060 DB***	**0.000215 DB[A]**	**0.000052[A]**	**0.0009[A]**	**0.000163[A]**	**0.00062[A]**	<0.0000019	**0.000054 DB[A]**	**0.000060 DB[A]**	nc	**0.000244 DB[A]**	**0.000233 DB[A]**
Phosphorus	mg/L	n/v	n/v	-	-	24.4	-	-	-	-	-	-	-	-	-
Microbiological Parameters															
Escherichia coli (E.Coli)	mpn/100mL	n/v	n/v	<100 DB	<10 MI	11	<100 DVM	<100 MI	<10 Z8	<5.0 Z8	10 MI	<10 MI	nc	<5.0 MI	<20 Z8
Fecal Coliforms	mpn/100mL	n/v	n/v	<100 DB	<10 MI	11	<100 DVM	<1.0	<10 Z8	<5.0 Z8	<10 MI	<10 MI	nc	<5.0 MI	<20 Z8
Heterotrophic Plate Count	cfu/mL	n/v	n/v	23,000 DB	370	5,800	1,900 AT	390 SC1	36,000 Z8	3,900	-	-	-	-	-
Heterotrophic Plate Count	mpn/100mL	n/v	n/v	-	-	-	-	-	-	-	>4800 MI	>4800 MI	nc	>4800 MI	48,000 Z8
Total Coliforms	mpn/100mL	n/v	n/v	100 DB	<10 MI	205	<100 DVM	<100 MI	<10 Z8	<5.0 Z8	52 MI	52 MI	0%	<5.0 MI	<20 Z8

See notes on the last page

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-12-3
Sample Date			6-Oct-16
Sample ID			MW16-12-3
Sampling Company			STANTEC
Laboratory			MAXX
Laboratory Work Order			B688395
Laboratory Sample ID			PS2813
Location Description			Tier 2
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated
Field Parameters			
Electrical Conductivity, Field	µS/cm	1,000[A]	**2,370[A]**
pH, Field	S.U.	6.5-8.5[A]	7
Temperature, Field	deg C	n/v	6.7
Calculated Parameters			
Anion Sum	meq/L	n/v	33
Cation Sum	meq/L	n/v	31
Hardness (as CaCO3)	mg/L	n/v	1,300
Ion Balance	%	n/v	0.94
Nitrate	mg/L	13[A]	1.5
Nitrate + Nitrite (as N)	mg/L	100[A]	0.34
Nitrite	mg/L	$0.197/1.97_{n4.a}$[A]	<0.033
Total Dissolved Solids	mg/L	500[A]	**1,900[A]**
Miscellaneous Inorganics			
Electrical Conductivity, Lab	µS/cm	1,000[A]	**2,600[A]**
pH, lab	S.U.	6.5-8.5[A]	7.97
Anions			
Alkalinity (P as CaCO3)	mg/L	n/v	<0.50
Alkalinity, Total (as CaCO3)	mg/L	n/v	410
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	510
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<0.50
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<0.50
Sulfate	mg/L	$128/429_{n3}$[A]	**900 CD[A]**
Chloride	mg/L	100[A]	**230 CD[A]**
Nutrients			
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	<0.010
Nitrate (as N)	mg/L	3[A]	0.34
Metals - Dissolved			
Aluminum	mg/L	$0.007/0.05_{n1.e}$[A]	0.0070
Antimony	mg/L	0.006[A]	<0.00060
Arsenic	mg/L	0.005[A]	0.00092
Barium	mg/L	2[A]	0.12
Beryllium	mg/L	n/v	<0.0010
Boron	mg/L	1[A]	0.051
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	0.000036
Calcium	mg/L	n/v	270
Chromium	mg/L	0.05[A]	<0.0010
Cobalt	mg/L	n/v	<0.00030
Copper	mg/L	0.007[A]	0.0018
Iron	mg/L	0.3[A]	<0.060
Lead	mg/L	$0.001/0.007_{n3}$[A]	<0.00020
Lithium	mg/L	n/v	0.030
Magnesium	mg/L	n/v	160
Manganese	mg/L	0.02[A]	**0.025[A]**
Mercury	mg/L	0.000005[A]	<0.0000020
Molybdenum	mg/L	n/v	0.0021
Nickel	mg/L	$0/0.17_{n3}$[A]	**0.0041[A]**
Phosphorus	mg/L	n/v	<0.10
Potassium	mg/L	n/v	6.4
Selenium	mg/L	0.002[A]	0.0016
Silicon	mg/L	n/v	6.1
Silver	mg/L	0.00025[A]	<0.00010
Sodium	mg/L	200[A]	110
Strontium	mg/L	n/v	1.1
Sulfur	mg/L	n/v	270
Thallium	mg/L	n/v	<0.00020
Tin	mg/L	n/v	<0.0010
Titanium	mg/L	n/v	<0.0010

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-12-3
Sample Date			6-Oct-16
Sample ID			MW16-12-3
Sampling Company			STANTEC
Laboratory			MAXX
Laboratory Work Order			B688395
Laboratory Sample ID			PS2813
Location Description			Tier 2
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated
Uranium	mg/L	0.01[A]	0.010
Vanadium	mg/L	n/v	0.0011
Zinc	mg/L	0.03[A]	<0.0030
Metals - Total			
Mercury	mg/L	0.000005[A]	**0.00030 DB[A]**

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-14-33
Sample Date			27-Sep-16
Sample ID			MW16-14-33
Sampling Company			STANTEC
Laboratory			MAXX
Laboratory Work Order			B684487
Laboratory Sample ID			PP7330
Location Description			Tier 2
Sample Type	Units	2024 AEPA Tier 1	Bedrock
Field Parameters			
Electrical Conductivity, Field	µS/cm	1,000[A]	**1,906[A]**
pH, Field	S.U.	6.5-8.5[A]	7.5
Temperature, Field	deg C	n/v	8
Calculated Parameters			
Anion Sum	meq/L	n/v	45
Cation Sum	meq/L	n/v	160
Hardness (as CaCO3)	mg/L	n/v	6,700
Ion Balance	%	n/v	3.4
Nitrate	mg/L	13_{f}[A]	0.072
Nitrate + Nitrite (as N)	mg/L	100[A]	<0.020
Nitrite	mg/L	$0.197/1.97_{n4.a}$[A]	<0.033
Total Dissolved Solids	mg/L	500[A]	**4,700[A]**
BTEX and Petroleum Hydrocarbons			
Benzene	mg/L	0.005[A]	<0.00040
Toluene	mg/L	0.024[A]	<0.00040
Ethylbenzene	mg/L	0.0016[A]	<0.00040
Xylene, m & p-	mg/L	n/v	<0.00080
Xylene, o-	mg/L	n/v	<0.00040
Xylenes, Total	mg/L	0.02[A]	<0.00080
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10
Miscellaneous Inorganics			
Dissolved Organic Carbon (DOC)	mg/L	n/v	3.9
Electrical Conductivity, Lab	µS/cm	1,000[A]	**2,000[A]**
pH, lab	S.U.	6.5-8.5[A]	7.80
Anions			
Alkalinity (P as CaCO3)	mg/L	n/v	81
Alkalinity, Total (as CaCO3)	mg/L	n/v	1,500
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	1,600
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	97
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<5.0
Sulfate	mg/L	$128/429_{n3}$[A]	**730 CD[A]**
Chloride	mg/L	100[A]	25
Nutrients			
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	**1.5[A]**
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	<0.010
Orthophosphate (as P)	mg/L	n/v	0.0039
Nitrate (as N)	mg/L	3[A]	0.016
Phosphorus, Total (Dissolved)	mg/L	n/v	0.0073
Total Kjeldahl Nitrogen	mg/L	n/v	38 CD
Metals - Dissolved			
Aluminum	mg/L	$0.007/0.05_{n1,e}$[A]	**0.016 NF MA[A]**
Antimony	mg/L	0.006[A]	0.0021
Arsenic	mg/L	0.005[A]	0.0017
Barium	mg/L	2[A]	**3.8[A]**
Beryllium	mg/L	n/v	<0.0010
Boron	mg/L	1[A]	***<2.0***
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	0.000024
Calcium	mg/L	n/v	2,300
Chromium	mg/L	0.05[A]	<0.0010
Cobalt	mg/L	n/v	0.00065
Copper	mg/L	0.007[A]	<0.00020
Iron	mg/L	0.3[A]	**68[A]**
Lead	mg/L	$0.001/0.007_{n3}$[A]	<0.00020
Lithium	mg/L	n/v	<2.0

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-14-33
Sample Date			27-Sep-16
Sample ID			MW16-14-33
Sampling Company			STANTEC
Laboratory			MAXX
Laboratory Work Order			B684487
Laboratory Sample ID			PP7330
Location Description			Tier 2
Sample Type	Units	2024 AEPA Tier 1	Bedrock
Magnesium	mg/L	n/v	190
Manganese	mg/L	0.02[A]	**14[A]**
Mercury	mg/L	0.000005[A]	<0.0000020
Molybdenum	mg/L	n/v	0.028
Nickel	mg/L	0/0.17$_{n3}$[A]	**0.0036[A]**
Phosphorus	mg/L	n/v	49
Potassium	mg/L	n/v	53
Selenium	mg/L	0.002[A]	0.0011
Silicon	mg/L	n/v	25
Silver	mg/L	0.00025[A]	<0.00010
Sodium	mg/L	200[A]	**410[A]**
Strontium	mg/L	n/v	9.7
Sulfur	mg/L	n/v	220
Thallium	mg/L	n/v	<0.00020
Tin	mg/L	n/v	<0.0010
Titanium	mg/L	n/v	0.0020
Uranium	mg/L	0.01[A]	**0.012[A]**
Vanadium	mg/L	n/v	<0.0010
Zinc	mg/L	0.03[A]	0.0036
Metals - Total			
Mercury	mg/L	0.000005[A]	***<0.02 DB***
Microbiological Parameters			
Escherichia coli (E.Coli)	mpn/100mL	n/v	<20
Fecal Coliforms	mpn/100mL	n/v	<20 DB
Heterotrophic Plate Count	cfu/mL	n/v	>6000
Total Coliforms	mpn/100mL	n/v	2,300

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-15-16
Sample Date			28-Sep-16
Sample ID			MW16-15-16
Sampling Company			STANTEC
Laboratory			MAXX
Laboratory Work Order			B685112
Laboratory Sample ID			PQ0284
Location Description			EIA Project Well
Sample Type	**Units**	**2024 AEPA Tier 1**	
Calculated Parameters			
Anion Sum	meq/L	n/v	12
Cation Sum	meq/L	n/v	14
Hardness (as CaCO3)	mg/L	n/v	160
Ion Balance	%	n/v	1.1
Nitrate	mg/L	13_f [A]	<0.044
Nitrate + Nitrite (as N)	mg/L	100 [A]	<0.020
Nitrite	mg/L	$0.197/1.97_{n4.a}$ [A]	<0.033
Total Dissolved Solids	mg/L	500 [A]	**720 [A]**
BTEX and Petroleum Hydrocarbons			
Benzene	mg/L	0.005 [A]	<0.00040
Toluene	mg/L	0.024 [A]	<0.00040
Ethylbenzene	mg/L	0.0016 [A]	<0.00040
Xylene, m & p-	mg/L	n/v	<0.00080
Xylene, o-	mg/L	n/v	<0.00040
Xylenes, Total	mg/L	0.02 [A]	<0.00080
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2 [A]	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1 [A]	<0.10
Miscellaneous Inorganics			
Dissolved Organic Carbon (DOC)	mg/L	n/v	1.4
Electrical Conductivity, Lab	µS/cm	1,000 [A]	**1,100 [A]**
pH, lab	S.U.	6.5-8.5 [A]	8.18
Anions			
Alkalinity (P as CaCO3)	mg/L	n/v	<0.50
Alkalinity, Total (as CaCO3)	mg/L	n/v	460
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	560
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<0.50
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<0.50
Sulfate	mg/L	$128/429_{n3}$ [A]	**150 [A]**
Chloride	mg/L	100 [A]	2.4
Nutrients			
Ammonia (as N)	mg/L	$0.035/125_{n2}$ [A]	**0.84 AG [A]**
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$ [A]	<0.010
Orthophosphate (as P)	mg/L	n/v	<0.0030
Nitrate (as N)	mg/L	3 [A]	<0.010
Phosphorus, Total (Dissolved)	mg/L	n/v	0.0069
Total Kjeldahl Nitrogen	mg/L	n/v	0.81
Metals - Dissolved			
Aluminum	mg/L	$0.007/0.05_{n1.e}$ [A]	<0.0030
Antimony	mg/L	0.006 [A]	<0.00060
Arsenic	mg/L	0.005 [A]	0.0022
Barium	mg/L	2 [A]	0.018
Beryllium	mg/L	n/v	<0.0010
Boron	mg/L	1 [A]	0.089
Cadmium	mg/L	$0.00004/0.00037_{n3}$ [A]	<0.000020
Calcium	mg/L	n/v	38
Chromium	mg/L	0.05 [A]	<0.0010
Cobalt	mg/L	n/v	<0.00030
Copper	mg/L	0.007 [A]	<0.00020
Iron	mg/L	0.3 [A]	0.15
Lead	mg/L	$0.001/0.007_{n3}$ [A]	<0.00020
Lithium	mg/L	n/v	0.053
Magnesium	mg/L	n/v	15
Manganese	mg/L	0.02 [A]	**0.066 [A]**
Mercury	mg/L	0.000005 [A]	<0.0000020
Molybdenum	mg/L	n/v	0.0015
Nickel	mg/L	$0/0.17_{n3}$ [A]	***<0.00050***

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-15-16
Sample Date			28-Sep-16
Sample ID			MW16-15-16
Sampling Company			STANTEC
Laboratory			MAXX
Laboratory Work Order			B685112
Laboratory Sample ID			PQ0284
Location Description			EIA Project Well
Sample Type	**Units**	**2024 AEPA Tier 1**	
Phosphorus	mg/L	n/v	<0.10
Potassium	mg/L	n/v	3.9
Selenium	mg/L	0.002[A]	<0.00020
Silicon	mg/L	n/v	3.6
Silver	mg/L	0.00025[A]	<0.00010
Sodium	mg/L	200[A]	**230[A]**
Strontium	mg/L	n/v	0.65
Sulfur	mg/L	n/v	50
Thallium	mg/L	n/v	<0.00020
Tin	mg/L	n/v	<0.0010
Titanium	mg/L	n/v	<0.0010
Uranium	mg/L	0.01[A]	0.00020
Vanadium	mg/L	n/v	<0.0010
Zinc	mg/L	0.03[A]	<0.0030
Metals - Total			
Mercury	mg/L	0.000005[A]	<0.0000020
Microbiological Parameters			
Escherichia coli (E.Coli)	mpn/100mL	n/v	<1.0
Fecal Coliforms	mpn/100mL	n/v	<1.0
Heterotrophic Plate Count	cfu/mL	n/v	120
Total Coliforms	mpn/100mL	n/v	1.0

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-15-34
Sample Date			26-Sep-16
Sample ID			MW16-15-34
Sampling Company			STANTEC
Laboratory			MAXX
Laboratory Work Order			B684017
Laboratory Sample ID			PP4727
Location Description			Tier 2
Sample Type	Units	2024 AEPA Tier 1	Bedrock
Field Parameters			
Electrical Conductivity, Field	µS/cm	1,000[A]	984
pH, Field	S.U.	6.5-8.5[A]	7.4
Temperature, Field	deg C	n/v	8
Calculated Parameters			
Anion Sum	meq/L	n/v	11
Cation Sum	meq/L	n/v	10
Hardness (as CaCO3)	mg/L	n/v	52
Ion Balance	%	n/v	0.95
Nitrate	mg/L	13[f,A]	<0.044
Nitrate + Nitrite (as N)	mg/L	100[A]	<0.020
Nitrite	mg/L	0.197/1.97[n4.a,A]	<0.033
Total Dissolved Solids	mg/L	500[A]	**610[A]**
BTEX and Petroleum Hydrocarbons			
Benzene	mg/L	0.005[A]	<0.00040
Toluene	mg/L	0.024[A]	<0.00040
Ethylbenzene	mg/L	0.0016[A]	<0.00040
Xylene, m & p-	mg/L	n/v	<0.00080
Xylene, o-	mg/L	n/v	<0.00040
Xylenes, Total	mg/L	0.02[A]	<0.00080
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10
Miscellaneous Inorganics			
Dissolved Organic Carbon (DOC)	mg/L	n/v	1.7
Electrical Conductivity, Lab	µS/cm	1,000[A]	1,000
pH, lab	S.U.	6.5-8.5[A]	8.31
Anions			
Alkalinity (P as CaCO3)	mg/L	n/v	<0.50
Alkalinity, Total (as CaCO3)	mg/L	n/v	350
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	430
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<0.50
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<0.50
Sulfate	mg/L	128/429[n3,A]	**170[A]**
Chloride	mg/L	100[A]	3.4
Nutrients			
Ammonia (as N)	mg/L	0.035/125[n2,A]	**0.99 AG[A]**
Nitrite (as N)	mg/L	0.06/0.6[n4,A]	<0.010
Orthophosphate (as P)	mg/L	n/v	0.0038
Nitrate (as N)	mg/L	3[A]	<0.010
Phosphorus, Total (Dissolved)	mg/L	n/v	0.0057
Total Kjeldahl Nitrogen	mg/L	n/v	0.90 AG
Metals - Dissolved			
Aluminum	mg/L	0.007/0.05[n1.e,A]	0.0040
Antimony	mg/L	0.006[A]	0.0013
Arsenic	mg/L	0.005[A]	0.0010
Barium	mg/L	2[A]	0.013
Beryllium	mg/L	n/v	<0.0010
Boron	mg/L	1[A]	0.040
Cadmium	mg/L	0.00004/0.00037[n3,A]	<0.000020
Calcium	mg/L	n/v	14
Chromium	mg/L	0.05[A]	<0.0010
Cobalt	mg/L	n/v	<0.00030
Copper	mg/L	0.007[A]	<0.00020
Iron	mg/L	0.3[A]	<0.060
Lead	mg/L	0.001/0.007[n3,A]	<0.00020
Lithium	mg/L	n/v	0.074
Magnesium	mg/L	n/v	4.2

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-15-34
Sample Date			26-Sep-16
Sample ID			MW16-15-34
Sampling Company			STANTEC
Laboratory			MAXX
Laboratory Work Order			B684017
Laboratory Sample ID			PP4727
Location Description			Tier 2
Sample Type	Units	2024 AEPA Tier 1	Bedrock
Manganese	mg/L	0.02[A]	**0.028[A]**
Mercury	mg/L	0.000005[A]	<0.0000020
Molybdenum	mg/L	n/v	0.018
Nickel	mg/L	0/0.17$_{n3}$[A]	***<0.00050***
Phosphorus	mg/L	n/v	<0.10
Potassium	mg/L	n/v	2.4
Selenium	mg/L	0.002[A]	0.00065
Silicon	mg/L	n/v	2.6
Silver	mg/L	0.00025[A]	<0.00010
Sodium	mg/L	200[A]	**210[A]**
Strontium	mg/L	n/v	0.25
Sulfur	mg/L	n/v	51
Thallium	mg/L	n/v	<0.00020
Tin	mg/L	n/v	<0.0010
Titanium	mg/L	n/v	<0.0010
Uranium	mg/L	0.01[A]	0.00024
Vanadium	mg/L	n/v	<0.0010
Zinc	mg/L	0.03[A]	<0.0030
Metals - Total			
Mercury	mg/L	0.000005[A]	***<0.00010 DB***
Microbiological Parameters			
Escherichia coli (E.Coli)	mpn/100mL	n/v	<1.0
Fecal Coliforms	mpn/100mL	n/v	<1.0
Heterotrophic Plate Count	cfu/mL	n/v	39
Total Coliforms	mpn/100mL	n/v	<1.0

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-16-11	
Sample Date			3-Oct-16	13-May-21
Sample ID			MW16-16-11	MW16-16-11
Sampling Company			STANTEC	STANTEC
Laboratory			MAXX	BV
Laboratory Work Order			B686741	C132075
Laboratory Sample ID			PR2486	ZU2982
Location Description			Tier 2	Tier 2
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated	Unconsolidated
Field Parameters				
Dissolved Oxygen, Field	mg/L	n/v	-	14.91
Electrical Conductivity, Field	µS/cm	1,000[A]	**4,840[A]**	**5,210[A]**
Oxidation Reduction Potential, field	mV	n/v	-	84.2
pH, Field	S.U.	6.5-8.5[A]	7.2	6.76
Temperature, Field	deg C	n/v	12.1	12.2
Calculated Parameters				
Anion Sum	meq/L	n/v	78	81
Cation Sum	meq/L	n/v	75	80
Hardness (as CaCO3)	mg/L	n/v	2,400	2,700
Ion Balance	%	n/v	0.95	0.41
Nitrate	mg/L	13[A]	0.14	<0.22
Nitrate + Nitrite (as N)	mg/L	100[A]	0.031	<0.050 MI
Nitrite	mg/L	0.197/1.97$_{n4.a}$[A]	<0.033	<0.033
Total Dissolved Solids	mg/L	500[A]	**4,900[A]**	**5,100[A]**
BTEX and Petroleum Hydrocarbons				
Benzene	mg/L	0.005[A]	**0.0056[A]**	<0.00040
Toluene	mg/L	0.024[A]	0.024	<0.00040
Ethylbenzene	mg/L	0.0016[A]	**0.0034[A]**	<0.00040
Xylene, m & p-	mg/L	n/v	0.013	<0.00080
Xylene, o-	mg/L	n/v	0.0056	<0.00040
Xylenes, Total	mg/L	0.02[A]	0.019	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10	<0.10
Miscellaneous Inorganics				
Dissolved Organic Carbon (DOC)	mg/L	n/v	4.6	3.4
Electrical Conductivity, Lab	µS/cm	1,000[A]	**5,400[A]**	**5,500[A]**
pH, lab	S.U.	6.5-8.5[A]	7.57	7.48
Anions				
Alkalinity (P as CaCO3)	mg/L	n/v	<0.50	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	630	720
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	770	870
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<0.50	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<0.50	<1.0
Sulfate	mg/L	128/429$_{n3}$[A]	**3,100 CD[A]**	**3,200 CD[A]**
Chloride	mg/L	100[A]	7.9	5.9
Nutrients				
Ammonia (as N)	mg/L	0.035/125$_{n2}$[A]	**0.60[A]**	**0.33[A]**
Nitrite (as N)	mg/L	0.06/0.6$_{n4}$[A]	<0.010	<0.010
Orthophosphate (as P)	mg/L	n/v	0.0045	0.0037
Nitrate (as N)	mg/L	3[A]	0.031	<0.050
Phosphorus, Total (Dissolved)	mg/L	n/v	0.011	<0.0030
Total Kjeldahl Nitrogen	mg/L	n/v	14 DB	1.25
Nitrogen	mg/L	n/v	-	1.2 DB
Metals - Dissolved				
Aluminum	mg/L	0.007/0.05$_{n1.e}$[A]	0.0056	0.0050
Antimony	mg/L	0.006[A]	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	0.00085	0.00056
Barium	mg/L	2[A]	0.026	0.013
Beryllium	mg/L	n/v	<0.0010	<0.0010
Boron	mg/L	1[A]	0.20	0.29
Cadmium	mg/L	0.00004/0.00037$_{n3}$[A]	**0.00014 NF[A]**	**0.000098[A]**
Calcium	mg/L	n/v	440	460
Chromium	mg/L	0.05[A]	<0.0010	<0.0010
Cobalt	mg/L	n/v	0.0037	0.0036
Copper	mg/L	0.007[A]	**0.0097[A]**	0.00022

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-16-11	
Sample Date			3-Oct-16	13-May-21
Sample ID			MW16-16-11	MW16-16-11
Sampling Company			STANTEC	STANTEC
Laboratory			MAXX	BV
Laboratory Work Order			B686741	C132075
Laboratory Sample ID			PR2486	ZU2982
Location Description			Tier 2	Tier 2
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated	Unconsolidated
Iron	mg/L	0.3[A]	<0.060	**0.51[A]**
Lead	mg/L	0.001/0.007$_{n3}$[A]	<0.00020	<0.00020
Lithium	mg/L	n/v	0.15	0.15
Magnesium	mg/L	n/v	320	370
Manganese	mg/L	0.02[A]	**2.3[A]**	**3.4[A]**
Mercury	mg/L	0.000005[A]	<0.0000020	<0.0000019
Molybdenum	mg/L	n/v	0.0011	0.00041
Nickel	mg/L	0/0.17$_{n3}$[A]	**0.0066[A]**	**0.0070[A]**
Phosphorus	mg/L	n/v	<0.10	<0.10
Potassium	mg/L	n/v	15	13
Selenium	mg/L	0.002[A]	0.00038	0.00030
Silicon	mg/L	n/v	6.3	7.1
Silver	mg/L	0.00025[A]	<0.00010	<0.00010
Sodium	mg/L	200[A]	**600 CD[A]**	**590 CD[A]**
Strontium	mg/L	n/v	4.9	6.0 CD
Sulfur	mg/L	n/v	1,000 CD	1,200 CD
Thallium	mg/L	n/v	<0.00020	<0.00020
Tin	mg/L	n/v	<0.0010	<0.0010
Titanium	mg/L	n/v	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	**0.033[A]**	**0.019[A]**
Vanadium	mg/L	n/v	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	<0.0030	<0.0030
Metals - Total				
Mercury	mg/L	0.000005[A]	***<0.0060 DB***	**0.0000788[A]**
Microbiological Parameters				
Escherichia coli (E.Coli)	mpn/100mL	n/v	<100 DB	<10 SVH MI
Fecal Coliforms	mpn/100mL	n/v	<100 DB	<10 SVH MI
Heterotrophic Plate Count	cfu/mL	n/v	50,000 DB	350
Total Coliforms	mpn/100mL	n/v	200 DB	<10 SVH MI

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-17-5
Sample Date			6-Oct-16
Sample ID			MW16-17-5
Sampling Company			STANTEC
Laboratory			MAXX
Laboratory Work Order			B688395
Laboratory Sample ID			PS2812
Location Description			Tier 2
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated
Field Parameters			
Electrical Conductivity, Field	µS/cm	1,000[A]	**6,290[A]**
pH, Field	S.U.	6.5-8.5[A]	7
Temperature, Field	deg C	n/v	6.7
Calculated Parameters			
Anion Sum	meq/L	n/v	110
Cation Sum	meq/L	n/v	100
Hardness (as CaCO3)	mg/L	n/v	3,500
Ion Balance	%	n/v	0.93
Nitrate	mg/L	13_{f}[A]	5.0
Nitrate + Nitrite (as N)	mg/L	100[A]	1.3
Nitrite	mg/L	$0.197/1.97_{n4,g}$[A]	**0.55[A]**
Total Dissolved Solids	mg/L	500[A]	**6,900[A]**
Miscellaneous Inorganics			
Electrical Conductivity, Lab	µS/cm	1,000[A]	**6,900[A]**
pH, lab	S.U.	6.5-8.5[A]	7.81
Anions			
Alkalinity (P as CaCO3)	mg/L	n/v	<0.50
Alkalinity, Total (as CaCO3)	mg/L	n/v	520
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	640
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<0.50
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<0.50
Sulfate	mg/L	$128/429_{n3}$[A]	**4,800 CD[A]**
Chloride	mg/L	100[A]	8.7
Nutrients			
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	**0.17[A]**
Nitrate (as N)	mg/L	3[A]	1.1
Metals - Dissolved			
Aluminum	mg/L	$0.007/0.05_{n1,e}$[A]	0.0039
Antimony	mg/L	0.006[A]	0.00062
Arsenic	mg/L	0.005[A]	0.00053
Barium	mg/L	2[A]	0.041
Beryllium	mg/L	n/v	<0.0010
Boron	mg/L	1[A]	0.12
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	**0.00028[A]**
Calcium	mg/L	n/v	410
Chromium	mg/L	0.05[A]	<0.0010
Cobalt	mg/L	n/v	0.00083
Copper	mg/L	0.007[A]	0.0017
Iron	mg/L	0.3[A]	<0.060
Lead	mg/L	$0.001/0.007_{n3}$[A]	<0.00020
Lithium	mg/L	n/v	0.15
Magnesium	mg/L	n/v	600 CD
Manganese	mg/L	0.02[A]	**0.39[A]**
Mercury	mg/L	0.000005[A]	<0.0000020
Molybdenum	mg/L	n/v	0.0015
Nickel	mg/L	$0/0.17_{n3}$[A]	**0.0054[A]**
Phosphorus	mg/L	n/v	0.11
Potassium	mg/L	n/v	11
Selenium	mg/L	0.002[A]	**0.034[A]**
Silicon	mg/L	n/v	5.2
Silver	mg/L	0.00025[A]	<0.00010
Sodium	mg/L	200[A]	**750 CD[A]**
Strontium	mg/L	n/v	4.7
Sulfur	mg/L	n/v	1,500 CD
Thallium	mg/L	n/v	<0.00020
Tin	mg/L	n/v	<0.0010

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-17-5
Sample Date			6-Oct-16
Sample ID			MW16-17-5
Sampling Company			STANTEC
Laboratory			MAXX
Laboratory Work Order			B688395
Laboratory Sample ID			PS2812
Location Description			Tier 2
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated
Titanium	mg/L	n/v	<0.0010
Uranium	mg/L	0.01[A]	**0.031[A]**
Vanadium	mg/L	n/v	<0.0010
Zinc	mg/L	0.03[A]	0.0062
Metals - Total			
Mercury	mg/L	0.000005[A]	***<0.00020 DB***

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-18-6	
Sample Date			4-Oct-16	13-May-21
Sample ID			MW16-18-6	MW16-18-6
Sampling Company			STANTEC	STANTEC
Laboratory			MAXX	BV
Laboratory Work Order			B687243	C132075
Laboratory Sample ID			PR5499	ZU2989
Location Description			Tier 2	Tier 2
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated	Unconsolidated
Field Parameters				
Dissolved Oxygen, Field	mg/L	n/v	-	23.79
Electrical Conductivity, Field	µS/cm	1,000[A]	**1,029[A]**	**1,060[A]**
Oxidation Reduction Potential, field	mV	n/v	-	62.5
pH, Field	S.U.	6.5-8.5[A]	7.1	7.43
Temperature, Field	deg C	n/v	6.3	6.4
Calculated Parameters				
Anion Sum	meq/L	n/v	13	12
Cation Sum	meq/L	n/v	12	13
Hardness (as CaCO3)	mg/L	n/v	480	490
Ion Balance	%	n/v	0.98	2.0
Nitrate	mg/L	13[A]	5.3	4.1
Nitrate + Nitrite (as N)	mg/L	100[A]	1.2	0.93 MI
Nitrite	mg/L	$0.197/1.97_{n4.a}$[A]	0.10	<0.033
Total Dissolved Solids	mg/L	500[A]	**650[A]**	**620[A]**
BTEX and Petroleum Hydrocarbons				
Benzene	mg/L	0.005[A]	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	0.00062	<0.00040
Xylene, m & p-	mg/L	n/v	0.0020	<0.00080
Xylene, o-	mg/L	n/v	0.0010	<0.00040
Xylenes, Total	mg/L	0.02[A]	0.0030	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10	<0.10
Miscellaneous Inorganics				
Dissolved Organic Carbon (DOC)	mg/L	n/v	4.9	3.8
Electrical Conductivity, Lab	µS/cm	1,000[A]	**1,100[A]**	**1,100[A]**
pH, lab	S.U.	6.5-8.5[A]	8.01	7.93
Anions				
Alkalinity (P as CaCO3)	mg/L	n/v	<0.50	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	420	450
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	510	550
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<0.50	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<0.50	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	100	82
Chloride	mg/L	100[A]	72	45
Nutrients				
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	***<0.050***	<0.015
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	0.031	<0.010
Orthophosphate (as P)	mg/L	n/v	<0.0030	0.0032
Nitrate (as N)	mg/L	3[A]	1.2	0.93
Phosphorus, Total (Dissolved)	mg/L	n/v	0.0038	0.0031
Total Kjeldahl Nitrogen	mg/L	n/v	1.3	0.72
Nitrogen	mg/L	n/v	-	1.7 DB
Metals - Dissolved				
Aluminum	mg/L	$0.007/0.05_{n1.e}$[A]	<0.0030	0.0053
Antimony	mg/L	0.006[A]	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	0.00022	0.00026
Barium	mg/L	2[A]	0.075	0.080
Beryllium	mg/L	n/v	<0.0010	<0.0010
Boron	mg/L	1[A]	0.088	0.092
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	<0.000020	<0.000020
Calcium	mg/L	n/v	86	85
Chromium	mg/L	0.05[A]	<0.0010	<0.0010
Cobalt	mg/L	n/v	<0.00030	<0.00030
Copper	mg/L	0.007[A]	0.00067	0.00080
Iron	mg/L	0.3[A]	<0.060	<0.060

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-18-6	
Sample Date			4-Oct-16	13-May-21
Sample ID			MW16-18-6	MW16-18-6
Sampling Company			STANTEC	STANTEC
Laboratory			MAXX	BV
Laboratory Work Order			B687243	C132075
Laboratory Sample ID			PR5499	ZU2989
Location Description			Tier 2	Tier 2
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated	Unconsolidated
Lead	mg/L	0.001/0.007$_{n3}$[A]	<0.00020	<0.00020
Lithium	mg/L	n/v	0.026	0.027
Magnesium	mg/L	n/v	63	67
Manganese	mg/L	0.02[A]	**0.058[A]**	0.0047
Mercury	mg/L	0.000005[A]	<0.0000020	<0.0000019
Molybdenum	mg/L	n/v	0.0019	0.0015
Nickel	mg/L	0/0.17$_{n3}$[A]	**0.00099[A]**	**0.00060[A]**
Phosphorus	mg/L	n/v	<0.10	<0.10
Potassium	mg/L	n/v	2.4	2.2
Selenium	mg/L	0.002[A]	0.0012	**0.0023[A]**
Silicon	mg/L	n/v	4.1	4.3
Silver	mg/L	0.00025[A]	<0.00010	<0.00010
Sodium	mg/L	200[A]	66	62
Strontium	mg/L	n/v	0.75	0.80
Sulfur	mg/L	n/v	29	31
Thallium	mg/L	n/v	<0.00020	<0.00020
Tin	mg/L	n/v	<0.0010	<0.0010
Titanium	mg/L	n/v	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	**0.011[A]**	0.0076
Vanadium	mg/L	n/v	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	<0.0030	<0.0030
Metals - Total				
Mercury	mg/L	0.000005[A]	***<0.0060 DB***	**0.0000383[A]**
Microbiological Parameters				
Escherichia coli (E.Coli)	mpn/100mL	n/v	<10 DB	<10 MI
Fecal Coliforms	mpn/100mL	n/v	<10 DB	<10 MI
Heterotrophic Plate Count	cfu/mL	n/v	4,400 DB	140
Total Coliforms	mpn/100mL	n/v	140 DB	<10 MI

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-18-10	
Sample Date			4-Oct-16	13-May-21
Sample ID			MW16-18-10	MW16-18-10
Sampling Company			STANTEC	STANTEC
Laboratory			MAXX	BV
Laboratory Work Order			B687243	C132075
Laboratory Sample ID			PR5500	ZU2988
Location Description			Tier 2	Tier 2
Sample Type	Units	2024 AEPA Tier 1	Bedrock	Bedrock
Field Parameters				
Dissolved Oxygen, Field	mg/L	n/v	-	5.11
Electrical Conductivity, Field	µS/cm	1,000[A]	**1,049[A]**	**1,211[A]**
Oxidation Reduction Potential, field	mV	n/v	-	69.4
pH, Field	S.U.	6.5-8.5[A]	7	7.53
Temperature, Field	deg C	n/v	6.3	6.5
Calculated Parameters				
Anion Sum	meq/L	n/v	13	13
Cation Sum	meq/L	n/v	12	13
Hardness (as CaCO3)	mg/L	n/v	160	200
Ion Balance	%	n/v	0.93	0.068
Nitrate	mg/L	13[A]	0.51	1.6
Nitrate + Nitrite (as N)	mg/L	100[A]	0.13	0.35
Nitrite	mg/L	$0.197/1.97_{n4.a}$[A]	0.054	<0.033
Total Dissolved Solids	mg/L	500[A]	**680[A]**	**740[A]**
BTEX and Petroleum Hydrocarbons				
Benzene	mg/L	0.005[A]	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	0.0013	<0.00040
Ethylbenzene	mg/L	0.0016[A]	0.00068	<0.00040
Xylene, m & p-	mg/L	n/v	0.0029	<0.00080
Xylene, o-	mg/L	n/v	0.0012	<0.00040
Xylenes, Total	mg/L	0.02[A]	0.0041	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10	<0.10
Miscellaneous Inorganics				
Dissolved Organic Carbon (DOC)	mg/L	n/v	2.6	1.6
Electrical Conductivity, Lab	µS/cm	1,000[A]	**1,200[A]**	**1,200[A]**
pH, lab	S.U.	6.5-8.5[A]	8.10	7.96
Anions				
Alkalinity (P as CaCO3)	mg/L	n/v	<0.50	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	410	420
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	500	510
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<0.50	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<0.50	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	110	94
Chloride	mg/L	100[A]	78	**110[A]**
Nutrients				
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	***<0.050***	0.034
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	0.017	<0.010
Orthophosphate (as P)	mg/L	n/v	<0.0030	<0.0030
Nitrate (as N)	mg/L	3[A]	0.12	0.35
Phosphorus, Total (Dissolved)	mg/L	n/v	<0.0030	<0.0030
Total Kjeldahl Nitrogen	mg/L	n/v	18 CD	0.89
Nitrogen	mg/L	n/v	-	1.2 DB
Metals - Dissolved				
Aluminum	mg/L	$0.007/0.05_{n1.e}$[A]	<0.0030	0.0032
Antimony	mg/L	0.006[A]	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	0.00039	<0.00020
Barium	mg/L	2[A]	0.030	0.028
Beryllium	mg/L	n/v	<0.0010	<0.0010
Boron	mg/L	1[A]	0.14	0.16
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	<0.000020	<0.000020
Calcium	mg/L	n/v	38	47
Chromium	mg/L	0.05[A]	<0.0010	<0.0010
Cobalt	mg/L	n/v	0.00034	<0.00030
Copper	mg/L	0.007[A]	<0.00020	0.00041
Iron	mg/L	0.3[A]	<0.060	<0.060

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-18-10	
Sample Date			4-Oct-16	13-May-21
Sample ID			MW16-18-10	MW16-18-10
Sampling Company			STANTEC	STANTEC
Laboratory			MAXX	BV
Laboratory Work Order			B687243	C132075
Laboratory Sample ID			PR5500	ZU2988
Location Description			Tier 2	Tier 2
Sample Type	Units	2024 AEPA Tier 1	Bedrock	Bedrock
Lead	mg/L	0.001/0.007$_{n3}$[A]	<0.00020	<0.00020
Lithium	mg/L	n/v	0.031	0.039
Magnesium	mg/L	n/v	16	21
Manganese	mg/L	0.02[A]	**0.20[A]**	**0.21[A]**
Mercury	mg/L	0.000005[A]	<0.0000020	<0.0000019
Molybdenum	mg/L	n/v	0.0037	0.0018
Nickel	mg/L	0/0.17$_{n3}$[A]	***<0.00050***	**0.0025[A]**
Phosphorus	mg/L	n/v	<0.10	<0.10
Potassium	mg/L	n/v	1.3	1.3
Selenium	mg/L	0.002[A]	0.00066	0.0013
Silicon	mg/L	n/v	3.4	4.0
Silver	mg/L	0.00025[A]	<0.00010	<0.00010
Sodium	mg/L	200[A]	200	**210[A]**
Strontium	mg/L	n/v	0.27	0.36
Sulfur	mg/L	n/v	33	36
Thallium	mg/L	n/v	<0.00020	<0.00020
Tin	mg/L	n/v	<0.0010	<0.0010
Titanium	mg/L	n/v	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	0.0064	0.0049
Vanadium	mg/L	n/v	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	<0.0030	<0.0030
Metals - Total				
Mercury	mg/L	0.000005[A]	***<0.0060 DB***	***<0.00019 DB***
Microbiological Parameters				
Escherichia coli (E.Coli)	mpn/100mL	n/v	<100 DB	<10 MI
Fecal Coliforms	mpn/100mL	n/v	<100 DB	<10 MI
Heterotrophic Plate Count	cfu/mL	n/v	17,000 DB	450
Total Coliforms	mpn/100mL	n/v	310 DB	<10 MI

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-19-8
Sample Date			27-Sep-16
Sample ID			MW16-19-8
Sampling Company			STANTEC
Laboratory			MAXX
Laboratory Work Order			B684487
Laboratory Sample ID			PP7334
Location Description			Tier 2
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated
Field Parameters			
Electrical Conductivity, Field	µS/cm	1,000[A]	**2,400[A]**
pH, Field	S.U.	6.5-8.5[A]	7.6
Temperature, Field	deg C	n/v	8
Calculated Parameters			
Anion Sum	meq/L	n/v	32
Cation Sum	meq/L	n/v	31
Hardness (as CaCO3)	mg/L	n/v	980
Ion Balance	%	n/v	0.96
Nitrate	mg/L	13_f[A]	1.8
Nitrate + Nitrite (as N)	mg/L	100[A]	0.42
Nitrite	mg/L	$0.197/1.97_{n4.a}$[A]	<0.033
Total Dissolved Solids	mg/L	500[A]	**2,000[A]**
BTEX and Petroleum Hydrocarbons			
Benzene	mg/L	0.005[A]	<0.00040
Toluene	mg/L	0.024[A]	<0.00040
Ethylbenzene	mg/L	0.0016[A]	<0.00040
Xylene, m & p-	mg/L	n/v	<0.00080
Xylene, o-	mg/L	n/v	<0.00040
Xylenes, Total	mg/L	0.02[A]	<0.00080
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10
Miscellaneous Inorganics			
Dissolved Organic Carbon (DOC)	mg/L	n/v	6.3
Electrical Conductivity, Lab	µS/cm	1,000[A]	**2,500[A]**
pH, lab	S.U.	6.5-8.5[A]	7.56
Anions			
Alkalinity (P as CaCO3)	mg/L	n/v	<0.50
Alkalinity, Total (as CaCO3)	mg/L	n/v	420
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	520
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<0.50
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<0.50
Sulfate	mg/L	$128/429_{n3}$[A]	**1,100 CD[A]**
Chloride	mg/L	100[A]	1.9
Nutrients			
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	**0.070[A]**
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	<0.010
Orthophosphate (as P)	mg/L	n/v	<0.0030
Nitrate (as N)	mg/L	3[A]	0.42
Phosphorus, Total (Dissolved)	mg/L	n/v	0.0037
Total Kjeldahl Nitrogen	mg/L	n/v	0.70 DB
Metals - Dissolved			
Aluminum	mg/L	$0.007/0.05_{n1.e}$[A]	0.0039
Antimony	mg/L	0.006[A]	<0.00060
Arsenic	mg/L	0.005[A]	0.00030
Barium	mg/L	2[A]	0.013
Beryllium	mg/L	n/v	<0.0010
Boron	mg/L	1[A]	0.092
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	**0.000057[A]**
Calcium	mg/L	n/v	230
Chromium	mg/L	0.05[A]	<0.0010
Cobalt	mg/L	n/v	<0.00030
Copper	mg/L	0.007[A]	0.00059
Iron	mg/L	0.3[A]	<0.060
Lead	mg/L	$0.001/0.007_{n3}$[A]	<0.00020
Lithium	mg/L	n/v	0.029
Magnesium	mg/L	n/v	99

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-19-8
Sample Date			27-Sep-16
Sample ID			MW16-19-8
Sampling Company			STANTEC
Laboratory			MAXX
Laboratory Work Order			B684487
Laboratory Sample ID			PP7334
Location Description			Tier 2
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated
Manganese	mg/L	0.02[A]	**0.071[A]**
Mercury	mg/L	0.000005[A]	<0.0000020
Molybdenum	mg/L	n/v	0.00060
Nickel	mg/L	0/0.17$_{n3}$[A]	***<0.00050***
Phosphorus	mg/L	n/v	<0.10
Potassium	mg/L	n/v	5.9
Selenium	mg/L	0.002[A]	**0.056[A]**
Silicon	mg/L	n/v	3.6
Silver	mg/L	0.00025[A]	<0.00010
Sodium	mg/L	200[A]	**260[A]**
Strontium	mg/L	n/v	1.4
Sulfur	mg/L	n/v	370
Thallium	mg/L	n/v	<0.00020
Tin	mg/L	n/v	<0.0010
Titanium	mg/L	n/v	<0.0010
Uranium	mg/L	0.01[A]	**0.013[A]**
Vanadium	mg/L	n/v	<0.0010
Zinc	mg/L	0.03[A]	<0.0030
Metals - Total			
Mercury	mg/L	0.000005[A]	***<0.0020 DB***
Microbiological Parameters			
Escherichia coli (E.Coli)	mpn/100mL	n/v	63
Fecal Coliforms	mpn/100mL	n/v	<10 DB
Heterotrophic Plate Count	cfu/mL	n/v	>6000
Total Coliforms	mpn/100mL	n/v	280

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-19-19
Sample Date			27-Sep-16
Sample ID			MW16-19-19
Sampling Company			STANTEC
Laboratory			MAXX
Laboratory Work Order			B684487
Laboratory Sample ID			PP7335
Location Description			Tier 2
Sample Type	Units	2024 AEPA Tier 1	Bedrock
Field Parameters			
Electrical Conductivity, Field	µS/cm	1,000[A]	**2,850[A]**
pH, Field	S.U.	6.5-8.5[A]	7.2
Temperature, Field	deg C	n/v	8.2
Calculated Parameters			
Anion Sum	meq/L	n/v	36
Cation Sum	meq/L	n/v	34
Hardness (as CaCO3)	mg/L	n/v	600
Ion Balance	%	n/v	0.95
Nitrate	mg/L	13_f[A]	<0.044
Nitrate + Nitrite (as N)	mg/L	100[A]	<0.020
Nitrite	mg/L	$0.197/1.97_{n4.a}$[A]	<0.033
Total Dissolved Solids	mg/L	500[A]	**2,200[A]**
BTEX and Petroleum Hydrocarbons			
Benzene	mg/L	0.005[A]	<0.00040
Toluene	mg/L	0.024[A]	<0.00040
Ethylbenzene	mg/L	0.0016[A]	<0.00040
Xylene, m & p-	mg/L	n/v	<0.00080
Xylene, o-	mg/L	n/v	<0.00040
Xylenes, Total	mg/L	0.02[A]	<0.00080
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10
Miscellaneous Inorganics			
Dissolved Organic Carbon (DOC)	mg/L	n/v	3.9
Electrical Conductivity, Lab	µS/cm	1,000[A]	**3,000[A]**
pH, lab	S.U.	6.5-8.5[A]	7.54
Anions			
Alkalinity (P as CaCO3)	mg/L	n/v	<0.50
Alkalinity, Total (as CaCO3)	mg/L	n/v	520
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	640
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<0.50
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<0.50
Sulfate	mg/L	$128/429_{n3}$[A]	**1,200 CD[A]**
Chloride	mg/L	100[A]	1.7
Nutrients			
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	**1.1[A]**
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	<0.010
Orthophosphate (as P)	mg/L	n/v	<0.0030
Nitrate (as N)	mg/L	3[A]	<0.010
Phosphorus, Total (Dissolved)	mg/L	n/v	<0.0030
Total Kjeldahl Nitrogen	mg/L	n/v	1.5 DB
Metals - Dissolved			
Aluminum	mg/L	$0.007/0.05_{n1.e}$[A]	0.0033
Antimony	mg/L	0.006[A]	<0.00060
Arsenic	mg/L	0.005[A]	0.00033
Barium	mg/L	2[A]	<0.010
Beryllium	mg/L	n/v	<0.0010
Boron	mg/L	1[A]	0.13
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	<0.000020
Calcium	mg/L	n/v	140
Chromium	mg/L	0.05[A]	<0.0010
Cobalt	mg/L	n/v	<0.00030
Copper	mg/L	0.007[A]	<0.00020
Iron	mg/L	0.3[A]	**2.6[A]**
Lead	mg/L	$0.001/0.007_{n3}$[A]	<0.00020
Lithium	mg/L	n/v	0.056
Magnesium	mg/L	n/v	62

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-19-19
Sample Date			27-Sep-16
Sample ID			MW16-19-19
Sampling Company			STANTEC
Laboratory			MAXX
Laboratory Work Order			B684487
Laboratory Sample ID			PP7335
Location Description			Tier 2
Sample Type	Units	2024 AEPA Tier 1	Bedrock
Manganese	mg/L	0.02[A]	**0.37[A]**
Mercury	mg/L	0.000005[A]	<0.0000020
Molybdenum	mg/L	n/v	0.0012
Nickel	mg/L	0/0.17$_{n3}$[A]	***<0.00050***
Phosphorus	mg/L	n/v	<0.10
Potassium	mg/L	n/v	5.9
Selenium	mg/L	0.002[A]	<0.00020
Silicon	mg/L	n/v	3.4
Silver	mg/L	0.00025[A]	<0.00010
Sodium	mg/L	200[A]	**490[A]**
Strontium	mg/L	n/v	2.1
Sulfur	mg/L	n/v	370
Thallium	mg/L	n/v	<0.00020
Tin	mg/L	n/v	<0.0010
Titanium	mg/L	n/v	<0.0010
Uranium	mg/L	0.01[A]	0.00092
Vanadium	mg/L	n/v	<0.0010
Zinc	mg/L	0.03[A]	<0.0030
Metals - Total			
Mercury	mg/L	0.000005[A]	***<0.00020 DB***
Microbiological Parameters			
Escherichia coli (E.Coli)	mpn/100mL	n/v	<10
Fecal Coliforms	mpn/100mL	n/v	<10 DB
Heterotrophic Plate Count	cfu/mL	n/v	1,700
Total Coliforms	mpn/100mL	n/v	10

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-20-21
Sample Date			27-Sep-16
Sample ID			MW16-20-21
Sampling Company			STANTEC
Laboratory			MAXX
Laboratory Work Order			B684487
Laboratory Sample ID			PP7336
Location Description			EIA Project Well
Sample Type	Units	2024 AEPA Tier 1	Bedrock
Field Parameters			
Electrical Conductivity, Field	µS/cm	1,000[A]	**1,996[A]**
pH, Field	S.U.	6.5-8.5[A]	7.2
Temperature, Field	deg C	n/v	6.2
Calculated Parameters			
Anion Sum	meq/L	n/v	25
Cation Sum	meq/L	n/v	24
Hardness (as CaCO3)	mg/L	n/v	740
Ion Balance	%	n/v	0.97
Nitrate	mg/L	13_{f}[A]	0.085
Nitrate + Nitrite (as N)	mg/L	100[A]	<0.020
Nitrite	mg/L	$0.197/1.97_{n4.a}$[A]	<0.033
Total Dissolved Solids	mg/L	500[A]	**1,500[A]**
BTEX and Petroleum Hydrocarbons			
Benzene	mg/L	0.005[A]	0.0010
Toluene	mg/L	0.024[A]	0.00050
Ethylbenzene	mg/L	0.0016[A]	<0.00040
Xylene, m & p-	mg/L	n/v	<0.00080
Xylene, o-	mg/L	n/v	<0.00040
Xylenes, Total	mg/L	0.02[A]	<0.00080
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10
Miscellaneous Inorganics			
Dissolved Organic Carbon (DOC)	mg/L	n/v	3.8
Electrical Conductivity, Lab	µS/cm	1,000[A]	**2,100[A]**
pH, lab	S.U.	6.5-8.5[A]	7.59
Anions			
Alkalinity (P as CaCO3)	mg/L	n/v	<0.50
Alkalinity, Total (as CaCO3)	mg/L	n/v	450
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	540
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<0.50
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<0.50
Sulfate	mg/L	$128/429_{n3}$[A]	**760 CD[A]**
Chloride	mg/L	100[A]	3.3
Nutrients			
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	**0.57[A]**
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	<0.010
Orthophosphate (as P)	mg/L	n/v	<0.0030
Nitrate (as N)	mg/L	3[A]	0.019
Phosphorus, Total (Dissolved)	mg/L	n/v	<0.0030
Total Kjeldahl Nitrogen	mg/L	n/v	11 DB
Metals - Dissolved			
Aluminum	mg/L	$0.007/0.05_{n1.e}$[A]	0.0040
Antimony	mg/L	0.006[A]	<0.00060
Arsenic	mg/L	0.005[A]	0.00043
Barium	mg/L	2[A]	0.018
Beryllium	mg/L	n/v	<0.0010
Boron	mg/L	1[A]	0.076
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	<0.000020
Calcium	mg/L	n/v	160
Chromium	mg/L	0.05[A]	<0.0010
Cobalt	mg/L	n/v	0.00085
Copper	mg/L	0.007[A]	<0.00020
Iron	mg/L	0.3[A]	**0.69[A]**
Lead	mg/L	$0.001/0.007_{n3}$[A]	<0.00020
Lithium	mg/L	n/v	0.053
Magnesium	mg/L	n/v	82

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-20-21
Sample Date			27-Sep-16
Sample ID			MW16-20-21
Sampling Company			STANTEC
Laboratory			MAXX
Laboratory Work Order			B684487
Laboratory Sample ID			PP7336
Location Description			EIA Project Well
Sample Type	Units	2024 AEPA Tier 1	Bedrock
Manganese	mg/L	0.02[A]	**0.34[A]**
Mercury	mg/L	0.000005[A]	<0.0000020
Molybdenum	mg/L	n/v	0.0052
Nickel	mg/L	0/0.17$_{n3}$[A]	***<0.00050***
Phosphorus	mg/L	n/v	<0.10
Potassium	mg/L	n/v	8.9
Selenium	mg/L	0.002[A]	0.00090
Silicon	mg/L	n/v	4.0
Silver	mg/L	0.00025[A]	<0.00010
Sodium	mg/L	200[A]	**210[A]**
Strontium	mg/L	n/v	2.0
Sulfur	mg/L	n/v	240
Thallium	mg/L	n/v	<0.00020
Tin	mg/L	n/v	<0.0010
Titanium	mg/L	n/v	<0.0010
Uranium	mg/L	0.01[A]	0.0032
Vanadium	mg/L	n/v	<0.0010
Zinc	mg/L	0.03[A]	<0.0030
Metals - Total			
Mercury	mg/L	0.000005[A]	***<0.0060 DB***
Microbiological Parameters			
Escherichia coli (E.Coli)	mpn/100mL	n/v	<100
Fecal Coliforms	mpn/100mL	n/v	<100 DB
Heterotrophic Plate Count	cfu/mL	n/v	17,000 DB
Total Coliforms	mpn/100mL	n/v	750

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-21-11
Sample Date			29-Sep-16
Sample ID			MW16-21-11
Sampling Company			STANTEC
Laboratory			MAXX
Laboratory Work Order			B685593
Laboratory Sample ID			PQ3527
Location Description			Tier 2
Sample Type	Units	2024 AEPA Tier 1	Bedrock
Field Parameters			
Electrical Conductivity, Field	µS/cm	1,000[A]	848
pH, Field	S.U.	6.5-8.5[A]	7.2
Temperature, Field	deg C	n/v	8.5
Calculated Parameters			
Anion Sum	meq/L	n/v	9.2
Cation Sum	meq/L	n/v	9.9
Hardness (as CaCO3)	mg/L	n/v	440
Ion Balance	%	n/v	1.1
Nitrate	mg/L	13_{f}[A]	**21[A]**
Nitrate + Nitrite (as N)	mg/L	100[A]	4.8
Nitrite	mg/L	$0.197/1.97_{n4.a}$[A]	<0.033
Total Dissolved Solids	mg/L	500[A]	480
BTEX and Petroleum Hydrocarbons			
Benzene	mg/L	0.005[A]	<0.00040
Toluene	mg/L	0.024[A]	<0.00040
Ethylbenzene	mg/L	0.0016[A]	0.00059
Xylene, m & p-	mg/L	n/v	0.00090
Xylene, o-	mg/L	n/v	0.0010
Xylenes, Total	mg/L	0.02[A]	0.0019
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10
Miscellaneous Inorganics			
Dissolved Organic Carbon (DOC)	mg/L	n/v	4.8
Electrical Conductivity, Lab	µS/cm	1,000[A]	800
pH, lab	S.U.	6.5-8.5[A]	7.96
Anions			
Alkalinity (P as CaCO3)	mg/L	n/v	<0.50
Alkalinity, Total (as CaCO3)	mg/L	n/v	390
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	470
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<0.50
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<0.50
Sulfate	mg/L	$128/429_{n3}$[A]	50
Chloride	mg/L	100[A]	4.6
Nutrients			
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	***<0.050***
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	<0.010
Orthophosphate (as P)	mg/L	n/v	0.0041 OG
Nitrate (as N)	mg/L	3[A]	**4.8[A]**
Phosphorus, Total (Dissolved)	mg/L	n/v	0.013
Total Kjeldahl Nitrogen	mg/L	n/v	3.3 DB
Metals - Dissolved			
Aluminum	mg/L	$0.007/0.05_{n1.e}$[A]	0.0033
Antimony	mg/L	0.006[A]	<0.00060
Arsenic	mg/L	0.005[A]	0.00045
Barium	mg/L	2[A]	0.087
Beryllium	mg/L	n/v	<0.0010
Boron	mg/L	1[A]	0.061
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	**0.000073[A]**
Calcium	mg/L	n/v	86
Chromium	mg/L	0.05[A]	<0.0010
Cobalt	mg/L	n/v	0.00062
Copper	mg/L	0.007[A]	0.0013
Iron	mg/L	0.3[A]	0.078
Lead	mg/L	$0.001/0.007_{n3}$[A]	<0.00020
Lithium	mg/L	n/v	0.028
Magnesium	mg/L	n/v	54

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-21-11
Sample Date			29-Sep-16
Sample ID			MW16-21-11
Sampling Company			STANTEC
Laboratory			MAXX
Laboratory Work Order			B685593
Laboratory Sample ID			PQ3527
Location Description			Tier 2
Sample Type	Units	2024 AEPA Tier 1	Bedrock
Manganese	mg/L	0.02[A]	**0.17[A]**
Mercury	mg/L	0.000005[A]	<0.0000020
Molybdenum	mg/L	n/v	0.0010
Nickel	mg/L	0/0.17$_{n3}$[A]	**0.0016[A]**
Phosphorus	mg/L	n/v	<0.10
Potassium	mg/L	n/v	7.6
Selenium	mg/L	0.002[A]	0.0019
Silicon	mg/L	n/v	4.7
Silver	mg/L	0.00025[A]	<0.00010
Sodium	mg/L	200[A]	21
Strontium	mg/L	n/v	1.1
Sulfur	mg/L	n/v	19
Thallium	mg/L	n/v	<0.00020
Tin	mg/L	n/v	<0.0010
Titanium	mg/L	n/v	<0.0010
Uranium	mg/L	0.01[A]	0.0067
Vanadium	mg/L	n/v	<0.0010
Zinc	mg/L	0.03[A]	<0.0030
Metals - Total			
Mercury	mg/L	0.000005[A]	***<0.02 DB***
Microbiological Parameters			
Escherichia coli (E.Coli)	mpn/100mL	n/v	<10 DB
Fecal Coliforms	mpn/100mL	n/v	<10 DB
Heterotrophic Plate Count	cfu/mL	n/v	3,200 DB
Total Coliforms	mpn/100mL	n/v	20 DB

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location				MW16-22-26									
Sample Date				28-Sep-16	14-May-21	23-Nov-21	10-May-22	22-Nov-22	18-May-23	25-Oct-23	16-May-24	26-Sep-24	5-Jun-25
Sample ID				MW16-22-26	MW16-22-26	MW16-22-26	MW16-22-26	MW16-22-26	MW16-22-26	MW16-22-26	MW16-22-26	RMW16-22-26	MW16-22-26
Sampling Company				STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory				MAXX	BV	AGAT	BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order				B685112	C132332	21C834079	C231132	C292215	C335681	C386944	C435132	C476935	C551520
Laboratory Sample ID				PQ0285	ZU4970	3244031	ASU356	BHN145	BQS280	CCW514	CNR331	CWM896	DML533
Location Description				Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
Lithology				Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated
Sample Type	Units	2024 AEPA Tier 1	UCL										
Field Parameters													
Dissolved Oxygen, Field	mg/L	n/v	n/v	-	4.71	4.89	5.34	3.9	9.2	2.2	5.2	3.7	4.26
Electrical Conductivity, Field	µS/cm	1,000[A]	n/v	**2,080[A]**	**1,897[A]**	**1,922[A]**	**2,120[A]**	**1,934[A]**	**1,833[A]**	**2,293[A]**	1.882	**2,033[A]**	**2,014[A]**
Oxidation Reduction Potential, field	mV	n/v	n/v	-	65.8	89.4	130.3	-50.3	107.8	-272.4	-110.1	130.4	-70.6
pH, Field	S.U.	6.5-8.5[A]	n/v	7.2	7.37	7.68	7.25	7.76	7.59	7.88	8.03	7.75	7.65
Temperature, Field	deg C	n/v	n/v	7.9	14.0	3.56	4.8	3.1	7.4	1.6	7.3	8	10.8
Calculated Parameters													
Anion Sum	meq/L	n/v	n/v	26	24	-	24	24	25	24	25	24	24
Cation Sum	meq/L	n/v	n/v	26	24	-	23	24	27	23	25	24	23
Hardness (as CaCO3)	mg/L	n/v	n/v	640	680	704	680	670	770	670	720	690	690
Ion Balance	%	n/v	n/v	1.0	0.53	116	4.1	0.92	3.2	2.2	1.0	0.70	-
Ion Balance % Difference	%	n/v	n/v	-	-	-	-	-	-	-	-	-	2.1
Nitrate	mg/L	13_f[A]	n/v	0.054	3.3	1.5	<0.044	0.55	0.35	0.089	0.18	0.27	0.20
Nitrate + Nitrite (as N)	mg/L	100[A]	n/v	<0.020	0.73	0.34	0.022	0.14	0.11	0.020	0.076	0.060	0.045
Nitrite	mg/L	$0.197/1.97_{n4.a}$[A]	n/v	<0.033	<0.033	<0.05	0.069	0.062	0.11	<0.033	0.12	<0.033	<0.13
Total Dissolved Solids	mg/L	500[A]	1,945[B]	**1,700[A]**	**1,600[A]**	**1,480[A]**	**1,500[A]**	**1,600[A]**	**1,700[A]**	**1,500[A]**	**1,600[A]**	**1,600[A]**	**1,600[A]**
Sodium Adsorption Ratio (SAR)	none	5[A]	n/v	-	-	4.13	-	-	-	-	-	-	-
BTEX and Petroleum Hydrocarbons													
Benzene	mg/L	0.005[A]	n/v	<0.00040	<0.00040	<0.0005	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	n/v	<0.00040	<0.00040	<0.0003	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	n/v	<0.00040	<0.00040	<0.0005	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	n/v	<0.00080	<0.00080	-	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	n/v	<0.00040	<0.00040	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	n/v	<0.00080	<0.00089	<0.0005	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	n/v	<0.10	<0.10	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	n/v	<0.10	<0.10	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	n/v	<0.10	<0.10	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Miscellaneous Inorganics													
Dissolved Organic Carbon (DOC)	mg/L	n/v	5.2[B]	3.3	2.4	3	1.5	2.6	1.6	1.4	1.2 PRH	1.3	1.9
Electrical Conductivity, Lab	µS/cm	1,000[A]	2,462[B]	**2,200[A]**	**2,000[A]**	**2,000[A]**	**2,000[A]**	**2,000[A]**	**2,000[A]**	**1,900[A]**	**2,000[A]**	**2,000[A]**	**2,000[A]**
Sediment	none	n/v	n/v	-	-	NotPresent	-	-	-	-	-	-	-
pH, lab	S.U.	6.5-8.5[A]	9.71[B]	8.04	7.80	8.13	7.94	7.86	7.52	8.04	8.28	8.02	7.65
Anions													
Alkalinity (P as CaCO3)	mg/L	n/v	n/v	<0.50	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	n/v	180	180	184	180	180	190	170	180	180	190
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	n/v	220	220	232	220	220	230	210	220	220	230
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	n/v	<0.50	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	n/v	<0.50	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	1,247[B]	**1,100 CD[A]**	**970 CD[A]**	**845[A]**	**1,000[A]**	**990[A]**	**1,000[A]**	**970[A]**	**1,000[A]**	**990[A]**	**980[A]**
Chloride	mg/L	100[A]	13[B]	4.9	3.5	12.8	3.1	2.9	2.6	1.9	1.9	2.8	2.6
Fluoride	mg/L	1[A]	n/v	-	-	0.19	-	-	-	-	-	-	-
Nutrients													
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	n/v	<0.010	<0.010	<0.01	0.021	0.019	0.034	<0.010	0.035	<0.010	<0.040
Orthophosphate (as P)	mg/L	n/v	0.05[B]	0.0076 OG	0.0068	***<0.15***	0.0092 DXE	**0.051[B]**	0.011	0.0073	0.0050	<0.0030	-
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	1.67[B]	**0.68[A]**	0.021	**0.14[A]**	**0.39[A]**	**1.0[A]**	**0.62[A]**	**0.58[A]**	**0.57[A]**	**0.56[A]**	**0.57[A]**
Nitrate (as N)	mg/L	3[A]	0.52[B]	0.012	**0.73[B]**	0.34	<0.010	0.12	0.080	0.020	0.040	0.060	0.045
Phosphorus, Dissolved	mg/L	n/v	n/v	-	-	-	-	-	-	-	-	-	0.0052
Phosphorus, Total (Dissolved)	mg/L	n/v	n/v	<0.0030	0.0081	-	<0.0030	0.061	0.056	0.0051 P2	<0.0030 P2 PRH	<0.0030	-
Phosphorus, Total	mg/L	n/v	n/v	-	-	-	-	-	-	-	-	-	0.12
Total Kjeldahl Nitrogen	mg/L	n/v	2.2[B]	0.97	<0.020	0.3	0.788	1.51	0.665	0.86	0.973	0.86	0.74
Nitrogen	mg/L	n/v	n/v	-	0.62	-	0.81	1.7	0.78	0.88 DB	1.0	0.92	0.78 DB
Metals - Dissolved													
Aluminum	mg/L	$0.007/0.05_{n1,e}$[A]	n/v	0.0036	0.0057	**0.015[A]**	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	0.0045	<0.0030
Antimony	mg/L	0.006[A]	n/v	<0.00060	<0.00060	<0.001	0.0020	0.0014	0.0011	<0.00060	0.00096	0.0012	<0.00060
Arsenic	mg/L	0.005[A]	0.00219[B]	0.00073	<0.00020	0.002	0.00048	0.00040	0.00049	0.00055	0.00048	0.00044	0.00049
Barium	mg/L	2[A]	0.04[B]	0.034	0.020	***<0.05***	0.016	0.016	0.018	0.015	0.020	0.019	0.016
Beryllium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location				MW16-22-26										
Sample Date				28-Sep-16	14-May-21	23-Nov-21	10-May-22	22-Nov-22	18-May-23	25-Oct-23	16-May-24	26-Sep-24	5-Jun-25
Sample ID				MW16-22-26	MW16-22-26	MW16-22-26	MW16-22-26	MW16-22-26	MW16-22-26	MW16-22-26	MW16-22-26	RMW16-22-26	MW16-22-26
Sampling Company				STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory				MAXX	BV	AGAT	BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order				B685112	C132332	21C834079	C231132	C292215	C335681	C386944	C435132	C476935	C551520
Laboratory Sample ID				PQ0285	ZU4970	3244031	ASU356	BHN145	BQS280	CCW514	CNR331	CWM896	DML533
Location Description				Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
Lithology				Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated
Sample Type	Units	2024 AEPA Tier 1	UCL										
Boron	mg/L	1[A]	0.19[B]	0.098	0.14	0.14	0.12	0.13	0.14	0.13	0.12	0.12	0.14
Cadmium	mg/L	0.00004/0.00037$_{n3}$[A]	n/v	<0.000020	**0.000042[A]**	**0.000052[A]**	<0.00002	<0.000020	<0.000020	**0.000081[A]**	**0.000057[A]**	0.000027	<0.000020
Calcium	mg/L	n/v	217[B]	170	170	184	160	170	190	160	180	180	180
Chromium	mg/L	0.05[A]	n/v	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt	mg/L	n/v	0.001[B]	0.00087	<0.00030	<0.0009	0.00050	0.00034	0.00032	0.00044	0.00053	0.00043	0.00035
Copper	mg/L	0.007[A]	n/v	<0.00020	0.00026	<0.0008	<0.0010	<0.0010	0.0019	0.0011	<0.0010	**0.12[A]**	<0.0010
Iron	mg/L	0.3[A]	n/v	0.11	<0.060	<0.1	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	0.15
Lead	mg/L	0.001/0.007$_{n3}$[A]	n/v	<0.00020	<0.00020	0.0003	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Lithium	mg/L	n/v	0.12[B]	0.064	0.064	-	0.032	0.055	0.050	0.061	0.052	0.052	0.091
Magnesium	mg/L	n/v	82[B]	54	58	59.3	66	60	70	66	64	60	61
Manganese	mg/L	0.02[A]	0.7[B]	**0.51[A]**	**0.27[A]**	**0.400[A]**	**0.46[A]**	**0.43[A]**	**0.47[A]**	**0.46[A]**	**0.39[A]**	**0.39[A]**	**0.43[A]**
Mercury	mg/L	0.000005[A]	n/v	<0.0000020	<0.0000019	**0.0000056[A]**	<0.0000019	<0.0000019	<0.0000019	0.0000028	<0.0000019	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	0.00602[B]	0.0039	0.0032	0.003	0.0028	0.0023	0.0023	0.0027	0.0045	0.0030	0.0025
Nickel	mg/L	0/0.17$_{n3}$[A]	0.0025[B]	**0.0018[A]**	**0.0014[A]**	***<0.003***	**0.00080[A]**	**0.0010[A]**	**0.00088[A]**	**0.0012[A]**	**0.0010[A]**	**0.00084[A]**	**0.0011[A]**
Phosphorus	mg/L	n/v	n/v	<0.10	<0.10	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Potassium	mg/L	n/v	8.5[B]	7.1	6.7	6.8	6.6	6.8	7.8	6.7	7.2	6.8	6.7
Selenium	mg/L	0.002[A]	0.001[B]	0.00023	0.00048	0.0010	<0.00020	0.00036	<0.00020	0.00035	0.00034	<0.00020	<0.00020
Silicon	mg/L	n/v	5.8[B]	4.8	4.4	-	4.0	3.8	4.4	3.9	3.5	3.7	3.9
Silver	mg/L	0.00025[A]	n/v	<0.00010	<0.00010	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium	mg/L	200[A]	368[B]	**310[A]**	**230[A]**	**252[A]**	200	**230[A]**	**250[A]**	**210[A]**	**230[A]**	**230[A]**	**210[A]**
Strontium	mg/L	n/v	3.9[B]	2.4	3.1	-	2.9	3.0	3.2	3.0	3.0	3.0	3.0
Sulfur	mg/L	n/v	428[B]	350	330	-	340	310	330	320	280	280	340
Thallium	mg/L	n/v	n/v	<0.00020	<0.00020	<0.0001	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Tin	mg/L	n/v	0.0206[B]	<0.0010	<0.0010	-	0.011	0.0064	0.0046	<0.0010	0.0048	0.012	0.0066
Titanium	mg/L	n/v	n/v	<0.0010	<0.0010	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	0.006[B]	0.0044	0.0026	0.003	0.0022	0.0019	0.0019	0.0022	0.0017	0.0011	0.0015
Vanadium	mg/L	n/v	n/v	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	n/v	<0.0030	0.016	<0.005	0.015	<0.0030	0.0032	<0.0030	<0.0030	0.0096	<0.0030
Metals - Total													
Mercury	mg/L	0.000005[A]	n/v	***<0.0060 DB***	<0.0000019	**0.0000056[A]**	<0.0000019	<0.0000019	<0.0000019	**0.000037[A]**	**0.000054 DB[A]**	<0.0000019	0.0000050
Phosphorus	mg/L	n/v	n/v	-	-	0.16	-	-	-	-	-	-	-
Microbiological Parameters													
Escherichia coli (E.Coli)	mpn/100mL	n/v	n/v	<10 DB	<1.0	<1	<1.0	<1.0	<1.0	<5.0 Z8	<2.0 MI	<1.0	<1.0
Fecal Coliforms	mpn/100mL	n/v	n/v	<10 DB	<1.0	1	3.1	<1.0	<1.0	<5.0 Z8	<2.0 MI	<1.0	<1.0
Heterotrophic Plate Count	cfu/mL	n/v	n/v	>6000	510	3,800	1,200	780	5,500	1,000	-	-	-
Heterotrophic Plate Count	mpn/100mL	n/v	n/v	-	-	-	-	-	-	-	>4800 MI	>2400	>2400
Total Coliforms	mpn/100mL	n/v	n/v	2,000 DB	1,200	488	460	180	140	10 Z8	4.0 MI	8.5	<1.0

See notes on the last page

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location				MW16-23-14	
Sample Date			29-Sep-16	14-May-21	23-Nov-21
Sample ID			MW16-23-14	MW16-23-14	MW16-23-14
Sampling Company			STANTEC	STANTEC	STANTEC
Laboratory			MAXX	BV	AGAT
Laboratory Work Order			B685593	C132332	21C834079
Laboratory Sample ID			PQ3529	ZU4971	3244037
Location Description			Tier 2	Tier 2	Tier 2
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated	Unconsolidated	Unconsolidated
Field Parameters					
Dissolved Oxygen, Field	mg/L	n/v	-	9.22	4.31
Electrical Conductivity, Field	µS/cm	1,000[A]	**1,064[A]**	993	**1,016[A]**
Oxidation Reduction Potential, field	mV	n/v	-	0.1	31.9
pH, Field	S.U.	6.5-8.5[A]	7.2	6.96	6.92
Temperature, Field	deg C	n/v	9.4	10.4	2.17
Calculated Parameters					
Anion Sum	meq/L	n/v	13	13	-
Cation Sum	meq/L	n/v	14	12	-
Hardness (as CaCO3)	mg/L	n/v	540	510	565
Ion Balance	%	n/v	1.0	1.7	111
Nitrate	mg/L	13[A]	<0.044	<0.044	<0.5
Nitrate + Nitrite (as N)	mg/L	100[A]	<0.020	<0.010	<0.02
Nitrite	mg/L	$0.197/1.97_{n4.a}$[A]	<0.033	<0.033	<0.05
Total Dissolved Solids	mg/L	500[A]	**680[A]**	**620[A]**	**639[A]**
Sodium Adsorption Ratio (SAR)	none	5[A]	-	-	0.97
BTEX and Petroleum Hydrocarbons					
Benzene	mg/L	0.005[A]	<0.00040	<0.00040	<0.0005
Toluene	mg/L	0.024[A]	<0.00040	<0.00040	<0.0003
Ethylbenzene	mg/L	0.0016[A]	<0.00040	<0.00040	<0.0005
Xylene, m & p-	mg/L	n/v	<0.00080	<0.00080	-
Xylene, o-	mg/L	n/v	<0.00040	<0.00040	-
Xylenes, Total	mg/L	0.02[A]	<0.00080	<0.00089	<0.0005
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10	<0.10	<0.1
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10	<0.10	<0.1
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10	<0.10	<0.1
Miscellaneous Inorganics					
Dissolved Organic Carbon (DOC)	mg/L	n/v	4.1	2.1	6
Electrical Conductivity, Lab	µS/cm	1,000[A]	**1,100[A]**	**1,100[A]**	**1,040[A]**
Sediment	none	n/v	-	-	NotPresent
pH, lab	S.U.	6.5-8.5[A]	7.94	7.52	7.90
Anions					
Alkalinity (P as CaCO3)	mg/L	n/v	<0.50	<1.0	<5
Alkalinity, Total (as CaCO3)	mg/L	n/v	600	580	561
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	730	710	702
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<0.50	<1.0	<5
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<0.50	<1.0	<5
Sulfate	mg/L	$128/429_{n3}$[A]	70	45	35.7
Chloride	mg/L	100[A]	3.5	<1.0	5.5
Fluoride	mg/L	1[A]	-	-	0.08
Nutrients					
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	**0.14[A]**	**0.089[A]**	**0.10[A]**
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	<0.010	<0.010	<0.01
Orthophosphate (as P)	mg/L	n/v	<0.0030	0.0033	0.17
Nitrate (as N)	mg/L	3[A]	<0.010	<0.010	<0.02
Phosphorus, Total (Dissolved)	mg/L	n/v	<0.0030	0.0045	-
Total Kjeldahl Nitrogen	mg/L	n/v	2.8 CD	0.149	1.0
Nitrogen	mg/L	n/v	-	0.15	-
Metals - Dissolved					
Aluminum	mg/L	$0.007/0.05_{n1.e}$[A]	<0.0030	<0.0030	<0.004
Antimony	mg/L	0.006[A]	<0.00060	<0.00060	<0.001
Arsenic	mg/L	0.005[A]	**0.0056[A]**	0.0013	0.002
Barium	mg/L	2[A]	0.12	0.090	<0.05
Beryllium	mg/L	n/v	<0.0010	<0.0010	<0.0005
Boron	mg/L	1[A]	0.13	0.13	0.12
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	0.000033	<0.000020	0.000029
Calcium	mg/L	n/v	130	130	146
Chromium	mg/L	0.05[A]	<0.0010	<0.0010	<0.0005

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location				MW16-23-14	
Sample Date			29-Sep-16	14-May-21	23-Nov-21
Sample ID			MW16-23-14	MW16-23-14	MW16-23-14
Sampling Company			STANTEC	STANTEC	STANTEC
Laboratory			MAXX	BV	AGAT
Laboratory Work Order			B685593	C132332	21C834079
Laboratory Sample ID			PQ3529	ZU4971	3244037
Location Description			Tier 2	Tier 2	Tier 2
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated	Unconsolidated	Unconsolidated
Cobalt	mg/L	n/v	0.0020	0.00079	<0.0009
Copper	mg/L	0.007[A]	<0.00020	0.0056	<0.0008
Iron	mg/L	0.3[A]	**0.50[A]**	**0.91[A]**	<0.1
Lead	mg/L	0.001/0.007$_{n3}$[A]	<0.00020	<0.00020	<0.0002
Lithium	mg/L	n/v	0.032	0.033	-
Magnesium	mg/L	n/v	53	45	48.6
Manganese	mg/L	0.02[A]	**0.75[A]**	**0.37[A]**	**0.368[A]**
Mercury	mg/L	0.000005[A]	<0.0000020	<0.0000019	**0.0000081[A]**
Molybdenum	mg/L	n/v	0.0053	0.00052	<0.001
Nickel	mg/L	0/0.17$_{n3}$[A]	**0.0053[A]**	**0.00088[A]**	***<0.003***
Phosphorus	mg/L	n/v	<0.10	<0.10	<0.08
Potassium	mg/L	n/v	6.5	4.5	5.0
Selenium	mg/L	0.002[A]	<0.00020	<0.00020	0.0011
Silicon	mg/L	n/v	6.5	5.9	-
Silver	mg/L	0.00025[A]	<0.00010	<0.00010	<0.00005
Sodium	mg/L	200[A]	59	40	53.2
Strontium	mg/L	n/v	1.1	1.3	-
Sulfur	mg/L	n/v	25	15	-
Thallium	mg/L	n/v	<0.00020	<0.00020	<0.0001
Tin	mg/L	n/v	<0.0010	<0.0010	-
Titanium	mg/L	n/v	<0.0010	<0.0010	0.002
Uranium	mg/L	0.01[A]	0.0052	0.0026	0.003
Vanadium	mg/L	n/v	<0.0010	<0.0010	-
Zinc	mg/L	0.03[A]	<0.0030	<0.0030	<0.005
Metals - Total					
Mercury	mg/L	0.000005[A]	***<0.02 DB***	**0.0000234[A]**	**0.000013[A]**
Phosphorus	mg/L	n/v	-	-	0.55
Microbiological Parameters					
Escherichia coli (E.Coli)	mpn/100mL	n/v	<10 DB	<10 MI	1
Fecal Coliforms	mpn/100mL	n/v	<10 DB	<10 MI	1
Heterotrophic Plate Count	cfu/mL	n/v	20,000 DB	6,100 MI	2,660
Total Coliforms	mpn/100mL	n/v	>2400 DB	<10 MI	17

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-23-36		
Sample Date			29-Sep-16	14-May-21	23-Nov-21
Sample ID			MW16-23-36	MW16-23-36	MW16-23-36
Sampling Company			STANTEC	STANTEC	STANTEC
Laboratory			MAXX	BV	AGAT
Laboratory Work Order			B685593	C132332	21C834079
Laboratory Sample ID			PQ3528	ZU4972	3244036
Location Description			Tier 2	Tier 2	Tier 2
Sample Type	Units	2024 AEPA Tier 1	Bedrock	Bedrock	Bedrock
Field Parameters					
Dissolved Oxygen, Field	mg/L	n/v	-	13.11	2.8
Electrical Conductivity, Field	µS/cm	1,000[A]	**1,256[A]**	**1,298[A]**	**1,281[A]**
Oxidation Reduction Potential, field	mV	n/v	-	-72.6	-38.1
pH, Field	S.U.	6.5-8.5[A]	7.3	7.64	7.71
Temperature, Field	deg C	n/v	8.3	7.8	3.88
Calculated Parameters					
Anion Sum	meq/L	n/v	14	15	-
Cation Sum	meq/L	n/v	14	14	-
Hardness (as CaCO3)	mg/L	n/v	180	190	198
Ion Balance	%	n/v	0.99	1.8	112
Nitrate	mg/L	13[A]	<0.044	<0.044	<0.5
Nitrate + Nitrite (as N)	mg/L	100[A]	<0.020	<0.010	<0.02
Nitrite	mg/L	$0.197/1.97_{n4.a}$[A]	<0.033	<0.033	<0.05
Total Dissolved Solids	mg/L	500[A]	**850[A]**	**900[A]**	**858[A]**
Sodium Adsorption Ratio (SAR)	none	5[A]	-	-	**7.78[A]**
BTEX and Petroleum Hydrocarbons					
Benzene	mg/L	0.005[A]	<0.00040	<0.00040	<0.0005
Toluene	mg/L	0.024[A]	<0.00040	<0.00040	<0.0003
Ethylbenzene	mg/L	0.0016[A]	<0.00040	<0.00040	<0.0005
Xylene, m & p-	mg/L	n/v	<0.00080	<0.00080	-
Xylene, o-	mg/L	n/v	<0.00040	<0.00040	-
Xylenes, Total	mg/L	0.02[A]	<0.00080	<0.00089	<0.0005
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10	<0.10	<0.1
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10	<0.10	<0.1
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10	<0.10	<0.1
Miscellaneous Inorganics					
Dissolved Organic Carbon (DOC)	mg/L	n/v	2.9	2.3	4
Electrical Conductivity, Lab	µS/cm	1,000[A]	**1,300[A]**	**1,400[A]**	**1,380[A]**
Sediment	none	n/v	-	-	NotPresent
pH, lab	S.U.	6.5-8.5[A]	8.22	8.16	8.33
Anions					
Alkalinity (P as CaCO3)	mg/L	n/v	<0.50	<1.0	<5
Alkalinity, Total (as CaCO3)	mg/L	n/v	290	300	314
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	350	370	386
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<0.50	<1.0	<5
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<0.50	<1.0	<5
Sulfate	mg/L	$128/429_{n3}$[A]	**380 CD[A]**	**410 CD[A]**	**339[A]**
Chloride	mg/L	100[A]	3.2	2.2	3.1
Fluoride	mg/L	1[A]	-	-	0.17
Nutrients					
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	**0.83[A]**	**1.1[A]**	**1.11[A]**
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	<0.010	<0.010	<0.01
Orthophosphate (as P)	mg/L	n/v	0.0040 OG	0.0043	<0.15
Nitrate (as N)	mg/L	3[A]	<0.010	<0.010	<0.02
Phosphorus, Total (Dissolved)	mg/L	n/v	0.013	0.016	-
Total Kjeldahl Nitrogen	mg/L	n/v	1.3	1.86	4.3
Nitrogen	mg/L	n/v	-	1.9 DB	-
Metals - Dissolved					
Aluminum	mg/L	$0.007/0.05_{n1,e}$[A]	**0.0074[A]**	<0.0030	0.004
Antimony	mg/L	0.006[A]	<0.00060	<0.00060	<0.001
Arsenic	mg/L	0.005[A]	0.00035	0.00029	0.002
Barium	mg/L	2[A]	0.030	0.053	<0.05
Beryllium	mg/L	n/v	<0.0010	<0.0010	<0.0005
Boron	mg/L	1[A]	0.086	0.095	0.09
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	<0.000020	<0.000020	0.000017
Calcium	mg/L	n/v	50	51	54.4
Chromium	mg/L	0.05[A]	<0.0010	<0.0010	<0.0005

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-23-36		
Sample Date			29-Sep-16	14-May-21	23-Nov-21
Sample ID			MW16-23-36	MW16-23-36	MW16-23-36
Sampling Company			STANTEC	STANTEC	STANTEC
Laboratory			MAXX	BV	AGAT
Laboratory Work Order			B685593	C132332	21C834079
Laboratory Sample ID			PQ3528	ZU4972	3244036
Location Description			Tier 2	Tier 2	Tier 2
Sample Type	Units	2024 AEPA Tier 1	Bedrock	Bedrock	Bedrock
Cobalt	mg/L	n/v	<0.00030	<0.00030	<0.0009
Copper	mg/L	0.007[A]	<0.00020	0.00025	<0.0008
Iron	mg/L	0.3[A]	<0.060	**0.77[A]**	<0.1
Lead	mg/L	0.001/0.007$_{n3}$[A]	<0.00020	<0.00020	<0.0002
Lithium	mg/L	n/v	0.066	0.075	-
Magnesium	mg/L	n/v	14	15	15.2
Manganese	mg/L	0.02[A]	**0.083[A]**	**0.10[A]**	**0.073[A]**
Mercury	mg/L	0.000005[A]	<0.0000020	<0.0000019	<0.0000025
Molybdenum	mg/L	n/v	0.0023	0.0023	0.005
Nickel	mg/L	0/0.17$_{n3}$[A]	***<0.00050***	***<0.00050***	***<0.003***
Phosphorus	mg/L	n/v	<0.10	<0.10	<0.08
Potassium	mg/L	n/v	4.2	4.0	4.3
Selenium	mg/L	0.002[A]	<0.00020	<0.00020	0.0020
Silicon	mg/L	n/v	3.8	3.8	-
Silver	mg/L	0.00025[A]	<0.00010	<0.00010	<0.00005
Sodium	mg/L	200[A]	**230[A]**	**230[A]**	**252[A]**
Strontium	mg/L	n/v	0.77	0.83	-
Sulfur	mg/L	n/v	120	140	-
Thallium	mg/L	n/v	<0.00020	<0.00020	<0.0001
Tin	mg/L	n/v	<0.0010	<0.0010	-
Titanium	mg/L	n/v	<0.0010	<0.0010	0.001
Uranium	mg/L	0.01[A]	0.00010	<0.00010	<0.001
Vanadium	mg/L	n/v	<0.0010	<0.0010	-
Zinc	mg/L	0.03[A]	<0.0030	<0.0030	<0.005
Metals - Total					
Mercury	mg/L	0.000005[A]	***<0.00020 DB***	**0.0000699[A]**	**0.000025[A]**
Phosphorus	mg/L	n/v	-	-	2.01
Microbiological Parameters					
Escherichia coli (E.Coli)	mpn/100mL	n/v	11	<20 MI	<1
Fecal Coliforms	mpn/100mL	n/v	5.1	<20 MI	<1
Heterotrophic Plate Count	cfu/mL	n/v	400	1,100 MI	2,450
Total Coliforms	mpn/100mL	n/v	520	<20 MI	81

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-24-30			
Sample Date			28-Sep-16	14-May-21	23-Nov-21	10-May-22
Sample ID			MW16-24-30	MW16-24-30	MW16-24-30	MW16-24-30
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			MAXX	BV	AGAT	BV
Laboratory Work Order			B685112	C132332	21C834079	C231132
Laboratory Sample ID			PQ0283	ZU4973	3244038	ASU357
Location Description			EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well
Sample Type	Units	2024 AEPA Tier 1	Bedrock	Bedrock	Bedrock	Bedrock
Field Parameters						
Dissolved Oxygen, Field	mg/L	n/v	-	11.89	3.65	3.46
Electrical Conductivity, Field	µS/cm	1,000[A]	**1,114[A]**	**1,107[A]**	**1,074[A]**	**1,178[A]**
Oxidation Reduction Potential, field	mV	n/v	-	-10.9	25.8	36.5
pH, Field	S.U.	6.5-8.5[A]	7	7.83	7.47	7.46
Temperature, Field	deg C	n/v	8.2	7.0	3.4	6.5
Calculated Parameters						
Anion Sum	meq/L	n/v	13	13	-	13
Cation Sum	meq/L	n/v	14	12	-	13
Hardness (as CaCO3)	mg/L	n/v	160	160	170	170
Ion Balance	%	n/v	1.1	2.8	113	1.8
Nitrate	mg/L	13[A]	<0.044	<0.044	<0.5	<0.044
Nitrate + Nitrite (as N)	mg/L	100[A]	<0.020	<0.010	<0.02	<0.010
Nitrite	mg/L	0.197/1.97$_{n4.a}$[A]	<0.033	<0.033	<0.05	<0.033
Total Dissolved Solids	mg/L	500[A]	**730[A]**	**690[A]**	**691[A]**	**720[A]**
Sodium Adsorption Ratio (SAR)	none	5[A]	-	-	**7.65[A]**	-
BTEX and Petroleum Hydrocarbons						
Benzene	mg/L	0.005[A]	<0.00040	<0.00040	<0.0005	<0.00040
Toluene	mg/L	0.024[A]	<0.00040	<0.00040	<0.0003	<0.00040
Ethylbenzene	mg/L	0.0016[A]	<0.00040	<0.00040	<0.0005	<0.00040
Xylene, m & p-	mg/L	n/v	<0.00080	<0.00080	-	<0.00080
Xylene, o-	mg/L	n/v	<0.00040	<0.00040	-	<0.00040
Xylenes, Total	mg/L	0.02[A]	<0.00080	<0.00089	<0.0005	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10	<0.10	<0.1	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10	<0.10	<0.1	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10	<0.10	<0.1	<0.10
Miscellaneous Inorganics						
Dissolved Organic Carbon (DOC)	mg/L	n/v	1.2	2.8	4	1.1
Electrical Conductivity, Lab	µS/cm	1,000[A]	**1,100[A]**	**1,100[A]**	**1,150[A]**	**1,100[A]**
Sediment	none	n/v	-	-	NotPresent	-
pH, lab	S.U.	6.5-8.5[A]	8.19	8.05	8.34	8.18
Anions						
Alkalinity (P as CaCO3)	mg/L	n/v	<0.50	<1.0	<5	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	460	470	456	480
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	560	570	567	590
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<0.50	<1.0	<5	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<0.50	<1.0	<5	<1.0
Sulfate	mg/L	128/429$_{n3}$[A]	**160[A]**	**150[A]**	120	**150[A]**
Chloride	mg/L	100[A]	<1.0	2.5	2.0	1.0
Fluoride	mg/L	1[A]	-	-	0.40	-
Nutrients						
Ammonia (as N)	mg/L	0.035/125$_{n2}$[A]	**0.86[A]**	**0.81[A]**	**0.77[A]**	-
Nitrite (as N)	mg/L	0.06/0.6$_{n4}$[A]	<0.010	<0.010	<0.01	<0.010
Orthophosphate (as P)	mg/L	n/v	<0.0030	0.0034	<0.15	<0.0030
Ammonia (as N)	mg/L	0.035/125$_{n2}$[A]	-	-	-	**0.83[A]**
Nitrate (as N)	mg/L	3[A]	<0.010	<0.010	<0.02	<0.010
Phosphorus, Total (Dissolved)	mg/L	n/v	<0.0030	<0.0030	-	<0.0030
Total Kjeldahl Nitrogen	mg/L	n/v	0.88	1.10	0.9	1.03
Nitrogen	mg/L	n/v	-	1.1	-	1.0
Metals - Dissolved						
Aluminum	mg/L	0.007/0.05$_{n1,e}$[A]	<0.0030	0.0032	**0.013[A]**	<0.0030
Antimony	mg/L	0.006[A]	<0.00060	<0.00060	<0.001	<0.00060
Arsenic	mg/L	0.005[A]	0.0023	0.0025	0.005	0.0025
Barium	mg/L	2[A]	0.019	0.037	<0.05	0.018
Beryllium	mg/L	n/v	<0.0010	<0.0010	<0.0005	<0.0010
Boron	mg/L	1[A]	0.089	0.093	0.09	0.088
Cadmium	mg/L	0.00004/0.00037$_{n3}$[A]	<0.000020	<0.000020	0.000021	<0.00002

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-24-30			
Sample Date			28-Sep-16	14-May-21	23-Nov-21	10-May-22
Sample ID			MW16-24-30	MW16-24-30	MW16-24-30	MW16-24-30
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			MAXX	BV	AGAT	BV
Laboratory Work Order			B685112	C132332	21C834079	C231132
Laboratory Sample ID			PQ0283	ZU4973	3244038	ASU357
Location Description			EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well
Sample Type	Units	2024 AEPA Tier 1	Bedrock	Bedrock	Bedrock	Bedrock
Calcium	mg/L	n/v	38	38	41.2	41
Chromium	mg/L	0.05[A]	<0.0010	<0.0010	0.0007	<0.0010
Cobalt	mg/L	n/v	<0.00030	<0.00030	<0.0009	<0.00030
Copper	mg/L	0.007[A]	<0.00020	<0.00020	0.0016	<0.0010
Iron	mg/L	0.3[A]	0.14	0.10	<0.1	<0.060
Lead	mg/L	0.001/0.007$_{n3}$[A]	<0.00020	<0.00020	0.0010	<0.00020
Lithium	mg/L	n/v	0.054	0.056	-	0.075
Magnesium	mg/L	n/v	16	15	16.2	17
Manganese	mg/L	0.02[A]	**0.067[A]**	**0.076[A]**	**0.065[A]**	**0.067[A]**
Mercury	mg/L	0.000005[A]	<0.0000020	<0.0000019	<0.0000025	<0.0000019
Molybdenum	mg/L	n/v	0.0014	0.0035	0.001	0.0013
Nickel	mg/L	0/0.17$_{n3}$[A]	***<0.00050***	***<0.00050***	***<0.003***	***<0.00050***
Phosphorus	mg/L	n/v	<0.10	<0.10	<0.08	<0.10
Potassium	mg/L	n/v	4.0	3.6	3.9	4.0
Selenium	mg/L	0.002[A]	<0.00020	<0.00020	0.0008	<0.00020
Silicon	mg/L	n/v	3.6	3.6	-	3.3
Silver	mg/L	0.00025[A]	<0.00010	<0.00010	<0.00005	<0.00010
Sodium	mg/L	200[A]	**240[A]**	200	**229[A]**	**220[A]**
Strontium	mg/L	n/v	0.66	0.63	-	0.66
Sulfur	mg/L	n/v	51	51	-	44
Thallium	mg/L	n/v	<0.00020	<0.00020	<0.0001	<0.00020
Tin	mg/L	n/v	<0.0010	<0.0010	-	<0.0010
Titanium	mg/L	n/v	<0.0010	<0.0010	0.001	<0.0010
Uranium	mg/L	0.01[A]	0.00022	0.00029	<0.001	0.00021
Vanadium	mg/L	n/v	<0.0010	<0.0010	-	<0.0010
Zinc	mg/L	0.03[A]	<0.0030	<0.0030	0.019	<0.0030
Metals - Total						
Mercury	mg/L	0.000005[A]	<0.0000020	0.0000042	**0.0000052[A]**	<0.0000019
Phosphorus	mg/L	n/v	-	-	<0.08	-
Microbiological Parameters						
Escherichia coli (E.Coli)	mpn/100mL	n/v	<1.0	<1.0	<1	<1.0
Fecal Coliforms	mpn/100mL	n/v	<1.0	<1.0	<1	<1.0
Heterotrophic Plate Count	cfu/mL	n/v	48	750	925	100
Total Coliforms	mpn/100mL	n/v	2.0	<1.0	43	19

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location						MW16-25-9			
Sample Date			30-Sep-16	14-May-21	23-Nov-21	10-May-22	22-Nov-22	18-May-23	6-Jun-25
Sample ID			MW16-25-9	MW16-25-9	MW16-25-9	MW16-25-9	MW16-25-9	MW16-25-9	MW16-25-9
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			MAXX	BV	AGAT	BV	BV	BV	BV
Laboratory Work Order			B686123	C132332	21C834079	C231132	C292215	C335681	C551949
Laboratory Sample ID			PQ7067	ZU4974	3244039	ASU358	BHN146	BQS282	DMO158
Location Description			EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated
Field Parameters									
Dissolved Oxygen, Field	mg/L	n/v	-	11.01	4.01	2.93	6.2	2.8	4.64
Electrical Conductivity, Field	µS/cm	1,000[A]	**1,039[A]**	**1,647[A]**	**1,279[A]**	**1,293[A]**	625	**1,072[A]**	**1,246[A]**
Oxidation Reduction Potential, field	mV	n/v	-	62.3	36.6	98.7	-4.8	189.2	116.9
pH, Field	S.U.	6.5-8.5[A]	7.1	7.11	7.17	7.11	7.66	7.35	7.18
Temperature, Field	deg C	n/v	7.3	8.0	3.32	8.2	3.7	13.1	10.79
Calculated Parameters									
Anion Sum	meq/L	n/v	13	21	-	16	14	14	16
Cation Sum	meq/L	n/v	14	21	-	16	15	17	16
Hardness (as CaCO3)	mg/L	n/v	590	810	745	650	610	730	670
Ion Balance	%	n/v	1.1	0.40	115	0.77	1.0	11	-
Ion Balance % Difference	%	n/v	-	-	-	-	-	-	1.1
Nitrate	mg/L	13_{f}[A]	0.064	<0.044	<0.5	<0.044	0.081	0.12	<0.18
Nitrate + Nitrite (as N)	mg/L	100[A]	<0.020	<0.010	<0.02	<0.010	0.018	0.027	<0.040
Nitrite	mg/L	$0.197/1.97_{n4.o}$[A]	<0.033	<0.033	<0.05	<0.033	<0.033	<0.033	<0.13
Total Dissolved Solids	mg/L	500[A]	**680[A]**	**1,200[A]**	**903[A]**	**830[A]**	**750[A]**	**780[A]**	**820[A]**
Sodium Adsorption Ratio (SAR)	none	5[A]	-	-	1.26	-	-	-	-
BTEX and Petroleum Hydrocarbons									
Benzene	mg/L	0.005[A]	<0.00040	<0.00040	<0.0005	<0.00040	<0.00040	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	<0.00040	<0.00040	<0.0003	<0.00040	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	<0.00040	<0.00040	<0.0005	<0.00040	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	<0.00080	<0.00080	-	<0.00080	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	<0.00040	<0.00040	-	<0.00040	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	<0.00080	<0.00089	<0.0005	<0.00089	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10	<0.10	<0.1	<0.10	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10	<0.10	<0.1	<0.10	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10	<0.10	<0.1	<0.10	<0.10	<0.10	<0.10
Miscellaneous Inorganics									
Dissolved Organic Carbon (DOC)	mg/L	n/v	5.6	4.8	7	4.1	4.0	4.7	4.4
Electrical Conductivity, Lab	µS/cm	1,000[A]	**1,100[A]**	**1,700[A]**	**1,350[A]**	**1,200[A]**	**1,200[A]**	**1,200[A]**	**1,300[A]**
Sediment	none	n/v	-	-	NotPresent	-	-	-	-
pH, lab	S.U.	6.5-8.5[A]	8.11	7.74	8.07	7.73	7.81	7.49	7.92
Anions									
Alkalinity (P as CaCO3)	mg/L	n/v	<0.50	<1.0	<5	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	470	530	532	560	550	550	560
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	580	650	660	690	680	670	690
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<0.50	<1.0	<5	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<0.50	<1.0	<5	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	**150[A]**	**500 CD[A]**	**253[A]**	**210[A]**	**160[A]**	**150[A]**	**210[A]**
Chloride	mg/L	100[A]	8.2	3.8	1.6	<1.0	<1.0	1.1	<1.0
Fluoride	mg/L	1[A]	-	-	0.06	-	-	-	-
Nutrients									
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	**0.12[A]**	0.029	<0.02	-	-	-	-
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.040
Orthophosphate (as P)	mg/L	n/v	0.0086	0.0079	<0.15	0.012	0.0064	0.010	-
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	-	-	-	<0.015	<0.015	**0.14[A]**	<0.015
Nitrate (as N)	mg/L	3[A]	0.015	<0.010	<0.02	<0.010	0.018	0.027	<0.040
Phosphorus, Dissolved	mg/L	n/v	-	-	-	-	-	-	0.0075
Phosphorus, Total (Dissolved)	mg/L	n/v	0.016	0.018	-	0.0064	0.0059	0.0092 P2	-
Phosphorus, Total	mg/L	n/v	-	-	-	-	-	-	0.060
Total Kjeldahl Nitrogen	mg/L	n/v	0.54 DB	0.69	1.4	2.26	<0.40	0.44	0.40
Nitrogen	mg/L	n/v	-	0.69 DB	-	2.3 DB	<0.40 DB	0.46 DB	0.40 DB
Metals - Dissolved									
Aluminum	mg/L	$0.007/0.05_{n1,e}$[A]	**0.028[A]**	<0.0030	**0.033[A]**	<0.0030	<0.0030	<0.0030	0.0033
Antimony	mg/L	0.006[A]	<0.00060	<0.00060	<0.001	0.0014	<0.00060	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	0.00078	0.00041	0.001	0.00060	0.00057	0.00045	0.00039
Barium	mg/L	2[A]	0.053	0.063	<0.05	0.050	0.049	0.058	0.047
Beryllium	mg/L	n/v	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-25-9						
Sample Date			30-Sep-16	14-May-21	23-Nov-21	10-May-22	22-Nov-22	18-May-23	6-Jun-25
Sample ID			MW16-25-9	MW16-25-9	MW16-25-9	MW16-25-9	MW16-25-9	MW16-25-9	MW16-25-9
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			MAXX	BV	AGAT	BV	BV	BV	BV
Laboratory Work Order			B686123	C132332	21C834079	C231132	C292215	C335681	C551949
Laboratory Sample ID			PQ7067	ZU4974	3244039	ASU358	BHN146	BQS282	DMO158
Location Description			EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated
Boron	mg/L	1[A]	0.099	0.070	0.06	0.071	0.058	0.068	0.063
Cadmium	mg/L	0.00004/0.00037$_{n3}$[A]	**0.000065[A]**	**0.000077[A]**	0.000023	**0.000046[A]**	**0.000044[A]**	**0.000044[A]**	**0.000045[A]**
Calcium	mg/L	n/v	140	160	148	120	120	140	130
Chromium	mg/L	0.05[A]	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt	mg/L	n/v	0.0020	0.00067	<0.0009	0.00069	0.00083	0.00054	<0.00030
Copper	mg/L	0.007[A]	0.0011	0.0016	0.0026	<0.0010	<0.0010	0.0024	0.0015
Iron	mg/L	0.3[A]	0.16	<0.060	<0.1	<0.060	<0.060	<0.060	<0.060
Lead	mg/L	0.001/0.007$_{n3}$[A]	<0.00020	<0.00020	0.0007	<0.00020	<0.00020	<0.00020	<0.00020
Lithium	mg/L	n/v	0.034	0.071	-	0.043	0.051	0.046	0.11
Magnesium	mg/L	n/v	59	100	91.2	82	75	92	83
Manganese	mg/L	0.02[A]	**0.23[A]**	**0.22[A]**	**0.170[A]**	**0.14[A]**	**0.17[A]**	**0.17[A]**	**0.062[A]**
Mercury	mg/L	0.000005[A]	0.0000035	<0.0000019	<0.0000025	<0.0000019	<0.0000019	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	0.0036	0.0017	0.001	0.0014	0.0014	0.0010	0.0012
Nickel	mg/L	0/0.17$_{n3}$[A]	**0.0067[A]**	**0.0036[A]**	**0.004[A]**	**0.0028[A]**	**0.0031[A]**	**0.0029[A]**	**0.0029[A]**
Phosphorus	mg/L	n/v	<0.10	<0.10	0.09	<0.10	<0.10	<0.10	<0.10
Potassium	mg/L	n/v	6.6	5.9	5.7	5.8	5.2	6.3	5.7
Selenium	mg/L	0.002[A]	0.0014	<0.00020	0.0007	0.00045	0.00027	0.00035	0.0014
Silicon	mg/L	n/v	7.0	6.0	-	5.3	5.1	6.2	5.3
Silver	mg/L	0.00025[A]	<0.00010	<0.00010	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010
Sodium	mg/L	200[A]	34	110	79.3	63	58	62	56
Strontium	mg/L	n/v	0.74	1.7	-	1.3	1.2	1.3	1.2
Sulfur	mg/L	n/v	49	180	-	66	51	46	72
Thallium	mg/L	n/v	<0.00020	<0.00020	<0.0001	<0.00020	<0.00020	<0.00020	<0.00020
Tin	mg/L	n/v	<0.0010	<0.0010	-	<0.0010	0.0012	<0.0010	0.0033
Titanium	mg/L	n/v	<0.0010	<0.0010	0.002	<0.0010	<0.0010	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	**0.014[A]**	**0.035[A]**	**0.028[A]**	**0.025[A]**	**0.024[A]**	**0.021[A]**	**0.022[A]**
Vanadium	mg/L	n/v	0.0011	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	<0.0030	<0.0030	0.011	<0.0030	<0.0030	<0.0030	<0.0030
Metals - Total									
Mercury	mg/L	0.000005[A]	***<0.0020 DB***	**0.0000683[A]**	**0.000097[A]**	**0.000077[A]**	**0.0000113[A]**	**0.000042[A]**	<0.0000019
Phosphorus	mg/L	n/v	-	-	0.81	-	-	-	-
Microbiological Parameters									
Escherichia coli (E.Coli)	mpn/100mL	n/v	<10 DB	<10 MI	9	<10 AT	<1.0	<10 Z8	<5.0 Z8
Fecal Coliforms	mpn/100mL	n/v	<10 DB	<10 MI	26	<10 AT	<1.0	<10 Z8	<5.0 Z8
Heterotrophic Plate Count	cfu/mL	n/v	7,900 DB	5,300 MI	21,100	2,700 AT	190 SC1	19,000 Z8	-
Heterotrophic Plate Count	mpn/100mL	n/v	-	-	-	-	-	-	>12000 Z8
Total Coliforms	mpn/100mL	n/v	>2400 DB	<10 MI	70	30 AT	<1.0	<10 Z8	<5.0 Z8

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location							MW16-26-18			
Sample Date			28-Sep-16	12-May-21	24-Nov-21		24-Nov-21	4-May-22	15-Nov-22	15-May-23
Sample ID			MW16-26-18	MW16-26-18	21-1		MW16-26-18	MW16-26-18	MW16-26-18	MW16-26-18
Sampling Company			STANTEC	STANTEC	STANTEC		STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			MAXX	BV	AGAT		AGAT	BV	BV	BV
Laboratory Work Order			B685112	C131657	21C834850		21C834850	C229742	C290290	C334367
Laboratory Sample ID			PQ0281	ZU0432	3249835		3249829	ASN086	BHB171	BQM164
Location Description			EIA Project Well	EIA Project Well	EIA Project Well		EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well
Sample Type	Units	2024 AEPA Tier 1	Bedrock	Bedrock	Bedrock Field Duplicate	RPD (%)	Bedrock	Bedrock	Bedrock	Bedrock
Field Parameters										
Dissolved Oxygen, Field	mg/L	n/v	-	7.76	-	-	3.68	3.08	9.6	4.8
Electrical Conductivity, Field	µS/cm	1,000[A]	**1,207[A]**	**3,581[A]**	-	-	**1,238[A]**	**1,372[A]**	**1,211[A]**	**1,249[A]**
Oxidation Reduction Potential, field	mV	n/v	-	-32.5	-	-	80.1	-3.8	-34.3	37.9
pH, Field	S.U.	6.5-8.5[A]	7.4	7.70	-	-	7.23	7.29	7.51	7.89
Temperature, Field	deg C	n/v	7.1	5.6	-	-	6.78	10.1	4.6	12.5
Calculated Parameters										
Anion Sum	meq/L	n/v	14	16	-	-	-	14	13	15
Cation Sum	meq/L	n/v	14	16	-	-	-	16	14	15
Hardness (as CaCO3)	mg/L	n/v	140	170	90	24%	71	150	120	140
Ion Balance	%	n/v	1.0	0.57	102	2%	100	6.0	3.4	0.98
Nitrate	mg/L	13[A]	<0.044	<0.044	<0.5	nc	<0.5	<0.044	0.070	<0.044
Nitrate + Nitrite (as N)	mg/L	100[A]	<0.020	<0.010	<0.02	nc	<0.02	<0.010	0.016	<0.010
Nitrite	mg/L	$0.197/1.97_{n4.a}$[A]	<0.033	<0.033	<0.05	nc	<0.05	<0.033	<0.033	<0.033
Total Dissolved Solids	mg/L	500[A]	**870[A]**	**990[A]**	**833[A]**	7%	**780[A]**	**910[A]**	**850[A]**	**920[A]**
Sodium Adsorption Ratio (SAR)	none	5[A]	-	-	**12.2[A]**	nc	**13.1[A]**	-	-	-
BTEX and Petroleum Hydrocarbons										
Benzene	mg/L	0.005[A]	<0.00040	<0.00040	<0.0005	nc	<0.0005	<0.00040	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	<0.00040	<0.00040	<0.0003	nc	<0.0003	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	<0.00040	<0.00040	<0.0005	nc	<0.0005	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	<0.00080	<0.00080	-	-	-	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	<0.00040	<0.00040	-	-	-	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	<0.00080	<0.00089	<0.0005	nc	<0.0005	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10	<0.10	<0.1	nc	<0.1	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10	<0.10	<0.1	nc	<0.1	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10	<0.10	<0.1	nc	<0.1	<0.10	<0.10	<0.10
Miscellaneous Inorganics										
Dissolved Organic Carbon (DOC)	mg/L	n/v	2.1	2.3	5.493	nc	3.274	1.8	1.3	2.2
Electrical Conductivity, Lab	µS/cm	1,000[A]	**1,300[A]**	**1,500[A]**	**1,330[A]**	2%	**1,310[A]**	**1,300[A]**	**1,300[A]**	**1,500[A]**
Sediment	none	n/v	-	-	NotPresent	nc	NotPresent	-	-	-
pH, lab	S.U.	6.5-8.5[A]	8.29	8.21	8.37	nc	8.32	8.26	8.14	8.28
Anions										
Alkalinity (P as CaCO3)	mg/L	n/v	<0.50	<1.0	<5	nc	<5	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	260	280	267	1%	265	290	270	290
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	310	340	317	1%	319	350	320	350
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<0.50	<1.0	<5	nc	<5	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<0.50	<1.0	<5	nc	<5	<1.0	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	**400 CD[A]**	**380 CD[A]**	**375[A]**	9%	**344[A]**	**370[A]**	**370[A]**	**360[A]**
Chloride	mg/L	100[A]	2.0	84	2.6	nc	1.2	19	9.3	64
Fluoride	mg/L	1[A]	-	-	1.00	9%	**1.09[A]**	-	-	-
Nutrients										
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	**0.64[A]**	**0.76[A]**	**0.69[A]**	11%	**0.62[A]**	-	-	-
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	<0.010	<0.010	<0.01	nc	<0.01	<0.010	<0.010	<0.010
Orthophosphate (as P)	mg/L	n/v	<0.0030	0.0065	<0.15	nc	<0.15	<0.0030	0.0066	0.011
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	-	-	-	-	-	**0.79[A]**	**0.72[A]**	**0.63[A]**
Nitrate (as N)	mg/L	3[A]	<0.010	<0.010	<0.02	nc	<0.02	<0.010	0.016	<0.010
Phosphorus, Total (Dissolved)	mg/L	n/v	0.0062	0.013	-	-	-	0.0031	<0.0030	0.0057 P2
Total Kjeldahl Nitrogen	mg/L	n/v	4.5 DB	1.42	1.6	6%	1.7	<2.0	0.73	1.09
Nitrogen	mg/L	n/v	-	1.4 DB	-	-	-	<2.0 DB	0.74 DB	1.1 DB
Metals - Dissolved										
Aluminum	mg/L	$0.007/0.05_{n1,e}$[A]	0.0037	<0.0030	**0.011[A]**	nc	**0.109[A]**	0.0049	<0.0030	0.0053
Antimony	mg/L	0.006[A]	<0.00060	<0.00060	<0.001	nc	<0.001	<0.00060	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	<0.00020	<0.00020	0.003	nc	<0.001	0.0010	0.00022	0.00035
Barium	mg/L	2[A]	<0.010	0.053	<0.05	nc	<0.05	0.018	0.014	0.032
Beryllium	mg/L	n/v	<0.0010	<0.0010	<0.0005	nc	<0.0005	<0.0010	<0.0010	<0.0010
Boron	mg/L	1[A]	0.13	0.12	0.13	0%	0.13	0.14	0.12	0.13
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	<0.000020	<0.000020	<0.000016	nc	<0.000016	<0.00002	<0.000020	<0.000020

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-26-18							
Sample Date			28-Sep-16	12-May-21	24-Nov-21		24-Nov-21	4-May-22	15-Nov-22	15-May-23
Sample ID			MW16-26-18	MW16-26-18	21-1		MW16-26-18	MW16-26-18	MW16-26-18	MW16-26-18
Sampling Company			STANTEC	STANTEC	STANTEC		STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			MAXX	BV	AGAT		AGAT	BV	BV	BV
Laboratory Work Order			B685112	C131657	21C834850		21C834850	C229742	C290290	C334367
Laboratory Sample ID			PQ0281	ZU0432	3249835		3249829	ASN086	BHB171	BQM164
Location Description			EIA Project Well	EIA Project Well	EIA Project Well		EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well
Sample Type	Units	2024 AEPA Tier 1	Bedrock	Bedrock	Bedrock Field Duplicate	RPD (%)	Bedrock	Bedrock	Bedrock	Bedrock
Calcium	mg/L	n/v	40	47	23.0	36%	16.0	41	34	38
Chromium	mg/L	0.05[A]	<0.0010	<0.0010	<0.0005	nc	<0.0005	<0.0010	<0.0010	<0.0010
Cobalt	mg/L	n/v	<0.00030	<0.00030	<0.0009	nc	<0.0009	<0.00030	<0.00030	<0.00030
Copper	mg/L	0.007[A]	0.00021	0.00021	<0.0008	nc	0.0015	<0.0010	<0.0010	<0.0010
Iron	mg/L	0.3[A]	0.15	0.14	<0.1	nc	<0.1	<0.060	<0.060	<0.060
Lead	mg/L	0.001/0.007$_{n3}$[A]	<0.00020	<0.00020	<0.0002	nc	**0.0011**[A]	<0.00020	<0.00020	<0.00020
Lithium	mg/L	n/v	0.035	0.028	-	-	-	0.038	0.038	0.023
Magnesium	mg/L	n/v	11	13	7.9	5%	7.5	12	9.0	11
Manganese	mg/L	0.02[A]	**0.083**[A]	**0.10**[A]	**0.083**[A]	23%	**0.066**[A]	**0.071**[A]	**0.065**[A]	**0.065**[A]
Mercury	mg/L	0.000005[A]	<0.0000020	<0.0000019	<0.0000025	nc	<0.0000025	<0.0000019	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	0.0048	0.0045	0.006	18%	0.005	0.0051	0.0047	0.0052
Nickel	mg/L	0/0.17$_{n3}$[A]	***<0.00050***	***<0.00050***	***<0.003***	nc	***<0.003***	**0.00060**[A]	***<0.00050***	***<0.00050***
Phosphorus	mg/L	n/v	<0.10	<0.10	<0.08	nc	<0.08	<0.10	<0.10	<0.10
Potassium	mg/L	n/v	2.8	2.8	2.1	nc	1.9	2.7	2.1	3.0
Selenium	mg/L	0.002[A]	<0.00020	<0.00020	0.0014	nc	0.0012	<0.00020	<0.00020	<0.00020
Silicon	mg/L	n/v	4.5	4.1	-	-	-	4.4	3.9	4.6
Silver	mg/L	0.00025[A]	<0.00010	<0.00010	<0.00005	nc	<0.00005	<0.00010	<0.00010	<0.00010
Sodium	mg/L	200[A]	**250**[A]	**290**[A]	**266**[A]	5%	**253**[A]	**290**[A]	**270**[A]	**270**[A]
Strontium	mg/L	n/v	0.61	0.65	-	-	-	0.67	0.54	0.62
Sulfur	mg/L	n/v	130	110	-	-	-	140	110	130
Thallium	mg/L	n/v	<0.00020	<0.00020	<0.0001	nc	<0.0001	<0.00020	<0.00020	<0.00020
Tin	mg/L	n/v	<0.0010	<0.0010	-	-	-	<0.0010	<0.0010	<0.0010
Titanium	mg/L	n/v	<0.0010	<0.0010	0.002	nc	0.004	<0.0010	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	0.00013	0.00029	<0.001	nc	<0.001	0.00016	<0.00010	<0.00010
Vanadium	mg/L	n/v	<0.0010	<0.0010	-	-	-	<0.0010	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	<0.0030	<0.0030	<0.005	nc	<0.005	<0.0030	<0.0030	<0.0030
Metals - Total										
Mercury	mg/L	0.000005[A]	***<0.0060 DB***	**0.0000096**[A]	**0.000016**[A]	0%	**0.000016**[A]	**0.000131**[A]	**0.000037**[A]	**0.0000231**[A]
Phosphorus	mg/L	n/v	-	-	0.54	4%	0.56	-	-	-
Microbiological Parameters										
Escherichia coli (E.Coli)	mpn/100mL	n/v	<10 DB	<10 MI	<1	nc	<1	<5.0 AT	<1.0	<1.0
Fecal Coliforms	mpn/100mL	n/v	<10 DB	<10 MI	8	nc	<1	<10 AT	<1.0	<1.0
Heterotrophic Plate Count	cfu/mL	n/v	>6000	4,500	650	27%	850	510	1,200	1,300
Total Coliforms	mpn/100mL	n/v	580 DB	640 MI	345	**61%**	649	26 AT	150	1,400

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-27-9					
Sample Date			28-Sep-16	12-May-21	24-Nov-21	4-May-22	15-Nov-22	15-May-23
Sample ID			MW16-27-9	MW16-27-9	MW16-27-4	MW16-27-9	MW16-27-9	MW16-27-9
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			MAXX	BV	AGAT	BV	BV	BV
Laboratory Work Order			B685112	C131657	21C834850	C229742	C290290	C334367
Laboratory Sample ID			PQ0280	ZU0430	3249794	ASN085	BHB172	BQM163
Location Description			EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated
Field Parameters								
Dissolved Oxygen, Field	mg/L	n/v	-	1.77	38.5	5.31	14.7	6.9
Electrical Conductivity, Field	µS/cm	1,000[A]	**1,902[A]**	**1,826[A]**	**1,479[A]**	**1,580[A]**	**1,437[A]**	**1,490[A]**
Oxidation Reduction Potential, field	mV	n/v	-	83.7	86.9	11.6	4.7	83.2
pH, Field	S.U.	6.5-8.5[A]	7.3	7.03	6.85	6.52	7.63	7.19
Temperature, Field	deg C	n/v	8.2	6.8	2.65	9.3	4.3	9.6
Calculated Parameters								
Anion Sum	meq/L	n/v	25	29	-	18	18	19
Cation Sum	meq/L	n/v	22	24	-	21	20	19
Hardness (as CaCO3)	mg/L	n/v	800	800	739	760	700	670
Ion Balance	%	n/v	0.90	9.9	113	7.6	3.7	0.48
Nitrate	mg/L	13[A]	<0.044	0.079	<0.5	<0.044	<0.044	<0.044
Nitrate + Nitrite (as N)	mg/L	100[A]	<0.020	0.018	<0.02	<0.010	<0.010	<0.010
Nitrite	mg/L	0.197/1.97$_{n4.a}$[A]	<0.033	<0.033	<0.05	<0.033	<0.033	<0.033
Total Dissolved Solids	mg/L	500[A]	**1,400[A]**	**1,600[A]**	**1,100[A]**	**1,100[A]**	**1,100[A]**	**1,100[A]**
Sodium Adsorption Ratio (SAR)	none	5[A]	-	-	2.16	-	-	-
BTEX and Petroleum Hydrocarbons								
Benzene	mg/L	0.005[A]	<0.00040	<0.00040	<0.0005	<0.00040	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	<0.00040	<0.00040	<0.0003	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	<0.00040	<0.00040	<0.0005	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	<0.00080	<0.00080	-	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	<0.00040	<0.00040	-	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	<0.00080	<0.00089	<0.0005	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10	<0.10	<0.1	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10	<0.10	<0.1	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10	<0.10	<0.1	<0.10	<0.10	<0.10
Miscellaneous Inorganics								
Dissolved Organic Carbon (DOC)	mg/L	n/v	1.8	4.0	3.069	2.1	2.2	1.7
Electrical Conductivity, Lab	µS/cm	1,000[A]	**2,000[A]**	**2,600[A]**	**1,600[A]**	**1,500[A]**	**1,600[A]**	**1,600[A]**
Sediment	none	n/v	-	-	NotPresent	-	-	-
pH, lab	S.U.	6.5-8.5[A]	7.77	7.71	7.92	7.63	7.54	7.51
Anions								
Alkalinity (P as CaCO3)	mg/L	n/v	<0.50	<1.0	<5	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	530	420	482	510	490	520
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	650	510	588	620	600	640
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<0.50	<1.0	<5	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<0.50	<1.0	<5	<1.0	<1.0	<1.0
Sulfate	mg/L	128/429$_{n3}$[A]	**690 CD[A]**	**490 CD[A]**	**420[A]**	**380[A]**	**420[A]**	**390[A]**
Chloride	mg/L	100[A]	2.1	**370 CD[A]**	<1.0	<1.0	<1.0	1.2
Fluoride	mg/L	1[A]	-	-	0.08	-	-	-
Nutrients								
Ammonia (as N)	mg/L	0.035/125$_{n2}$[A]	**0.38[A]**	**0.35[A]**	**0.35[A]**	-	-	-
Nitrite (as N)	mg/L	0.06/0.6$_{n4}$[A]	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010
Orthophosphate (as P)	mg/L	n/v	<0.0030	0.034	<0.15	<0.0030	0.0031	0.0034
Ammonia (as N)	mg/L	0.035/125$_{n2}$[A]	-	-	-	**0.33[A]**	**0.36[A]**	**0.29[A]**
Nitrate (as N)	mg/L	3[A]	<0.010	0.018	<0.02	<0.010	<0.010	<0.010
Phosphorus, Total (Dissolved)	mg/L	n/v	<0.0030	0.20	-	<0.0030	<0.0030	<0.0030 P2
Total Kjeldahl Nitrogen	mg/L	n/v	1.1	2.29	4.6	<2.0	0.59	0.86
Nitrogen	mg/L	n/v	-	2.3 DB	-	<2.0 DB	0.59 DB	0.86 DB
Metals - Dissolved								
Aluminum	mg/L	0.007/0.05$_{n1,e}$[A]	<0.0030	**0.94[A]**	<0.004	<0.0030	<0.0030	<0.0030
Antimony	mg/L	0.006[A]	<0.00060	<0.00060	<0.001	<0.00060	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	0.00036	0.0011	<0.001	0.00033	0.00032	0.00026
Barium	mg/L	2[A]	<0.010	0.023	<0.05	0.013	0.010	0.017
Beryllium	mg/L	n/v	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010
Boron	mg/L	1[A]	0.13	0.12	0.13	0.14	0.11	0.14
Cadmium	mg/L	0.00004/0.00037$_{n3}$[A]	0.000026	0.000035	0.000017	**0.000047[A]**	**0.00017[A]**	**0.00005[A]**

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW16-27-9					
Sample Date			28-Sep-16	12-May-21	24-Nov-21	4-May-22	15-Nov-22	15-May-23
Sample ID			MW16-27-9	MW16-27-9	MW16-27-4	MW16-27-9	MW16-27-9	MW16-27-9
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			MAXX	BV	AGAT	BV	BV	BV
Laboratory Work Order			B685112	C131657	21C834850	C229742	C290290	C334367
Laboratory Sample ID			PQ0280	ZU0430	3249794	ASN085	BHB172	BQM163
Location Description			EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well	EIA Project Well
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated
Calcium	mg/L	n/v	200	180	186	180	170	160
Chromium	mg/L	0.05[A]	<0.0010	0.0013	<0.0005	<0.0010	<0.0010	<0.0010
Cobalt	mg/L	n/v	0.0014	0.0020	<0.0009	0.0010	0.0012	0.0011
Copper	mg/L	0.007[A]	<0.00020	0.0017	<0.0008	<0.0010	<0.0010	<0.0010
Iron	mg/L	0.3[A]	**0.42[A]**	<0.060	<0.1	<0.060	<0.060	<0.060
Lead	mg/L	0.001/0.007$_{n3}$[A]	<0.00020	0.00047	<0.0002	<0.00020	<0.00020	<0.00020
Lithium	mg/L	n/v	0.041	0.050	-	0.033	0.036	0.031
Magnesium	mg/L	n/v	75	85	66.7	73	66	64
Manganese	mg/L	0.02[A]	**0.41[A]**	**0.65[A]**	**0.362[A]**	**0.32[A]**	**0.29[A]**	**0.30[A]**
Mercury	mg/L	0.000005[A]	<0.0000020	<0.0000019	<0.0000025	<0.0000019	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	0.00058	0.0035	0.004	0.00053	0.00052	0.00051
Nickel	mg/L	0/0.17$_{n3}$[A]	**0.00062[A]**	**0.0047[A]**	***<0.003***	**0.00093[A]**	**0.00099[A]**	**0.00077[A]**
Phosphorus	mg/L	n/v	<0.10	<0.10	0.10	<0.10	<0.10	<0.10
Potassium	mg/L	n/v	4.9	6.3	4.7	5.1	4.7	4.6
Selenium	mg/L	0.002[A]	<0.00020	<0.00020	**0.0025[A]**	<0.00020	<0.00020	<0.00020
Silicon	mg/L	n/v	5.7	7.1	-	5.7	5.1	5.8
Silver	mg/L	0.00025[A]	<0.00010	<0.00010	<0.00005	<0.00010	<0.00010	<0.00010
Sodium	mg/L	200[A]	140	170	135	130	130	120
Strontium	mg/L	n/v	1.6	1.4	-	1.4	1.3	1.4
Sulfur	mg/L	n/v	180	210	-	150	120	140
Thallium	mg/L	n/v	<0.00020	<0.00020	0.0001	<0.00020	<0.00020	<0.00020
Tin	mg/L	n/v	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010
Titanium	mg/L	n/v	<0.0010	0.097	0.002	<0.0010	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	0.0049	**0.017[A]**	0.006	0.0050	0.0049	0.0053
Vanadium	mg/L	n/v	<0.0010	0.0026	-	<0.0010	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	<0.0030	0.0042	<0.005	<0.0030	<0.0030	<0.0030
Metals - Total								
Mercury	mg/L	0.000005[A]	***<0.02 DB***	**0.000306 DB[A]**	**0.000072[A]**	**0.000177[A]**	**0.000175[A]**	**0.000233[A]**
Phosphorus	mg/L	n/v	-	-	8.81	-	-	-
Microbiological Parameters								
Escherichia coli (E.Coli)	mpn/100mL	n/v	<10 DB	<100 MI	6	<2.0 AT	<1.0	<1.0
Fecal Coliforms	mpn/100mL	n/v	<10 DB	<100 MI	27	<10 AT	<5.0 MI	<1.0
Heterotrophic Plate Count	cfu/mL	n/v	980	1,300 MI	2,400	430	130 SVH	38
Total Coliforms	mpn/100mL	n/v	850 DB	410 MI	173	8.2 AT	<1.0	20

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location						MW21-3-15			
Sample Date			4-May-22	16-Nov-22	16-May-23	26-Oct-23	16-May-24	19-Sep-24	3-Jun-25
Sample ID			MW21-3b	MW21-3-15	MW21-3-15	MW21-3-15	MW21-3-15	MW21-3-15	MW21-3-15
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order			C229742	C290717	C334712	C387360	C435132	C474428	C550515
Laboratory Sample ID			ASN084	BHD545	BQN669	CCY431	CNR326	CVW764	DMG751
Location Description			Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
Sample Type	Units	2024 AEPA Tier 1	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock
Field Parameters									
Dissolved Oxygen, Field	mg/L	n/v	4.76	8.0	12.0	3.4	5.3	6.72	7.2
Electrical Conductivity, Field	µS/cm	1,000[A]	**1,145[A]**	**1,272[A]**	**1,115[A]**	**1,211[A]**	1.135	845	**1,234[A]**
Oxidation Reduction Potential, field	mV	n/v	88.2	-35.8	190.4	205.3	-14.7	44.1	129.4
pH, Field	S.U.	6.5-8.5[A]	7.56	**8.60[A]**	7.90	8.47	8.13	8.46	8.38
Temperature, Field	deg C	n/v	8.4	0.7	9.3	6.1	6.2	7.8	8.21
Calculated Parameters									
Anion Sum	meq/L	n/v	21	15	14	14	14	14	14
Cation Sum	meq/L	n/v	13	13	15	16	15	15	12
Hardness (as CaCO3)	mg/L	n/v	22	23	16	16	43	15	12
Ion Balance	%	n/v	22	6.8	4.7	7.3	3.5	2.4	-
Ion Balance % Difference	%	n/v	-	-	-	-	-	-	6.3
Nitrate	mg/L	13_f[A]	0.062	0.050	0.045	<0.044	0.31	<0.044	<0.18
Nitrate + Nitrite (as N)	mg/L	100[A]	0.014	0.011	0.010	<0.010	0.13	0.029	<0.040
Nitrite	mg/L	$0.197/1.97_{n4,g}$[A]	<0.033	<0.033	<0.033	<0.033	**0.22[A]**	0.076	<0.13
Total Dissolved Solids	mg/L	500[A]	**990[A]**	**820[A]**	**820[A]**	**840[A]**	**830[A]**	**810[A]**	**750[A]**
BTEX and Petroleum Hydrocarbons									
Benzene	mg/L	0.005[A]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10	<0.10	<0.10	<0.10	<0.10	<0.30 VV	<0.10
Miscellaneous Inorganics									
Dissolved Organic Carbon (DOC)	mg/L	n/v	5.6	2.7	2.0	1.9	2.5 PRH	1.6 PRH	1.5
Electrical Conductivity, Lab	µS/cm	1,000[A]	**1,100[A]**	**1,200[A]**	**1,200[A]**	**1,300[A]**	**1,300[A]**	**1,300[A]**	**1,300[A]**
pH, lab	S.U.	6.5-8.5[A]	**8.59[A]**	8.43	8.45	**8.66[A]**	**8.51[A]**	**8.64[A]**	**8.58[A]**
Anions									
Alkalinity (P as CaCO3)	mg/L	n/v	13	5.5	9.5	23	18	38	12
Alkalinity, Total (as CaCO3)	mg/L	n/v	910	610	540	500	530	540	530
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	1,100	740	630	560	610	570	620
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	16	6.6	11	28	21	45	15
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	**130[A]**	**150[A]**	**150[A]**	**170[A]**	**160[A]**	**150[A]**	**150[A]**
Chloride	mg/L	100[A]	3.7	<1.0	1.9	1.4	<1.0	1.6	1.2
Nutrients									
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	<0.010	<0.010	<0.010	<0.010	**0.065[A]**	0.023	<0.040
Orthophosphate (as P)	mg/L	n/v	0.12	0.029	0.016	0.026	0.041	0.019	0.018
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	**0.90[A]**	**0.51[A]**	**0.33[A]**	**0.33[A]**	**0.48[A]**	**0.47[A]**	**0.36[A]**
Nitrate (as N)	mg/L	3[A]	0.014	0.011	0.010	<0.010	0.069	<0.010	<0.040
Phosphorus, Dissolved	mg/L	n/v	-	-	-	-	-	-	0.015 P2
Phosphorus, Total (Dissolved)	mg/L	n/v	0.13	0.044	0.018	0.027	0.021 PRH	0.017 PRH P2	-
Total Kjeldahl Nitrogen	mg/L	n/v	14.4	<1.0	0.66	<0.40	0.95	0.83	0.47
Nitrogen	mg/L	n/v	14 DB	<1.0 DB	0.67 DB	<0.40 DB NNA	1.1	0.86 DB	0.47 DB
Metals - Dissolved									
Aluminum	mg/L	$0.007/0.05_{n1,e}$[A]	**3.9[A]**	**0.022[A]**	**0.0076[A]**	**0.22[A]**	**1.1[A]**	**0.34[A]**	0.0043
Antimony	mg/L	0.006[A]	0.0016	0.00081	<0.00060	<0.00060	***<0.012***	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	**0.0065[A]**	0.0014	0.0013	0.0019	<0.0040	0.0011	0.00063
Barium	mg/L	2[A]	0.041	0.060	0.020	0.021	0.19	0.024	0.014
Beryllium	mg/L	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.020	<0.0010	<0.0010
Boron	mg/L	1[A]	0.19	0.19	0.22	0.22	0.20	0.23	0.19
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	0.000029	<0.000020	<0.000020	<0.000020	***<0.00040***	<0.000020	<0.000020
Calcium	mg/L	n/v	6.6	6.8	5.4	5.8	17	5.3	4.1
Chromium	mg/L	0.05[A]	0.0036	<0.0010	<0.0010	<0.0010	<0.020	<0.0010	<0.0010

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW21-3-15						
Sample Date			4-May-22	16-Nov-22	16-May-23	26-Oct-23	16-May-24	19-Sep-24	3-Jun-25
Sample ID			MW21-3b	MW21-3-15	MW21-3-15	MW21-3-15	MW21-3-15	MW21-3-15	MW21-3-15
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order			C229742	C290717	C334712	C387360	C435132	C474428	C550515
Laboratory Sample ID			ASN084	BHD545	BQN669	CCY431	CNR326	CVW764	DMG751
Location Description			Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
Sample Type	Units	2024 AEPA Tier 1	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock
Cobalt	mg/L	n/v	0.0010	<0.00030	<0.00030	<0.00030	<0.0060	<0.00030	<0.00030
Copper	mg/L	0.007[A]	**0.0080[A]**	0.0025	**0.0074[A]**	0.0013	***<0.020***	<0.0010	<0.0010
Iron	mg/L	0.3[A]	**0.95[A]**	**3.5[A]**	<0.060	0.13	**0.70[A]**	0.20	<0.060
Lead	mg/L	0.001/0.007$_{n3}$[A]	**0.0016[A]**	<0.00020	<0.00020	<0.00020	**0.0044[A]**	0.00026	<0.00020
Lithium	mg/L	n/v	<0.020	0.027	0.029	0.038	<0.20	0.027	0.023
Magnesium	mg/L	n/v	1.4	1.5	0.53	0.48	<2.0	0.44	0.31
Manganese	mg/L	0.02[A]	**0.034[A]**	0.015	<0.0040	0.0041	**0.12[A]**	<0.0040	0.012
Mercury	mg/L	0.000005[A]	0.000002	<0.0000019	<0.0000019	0.0000024	<0.0000019	0.0000034	<0.0000019
Molybdenum	mg/L	n/v	0.023	0.0044	0.0016	0.0026	<0.0040	0.0013	0.0023
Nickel	mg/L	0/0.17$_{n3}$[A]	**0.0067[A]**	***<0.00050***	**0.00059[A]**	**0.00080[A]**	***<0.010***	***<0.00050***	***<0.00050***
Phosphorus	mg/L	n/v	0.11	<0.10	<0.10	<0.10	<1.0	<0.10	<0.10
Potassium	mg/L	n/v	1.2	1.5	0.63	0.73	<3.0	0.72	0.52
Selenium	mg/L	0.002[A]	**0.0022[A]**	0.00068	0.00056	0.00041	***<0.0040***	<0.00020	<0.00020
Silicon	mg/L	n/v	4.5	9.6	4.2	4.2	<5.0	3.9	3.5
Silver	mg/L	0.00025[A]	<0.00010	<0.00010	<0.00010	<0.00010	***<0.0020***	<0.00010	<0.00010
Sodium	mg/L	200[A]	**300[A]**	**290[A]**	**340[A]**	**360[A]**	**330[A]**	**330[A]**	**270[A]**
Strontium	mg/L	n/v	0.053	0.076	0.059	0.066	<0.20	0.075	0.054
Sulfur	mg/L	n/v	46	44	54	60	49	42	47
Thallium	mg/L	n/v	<0.00020	<0.00020	<0.00020	<0.00020	<0.0040	<0.00020	<0.00020
Tin	mg/L	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.020	<0.0010	<0.0010
Titanium	mg/L	n/v	0.15	0.0045	<0.0010	0.0078	<0.020	0.013	<0.0010
Uranium	mg/L	0.01[A]	0.0072	0.0012	0.00049	0.00078	<0.0020	0.00041	0.00041
Vanadium	mg/L	n/v	0.011	0.0013	0.0025	0.0018	<0.020	0.0016	<0.0010
Zinc	mg/L	0.03[A]	0.0065	<0.0030	<0.0030	<0.0030	**1.1[A]**	<0.0030	<0.0030
Metals - Total									
Mercury	mg/L	0.000005[A]	**0.00446[A]**	**0.00176[A]**	**0.0000333[A]**	**0.0000334[A]**	**0.000216 DB[A]**	**0.000152 DB[A]**	**0.0000157[A]**
Microbiological Parameters									
Escherichia coli (E.Coli)	mpn/100mL	n/v	<100 AT	<100	<10 Z8	<10 Z8	<100 MI	<2.0 MI	<2.0 Z8
Fecal Coliforms	mpn/100mL	n/v	<100 AT	<100 MI	<10 Z8	<10 Z8	<100 MI	2.0 MI	2.0 Z8
Heterotrophic Plate Count	cfu/mL	n/v	100,000 DVM	>6000	540 Z8	>6000	-	-	-
Heterotrophic Plate Count	mpn/100mL	n/v	-	-	-	-	>24000 MI	>2400	>2400
Total Coliforms	mpn/100mL	n/v	<100 AT	980	<10 Z8	<10 Z8	<100 MI	<2.0 MI	<2.0 Z8

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW21-6-7					
Sample Date			22-Nov-21	5-May-22	15-Nov-22	17-May-23	26-Oct-23	16-May-24
Sample ID			MW21-6a	MW21-6a	MW21-6-7	MW21-6-7	MW21-6-7	MW21-6-7
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			AGAT	BV	BV	BV	BV	BV
Laboratory Work Order			21C833752	C230164	C290290	C335152	C387360	C435132
Laboratory Sample ID			3240635	ASP028	BHB169	BQP598	CCY430	CNR324
Location Description			Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated
Field Parameters								
Dissolved Oxygen, Field	mg/L	n/v	17.92	3.55	4.0	7.7	4.6	5.6
Electrical Conductivity, Field	µS/cm	1,000[A]	**1,306[A]**	**1,427[A]**	**1,367[A]**	**1,301[A]**	**1,440[A]**	1,446
Oxidation Reduction Potential, field	mV	n/v	41.5	7.8	-49.6	150.9	64.7	13.1
pH, Field	S.U.	6.5-8.5[A]	7.4	7	7.19	7.40	7.16	7.07
Temperature, Field	deg C	n/v	7.36	9	5.8	7.6	6.6	5.5
Calculated Parameters								
Anion Sum	meq/L	n/v	-	15	16	16	15	16
Cation Sum	meq/L	n/v	-	19	17	16	22	20
Hardness (as CaCO3)	mg/L	n/v	351	390	320	320	460	410
Ion Balance	%	n/v	110	12	1.8	1.6	17	9.5
Nitrate	mg/L	13_f[A]	<0.5	<0.044	0.17	<0.044	0.056	0.42
Nitrate + Nitrite (as N)	mg/L	100[A]	<0.02	<0.010	0.039	<0.010	0.013	0.094
Nitrite	mg/L	$0.197/1.97_{n4.a}$[A]	<0.05	<0.033	<0.033	<0.033	<0.033	<0.033
Total Dissolved Solids	mg/L	500[A]	**957[A]**	**950[A]**	**940[A]**	**910[A]**	**1,000[A]**	**1,000[A]**
Sodium Adsorption Ratio (SAR)	none	5[A]	**5.83[A]**	-	-	-	-	-
BTEX and Petroleum Hydrocarbons								
Benzene	mg/L	0.005[A]	<0.0005	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	<0.0003	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	<0.0005	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	-	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	<0.0005	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10
Miscellaneous Inorganics								
Dissolved Organic Carbon (DOC)	mg/L	n/v	14	3.5	3.8	4.1	3.4	2.9 PRH
Electrical Conductivity, Lab	µS/cm	1,000[A]	**1,480[A]**	**1,400[A]**	**1,400[A]**	**1,400[A]**	**1,400[A]**	**1,600[A]**
pH, lab	S.U.	6.5-8.5[A]	8.13	7.83	7.67	7.48	8.16	8.15
Anions								
Alkalinity (P as CaCO3)	mg/L	n/v	<5	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	549	500	550	550	460	470
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	684	610	670	670	570	570
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<5	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<5	<1.0	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	**223[A]**	**230[A]**	**230[A]**	**220[A]**	**250[A]**	**260[A]**
Chloride	mg/L	100[A]	19.0	18	27	25	32	48
Fluoride	mg/L	1[A]	0.43	-	-	-	-	-
Nutrients								
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	**0.12[A]**	-	-	-	-	-
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010
Orthophosphate (as P)	mg/L	n/v	<0.15	<0.0030	0.0042	<0.0030	0.0034	<0.0030
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	-	**0.036[A]**	0.024	**0.045[A]**	**0.061[A]**	**0.039[A]**
Nitrate (as N)	mg/L	3[A]	<0.02	<0.010	0.039	<0.010	0.013	0.094
Phosphorus, Total (Dissolved)	mg/L	n/v	-	0.010	0.032	3.0 DB	<0.0030	<0.0030 PRH
Total Kjeldahl Nitrogen	mg/L	n/v	166	4.7	1.15	2.02	8.2	1.16
Nitrogen	mg/L	n/v	-	4.7 DB	1.2 DB	2.0	8.2	1.3
Metals - Dissolved								
Aluminum	mg/L	$0.007/0.05_{n1,e}$[A]	**0.009[A]**	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Antimony	mg/L	0.006[A]	<0.001	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	0.001	0.00023	0.00023	0.00028	0.00021	<0.00020
Barium	mg/L	2[A]	<0.05	0.025	0.021	0.021	0.027	0.025
Beryllium	mg/L	n/v	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron	mg/L	1[A]	0.19	0.20	0.19	0.19	0.21	0.19
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	0.000037	0.000023	<0.000020	0.000033	0.000032	0.000021
Calcium	mg/L	n/v	91.2	100	86	84	120	110

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			MW21-6-7					
Sample Date			22-Nov-21	5-May-22	15-Nov-22	17-May-23	26-Oct-23	16-May-24
Sample ID			MW21-6a	MW21-6a	MW21-6-7	MW21-6-7	MW21-6-7	MW21-6-7
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			AGAT	BV	BV	BV	BV	BV
Laboratory Work Order			21C833752	C230164	C290290	C335152	C387360	C435132
Laboratory Sample ID			3240635	ASP028	BHB169	BQP598	CCY430	CNR324
Location Description			Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated
Chromium	mg/L	0.05[A]	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt	mg/L	n/v	<0.0009	0.00037	0.00058	0.00055	0.00053	<0.00030
Copper	mg/L	0.007[A]	<0.0008	<0.0010	<0.0010	0.0014	<0.0010	<0.0010
Iron	mg/L	0.3[A]	<0.1	<0.060	<0.060	<0.060	<0.060	<0.060
Lead	mg/L	0.001/0.007$_{n3}$[A]	<0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Lithium	mg/L	n/v	-	0.032	0.034	0.032	0.046	0.037
Magnesium	mg/L	n/v	30.0	34	26	27	38	32
Manganese	mg/L	0.02[A]	0.009	**0.17[A]**	**0.18[A]**	**0.20[A]**	**0.22[A]**	0.0079
Mercury	mg/L	0.000005[A]	**0.0000054[A]**	<0.0000019	<0.0000019	<0.0000019	0.0000021	<0.0000019
Molybdenum	mg/L	n/v	0.002	0.0016	0.0011	0.0017 NH	0.0012	0.0019
Nickel	mg/L	0/0.17$_{n3}$[A]	***<0.003***	**0.0019[A]**	**0.0018[A]**	**0.0023[A]**	**0.0024[A]**	**0.0011[A]**
Phosphorus	mg/L	n/v	<0.14	<0.10	<0.10	<0.10	<0.10	<0.10
Potassium	mg/L	n/v	6.2	5.2	4.3	4.1	5.5	4.7
Selenium	mg/L	0.002[A]	<0.0005	0.00023	<0.00020	<0.00020	<0.00020	0.00037
Silicon	mg/L	n/v	-	4.9	4.3	4.6	5.3	4.4
Silver	mg/L	0.00025[A]	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium	mg/L	200[A]	**251[A]**	**260[A]**	**240[A]**	**220[A]**	**280[A]**	**260[A]**
Strontium	mg/L	n/v	-	1.0	0.89	0.90	1.2	1.2
Sulfur	mg/L	n/v	-	72	66	75	88	81
Thallium	mg/L	n/v	<0.0001	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Tin	mg/L	n/v	-	<0.0010	<0.0010	<0.0010	0.0017	<0.0010
Titanium	mg/L	n/v	0.005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	0.008	0.0070	0.0073	0.0077	0.0081	0.0073
Vanadium	mg/L	n/v	-	0.0014	<0.0010	<0.0010	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	<0.005	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Metals - Total								
Mercury	mg/L	0.000005[A]	**0.000060[A]**	**0.00169[A]**	**0.000731[A]**	**0.00093[A]**	**0.000375[A]**	**0.00075 DB[A]**
Phosphorus	mg/L	n/v	10.3	-	-	-	-	-
Microbiological Parameters								
Escherichia coli (E.Coli)	mpn/100mL	n/v	4	<10	<100 MI	<10 Z8	<100 Z8	<100 MI
Fecal Coliforms	mpn/100mL	n/v	9	<100	<100 MI	<10 Z8	<100 Z8	<100 MI
Heterotrophic Plate Count	cfu/mL	n/v	73,000	1,200	1,600	170	1,100	-
Heterotrophic Plate Count	mpn/100mL	n/v	-	-	-	-	-	>24000 SVH
Total Coliforms	mpn/100mL	n/v	830	30	<100 MI	<10 Z8	<100 Z8	<100 MI

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location				MW21-6-12									
Sample Date				22-Nov-21	5-May-22	15-Nov-22		15-Nov-22	17-May-23	26-Oct-23	16-May-24	20-Sep-24	4-Jun-25
Sample ID				MW21-6b	MW21-6b	22-11		MW21-6-12	MW21-6-12	MW21-6-12	MW21-6-12	MW21-6-12	MW21-6-12
Sampling Company				STANTEC	STANTEC	STANTEC		STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory				AGAT	BV	BV		BV	BV	BV	BV	BV	BV
Laboratory Work Order				21C833752	C230164	C290290		C290290	C335152	C387360	C435132	C474887	C551030
Laboratory Sample ID				3240636	ASP030	BHB175		BHB170	BQP599	CCY429	CNR325	CVZ683	DMJ305
Location Description				Tier 2	Tier 2	Tier 2		Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
Lithology				Bedrock	Bedrock	Bedrock		Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock
Sample Type	Units	2024 AEPA Tier 1	UCL			Field Duplicate	RPD (%)						
Field Parameters													
Dissolved Oxygen, Field	mg/L	n/v	n/v	7.91	2.24	-	-	5.9	6.9	3.9	7.2	3.58	2.95
Electrical Conductivity, Field	µS/cm	1,000[A]	n/v	**1,425[A]**	**1,592[A]**	-	-	**1,479[A]**	**1,409[A]**	**1,413[A]**	1.486	**1,740[A]**	**1,975[A]**
Oxidation Reduction Potential, field	mV	n/v	n/v	69	-53.6	-	-	-50.6	81.3	73.8	-29.8	-1.1	-7.2
pH, Field	S.U.	6.5-8.5[A]	n/v	7.83	7.01	-	-	7.36	7.23	7.07	7.47	7.02	7.03
Temperature, Field	deg C	n/v	n/v	5.99	12.1	-	-	5.9	10.2	6.5	6.2	7.4	9.98
Calculated Parameters													
Anion Sum	meq/L	n/v	n/v	-	16	17	nc	17	17	15	18	19	21
Cation Sum	meq/L	n/v	n/v	-	20	18	nc	18	17	21	20	21	21
Hardness (as CaCO3)	mg/L	n/v	n/v	336	380	350	0%	350	340	410	410	430	450
Ion Balance	%	n/v	n/v	106	10	2.5	nc	2.5	0.84	15	6.3	4.5	-
Ion Balance % Difference	%	n/v	n/v	-	-	-	-	-	-	-	-	-	0.43
Nitrate	mg/L	13_f[A]	n/v	<1.0	<0.044	<0.044	nc	<0.044	<0.044	<0.044	0.074	<0.044	0.28
Nitrate + Nitrite (as N)	mg/L	100[A]	n/v	<0.02	<0.010	<0.010	nc	<0.010	<0.010	<0.010	0.017	<0.010 MSE	0.064
Nitrite	mg/L	$0.197/1.97_{n4.a}$[A]	n/v	<0.05	<0.033	<0.033	nc	<0.033	<0.033	<0.033	<0.033	<0.033	<0.13
Total Dissolved Solids	mg/L	500[A]	1,400[B]	**968[A]**	**980[A]**	**1,000[A]**	0%	**1,000[A]**	**960[A]**	**990[A]**	**1,100[A]**	**1,100[A]**	**1,200[A]**
Sodium Adsorption Ratio (SAR)	none	5[A]	n/v	**6.01[A]**	-	-	-	-	-	-	-	-	-
BTEX and Petroleum Hydrocarbons													
Benzene	mg/L	0.005[A]	n/v	<0.0005	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	n/v	<0.0003	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	n/v	<0.0005	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	n/v	-	<0.00080	<0.00080	nc	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	n/v	-	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	n/v	<0.0005	<0.00089	<0.00089	nc	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	n/v	<0.1	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	n/v	<0.1	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	n/v	<0.1	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Miscellaneous Inorganics													
Dissolved Organic Carbon (DOC)	mg/L	n/v	10.9[B]	8	2.5	4.4	**55%**	2.5	3.3	2.6	2.5 PRH	2.6	2.8
Electrical Conductivity, Lab	µS/cm	1,000[A]	2,239[B]	**1,510[A]**	**1,500[A]**	**1,600[A]**	0%	**1,600[A]**	**1,500[A]**	**1,400[A]**	**1,600[A]**	**1,700[A]**	**1,900[A]**
pH, lab	S.U.	6.5-8.5[A]	9.66[B]	8.07	7.91	7.67	nc	7.68	7.54	8.25	7.96	7.75	7.93
Anions													
Alkalinity (P as CaCO3)	mg/L	n/v	n/v	<5	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	n/v	537	480	530	0%	530	540	440	530	530	530
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	n/v	669	590	640	0%	640	660	540	650	650	650
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	n/v	<5	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	n/v	<5	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	557[B]	**221[A]**	**240[A]**	**230[A]**	0%	**230[A]**	**220[A]**	**240[A]**	**270[A]**	**270[A]**	**430[A]**
Chloride	mg/L	100[A]	127[B]	44.7	48	74	0%	74	66	52	61	91	50
Fluoride	mg/L	1[A]	n/v	0.21	-	-	-	-	-	-	-	-	-
Nutrients													
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	n/v	<0.01	<0.010	<0.010	nc	<0.010	<0.010	<0.010	<0.010	<0.010	<0.040
Orthophosphate (as P)	mg/L	n/v	n/v	<0.15	<0.0030	0.0032	nc	<0.0030	<0.0030	<0.0030	0.0043	<0.0030	-
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	0.44[B]	**0.23[A]**	**0.19[A]**	**0.18[A]**	0%	**0.18[A]**	**0.16[A]**	**0.13[A]**	**0.13[A]**	**0.11[A]**	**0.30[A]**
Nitrate (as N)	mg/L	3[A]	n/v	<0.02	<0.010	<0.010	nc	<0.010	<0.010	<0.010	0.017	<0.010	0.064
Phosphorus, Dissolved	mg/L	n/v	n/v	-	-	-	-	-	-	-	-	-	<0.0030
Phosphorus, Total (Dissolved)	mg/L	n/v	n/v	-	<0.0030	0.14	15%	0.12 DB	<0.0030	<0.0030	<0.0030 PRH P2	<0.0030	-
Phosphorus, Total	mg/L	n/v	n/v	-	-	-	-	-	-	-	-	-	2.0
Total Kjeldahl Nitrogen	mg/L	n/v	1.8[B]	1.4	0.47	0.471	**38%**	0.690	0.315	0.243	0.291	0.23	0.88
Nitrogen	mg/L	n/v	n/v	-	0.47 DB	0.47	**38%**	0.69	0.31	0.24	0.31	0.23	0.95 DB
Metals - Dissolved													
Aluminum	mg/L	$0.007/0.05_{n1.e}$[A]	n/v	0.005	<0.0030	<0.0030	nc	<0.0030	0.0063	<0.0030	<0.0030	<0.0030	<0.0030
Antimony	mg/L	0.006[A]	n/v	<0.001	<0.00060	<0.00060	nc	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	0.00157[B]	0.001	0.00072	0.00079	nc	0.00083	0.00090	0.00059	0.00065	0.00050	0.0010
Barium	mg/L	2[A]	0.02[B]	***<0.05***	0.015	0.014	nc	0.014	0.013	0.016	0.014	0.018	0.015
Beryllium	mg/L	n/v	n/v	<0.0005	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron	mg/L	1[A]	0.29[B]	0.21	0.23	0.20	0%	0.20	0.21	0.23	0.21	0.23	0.25
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	n/v	**0.000077[A]**	<0.00002	0.000024	nc	<0.000020	0.000029	0.000034	<0.000020	<0.000020	<0.000020

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location				MW21-6-12									
Sample Date				22-Nov-21	5-May-22	15-Nov-22		15-Nov-22	17-May-23	26-Oct-23	16-May-24	20-Sep-24	4-Jun-25
Sample ID				MW21-6b	MW21-6b	22-11		MW21-6-12	MW21-6-12	MW21-6-12	MW21-6-12	MW21-6-12	MW21-6-12
Sampling Company				STANTEC	STANTEC	STANTEC		STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory				AGAT	BV	BV		BV	BV	BV	BV	BV	BV
Laboratory Work Order				21C833752	C230164	C290290		C290290	C335152	C387360	C435132	C474887	C551030
Laboratory Sample ID				3240636	ASP030	BHB175		BHB170	BQP599	CCY429	CNR325	CVZ683	DMJ305
Location Description				Tier 2	Tier 2	Tier 2		Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
Lithology				Bedrock	Bedrock	Bedrock		Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock
Sample Type	Units	2024 AEPA Tier 1	UCL			Field Duplicate	RPD (%)						
Calcium	mg/L	n/v	161[B]	88.7	98	91	0%	91	87	110	110	120	120
Chromium	mg/L	0.05[A]	n/v	<0.0005	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt	mg/L	n/v	0.001[B]	<0.0009	0.00058	0.00059	nc	0.00054	0.00063	0.00044	0.00030	0.00035	0.00051
Copper	mg/L	0.007[A]	n/v	0.0012	<0.0010	<0.0010	nc	0.0010	0.0017	<0.0010	<0.0010	<0.0010	<0.0010
Iron	mg/L	0.3[A]	n/v	<0.1	<0.060	<0.060	nc	<0.060	<0.060	<0.060	<0.060	<0.060	**0.37[A]**
Lead	mg/L	0.001/0.007$_{n3}$[A]	n/v	<0.0002	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Lithium	mg/L	n/v	0.07[B]	-	0.045	0.045	nc	0.048	0.050	0.056	0.051	0.044	0.056
Magnesium	mg/L	n/v	47[B]	27.7	33	29	0%	29	29	35	34	35	37
Manganese	mg/L	0.02[A]	0.26[B]	**0.149[A]**	**0.18[A]**	**0.099[A]**	0%	**0.099[A]**	**0.097[A]**	**0.084[A]**	**0.076[A]**	**0.084[A]**	**0.11[A]**
Mercury	mg/L	0.000005[A]	0.0001234[B]	***<0.0000125***	<0.0000019	<0.0000019	nc	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	0.00319[B]	0.002	0.0012	0.0011	0%	0.0011	0.0017	0.0010	0.0019	0.00087	0.0014
Nickel	mg/L	0/0.17$_{n3}$[A]	0.0075[B]	**0.005[A]**	**0.0016[A]**	**0.0022[A]**	nc	**0.0021[A]**	**0.0029[A]**	**0.0019[A]**	**0.0014[A]**	**0.0033[A]**	**0.0022[A]**
Phosphorus	mg/L	n/v	n/v	<0.08	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Potassium	mg/L	n/v	6.1[B]	4.3	5.1	4.9	4%	4.7	4.3	5.1	4.9	4.9	4.8
Selenium	mg/L	0.002[A]	n/v	<0.0005	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Silicon	mg/L	n/v	5.7[B]	-	4.5	4.0	3%	3.9	4.3	4.9	4.4	4.5	4.2
Silver	mg/L	0.00025[A]	n/v	<0.00005	<0.00010	<0.00010	nc	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium	mg/L	200[A]	339[B]	**253[A]**	**270[A]**	**260[A]**	0%	**260[A]**	**230[A]**	**280[A]**	**280[A]**	**270[A]**	**280[A]**
Strontium	mg/L	n/v	2.7[B]	-	1.8	1.6	0%	1.6	1.5	1.7	1.7	1.8	2.2
Sulfur	mg/L	n/v	214[B]	-	73	75	14%	65	75	89	89	110	150
Thallium	mg/L	n/v	n/v	<0.0001	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Tin	mg/L	n/v	n/v	-	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Titanium	mg/L	n/v	n/v	0.001	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	0.011[B]	0.004	0.0043	0.0053	0%	0.0053	0.0062	0.0064	0.0070	0.0075	0.0065
Vanadium	mg/L	n/v	n/v	-	0.0014	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	n/v	<0.005	<0.0030	0.0070	nc	0.0039	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Metals - Total													
Mercury	mg/L	0.000005[A]	0.0001234[B]	**0.000010[A]**	**0.0000122[A]**	**0.000024[A]**	nc	**0.00002[A]**	**0.0000217[A]**	<0.0000019	0.0000020	<0.0000019	**0.000162 DB[AB]**
Phosphorus	mg/L	n/v	n/v	0.50	-	-	-	-	-	-	-	-	-
Microbiological Parameters													
Escherichia coli (E.Coli)	mpn/100mL	n/v	n/v	<1	10	<1.0	nc	<1.0	<1.0	<100 Z8	<1.0	<1.0	<20 Z8
Fecal Coliforms	mpn/100mL	n/v	n/v	<1	<10	<1.0	nc	<1.0	<1.0	<1.0	<1.0	<1.0	<20 Z8
Heterotrophic Plate Count	cfu/mL	n/v	n/v	5,650	210	1,200	21%	970	130	47 SVH	-	-	-
Heterotrophic Plate Count	mpn/100mL	n/v	n/v	-	-	-	-	-	-	-	73 SVH	2,400	31,000 Z8
Total Coliforms	mpn/100mL	n/v	n/v	548	10	<1.0	nc	<1.0	<1.0	<100 Z8	<1.0	3.1	<20 Z8

See notes on the last page

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location				RMW16-5-12							
Sample Date				1-Dec-21	4-May-22	21-Nov-22	19-May-23	23-Oct-23	15-May-24	24-Sep-24	3-Jun-25
Sample ID				RMW16-5-11	RMW16-5-11	RMW16-5-12	RMW16-5-12	RMW16-5-12	RMW 16-5-12	RMW16-5-12	RMW16-5-12
Sampling Company				STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory				AGAT	BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order				21C838865	C229742	C291884	C335907	C386148	C435079	C475814	C550515
Laboratory Sample ID				3284939	ASN090	BHL366	BQT302	CCP851	CNR022	CWH293	DMG753
Location Description				Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
Lithology				Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock
Sample Type	Units	2024 AEPA Tier 1	UCL								
Field Parameters											
Dissolved Oxygen, Field	mg/L	n/v	n/v	8.3	5.12	4.4	3.8	5.1	3.5	2.68	3.87
Electrical Conductivity, Field	µS/cm	1,000[A]	n/v	776	818	769	798	858	0.732	845	770
Oxidation Reduction Potential, field	mV	n/v	n/v	-17.3	-45.2	-30.9	119.8	16.5	-7.7	75.4	48.1
pH, Field	S.U.	6.5-8.5[A]	n/v	7.73	6.96	7.28	7.45	7.16	7.74	7.43	7.35
Temperature, Field	deg C	n/v	n/v	5.1	8.9	4.8	19.5	0.9	5.8	11.8	9.45
Calculated Parameters											
Anion Sum	meq/L	n/v	n/v	-	9.2	9.0	9.6	7.1	8.1	9.3	9.2
Cation Sum	meq/L	n/v	n/v	-	9.6	8.6	19	7.8	9.5	8.9	8.2
Hardness (as CaCO3)	mg/L	n/v	n/v	329	310	280	720	230	320	290	270
Ion Balance	%	n/v	n/v	120	2.2	2.5	33	5.0	8.0	2.5	-
Ion Balance % Difference	%	n/v	n/v	-	-	-	-	-	-	-	5.4
Nitrate	mg/L	13_{l}[A]	n/v	0.8	<0.044	0.26	0.14	0.22	<0.044	0.16	0.29
Nitrate + Nitrite (as N)	mg/L	100[A]	n/v	0.18	<0.010	0.059	0.032	0.049	<0.010	0.036	0.066
Nitrite	mg/L	$0.197/1.97_{n4.a}$[A]	n/v	<0.05	<0.033	<0.033	<0.033	<0.033	<0.033	<0.033	<0.13
Total Dissolved Solids	mg/L	500[A]	817[B]	426	480	450	**660**[A]	380	440	460	450
Sodium Adsorption Ratio (SAR)	none	5[A]	n/v	1.39	-	-	-	-	-	-	-
BTEX and Petroleum Hydrocarbons											
Benzene	mg/L	0.005[A]	n/v	<0.0005	<0.00040	<0.00040	<0.00040	<0.00040	<0.00050 EC	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	n/v	<0.0003	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	n/v	<0.0005	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	n/v	-	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	n/v	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	n/v	<0.0005	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	n/v	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	n/v	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	n/v	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Miscellaneous Inorganics											
Dissolved Organic Carbon (DOC)	mg/L	n/v	5.4[B]	3	2.5	1.7	3.0	1.2	1.3	1.0	1.2
Electrical Conductivity, Lab	µS/cm	1,000[A]	n/v	729	780	770	770	670	720	780	780
pH, lab	S.U.	6.5-8.5[A]	9.9[B]	8.26	8.04	7.94	7.90	8.32	8.09	8.06	8.02
Anions											
Alkalinity (P as CaCO3)	mg/L	n/v	n/v	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	n/v	334	410	400	430	310	360	420	410
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	n/v	408	500	490	530	370	440	510	500
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	n/v	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	n/v	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	54[B]	46.1	48	43	43	43	40	41	42
Chloride	mg/L	100[A]	5[B]	3.3	2.7	1.8	<1.0	2.3	1.5	2.2	1.9
Fluoride	mg/L	1[A]	n/v	0.20	-	-	-	-	-	-	-
Nutrients											
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	n/v	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.040
Orthophosphate (as P)	mg/L	n/v	n/v	<0.15	<0.0030	0.0043	<0.0030	0.0034	0.0038	<0.0030	<0.0030
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	0.51[B]	**0.28**[A]	**0.29**[A]	**0.17**[A]	**0.31**[A]	**0.28**[A]	**0.18**[A]	**0.13**[A]	**0.22**[A]
Nitrate (as N)	mg/L	3[A]	0.23[B]	0.18	<0.010	0.059	0.032	0.049	<0.010	0.036	0.066
Phosphorus, Dissolved	mg/L	n/v	n/v	-	-	-	-	-	-	-	<0.0030
Phosphorus, Total (Dissolved)	mg/L	n/v	n/v	-	0.058	<0.0030	<0.0030	0.010	<0.0030 P2	<0.0030	-
Total Kjeldahl Nitrogen	mg/L	n/v	11.4[B]	8.00	4.7	<2.0	0.75	3.4	0.72	<0.20	<2.0
Nitrogen	mg/L	n/v	n/v	-	4.7 DB	<2.0 DB	0.78 DB	3.4 IF	0.72 DB	0.23 DB	<2.0 DB NN NNA
Metals - Dissolved											
Aluminum	mg/L	$0.007/0.05_{n1.e}$[A]	n/v	**0.061**[A]	0.0058	<0.0030	**2.8**[A]	<0.0030	<0.0030	**0.022**[A]	<0.0030
Antimony	mg/L	0.006[A]	n/v	<0.001	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	0.00238[B]	<0.001	0.00056	0.00028	0.0020	0.00043	0.00039	<0.00020	<0.00020
Barium	mg/L	2[A]	0.31[B]	0.07	0.069	0.070	**0.33**[B]	0.062	0.067	0.059	0.047
Beryllium	mg/L	n/v	n/v	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron	mg/L	1[A]	0.15[B]	0.09	0.12	0.079	0.097	<0.10	0.10	0.096	0.091
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	n/v	0.000030	<0.00002	<0.000020	**0.00075**[A]	<0.000020	<0.000020	<0.000020	<0.000020
Calcium	mg/L	n/v	253[B]	74.9	68	62	180	49	69	63	58

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location				RMW16-5-12							
Sample Date				1-Dec-21	4-May-22	21-Nov-22	19-May-23	23-Oct-23	15-May-24	24-Sep-24	3-Jun-25
Sample ID				RMW16-5-11	RMW16-5-11	RMW16-5-12	RMW16-5-12	RMW16-5-12	RMW 16-5-12	RMW16-5-12	RMW16-5-12
Sampling Company				STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory				AGAT	BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order				21C838865	C229742	C291884	C335907	C386148	C435079	C475814	C550515
Laboratory Sample ID				3284939	ASN090	BHL366	BQT302	CCP851	CNR022	CWH293	DMG753
Location Description				Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
Lithology				Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock
Sample Type	Units	2024 AEPA Tier 1	UCL								
Chromium	mg/L	0.05[A]	n/v	<0.0005	<0.0010	<0.0010	0.0047	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt	mg/L	n/v	0.004[B]	<0.0009	0.00042	0.00038	**0.0048[B]**	0.00038	0.00035	0.00031	<0.00030
Copper	mg/L	0.007[A]	n/v	<0.0008	<0.0010	<0.0010	0.0046	<0.0010	<0.0010	<0.0010	<0.0010
Iron	mg/L	0.3[A]	n/v	<0.1	<0.060	<0.060	**36[A]**	<0.30	<0.060	<0.060	0.099
Lead	mg/L	0.001/0.007$_{n3}$[A]	n/v	0.0004	<0.00020	<0.00020	**0.0070[A]**	<0.00020	<0.00020	<0.00020	<0.00020
Lithium	mg/L	n/v	n/v	-	<0.020	<0.020	0.032	<0.10	<0.020	<0.020	<0.020
Magnesium	mg/L	n/v	85[B]	34.5	34	30	64	27	35	33	31
Manganese	mg/L	0.02[A]	0.85[B]	**0.122[A]**	**0.14[A]**	**0.15[A]**	**1.2[AB]**	**0.045[A]**	**0.15[A]**	**0.14[A]**	**0.15[A]**
Mercury	mg/L	0.000005[A]	0.0004488[B]	-	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	0.00665[B]	0.006	0.0039	0.0015	0.00081	0.0018	0.0011	0.00065	0.00060
Nickel	mg/L	0/0.17$_{n3}$[A]	0.0075[B]	**0.003[A]**	**0.0015[A]**	**0.0011[A]**	**0.0081[AB]**	**0.00095[A]**	**0.00087[A]**	**0.00066[A]**	***<0.00050***
Phosphorus	mg/L	n/v	n/v	<0.08	<0.10	<0.10	1.7	<0.50	<0.10	<0.10	<0.10
Potassium	mg/L	n/v	12.7[B]	8.1	8.2	6.6	7.2	9.5	6.8	6.0	5.5
Selenium	mg/L	0.002[A]	0.003[B]	<0.0005	0.00029	0.0010	0.0016	0.0010	0.00025	0.0010	0.0011
Silicon	mg/L	n/v	17.7[B]	-	4.1	2.8	17	<2.5	3.0	2.8	2.9
Silver	mg/L	0.00025[A]	n/v	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium	mg/L	200[A]	87[B]	58.0	73	65	68	67	70	65	60
Strontium	mg/L	n/v	2[B]	-	1.2	1.3	1.5	0.95	1.4	1.3	1.2
Sulfur	mg/L	n/v	23[B]	-	18	11	13	15	14	12	13
Thallium	mg/L	n/v	n/v	<0.0001	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Tin	mg/L	n/v	n/v	-	0.0015	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Titanium	mg/L	n/v	n/v	0.002	0.0016	<0.0010	0.0073	<0.0010	<0.0010	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	0.003[B]	0.002	0.0022	0.0014	0.0021	0.0016	0.0014	0.0013	0.0011
Vanadium	mg/L	n/v	n/v	-	0.0011	<0.0010	0.0083	<0.0010	<0.0010	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	n/v	<0.005	<0.0030	<0.0030	0.029	<0.0030	<0.0030	<0.0030	<0.0030
Metals - Total											
Mercury	mg/L	0.000005[A]	0.0004488[B]	**0.000055[A]**	**0.000096[A]**	**0.000477[AB]**	**0.000091[A]**	**0.000037[A]**	**0.000122 DB[A]**	**0.0000167[A]**	**0.000210 DB[A]**
Phosphorus	mg/L	n/v	n/v	11.6	-	-	-	-	-	-	-
Microbiological Parameters											
Escherichia coli (E.Coli)	mpn/100mL	n/v	n/v	411	10 AT	<1.0	<10 Z8	<100 Z8	<100 MI	<2.0 MI	<10 Z8
Fecal Coliforms	mpn/100mL	n/v	n/v	579	10 AT	<1.0	<10 Z8	<100 Z8	<100 MI	<2.0 MI	<10 Z8
Heterotrophic Plate Count	cfu/mL	n/v	n/v	4,600	>6000 DVM	480	33,000 Z8	4,700 Z8	-	-	-
Heterotrophic Plate Count	mpn/100mL	n/v	n/v	-	-	-	-	-	4,800 SVH	>2400	>24000 MI
Total Coliforms	mpn/100mL	n/v	n/v	2,424	10 AT	<1.0	<10 Z8	<100 Z8	<100 MI	2.0 MI	<10 Z8

See notes on the last page

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location				RMW16-13-37									
Sample Date				24-Nov-21	9-May-22	18-Nov-22	16-May-23	24-Oct-23	24-Oct-23		13-May-24	20-Sep-24	5-Jun-25
Sample ID				MW16-13-37	RMW16-13-37	RMW16-13-37	RMW16-13-37	RMW16-13-37	23-10		RRMW16-13-37	RMW16-13-37	RMW16-13-37
Sampling Company				STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC		STANTEC	STANTEC	STANTEC
Laboratory				AGAT	BV	BV	BV	BV	BV		BV	BV	BV
Laboratory Work Order				21C834850	C230795	C291479	C334712	C386477	C386477		C433947	C474887	C551520
Laboratory Sample ID				3249834	ASS484	BHH857	BQN668	CCT431	CCT433		CNL872	CVZ684	DML530
Location Description				Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2		Tier 2	Tier 2	Tier 2
Lithology				Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock		Bedrock	Bedrock	Bedrock
Sample Type	Units	2024 AEPA Tier 1	UCL						Field Duplicate	RPD (%)			
Field Parameters													
Dissolved Oxygen, Field	mg/L	n/v	n/v	6.07	5.11	5.0	2.0	3.8	-	-	3.0	2.5	4.02
Electrical Conductivity, Field	µS/cm	1,000[A]	n/v	**3,344[A]**	**3,027[A]**	**1,772[A]**	**1,214[A]**	366	-	-	1.519	**1,146[A]**	**1,146[A]**
Oxidation Reduction Potential, field	mV	n/v	n/v	-44.4	-101.7	-21.4	-100.9	-151.4	-	-	-101.2	-108.2	-42.3
pH, Field	S.U.	6.5-8.5[A]	n/v	8.01	7.67	**8.53[A]**	8.08	7.25	-	-	8.16	8.15	8.11
Temperature, Field	deg C	n/v	n/v	3.96	6.2	3.8	9.6	3.4	-	-	7.6	6.6	10.18
Calculated Parameters													
Anion Sum	meq/L	n/v	n/v	-	35	21	33	4.6	4.5	nc	17	13	17
Cation Sum	meq/L	n/v	n/v	-	34	21	15	4.6	4.1	nc	18	14	17
Hardness (as CaCO3)	mg/L	n/v	n/v	155	110	42	20	69	64	8%	98	33	29
Ion Balance	%	n/v	n/v	110	0.63	0.83	37	0.053	4.2	nc	2.0	3.1	-
Ion Balance % Difference	%	n/v	n/v	-	-	-	-	-	-	-	-	-	1.1
Nitrate	mg/L	13_f[A]	n/v	0.7	<0.044	0.17	<0.044	1.4	1.4	0%	0.11	0.084	0.57
Nitrate + Nitrite (as N)	mg/L	100[A]	n/v	0.16	<0.010	0.038	<0.010	0.32	0.32	0%	0.044	0.033	0.19
Nitrite	mg/L	$0.197/1.97_{n4,g}$[A]	n/v	<0.10	<0.033	<0.033	<0.033	<0.033	<0.033	nc	0.061	0.046	**0.21[A]**
Total Dissolved Solids	mg/L	500[A]	4,132[B]	**2,470[A]**	**2,200[A]**	**1,200[A]**	**1,400[A]**	250	240	4%	**990[A]**	**710[A]**	**950[A]**
Sodium Adsorption Ratio (SAR)	none	5[A]	n/v	**30.0[A]**	-	-	-	-	-	-	-	-	-
BTEX and Petroleum Hydrocarbons													
Benzene	mg/L	0.005[A]	n/v	<0.0005	0.00051	<0.00040	<0.00060 EC	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00050 EC
Toluene	mg/L	0.024[A]	n/v	<0.0003	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	n/v	<0.0005	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	n/v	-	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	nc	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	n/v	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	n/v	<0.0005	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	nc	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	n/v	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	n/v	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	n/v	<0.1	<0.10	<0.10	<0.37	<0.10	<0.10	nc	<0.10	<0.10	<0.10
Miscellaneous Inorganics													
Dissolved Organic Carbon (DOC)	mg/L	n/v	56.9[B]	**58.28[B]**	41	16	10	3.9	3.8	3%	3.4	3.9	3.5
Electrical Conductivity, Lab	µS/cm	1,000[A]	5,848[B]	**3,650[A]**	**3,100[A]**	**1,800[A]**	**1,800[A]**	420	410	2%	**1,700[A]**	**1,200[A]**	**1,600[A]**
Sediment	none	n/v	n/v	Sediment	-	-	-	-	-	-	-	-	-
pH, lab	S.U.	6.5-8.5[A]	9.99[B]	8.33	8.02	7.96	8.41	7.75	7.71	nc	8.18	8.25	8.37
Anions													
Alkalinity (P as CaCO3)	mg/L	n/v	n/v	<5	<1.0	<1.0	<100	<1.0	<1.0	nc	<1.0	<1.0	5.3
Alkalinity, Total (as CaCO3)	mg/L	n/v	n/v	450	640	740	1,600	180	170	6%	510	530	620
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	n/v	540	780	900	1,900	220	210	5%	620	650	740
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	n/v	<5	<1.0	<1.0	<100	<1.0	<1.0	nc	<1.0	<1.0	6.4
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	n/v	<5	<1.0	<1.0	<100	<1.0	<1.0	nc	<1.0	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	1,047[B]	**1,130[AB]**	**950[A]**	**260[A]**	90	14	13	7%	49	32	51
Chloride	mg/L	100[A]	287[B]	**156[A]**	84	30	9.0	26	27	4%	**220[A]**	51	**130[A]**
Fluoride	mg/L	1[A]	n/v	**1.15[A]**	-	-	-	-	-	-	-	-	-
Nutrients													
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	n/v	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	nc	0.019	0.014	**0.063[A]**
Orthophosphate (as P)	mg/L	n/v	n/v	<0.15	0.0078	0.0047	0.013	0.0087	0.0094	nc	0.0077	0.024	-
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	3.54[B]	**1.77[A]**	**1.5[A]**	**1.0[A]**	**2.0[A]**	**0.038[A]**	**0.038[A]**	nc	**0.88[A]**	**0.54[A]**	**0.98[A]**
Nitrate (as N)	mg/L	3[A]	0.38[B]	0.16	<0.010	0.038	<0.010	0.32	0.32	0%	0.026	0.019	0.13
Phosphorus, Dissolved	mg/L	n/v	n/v	-	-	-	-	-	-	-	-	-	0.030
Phosphorus, Total (Dissolved)	mg/L	n/v	0.05[B]	-	0.0048	0.0070	<0.030 DB P2	0.0085 P2	0.012	nc	0.013	0.028	-
Phosphorus, Total	mg/L	n/v	n/v	-	-	-	-	-	-	-	-	-	2.4
Total Kjeldahl Nitrogen	mg/L	n/v	24.7[B]	17.0	3.2	<2.0	22.0	0.801	0.805	0%	1.28	1.4	<2.0
Nitrogen	mg/L	n/v	n/v	-	3.2 DB	<2.0 DB	22	1.12	1.13	1%	1.3	1.5 DB	<2.0 DB NN NNA
Metals - Dissolved													
Aluminum	mg/L	$0.007/0.05_{n1,e}$[A]	0.32[B]	**0.279[A]**	**0.013[A]**	**0.012[A]**	**0.064[A]**	0.0059	**0.028[A]**	nc	<0.0030	**0.31[A]**	**0.0099[A]**
Antimony	mg/L	0.006[A]	0.01[B]	<0.001	0.00075	0.0043	0.0059	0.0017	0.0017	nc	0.0012	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	0.00636[B]	0.003	0.0049	0.0013	0.0024	0.00028	0.00030	nc	0.00077	0.0017	0.0013
Barium	mg/L	2[A]	0.44[B]	0.09	0.049	0.30	0.16	0.054	0.055	2%	0.21	0.081	0.15

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location				RMW16-13-37									
Sample Date				24-Nov-21	9-May-22	18-Nov-22	16-May-23	24-Oct-23	24-Oct-23		13-May-24	20-Sep-24	5-Jun-25
Sample ID				MW16-13-37	RMW16-13-37	RMW16-13-37	RMW16-13-37	RMW16-13-37	23-10		RRMW16-13-37	RMW16-13-37	RMW16-13-37
Sampling Company				STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC		STANTEC	STANTEC	STANTEC
Laboratory				AGAT	BV	BV	BV	BV	BV		BV	BV	BV
Laboratory Work Order				21C834850	C230795	C291479	C334712	C386477	C386477		C433947	C474887	C551520
Laboratory Sample ID				3249834	ASS484	BHH857	BQN668	CCT431	CCT433		CNL872	CVZ684	DML530
Location Description				Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2		Tier 2	Tier 2	Tier 2
Lithology				Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock		Bedrock	Bedrock	Bedrock
Sample Type	Units	2024 AEPA Tier 1	UCL						Field Duplicate	RPD (%)			
Beryllium	mg/L	n/v	n/v	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010
Boron	mg/L	1[A]	0.33[B]	0.16	0.18	0.14	0.15	0.023	<0.020	nc	0.092	0.12	0.12
Cadmium	mg/L	0.00004/0.00037$_{n3}$[A]	n/v	**0.000098[A]**	<0.00002	**0.000061[A]**	0.000025	<0.000020	<0.000020	nc	<0.000020	0.000030	<0.000020
Calcium	mg/L	n/v	69[B]	47.6	32	12	6.1	23	21	9%	29	11	8.5
Chromium	mg/L	0.05[A]	n/v	0.0006	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010
Cobalt	mg/L	n/v	n/v	<0.0009	0.00031	0.00045	<0.00030	<0.00030	<0.00030	nc	<0.00030	<0.00030	<0.00030
Copper	mg/L	0.007[A]	0.0289[B]	**0.0233[A]**	<0.0010	0.0021	**0.013[A]**	0.0050	0.0019	nc	<0.0010	0.0011	<0.0010
Iron	mg/L	0.3[A]	n/v	0.1	0.22	<0.060	0.29	<0.060	<0.060	nc	<0.060	<0.060	<0.060
Lead	mg/L	0.001/0.007$_{n3}$[A]	n/v	0.0006	<0.00020	0.00026	<0.00020	<0.00020	<0.00020	nc	<0.00020	0.00046	<0.00020
Lithium	mg/L	n/v	0.22[B]	-	0.085	0.050	0.044	<0.020	0.020	nc	0.052	0.036	0.14
Magnesium	mg/L	n/v	13[B]	8.8	6.7	2.8	1.2	2.9	3.0	3%	5.9	1.6	1.8
Manganese	mg/L	0.02[A]	0.19[B]	**0.187[A]**	**0.16[A]**	0.016	0.015	0.019	<0.0040	nc	**0.021[A]**	0.011	**0.040[A]**
Mercury	mg/L	0.000005[A]	0.0020772[B]	<0.0000025	<0.0000019	<0.0000019	**0.00046[A]**	<0.0000019	0.0000023	nc	<0.0000019	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	0.17[B]	0.046	0.064	0.089	0.12	0.0071	0.0053	29%	0.027	0.042	0.022
Nickel	mg/L	0/0.17$_{n3}$[A]	0.0084[B]	**0.003[A]**	**0.0022[A]**	**0.0088[AB]**	**0.0015[A]**	**0.0011[A]**	**0.00096[A]**	nc	**0.00077[A]**	**0.00082[A]**	***<0.00050***
Phosphorus	mg/L	n/v	n/v	0.08	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10
Potassium	mg/L	n/v	8.9[B]	5.6	5.1	3.6	3.9	2.4	2.1	13%	3.5	2.3	2.4
Selenium	mg/L	0.002[A]	0.004[B]	**0.0042[AB]**	0.00096	0.0010	0.00058	0.00048	0.00023	nc	0.00042	<0.00020	<0.00020
Silicon	mg/L	n/v	7.6[B]	-	5.0	3.0	3.8	1.6	1.7	nc	2.6	2.5	2.8
Silver	mg/L	0.00025[A]	n/v	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	nc	<0.00010	<0.00010	<0.00010
Sodium	mg/L	200[A]	1,428[B]	**860[A]**	**740[A]**	**450[A]**	**340[A]**	74	65	13%	**370[A]**	**290[A]**	**390[A]**
Strontium	mg/L	n/v	0.9[B]	-	0.59	0.28	0.12	0.16	0.16	0%	0.44	0.20	0.17
Sulfur	mg/L	n/v	218[B]	-	**320[B]**	68	31	4.6	4.2	9%	14	11	20
Thallium	mg/L	n/v	n/v	<0.0001	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020
Tin	mg/L	n/v	0.0167[B]	-	<0.0010	0.0080	0.0023	0.010	0.0097	3%	0.0046	0.0030	0.0029
Titanium	mg/L	n/v	0.016[B]	0.007	0.0019	0.0013	0.0015	<0.0010	0.0016	nc	<0.0010	0.013	<0.0010
Uranium	mg/L	0.01[A]	0.047[B]	**0.029[A]**	**0.030[A]**	**0.022[A]**	**0.018[A]**	0.0014	0.0011	24%	0.0047	0.0066	0.0035
Vanadium	mg/L	n/v	0.01[B]	-	0.0011	0.0030	0.0075	<0.0010	<0.0010	nc	0.0023	0.0022	<0.0010
Zinc	mg/L	0.03[A]	n/v	0.018	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	nc	<0.0030	<0.0030	<0.0030
Metals - Total													
Mercury	mg/L	0.000005[A]	0.0020772[B]	***<0.0000125***	**0.000522[A]**	**0.000233[A]**	**0.00322[AB]**	**0.0000150[A]**	**0.0000174[A]**	15%	**0.000232 DB[A]**	**0.000028 DB[A]**	**0.000224 DB[A]**
Phosphorus	mg/L	n/v	n/v	8.47	-	-	-	-	-	-	-	-	-
Microbiological Parameters													
Escherichia coli (E.Coli)	mpn/100mL	n/v	n/v	3	<10 AT	<100 MI	<20 Z8	1.0	5.0 Z8	nc	<50 MI	10 MI	<20 Z8
Fecal Coliforms	mpn/100mL	n/v	n/v	5	10 AT	<100 MI	63 Z8	31	37 Z8	18%	<50 MI	58 MI	<20 Z8
Heterotrophic Plate Count	cfu/mL	n/v	n/v	111,000	150,000 AT	1,000	26,000 Z8	>6000	>6000	nc	-	-	-
Heterotrophic Plate Count	mpn/100mL	n/v	n/v	-	-	-	-	-	-	-	>120000 MI	>2400	>48000 MI
Total Coliforms	mpn/100mL	n/v	n/v	178	85 AT	310 MI	80 Z8	>2400	>12000 Z8	nc	6,200 MI	>4800 MI	330 Z8

See notes on the last page

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			RMW16-15-39			
Sample Date			24-Oct-23	13-May-24	24-Sep-24	4-Jun-25
Sample ID			RMW16-15-39	RRMW16-15-39	RMW16-15-39	RMW16-15-39
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			BV	BV	BV	BV
Laboratory Work Order			C386477	C433947	C475814	C551030
Laboratory Sample ID			CCT432	CNL871	CWH296	DMJ306
Location Description			Tier 2	Tier 2	Tier 2	Tier 2
Sample Type	Units	2024 AEPA Tier 1	Bedrock	Bedrock	Bedrock	Bedrock
Field Parameters						
Dissolved Oxygen, Field	mg/L	n/v	1.5	4.6	2.4	5.32
Electrical Conductivity, Field	µS/cm	1,000[A]	918	0.908	918	849
Oxidation Reduction Potential, field	mV	n/v	-209.8	-133.3	104.4	55.9
pH, Field	S.U.	6.5-8.5[A]	**8.63[A]**	**8.89[A]**	**8.91[A]**	8.41
Temperature, Field	deg C	n/v	2.1	8.6	9.4	12.2
Calculated Parameters						
Anion Sum	meq/L	n/v	11	11	11	9.8
Cation Sum	meq/L	n/v	12	11	9.8	8.7
Hardness (as CaCO3)	mg/L	n/v	30	28	25	15
Ion Balance	%	n/v	2.5	1.4	4.5	-
Ion Balance % Difference	%	n/v	-	-	-	5.9
Nitrate	mg/L	13_{f}[A]	0.052	0.096	0.11	<0.18
Nitrate + Nitrite (as N)	mg/L	100[A]	0.012	0.022	0.078	<0.040
Nitrite	mg/L	$0.197/1.97_{n4.o}$[A]	<0.033	<0.033	0.18	<0.13
Total Dissolved Solids	mg/L	500[A]	**660[A]**	**650[A]**	**570[A]**	**510[A]**
BTEX and Petroleum Hydrocarbons						
Benzene	mg/L	0.005[A]	<0.00040	<0.00040	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	<0.00040	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	<0.00040	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	<0.00080	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	<0.00040	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	<0.00089	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10	<0.10	<0.10	<0.10
Miscellaneous Inorganics						
Dissolved Organic Carbon (DOC)	mg/L	n/v	7.3	7.1	3.4	1.4
Electrical Conductivity, Lab	µS/cm	1,000[A]	**1,100[A]**	1,000	930	840
pH, lab	S.U.	6.5-8.5[A]	8.47	**8.61[A]**	8.44	**8.56[A]**
Anions						
Alkalinity (P as CaCO3)	mg/L	n/v	7.9	9.5	7.8	8.5
Alkalinity, Total (as CaCO3)	mg/L	n/v	350 NF	400	450	440
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	410	470	530	510
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	9.5	11	9.4	10
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	**140[A]**	**130[A]**	78	51
Chloride	mg/L	100[A]	42	22	4.5	<1.0
Nutrients						
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	<0.010	<0.010	0.054	<0.040
Orthophosphate (as P)	mg/L	n/v	<0.0030	0.017	0.017	-
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	**0.58[A]**	**1.3[A]**	**0.62[A]**	**0.69[A]**
Nitrate (as N)	mg/L	3[A]	0.012	0.022	0.024	<0.040
Phosphorus, Dissolved	mg/L	n/v	-	-	-	0.038
Phosphorus, Total (Dissolved)	mg/L	n/v	<0.0030	0.015 P2	0.026	-
Phosphorus, Total	mg/L	n/v	-	-	-	1.3
Total Kjeldahl Nitrogen	mg/L	n/v	0.941	3.2	1.2	0.90
Nitrogen	mg/L	n/v	0.953	3.3	1.2 DB	0.90 DB
Metals - Dissolved						
Aluminum	mg/L	$0.007/0.05_{n1.e}$[A]	**0.077[A]**	**0.45[A]**	**0.36[A]**	**0.12[A]**
Antimony	mg/L	0.006[A]	0.0041	0.0017	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	0.00075	0.0015	0.0013	0.00040
Barium	mg/L	2[A]	0.021	0.035	0.033	0.028
Beryllium	mg/L	n/v	<0.0010	<0.0010	<0.0010	<0.0010
Boron	mg/L	1[A]	0.071	0.053	0.049	0.050
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	<0.000020	<0.000020	<0.000020	<0.000020
Calcium	mg/L	n/v	7.5	6.9	6.6	4.2
Chromium	mg/L	0.05[A]	<0.0010	<0.0010	<0.0010	<0.0010

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			RMW16-15-39			
Sample Date			24-Oct-23	13-May-24	24-Sep-24	4-Jun-25
Sample ID			RMW16-15-39	RRMW16-15-39	RMW16-15-39	RMW16-15-39
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			BV	BV	BV	BV
Laboratory Work Order			C386477	C433947	C475814	C551030
Laboratory Sample ID			CCT432	CNL871	CWH296	DMJ306
Location Description			Tier 2	Tier 2	Tier 2	Tier 2
Sample Type	Units	2024 AEPA Tier 1	Bedrock	Bedrock	Bedrock	Bedrock
Cobalt	mg/L	n/v	<0.00030	<0.00030	<0.00030	<0.00030
Copper	mg/L	0.007[A]	0.0064	<0.0010	0.0018	<0.0010
Iron	mg/L	0.3[A]	<0.060	0.26	0.083	0.13
Lead	mg/L	0.001/0.007$_{n3}$[A]	<0.00020	<0.00020	0.00035	<0.00020
Lithium	mg/L	n/v	0.047	0.044	0.037	0.041
Magnesium	mg/L	n/v	2.7	2.6	2.0	1.0
Manganese	mg/L	0.02[A]	**0.022[A]**	0.0071	0.015	0.019
Mercury	mg/L	0.000005[A]	<0.0000019	<0.0000019	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	0.032	0.026	0.018	0.0076
Nickel	mg/L	0/0.17$_{n3}$[A]	**0.00095[A]**	**0.00056[A]**	**0.0012[A]**	***<0.00050***
Phosphorus	mg/L	n/v	<0.10	<0.10	<0.10	<0.10
Potassium	mg/L	n/v	6.3	4.3	2.6	1.4
Selenium	mg/L	0.002[A]	**0.0033[A]**	0.0012	0.00043	<0.00020
Silicon	mg/L	n/v	2.5	4.2	3.5	3.3
Silver	mg/L	0.00025[A]	<0.00010	<0.00010	<0.00010	<0.00010
Sodium	mg/L	200[A]	**250[A]**	**240[A]**	**210[A]**	190
Strontium	mg/L	n/v	0.11	0.11	0.10	0.072
Sulfur	mg/L	n/v	47	37	25	17
Thallium	mg/L	n/v	<0.00020	<0.00020	<0.00020	<0.00020
Tin	mg/L	n/v	<0.0010	<0.0010	<0.0010	<0.0010
Titanium	mg/L	n/v	<0.0010	0.0084	0.0066	0.0024
Uranium	mg/L	0.01[A]	0.00098	0.0020	0.0016	0.00026
Vanadium	mg/L	n/v	0.0030	0.0075	0.0029	<0.0010
Zinc	mg/L	0.03[A]	<0.0030	<0.0030	<0.0030	<0.0030
Metals - Total						
Mercury	mg/L	0.000005[A]	**0.000052[A]**	**0.00056 DB[A]**	**0.000058 DB[A]**	**0.0000568 DB[A]**
Microbiological Parameters						
Escherichia coli (E.Coli)	mpn/100mL	n/v	<10 Z8	<100 MI	<100 MI	<20 Z8
Fecal Coliforms	mpn/100mL	n/v	<10 Z8	<100 MI	<100 MI	<20 Z8
Heterotrophic Plate Count	cfu/mL	n/v	>6000	-	-	-
Heterotrophic Plate Count	mpn/100mL	n/v	-	>240000 MI	>2400	>48000 Z8
Total Coliforms	mpn/100mL	n/v	52 Z8	<100 MI	<100 MI	<20 Z8

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location				RMW16-16-17									
Sample Date				2-Dec-21	5-May-22	18-Nov-22	16-May-23	23-Oct-23	13-May-24	19-Sep-24	4-Jun-25	4-Jun-25	
Sample ID				RMW16-16-17	RMW16-16-17	RMW16-16-17	RMW16-16-17	RRMW16-16-17	RRMW16-16-17	RMW16-16-17	RMW16-16-17	SR25-02	
Sampling Company				STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	
Laboratory				AGAT	BV	BV	BV	BV	BV	BV	BV	BV	
Laboratory Work Order				21C839274	C230164	C291479	C334712	C386148	C433947	C474428	C551030	C551030	
Laboratory Sample ID				3287968	ASP026	BHH855	BQN670	CCP847	CNL870	CVW763	DMJ304	DMJ309	
Location Description				Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	
Lithology				Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	
Sample Type	Units	2024 AEPA Tier 1	UCL									Field Duplicate	RPD (%)
Field Parameters													
Dissolved Oxygen, Field	mg/L	n/v	n/v	6.62	3.98	13.4	5.1	2.7	2.7	1.02	2.72	-	-
Electrical Conductivity, Field	µS/cm	1,000[A]	n/v	**5,160[A]**	**5,086[A]**	**2,651[A]**	**4,612[A]**	**5,246[A]**	5.246	**5,238[A]**	**5,133[A]**	-	-
Oxidation Reduction Potential, field	mV	n/v	n/v	5	-23.4	-16.8	21.2	-114.2	-114.2	-56.9	7.7	-	-
pH, Field	S.U.	6.5-8.5[A]	n/v	7.13	6.9	7.32	7.27	7.01	7.01	6.93	6.83	-	-
Temperature, Field	deg C	n/v	n/v	4.07	7.5	2.2	12.3	3.0	3.0	13.4	13.61	-	-
Calculated Parameters													
Anion Sum	meq/L	n/v	n/v	-	59	67	66	63	77	65	67	63	nc
Cation Sum	meq/L	n/v	n/v	-	66	66	67	70	66	66	63	63	nc
Hardness (as CaCO3)	mg/L	n/v	n/v	1,520	1,400	1,300	1,300	1,400	1,300	1,400	1,300	1,300	0%
Ion Balance	%	n/v	n/v	109	5.6	0.78	0.85	5.8	7.8	1.2	-	-	-
Ion Balance % Difference	%	n/v	n/v	-	-	-	-	-	-	-	3.2	0.054	nc
Nitrate	mg/L	13_f[A]	n/v	<0.5	<0.22	<0.22	<0.22	<0.044	<0.22	<0.044	<0.18	<0.18	nc
Nitrate + Nitrite (as N)	mg/L	100[A]	n/v	<0.02	<0.050 AT	<0.050 MI	<0.050 Z8	<0.010	<0.050 MI	<0.010	<0.040	<0.040	nc
Nitrite	mg/L	$0.197/1.97_{n4.o}$[A]	n/v	<0.10	<0.033	<0.033	<0.033	<0.033	<0.033	<0.033	<0.13	<0.13	nc
Total Dissolved Solids	mg/L	500[A]	5,377[B]	**4,460[A]**	**3,900[A]**	**4,300[A]**	**4,200[A]**	**4,200[A]**	**4,800[A]**	**4,200[A]**	**4,200[A]**	**4,100[A]**	2%
Sodium Adsorption Ratio (SAR)	none	5[A]	n/v	**10.9[A]**	-	-	-	-	-	-	-	-	-
BTEX and Petroleum Hydrocarbons													
Benzene	mg/L	0.005[A]	n/v	<0.0005	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc
Toluene	mg/L	0.024[A]	n/v	<0.0003	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc
Ethylbenzene	mg/L	0.0016[A]	n/v	<0.0005	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc
Xylene, m & p-	mg/L	n/v	n/v	-	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	nc
Xylene, o-	mg/L	n/v	n/v	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc
Xylenes, Total	mg/L	0.02[A]	n/v	<0.0005	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	nc
PHC F1 (C6-C10 range)	mg/L	n/v	n/v	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	n/v	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	n/v	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc
Miscellaneous Inorganics													
Dissolved Organic Carbon (DOC)	mg/L	n/v	8.1[B]	4	2.6	3.2	5.5	1.9	2.6	2.2 PRH	2.1	2.2	nc
Electrical Conductivity, Lab	µS/cm	1,000[A]	6,326[B]	**5,510[A]**	**5,200[A]**	**5,100[A]**	**5,000[A]**	**4,900[A]**	**5,300[A]**	**5,200[A]**	**5,100[A]**	**5,100[A]**	0%
pH, lab	S.U.	6.5-8.5[A]	9.75[B]	8.14	7.89	7.61	7.90	8.09	7.94	8.17	7.94	8.00	nc
Anions													
Alkalinity (P as CaCO3)	mg/L	n/v	n/v	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	nc
Alkalinity, Total (as CaCO3)	mg/L	n/v	n/v	683	640	730	740	680	720	720	770	720	7%
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	n/v	833	780	890	900	830	880	880	940	880	7%
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	n/v	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	nc
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	n/v	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	nc
Sulfate	mg/L	$128/429_{n3}$[A]	3,490[B]	**2,560[A]**	**2,200[A]**	**2,500[A]**	**2,400[A]**	**2,300[A]**	**3,000[A]**	**2,400[A]**	**2,500[A]**	**2,300[A]**	8%
Chloride	mg/L	100[A]	7[B]	4.1	5.3	5.2	5.2	5.5	5.1	4.9	4.6	4.5	nc
Fluoride	mg/L	1[A]	n/v	0.07	-	-	-	-	-	-	-	-	-
Nutrients													
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	n/v	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.040	<0.040	nc
Orthophosphate (as P)	mg/L	n/v	n/v	<0.15	0.0037	0.0039	<0.0030	<0.0030	<0.0030	<0.0030	-	-	-
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	2.18[B]	**1.91[A]**	**1.7[A]**	**1.6[A]**	**1.7[A]**	**1.5[A]**	**1.6[A]**	**1.7[A]**	**1.7[A]**	**1.7[A]**	0%
Nitrate (as N)	mg/L	3[A]	n/v	<0.02	<0.050	<0.050	<0.050	<0.010	<0.050	<0.010	<0.040	<0.040	nc
Phosphorus, Dissolved	mg/L	n/v	n/v	-	-	-	-	-	-	-	<0.0030	<0.0030	nc
Phosphorus, Total (Dissolved)	mg/L	n/v	n/v	-	<0.0030	0.0032	0.13	<0.0030	<0.0030	<0.0030 PRH	-	-	-
Phosphorus, Total	mg/L	n/v	n/v	-	-	-	-	-	-	-	0.0082	0.011	nc
Total Kjeldahl Nitrogen	mg/L	n/v	14.9[B]	**19.06[B]**	4.8	2.09	2.71	1.83	2.11	2.1	1.9	2.1	10%
Nitrogen	mg/L	n/v	n/v	-	4.8 DB	2.1 DB	2.7	1.83	2.1	2.1 DB	1.9	2.1	10%
Metals - Dissolved													
Aluminum	mg/L	$0.007/0.05_{n1,e}$[A]	n/v	0.005	<0.0030	**0.015[A]**	0.0055	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	nc
Antimony	mg/L	0.006[A]	n/v	0.002	0.00096	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	nc
Arsenic	mg/L	0.005[A]	0.01731[B]	**0.014[A]**	**0.012[A]**	0.0048	0.0030	0.0048	0.0022	0.00051	0.0013	0.0014	7%
Barium	mg/L	2[A]	n/v	<0.05	0.012	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	nc
Beryllium	mg/L	n/v	n/v	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc
Boron	mg/L	1[A]	0.27[B]	0.23	0.22	0.19	0.22	0.23	0.22	0.21	0.21	0.21	0%

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location				RMW16-16-17									
Sample Date				2-Dec-21	5-May-22	18-Nov-22	16-May-23	23-Oct-23	13-May-24	19-Sep-24	4-Jun-25	4-Jun-25	
Sample ID				RMW16-16-17	RMW16-16-17	RMW16-16-17	RMW16-16-17	RRMW16-16-17	RRMW16-16-17	RMW16-16-17	RMW16-16-17	SR25-02	
Sampling Company				STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	
Laboratory				AGAT	BV	BV	BV	BV	BV	BV	BV	BV	
Laboratory Work Order				21C839274	C230164	C291479	C334712	C386148	C433947	C474428	C551030	C551030	
Laboratory Sample ID				3287968	ASP026	BHH855	BQN670	CCP847	CNL870	CVW763	DMJ304	DMJ309	
Location Description				Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	
Lithology				Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	
Sample Type	Units	2024 AEPA Tier 1	UCL									Field Duplicate	RPD (%)
Cadmium	mg/L	0.00004/0.00037$_{n3}$[A]	n/v	**0.000064**[A]	**0.000087**[A]	0.00004	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	nc
Calcium	mg/L	n/v	393[B]	346	300	280	280	310	280	290	280	280	0%
Chromium	mg/L	0.05[A]	n/v	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc
Cobalt	mg/L	n/v	0.011[B]	0.0096	0.0054	0.0034	0.0017	0.0021	0.0019	0.0016	0.0017	0.0016	6%
Copper	mg/L	0.007[A]	n/v	<0.0008	<0.0010	<0.0010	0.0043	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc
Iron	mg/L	0.3[A]	n/v	<0.1	<0.060	<0.060	**5.6**[A]	<0.060	<0.060	<0.060	**2.4**[A]	**2.4**[A]	0%
Lead	mg/L	0.001/0.007$_{n3}$[A]	n/v	<0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	nc
Lithium	mg/L	n/v	0.31[B]	-	0.24	0.22	0.25	0.26	0.26	0.24	0.23	0.23	0%
Magnesium	mg/L	n/v	185[B]	159	150	140	150	160	150	150	150	150	0%
Manganese	mg/L	0.02[A]	1.34[B]	**0.902**[A]	**0.69**[A]	**0.41**[A]	**0.56**[A]	**0.61**[A]	**0.40**[A]	**0.34**[A]	**0.40**[A]	**0.40**[A]	0%
Mercury	mg/L	0.000005[A]	n/v	-	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	nc
Molybdenum	mg/L	n/v	0.01564[B]	**0.025**[B]	0.0085	0.0015	0.00087	0.0013	0.00062	0.00039	0.00033	0.00029	nc
Nickel	mg/L	0/0.17$_{n3}$[A]	0.0512[B]	**0.060**[AB]	**0.029**[A]	**0.014**[A]	**0.0048**[A]	**0.0095**[A]	**0.0049**[A]	**0.0017**[A]	**0.0021**[A]	**0.0019**[A]	nc
Phosphorus	mg/L	n/v	n/v	<0.08	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	nc
Potassium	mg/L	n/v	19.4[B]	14.0	12	8.3	9.6	9.4	7.9	7.7	7.3	7.3	0%
Selenium	mg/L	0.002[A]	n/v	<0.0005	0.0011	0.00048	0.00099	<0.00020	<0.00080 MI	<0.00020	<0.00020	<0.00020	nc
Silicon	mg/L	n/v	20.7[B]	-	5.0	4.2	16	5.0	4.6	4.7	5.0	4.9	2%
Silver	mg/L	0.00025[A]	n/v	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	nc
Sodium	mg/L	200[A]	1,114[B]	**972**[A]	**880**[A]	**930**[A]	**910**[A]	**950**[A]	**900**[A]	**890**[A]	**840**[A]	**850**[A]	1%
Strontium	mg/L	n/v	9.4[B]	-	7.0	7.2	7.2	7.7	7.2	8.4	7.3	7.2	1%
Sulfur	mg/L	n/v	998[B]	-	830	770	750	870	780	830	850	860	1%
Thallium	mg/L	n/v	n/v	0.0001	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	nc
Tin	mg/L	n/v	n/v	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc
Titanium	mg/L	n/v	n/v	0.002	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc
Uranium	mg/L	0.01[A]	0.003[B]	**0.005**[B]	0.0014	0.00036	0.00031	0.00049	0.00030	0.00030	0.00024	0.00031	nc
Vanadium	mg/L	n/v	n/v	-	0.0010	<0.0010	0.0020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc
Zinc	mg/L	0.03[A]	n/v	<0.005	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	0.011	<0.0030	<0.0030	nc
Metals - Total													
Mercury	mg/L	0.000005[A]	n/v	**0.000035**[A]	**0.000491**[A]	**0.000234**[A]	**0.000232**[A]	***<0.000019***	***<0.00019 DB***	<0.0000019	<0.0000019	<0.0000019	nc
Phosphorus	mg/L	n/v	n/v	10.4	-	-	-	-	-	-	-	-	-
Microbiological Parameters													
Escherichia coli (E.Coli)	mpn/100mL	n/v	n/v	1	<10	<100 MI	<10 Z8	<100 Z8	<5.0 MI	<1.0	<1.0	<1.0	nc
Fecal Coliforms	mpn/100mL	n/v	n/v	2	<100	<100 MI	<10 Z8	<100 Z8	<5.0 MI	<1.0	<1.0	<1.0	nc
Heterotrophic Plate Count	cfu/mL	n/v	n/v	18,300	740	520	220 Z8	500	-	-	-	-	-
Heterotrophic Plate Count	mpn/100mL	n/v	n/v	-	-	-	-	-	1,600 MI	490	>2400	290	nc
Total Coliforms	mpn/100mL	n/v	n/v	550	210	<100 MI	<10 Z8	<100 Z8	38 MI	2.0	<1.0	<1.0	nc

See notes on the last page

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			RMW16-17-10	
Sample Date			22-Nov-21	10-May-22
Sample ID			RMW16-17-11	RMW16-17-11
Sampling Company			STANTEC	STANTEC
Laboratory			AGAT	BV
Laboratory Work Order			21C833752	C231132
Laboratory Sample ID			3240499	ASU359
Location Description			Tier 2	Tier 2
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated	Unconsolidated
Field Parameters				
Dissolved Oxygen, Field	mg/L	n/v	7.13	3.61
Electrical Conductivity, Field	µS/cm	1,000[A]	**2,077[A]**	**2,143[A]**
Oxidation Reduction Potential, field	mV	n/v	19.3	51.2
pH, Field	S.U.	6.5-8.5[A]	7.2	7.11
Temperature, Field	deg C	n/v	6.55	7.4
Calculated Parameters				
Anion Sum	meq/L	n/v	-	26
Cation Sum	meq/L	n/v	-	27
Hardness (as CaCO3)	mg/L	n/v	826	850
Ion Balance	%	n/v	108	0.36
Nitrate	mg/L	13[A]	<0.5	<0.22
Nitrate + Nitrite (as N)	mg/L	100[A]	<0.02	<0.050 AT
Nitrite	mg/L	0.197/1.97$_{n4.a}$[A]	<0.05	<0.033
Total Dissolved Solids	mg/L	500[A]	**1,530[A]**	**1,600[A]**
Sodium Adsorption Ratio (SAR)	none	5[A]	3.51	-
BTEX and Petroleum Hydrocarbons				
Benzene	mg/L	0.005[A]	<0.0005	<0.00040
Toluene	mg/L	0.024[A]	<0.0003	<0.00040
Ethylbenzene	mg/L	0.0016[A]	<0.0005	<0.00040
Xylene, m & p-	mg/L	n/v	-	<0.00080
Xylene, o-	mg/L	n/v	-	<0.00040
Xylenes, Total	mg/L	0.02[A]	<0.0005	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	<0.1	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.1	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.1	<0.10
Miscellaneous Inorganics				
Dissolved Organic Carbon (DOC)	mg/L	n/v	6	3.3
Electrical Conductivity, Lab	µS/cm	1,000[A]	**2,080[A]**	**2,100[A]**
pH, lab	S.U.	6.5-8.5[A]	8.02	7.80
Anions				
Alkalinity (P as CaCO3)	mg/L	n/v	<5	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	453	450
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	566	550
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<5	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<5	<1.0
Sulfate	mg/L	128/429$_{n3}$[A]	**744[A]**	**830[A]**
Chloride	mg/L	100[A]	<1.0	<1.0
Fluoride	mg/L	1[A]	0.06	-
Nutrients				
Ammonia (as N)	mg/L	0.035/125$_{n2}$[A]	**0.05[A]**	-
Nitrite (as N)	mg/L	0.06/0.6$_{n4}$[A]	<0.01	<0.010
Orthophosphate (as P)	mg/L	n/v	<0.15	0.0043
Ammonia (as N)	mg/L	0.035/125$_{n2}$[A]	-	**0.066[A]**
Nitrate (as N)	mg/L	3[A]	<0.02	<0.050
Phosphorus, Total (Dissolved)	mg/L	n/v	-	0.0034
Total Kjeldahl Nitrogen	mg/L	n/v	4.5	<2.0
Nitrogen	mg/L	n/v	-	<2.0 DB
Metals - Dissolved				
Aluminum	mg/L	0.007/0.05$_{n1,e}$[A]	**0.011[A]**	<0.0030
Antimony	mg/L	0.006[A]	<0.001	0.0014
Arsenic	mg/L	0.005[A]	0.001	0.00042
Barium	mg/L	2[A]	<0.05	0.022
Beryllium	mg/L	n/v	<0.0005	<0.0010
Boron	mg/L	1[A]	0.12	0.13
Cadmium	mg/L	0.00004/0.00037$_{n3}$[A]	**0.000086[A]**	<0.00002
Calcium	mg/L	n/v	189	190

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			RMW16-17-10	
Sample Date			22-Nov-21	10-May-22
Sample ID			RMW16-17-11	RMW16-17-11
Sampling Company			STANTEC	STANTEC
Laboratory			AGAT	BV
Laboratory Work Order			21C833752	C231132
Laboratory Sample ID			3240499	ASU359
Location Description			Tier 2	Tier 2
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated	Unconsolidated
Chromium	mg/L	0.05[A]	<0.0005	<0.0010
Cobalt	mg/L	n/v	0.0022	0.0014
Copper	mg/L	0.007[A]	<0.0008	<0.0010
Iron	mg/L	0.3[A]	<0.1	<0.060
Lead	mg/L	0.001/0.007$_{n3}$[A]	<0.0002	<0.00020
Lithium	mg/L	n/v	-	0.022
Magnesium	mg/L	n/v	86.0	92
Manganese	mg/L	0.02[A]	**0.648**[A]	**0.72**[A]
Mercury	mg/L	0.000005[A]	**0.0000052**[A]	<0.0000019
Molybdenum	mg/L	n/v	0.001	0.0010
Nickel	mg/L	0/0.17$_{n3}$[A]	**0.006**[A]	**0.0018**[A]
Phosphorus	mg/L	n/v	<0.08	<0.10
Potassium	mg/L	n/v	5.4	5.6
Selenium	mg/L	0.002[A]	<0.0005	<0.00020
Silicon	mg/L	n/v	-	4.5
Silver	mg/L	0.00025[A]	<0.00005	<0.00010
Sodium	mg/L	200[A]	**232**[A]	**220**[A]
Strontium	mg/L	n/v	-	2.7
Sulfur	mg/L	n/v	-	250
Thallium	mg/L	n/v	<0.0001	<0.00020
Tin	mg/L	n/v	-	<0.0010
Titanium	mg/L	n/v	0.002	<0.0010
Uranium	mg/L	0.01[A]	0.007	0.0067
Vanadium	mg/L	n/v	-	<0.0010
Zinc	mg/L	0.03[A]	<0.005	<0.0030
Metals - Total				
Mercury	mg/L	0.000005[A]	***<0.0000125***	**0.000239**[A]
Phosphorus	mg/L	n/v	2.62	-
Microbiological Parameters				
Escherichia coli (E.Coli)	mpn/100mL	n/v	3	<10 AT
Fecal Coliforms	mpn/100mL	n/v	8	10 AT
Heterotrophic Plate Count	cfu/mL	n/v	95,000	900 AT
Total Coliforms	mpn/100mL	n/v	1,990	160 AT

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location						RMW16-18-5			
Sample Date			22-Nov-21	5-May-22	17-Nov-22	18-May-23	27-Oct-23	16-May-24	26-Sep-24
Sample ID			RMW16-18-6	RMW16-18-6	RMW16-18-05	RMW16-18-5	RMW16-18-5	RMW16-18-5	RMW16-18-5
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			AGAT	BV	BV	BV	BV	BV	BV
Laboratory Work Order			21C833752	C230164	C291130	C335681	C387774	C435132	C476935
Laboratory Sample ID			3240637	ASP032	BHF768	BQS288	CDB053	CNR327	CWM894
Location Description			Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated
Field Parameters									
Dissolved Oxygen, Field	mg/L	n/v	41.26	3.71	3.4	4.3	7.8	7.7	4.74
Electrical Conductivity, Field	µS/cm	1,000[A]	**1,073[A]**	**1,143[A]**	**1,131[A]**	**1,013[A]**	**1,087[A]**	1.029	**1,138[A]**
Oxidation Reduction Potential, field	mV	n/v	62.1	67	-10.4	191.6	100.7	1.7	129.9
pH, Field	S.U.	6.5-8.5[A]	7.94	7.42	7.22	7.50	7.69	7.30	7.77
Temperature, Field	deg C	n/v	6.32	8.2	1.9	9.6	5.4	6.1	8.4
Calculated Parameters									
Anion Sum	meq/L	n/v	-	12	12	12	12	12	12
Cation Sum	meq/L	n/v	-	13	13	14	14	13	13
Hardness (as CaCO3)	mg/L	n/v	265	260	260	300	280	270	270
Ion Balance	%	n/v	109	3.3	1.6	8.1	8.4	6.8	2.0
Nitrate	mg/L	13[A]	4.3	4.1	3.9	4.2	0.92	3.3	2.3
Nitrate + Nitrite (as N)	mg/L	100[A]	0.97	0.95	0.89 MI	0.95 Z8	0.21	0.75	0.51
Nitrite	mg/L	0.197/1.97$_{n4.a}$[A]	<0.05	0.040	0.040	<0.033	<0.033	<0.033	<0.033
Total Dissolved Solids	mg/L	500[A]	**665[A]**	**650[A]**	**670[A]**	**690[A]**	**680[A]**	**660[A]**	**670[A]**
Sodium Adsorption Ratio (SAR)	none	5[A]	4.79	-	-	-	-	-	-
BTEX and Petroleum Hydrocarbons									
Benzene	mg/L	0.005[A]	<0.0005	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	<0.0003	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	<0.0005	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	-	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	<0.0005	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Miscellaneous Inorganics									
Dissolved Organic Carbon (DOC)	mg/L	n/v	6	2.2 DSM	2.5	2.2	1.5	2.0 PRH	2.2
Electrical Conductivity, Lab	µS/cm	1,000[A]	**1,130[A]**	**1,100[A]**	**1,100[A]**	**1,100[A]**	**1,100[A]**	**1,100[A]**	**1,100[A]**
pH, lab	S.U.	6.5-8.5[A]	8.25	7.95	8.06	7.95	8.15	8.32	8.18
Anions									
Alkalinity (P as CaCO3)	mg/L	n/v	<5	<1.0	<1.0	<1.0	<1.0	4.5	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	408	380	410	410	390	370	410
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	511	470	500	500	480	440	500
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<5	<1.0	<1.0	<1.0	<1.0	5.4	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	128/429$_{n3}$[A]	62.2	70	68	59	72	72	81
Chloride	mg/L	100[A]	80.2	92	93	96	91	92	87
Fluoride	mg/L	1[A]	0.14	-	-	-	-	-	-
Nutrients									
Ammonia (as N)	mg/L	0.035/125$_{n2}$[A]	**0.05[A]**	-	-	-	-	-	-
Nitrite (as N)	mg/L	0.06/0.6$_{n4}$[A]	<0.01	0.012	0.012	<0.010	<0.010	<0.010	<0.010
Orthophosphate (as P)	mg/L	n/v	<0.15	0.0049	0.0046	<0.0030	<0.0030	<0.0030	<0.0030
Ammonia (as N)	mg/L	0.035/125$_{n2}$[A]	-	0.017	0.030	0.020	0.018	0.032	<0.015
Nitrate (as N)	mg/L	3[A]	0.97	0.93	0.88	0.95	0.21	0.75	0.51
Phosphorus, Total (Dissolved)	mg/L	n/v	-	0.0069	0.011	<0.0030	<0.0030	<0.0030 PRH	<0.0030
Total Kjeldahl Nitrogen	mg/L	n/v	1.7	0.63	<1.0	0.24	5.1	0.94	1.9
Nitrogen	mg/L	n/v	-	1.6 DB	<1.0 DB	1.2 DB	5.3 DB	1.7	2.4 DB
Metals - Dissolved									
Aluminum	mg/L	0.007/0.05$_{n1,e}$[A]	**0.017[A]**	**0.015[A]**	<0.0030	0.0048	0.0033	0.0038	**0.0079[A]**
Antimony	mg/L	0.006[A]	<0.001	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	0.001	0.00029	<0.00020	<0.00020	0.00026	0.00025	0.00020
Barium	mg/L	2[A]	<0.05	0.065	0.075	0.077	0.066	0.057	0.072
Beryllium	mg/L	n/v	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron	mg/L	1[A]	0.11	0.11	0.12	0.11	0.12	0.10	0.12
Cadmium	mg/L	0.00004/0.00037$_{n3}$[A]	**0.000047[A]**	<0.00002	0.000028	0.000022	<0.000020	<0.000020	<0.000020
Calcium	mg/L	n/v	54.7	52	54	59	56	54	53
Chromium	mg/L	0.05[A]	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location						RMW16-18-5			
Sample Date			22-Nov-21	5-May-22	17-Nov-22	18-May-23	27-Oct-23	16-May-24	26-Sep-24
Sample ID			RMW16-18-6	RMW16-18-6	RMW16-18-05	RMW16-18-5	RMW16-18-5	RMW16-18-5	RMW16-18-5
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			AGAT	BV	BV	BV	BV	BV	BV
Laboratory Work Order			21C833752	C230164	C291130	C335681	C387774	C435132	C476935
Laboratory Sample ID			3240637	ASP032	BHF768	BQS288	CDB053	CNR327	CWM894
Location Description			Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated
Cobalt	mg/L	n/v	<0.0009	0.00031	0.00033	0.00035	0.00044	<0.00030	<0.00030
Copper	mg/L	0.007[A]	0.0011	<0.0010	<0.0010	0.0029	0.0010	0.0011	<0.0010
Iron	mg/L	0.3[A]	<0.1	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060
Lead	mg/L	0.001/0.007$_{n3}$[A]	<0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Lithium	mg/L	n/v	-	<0.020	<0.020	<0.020	<0.020	<0.020	0.058
Magnesium	mg/L	n/v	31.1	32	30	38	33	33	32
Manganese	mg/L	0.02[A]	**0.099[A]**	**0.099[A]**	**0.12[A]**	**0.13[A]**	**0.13[A]**	<0.0040	0.0057
Mercury	mg/L	0.000005[A]	0.0000039	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	0.004	0.0032	0.0034	0.0027	0.0045	0.0022	0.0028
Nickel	mg/L	0/0.17$_{n3}$[A]	***<0.003***	**0.0013[A]**	**0.00090[A]**	**0.00087[A]**	**0.0012[A]**	***<0.00050***	***<0.00050***
Phosphorus	mg/L	n/v	<0.08	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Potassium	mg/L	n/v	2.6	2.2	2.0	2.3	3.0	2.4	2.7
Selenium	mg/L	0.002[A]	<0.0005	0.00060	0.00065	0.00053	0.00053	**0.0026[A]**	0.0019
Silicon	mg/L	n/v	-	3.8	3.3	3.6	5.0	3.6	4.1
Silver	mg/L	0.00025[A]	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium	mg/L	200[A]	179	170	170	190	190	180	170
Strontium	mg/L	n/v	-	0.41	0.43	0.47	0.48	0.40	0.43
Sulfur	mg/L	n/v	-	22	19	21	23	24	22
Thallium	mg/L	n/v	<0.0001	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Tin	mg/L	n/v	-	<0.0010	<0.0010	<0.0010	0.0016	<0.0010	0.0025
Titanium	mg/L	n/v	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	0.008	0.0080	0.0075	0.0078	0.0090	0.0066	0.0082
Vanadium	mg/L	n/v	-	0.0016	0.0011	<0.0010	<0.0010	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	<0.005	<0.0030	<0.0030	<0.0030	0.0045	<0.0030	<0.0030
Metals - Total									
Mercury	mg/L	0.000005[A]	**0.000069[A]**	**0.000225[A]**	**0.000255[A]**	**0.00021[A]**	**0.000129[A]**	**0.000558 DB[A]**	**0.000253 DB[A]**
Phosphorus	mg/L	n/v	2.87	-	-	-	-	-	-
Microbiological Parameters									
Escherichia coli (E.Coli)	mpn/100mL	n/v	<1	<100	<100 MI	<10 Z8	<100 Z8	<100 MI	<1.0
Fecal Coliforms	mpn/100mL	n/v	<1	<100	<1.0	<10 Z8	<100 Z8	<100 MI	<2.0 MI
Heterotrophic Plate Count	cfu/mL	n/v	89,500	79,000	>6000	>60000 Z8	2,800 Z8	-	-
Heterotrophic Plate Count	mpn/100mL	n/v	-	-	-	-	-	4,400 MI	>2400
Total Coliforms	mpn/100mL	n/v	85	<100	<100 MI	<10 Z8	<100 Z8	<100 MI	<1.0

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location				RMW16-18-13							
Sample Date				22-Nov-21	5-May-22	17-Nov-22	18-May-23	27-Oct-23	16-May-24	26-Sep-24	6-Jun-25
Sample ID				RMW16-18-10	RMW16-18-10	RMW16-18-13	RMW16-18-13	RMW16-18-13	RMW16-18-13	RMW16-18-13	RMW16-18-13
Sampling Company				STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory				AGAT	BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order				21C833752	C230164	C291130	C335681	C387774	C435132	C476935	C551949
Laboratory Sample ID				3240638	ASP034	BHF767	BQS289	CDB054	CNR328	CWM895	DMO155
Location Description				Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
Lithology				Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock
Sample Type	Units	2024 AEPA Tier 1	UCL								
Field Parameters											
Dissolved Oxygen, Field	mg/L	n/v	n/v	3.19	2.56	2.3	4.7	2.8	3.1	3.66	4.65
Electrical Conductivity, Field	µS/cm	1,000[A]	n/v	**1,011[A]**	**1,098[A]**	**1,136[A]**	**1,014[A]**	**1,189[A]**	1.052	**1,137[A]**	**1,139[A]**
Oxidation Reduction Potential, field	mV	n/v	n/v	52.3	66.9	2.3	167.1	103.5	-23.9	130.4	-33.6
pH, Field	S.U.	6.5-8.5[A]	n/v	7.64	7.45	7.39	7.58	7.99	7.45	7.71	7.64
Temperature, Field	deg C	n/v	n/v	5.04	7.5	1.4	14.5	6.0	11.8	7.8	11.96
Calculated Parameters											
Anion Sum	meq/L	n/v	n/v	-	12	11	12	11	12	12	12
Cation Sum	meq/L	n/v	n/v	-	13	12	14	13	14	12	12
Hardness (as CaCO3)	mg/L	n/v	n/v	132	180	140	200	130	200	150	150
Ion Balance	%	n/v	n/v	103	5.3	2.9	8.8	7.6	7.0	0.021	-
Ion Balance % Difference	%	n/v	n/v	-	-	-	-	-	-	-	0.34
Nitrate	mg/L	13_f[A]	n/v	1.5	2.8	<0.44	3.0	1.3	2.3	0.92	1.5
Nitrate + Nitrite (as N)	mg/L	100[A]	n/v	0.34	0.63	<0.10 MI	0.68	0.28	0.52	0.21	0.34 MI
Nitrite	mg/L	$0.197/1.97_{n4.a}$[A]	n/v	<0.05	<0.033	<0.033	<0.033	<0.033	<0.033	<0.033	<0.13
Total Dissolved Solids	mg/L	500[A]	813[B]	**640[A]**	**660[A]**	**640[A]**	**680[A]**	**680[A]**	**690[A]**	**650[A]**	**670[A]**
Sodium Adsorption Ratio (SAR)	none	5[A]	n/v	**7.96[A]**	-	-	-	-	-	-	-
BTEX and Petroleum Hydrocarbons											
Benzene	mg/L	0.005[A]	n/v	<0.0005	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	n/v	<0.0003	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	n/v	<0.0005	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	n/v	-	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	n/v	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	n/v	<0.0005	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	n/v	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	n/v	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	n/v	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Miscellaneous Inorganics											
Dissolved Organic Carbon (DOC)	mg/L	n/v	5.5[B]	4	1.8	2.0	1.7	1.5	1.6 PRH	1.5	1.9
Electrical Conductivity, Lab	µS/cm	1,000[A]	1,344[B]	**1,080[A]**	**1,100[A]**	**1,100[A]**	**1,100[A]**	**1,100[A]**	**1,100[A]**	**1,100[A]**	**1,100[A]**
pH, lab	S.U.	6.5-8.5[A]	10.14[B]	8.40	8.20	8.19	8.07	8.40	8.42	8.32	8.22
Anions											
Alkalinity (P as CaCO3)	mg/L	n/v	n/v	6	<1.0	<1.0	<1.0	3.3	8.6	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	n/v	386	390	370	380	360	400	400	400
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	n/v	468	470	450	470	430	460	490	490
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	n/v	7	<1.0	<1.0	<1.0	4.0	10	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	n/v	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	100[B]	82.4	80	82	68	73	69	71	70
Chloride	mg/L	100[A]	129[B]	64.3	76	79	87	96	89	86	96
Fluoride	mg/L	1[A]	n/v	0.29	-	-	-	-	-	-	-
Nutrients											
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	n/v	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.040
Orthophosphate (as P)	mg/L	n/v	n/v	<0.15	<0.0030	0.0048	<0.0030	<0.0030	<0.0030	<0.0030	-
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	n/v	**0.04[A]**	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	**0.098[A]**
Nitrate (as N)	mg/L	3[A]	1.18[B]	0.34	0.63	<0.10	0.68	0.28	0.52	0.21	0.34
Phosphorus, Dissolved	mg/L	n/v	n/v	-	-	-	-	-	-	-	<0.0030
Phosphorus, Total (Dissolved)	mg/L	n/v	n/v	-	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030 PRH	<0.0030	-
Phosphorus, Total	mg/L	n/v	n/v	-	-	-	-	-	-	-	0.98
Total Kjeldahl Nitrogen	mg/L	n/v	1.4[B]	1.1	0.30	0.62	<0.020	0.142	0.281	0.085	0.52
Nitrogen	mg/L	n/v	n/v	-	0.93 DB	0.62	0.70	0.43	0.80	0.29	0.86 DB
Metals - Dissolved											
Aluminum	mg/L	$0.007/0.05_{n1,e}$[A]	0.02[B]	**0.017[A]**	<0.0030	<0.0030	0.0040	0.0037	0.0042	0.0050	0.0032
Antimony	mg/L	0.006[A]	n/v	<0.001	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	n/v	<0.001	0.00035	<0.00020	<0.00020	<0.00020	0.00028	<0.00020	<0.00020
Barium	mg/L	2[A]	0.06[B]	<0.05	0.041	0.034	0.045	0.033	0.046	0.035	0.032
Beryllium	mg/L	n/v	n/v	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron	mg/L	1[A]	0.17[B]	0.13	0.14	0.14	0.14	0.14	0.12	0.13	0.14
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	n/v	**0.000082[A]**	<0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location				RMW16-18-13							
Sample Date				22-Nov-21	5-May-22	17-Nov-22	18-May-23	27-Oct-23	16-May-24	26-Sep-24	6-Jun-25
Sample ID				RMW16-18-10	RMW16-18-10	RMW16-18-13	RMW16-18-13	RMW16-18-13	RMW16-18-13	RMW16-18-13	RMW16-18-13
Sampling Company				STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory				AGAT	BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order				21C833752	C230164	C291130	C335681	C387774	C435132	C476935	C551949
Laboratory Sample ID				3240638	ASP034	BHF767	BQS289	CDB054	CNR328	CWM895	DMO155
Location Description				Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
Lithology				Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock
Sample Type	Units	2024 AEPA Tier 1	UCL								
Calcium	mg/L	n/v	56[B]	29.5	38	30	42	30	41	32	33
Chromium	mg/L	0.05[A]	n/v	0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt	mg/L	n/v	n/v	<0.0009	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Copper	mg/L	0.007[A]	n/v	0.0016	<0.0010	<0.0010	0.0023	0.0011	**0.015[A]**	<0.0010	<0.0010
Iron	mg/L	0.3[A]	n/v	<0.1	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060
Lead	mg/L	0.001/0.007$_{n3}$[A]	n/v	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	0.00075	<0.00020	<0.00020
Lithium	mg/L	n/v	n/v	-	<0.020	0.020	<0.020	0.020	<0.020	0.023	<0.020
Magnesium	mg/L	n/v	35[B]	14.1	21	15	23	13	23	17	16
Manganese	mg/L	0.02[A]	0.19[B]	**0.078[A]**	**0.12[A]**	**0.098[A]**	**0.13[A]**	**0.10[A]**	**0.12[A]**	**0.13[A]**	**0.081[A]**
Mercury	mg/L	0.000005[A]	0.0001015[B]	<0.0000025	<0.0000019	<0.0000019	<0.0000019	0.0000020	<0.0000019	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	0.00656[B]	0.005	0.0036	0.0037	0.0037	0.0038	0.0043	0.0038	0.0027
Nickel	mg/L	0/0.17$_{n3}$[A]	n/v	***<0.003***	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***
Phosphorus	mg/L	n/v	n/v	<0.08	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Potassium	mg/L	n/v	1.9[B]	1.3	1.4	0.95	1.3	1.2	1.4	1.3	1.2
Selenium	mg/L	0.002[A]	0.003[B]	<0.0005	0.00053	0.00053	0.00044	0.0010	0.0010	0.00088	0.0019
Silicon	mg/L	n/v	4[B]	-	3.0	2.7	3.4	3.1	3.1	2.8	3.2
Silver	mg/L	0.00025[A]	n/v	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium	mg/L	200[A]	280[B]	**210[A]**	**210[A]**	**210[A]**	**220[A]**	**250[A]**	**220[A]**	200	**210[A]**
Strontium	mg/L	n/v	0.4[B]	-	0.28	0.22	0.29	0.21	0.28	0.24	0.21
Sulfur	mg/L	n/v	32[B]	-	24	24	27	26	22	22	24
Thallium	mg/L	n/v	n/v	<0.0001	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Tin	mg/L	n/v	n/v	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Titanium	mg/L	n/v	n/v	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	0.008[B]	0.005	0.0056	0.0044	0.0054	0.0048	0.0057	0.0061	0.0053
Vanadium	mg/L	n/v	n/v	-	0.0018	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	n/v	<0.005	<0.0030	<0.0030	<0.0030	<0.0030	0.0091	<0.0030	<0.0030
Metals - Total											
Mercury	mg/L	0.000005[A]	0.0001015[B]	**0.000049[A]**	**0.0000083[A]**	0.0000041	***<0.000019***	**0.0000071[A]**	**0.0000288[A]**	0.0000044	**0.000117 DB[AB]**
Phosphorus	mg/L	n/v	n/v	0.53	-	-	-	-	-	-	-
Microbiological Parameters											
Escherichia coli (E.Coli)	mpn/100mL	n/v	n/v	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10 Z8
Fecal Coliforms	mpn/100mL	n/v	n/v	1	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<10 Z8
Heterotrophic Plate Count	cfu/mL	n/v	n/v	6,200	2,500	2,300	1,400	49	-	-	-
Heterotrophic Plate Count	mpn/100mL	n/v	n/v	-	-	-	-	-	>2400	>2400	>24000 MI
Total Coliforms	mpn/100mL	n/v	n/v	770	12	1.0	<1.0	<1.0	5.2	<1.0	<10 Z8

See notes on the last page

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location				RMW16-19-10							
Sample Date				1-Dec-21	6-May-22	17-Nov-22	18-May-23	27-Oct-23	16-May-24	26-Sep-24	6-Jun-25
Sample ID				RMW16-19-8	RMW16-19-8	RMW16-19-10	RMW16-19-10	RMW16-19-10	RMW16-19-10	RMW16-19-10	RMW16-19-10
Sampling Company				STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory				AGAT	BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order				21C838865	C230432	C291130	C335681	C387774	C435132	C476935	C551949
Laboratory Sample ID				3284935	ASQ364	BHF769	BQS287	CDB051	CNR329	CWM897	DMO154
Location Description				Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
Lithology				Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated
Sample Type	Units	2024 AEPA Tier 1	UCL								
Field Parameters											
Dissolved Oxygen, Field	mg/L	n/v	n/v	5.19	5.09	4.0	6.4	3.8	3.2	2.77	6.33
Electrical Conductivity, Field	µS/cm	1,000[A]	n/v	**3,024[A]**	**3,057[A]**	**3,014[A]**	**2,468[A]**	**2,360[A]**	2.673	**3,384[A]**	**2,678[A]**
Oxidation Reduction Potential, field	mV	n/v	n/v	123.8	52.2	-28.0	98.3	111.5	35.4	10.1	128.4
pH, Field	S.U.	6.5-8.5[A]	n/v	7.07	7.09	6.95	7.41	7.17	6.93	7.03	7.07
Temperature, Field	deg C	n/v	n/v	4.28	10.6	4.9	9.7	7.3	10.1	7.1	11.01
Calculated Parameters											
Anion Sum	meq/L	n/v	n/v	-	38	40	36	26	38	46	35
Cation Sum	meq/L	n/v	n/v	-	42	40	39	32	39	45	34
Hardness (as CaCO3)	mg/L	n/v	n/v	1,180	1,200	1,100	1,100	810	1,100	1,300	900
Ion Balance	%	n/v	n/v	117	4.4	0.18	4.0	9.3	0.49	1.4	-
Ion Balance % Difference	%	n/v	n/v	-	-	-	-	-	-	-	0.42
Nitrate	mg/L	13_f[A]	n/v	<0.5	<0.22	<0.044	<0.044	<0.044	0.068	<0.22	<0.18
Nitrate + Nitrite (as N)	mg/L	100[A]	n/v	<0.02	<0.050 AT	<0.010	<0.010	<0.010	0.015	<0.050 MI	<0.040
Nitrite	mg/L	$0.197/1.97_{n4.a}$[A]	n/v	<0.10	<0.033	<0.033	<0.033	<0.033	<0.033	<0.033	<0.13
Total Dissolved Solids	mg/L	500[A]	3,721[B]	**2,330[A]**	**2,500[A]**	**2,600[A]**	**2,300[A]**	**1,800[A]**	**2,400[A]**	**2,900[A]**	**2,200[A]**
Sodium Adsorption Ratio (SAR)	none	5[A]	n/v	4.91	-	-	-	-	-	-	-
BTEX and Petroleum Hydrocarbons											
Benzene	mg/L	0.005[A]	n/v	<0.0005	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	n/v	<0.0003	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	n/v	<0.0005	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	n/v	-	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	n/v	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	n/v	<0.0005	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	n/v	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	n/v	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	n/v	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Miscellaneous Inorganics											
Dissolved Organic Carbon (DOC)	mg/L	n/v	9.1[B]	6	5.7	5.7	3.9	3.2	4.3 PRH	5.3	4.0
Electrical Conductivity, Lab	µS/cm	1,000[A]	4,247[B]	**3,110[A]**	**3,100[A]**	**3,100[A]**	**2,800[A]**	**2,400[A]**	**3,000[A]**	**3,400[A]**	**2,700[A]**
pH, lab	S.U.	6.5-8.5[A]	9.59[B]	8.12	7.57	7.76	7.64	8.00	7.85	7.87	7.82
Anions											
Alkalinity (P as CaCO3)	mg/L	n/v	n/v	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	n/v	402	480	460	510	390	500	470	530
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	n/v	490	590	560	620	480	610	570	640
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	n/v	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	n/v	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	2,447[B]	**1,280[A]**	**1,400[A]**	**1,500[A]**	**1,200[A]**	**890[A]**	**1,400[A]**	**1,800[A]**	**1,200[A]**
Chloride	mg/L	100[A]	4[B]	2.5	2.1	2.9	1.7	<1.0	1.8	1.8	1.4
Fluoride	mg/L	1[A]	n/v	0.07	-	-	-	-	-	-	-
Nutrients											
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	n/v	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.040
Orthophosphate (as P)	mg/L	n/v	n/v	<0.15	0.0035	0.0042	<0.0030	<0.0030	<0.0030	<0.0030	-
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	0.4[B]	**0.08[A]**	**0.043[A]**	**0.074[A]**	**0.38[A]**	**0.14[A]**	**0.089[A]**	**0.070[A]**	**0.12[A]**
Nitrate (as N)	mg/L	3[A]	n/v	<0.02	<0.050	<0.010	<0.010	<0.010	0.015	<0.050	<0.040
Phosphorus, Dissolved	mg/L	n/v	n/v	-	-	-	-	-	-	-	<0.0030
Phosphorus, Total (Dissolved)	mg/L	n/v	n/v	-	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030 PRH	<0.0030	-
Phosphorus, Total	mg/L	n/v	n/v	-	-	-	-	-	-	-	4.4
Total Kjeldahl Nitrogen	mg/L	n/v	8.5[B]	**10.58[B]**	1.45	<1.0	0.91	1.65	0.422	0.70	<2.0
Nitrogen	mg/L	n/v	n/v	-	1.5 DB	<1.0 DB	0.91 DB	1.6 DB	0.44	0.70 DB	<2.0 DB NNA
Metals - Dissolved											
Aluminum	mg/L	$0.007/0.05_{n1,e}$[A]	n/v	**0.072[A]**	<0.0030	0.0033	<0.0030	<0.0030	<0.0030	0.0038	0.0040
Antimony	mg/L	0.006[A]	n/v	<0.001	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	0.00203[B]	0.002	0.00035	0.00028	0.00025	<0.00020	<0.00020	0.00024	<0.00020
Barium	mg/L	2[A]	n/v	<0.05	0.015	0.013	0.013	<0.010	<0.010	<0.010	0.011
Beryllium	mg/L	n/v	n/v	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron	mg/L	1[A]	0.16[B]	0.12	0.13	0.12	0.13	0.12	0.12	0.11	0.14

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location				RMW16-19-10							
Sample Date				1-Dec-21	6-May-22	17-Nov-22	18-May-23	27-Oct-23	16-May-24	26-Sep-24	6-Jun-25
Sample ID				RMW16-19-8	RMW16-19-8	RMW16-19-10	RMW16-19-10	RMW16-19-10	RMW16-19-10	RMW16-19-10	RMW16-19-10
Sampling Company				STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory				AGAT	BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order				21C838865	C230432	C291130	C335681	C387774	C435132	C476935	C551949
Laboratory Sample ID				3284935	ASQ364	BHF769	BQS287	CDB051	CNR329	CWM897	DMO154
Location Description				Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
Lithology				Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated
Sample Type	Units	2024 AEPA Tier 1	UCL								
Cadmium	mg/L	0.00004/0.00037$_{n3}$[A]	0.000306[B]	**0.000096[A]**	**0.000051[A]**	0.000026	**0.00012[A]**	**0.000098[A]**	**0.00012[A]**	**0.00019[A]**	**0.000090[A]**
Calcium	mg/L	n/v	462[B]	309	290	280	260	200	260	340	220
Chromium	mg/L	0.05[A]	n/v	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt	mg/L	n/v	0.002[B]	0.0012	0.00068	0.00061	0.00067	0.00064	0.00046	0.00082	0.00061
Copper	mg/L	0.007[A]	n/v	0.0011	<0.0010	0.0013	0.0021	<0.0010	<0.0010	<0.0010	<0.0010
Iron	mg/L	0.3[A]	n/v	<0.1	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060
Lead	mg/L	0.001/0.007$_{n3}$[A]	n/v	0.0006	<0.00020	<0.00020	<0.00020	0.00082	<0.00020	<0.00020	<0.00020
Lithium	mg/L	n/v	0.06[B]	-	0.024	0.021	0.021	0.022	0.026	0.041	<0.020
Magnesium	mg/L	n/v	157[B]	100	110	100	96	75	96	120	83
Manganese	mg/L	0.02[A]	1.33[B]	**0.537[A]**	**0.61[A]**	**0.59[A]**	**0.79[A]**	**0.75[A]**	**0.62[A]**	**1.0[A]**	**0.72[A]**
Mercury	mg/L	0.000005[A]	0.001438[B]	-	<0.0000019	<0.0000019	<0.0000019	0.0000020	<0.0000019	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	0.00121[B]	<0.001	0.00081	0.00077	0.00065	0.00093	0.00087	0.00066	0.00071
Nickel	mg/L	0/0.17$_{n3}$[A]	0.0058[B]	**0.004[A]**	**0.0026[A]**	**0.0023[A]**	**0.0020[A]**	**0.0014[A]**	**0.0016[A]**	**0.0019[A]**	**0.0014[A]**
Phosphorus	mg/L	n/v	n/v	<0.08	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Potassium	mg/L	n/v	8.1[B]	6.5	6.8	6.1	7.0	6.7	6.5	6.8	6.4
Selenium	mg/L	0.002[A]	0.005[B]	<0.0005	**0.0030[A]**	**0.0024[A]**	0.0010	0.00043	0.0012	0.0012	0.00091
Silicon	mg/L	n/v	4.8[B]	-	3.9	3.7	4.2	4.1	3.8	3.9	4.1
Silver	mg/L	0.00025[A]	n/v	<0.00005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium	mg/L	200[A]	484[B]	**388[A]**	**410[A]**	**410[A]**	**410[A]**	**360[A]**	**400[A]**	**410[A]**	**370[A]**
Strontium	mg/L	n/v	2.7[B]	-	1.9	1.9	1.9	1.6	1.8	2.2	1.6
Sulfur	mg/L	n/v	754[B]	-	450	440	400	280	400	550	380
Thallium	mg/L	n/v	n/v	<0.0001	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Tin	mg/L	n/v	n/v	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0018	0.0012
Titanium	mg/L	n/v	n/v	0.002	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	0.017[B]	**0.013[A]**	**0.012[A]**	**0.012[A]**	0.0099	0.010	**0.011[A]**	**0.013[A]**	0.010
Vanadium	mg/L	n/v	n/v	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	n/v	<0.005	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Metals - Total											
Mercury	mg/L	0.000005[A]	0.001438[B]	**0.000081[A]**	**0.00072[A]**	**0.000708[A]**	**0.001[A]**	**0.000132[A]**	**0.000398 DB[A]**	**0.000206 DB[A]**	**0.000295 DB[A]**
Phosphorus	mg/L	n/v	n/v	14.2	-	-	-	-	-	-	-
Microbiological Parameters											
Escherichia coli (E.Coli)	mpn/100mL	n/v	n/v	13	<100 DVM	<100 MI	<10 Z8	<100 Z8	<100 MI	<10 MI	<20 Z8
Fecal Coliforms	mpn/100mL	n/v	n/v	26	<100 DVM	<1.0	<10 Z8	<100 Z8	<100 MI	<10 MI	<20 Z8
Heterotrophic Plate Count	cfu/mL	n/v	n/v	8,900	1,100 AT	290	19,000 Z8	3,000 Z8	-	-	-
Heterotrophic Plate Count	mpn/100mL	n/v	n/v	-	-	-	-	-	>24000 MI	>2400	>48000 MI
Total Coliforms	mpn/100mL	n/v	n/v	194	410 DVM	<100 MI	<10 Z8	<100 Z8	<100 MI	<10 MI	<20 Z8

See notes on the last page

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location				RMW16-19-19											
Sample Date				1-Dec-21	6-May-22	17-Nov-22		17-Nov-22	18-May-23	27-Oct-23	16-May-24	26-Sep-24	26-Sep-24		6-Jun-25
Sample ID				RMW16-19-19	RMW16-19-19	22-12		RMW16-19-19	RMW16-19-19	RMW16-19-19	RMW16-19-19	RMW16-19-19	SR24-10		RMW16-19-19
Sampling Company				STANTEC	STANTEC	STANTEC		STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC		STANTEC
Laboratory				AGAT	BV	BV		BV	BV	BV	BV	BV	BV		BV
Laboratory Work Order				21C838865	C230432	C291130		C291130	C335681	C387774	C435132	C476935	C476935		C551949
Laboratory Sample ID				3284875	ASQ365	BHF770		BHF764	BQS286	CDB052	CNR330	CWM898	CWM902		DMO153
Location Description				Tier 2	Tier 2	Tier 2		Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2		Tier 2
Lithology				Bedrock	Bedrock	Bedrock		Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock		Bedrock
Sample Type	Units	2024 AEPA Tier 1	UCL			Field Duplicate	RPD (%)						Field Duplicate	RPD (%)	
Field Parameters															
Dissolved Oxygen, Field	mg/L	n/v	n/v	2.75	2.04	-	-	3.8	7.2	0.7	2.5	1.95	-	-	1.86
Electrical Conductivity, Field	µS/cm	1,000[A]	n/v	**2,642[A]**	**2,642[A]**	-	-	**2,607[A]**	**2,646[A]**	**2,731[A]**	2.647	**2,953[A]**	-	-	**2,814[A]**
Oxidation Reduction Potential, field	mV	n/v	n/v	-4.7	-103	-	-	-29.1	-31.7	-47.3	-78.8	-18.2	-	-	-11.5
pH, Field	S.U.	6.5-8.5[A]	n/v	7.23	7.05	-	-	7.15	7.40	7.20	7.13	7.11	-	-	7.1
Temperature, Field	deg C	n/v	n/v	3.89	6.8	-	-	3.0	13.7	5.2	10.2	7.4	-	-	11.04
Calculated Parameters															
Anion Sum	meq/L	n/v	n/v	-	32	32	nc	32	33	33	35	36	37	nc	34
Cation Sum	meq/L	n/v	n/v	-	33	32	nc	31	34	35	36	33	34	nc	32
Hardness (as CaCO3)	mg/L	n/v	n/v	485	480	470	0%	470	540	520	550	550	560	2%	510
Ion Balance	%	n/v	n/v	108	1.3	0.36	nc	1.3	1.4	3.6	0.47	3.9	4.3	nc	-
Ion Balance % Difference	%	n/v	n/v	-	-	-	-	-	-	-	-	-	-	-	3.5
Nitrate	mg/L	13_f[A]	n/v	<0.5	<0.044	0.093	nc	<0.044	<0.044	<0.044	<0.044	<0.044	<0.044	nc	<0.18
Nitrate + Nitrite (as N)	mg/L	100[A]	n/v	<0.02	<0.010	0.021	nc	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	nc	<0.040
Nitrite	mg/L	$0.197/1.97_{n4.a}$[A]	n/v	<0.05	<0.033	<0.033	nc	<0.033	<0.033	<0.033	<0.033	<0.033	<0.033	nc	<0.13
Total Dissolved Solids	mg/L	500[A]	2,558[B]	**1,850[A]**	**2,000[A]**	**2,000[A]**	0%	**2,000[A]**	**2,100[A]**	**2,100[A]**	**2,200[A]**	**2,200[A]**	**2,300[A]**	4%	**2,100[A]**
Sodium Adsorption Ratio (SAR)	none	5[A]	n/v	**9.60[A]**	-	-	-	-	-	-	-	-	-	-	-
BTEX and Petroleum Hydrocarbons															
Benzene	mg/L	0.005[A]	n/v	<0.0005	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040
Toluene	mg/L	0.024[A]	n/v	<0.0003	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040
Ethylbenzene	mg/L	0.0016[A]	n/v	<0.0005	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040
Xylene, m & p-	mg/L	n/v	n/v	-	<0.00080	<0.00080	nc	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	nc	<0.00080
Xylene, o-	mg/L	n/v	n/v	-	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040
Xylenes, Total	mg/L	0.02[A]	n/v	<0.0005	<0.00089	<0.00089	nc	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	nc	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	n/v	<0.1	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	n/v	<0.1	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	n/v	<0.1	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10
Miscellaneous Inorganics															
Dissolved Organic Carbon (DOC)	mg/L	n/v	4.8[B]	4	3.6	4.1	5%	3.9	3.7	3.3	3.3 PRH	3.6	3.3	9%	3.9
Electrical Conductivity, Lab	µS/cm	1,000[A]	3,378[B]	**2,760[A]**	**2,600[A]**	**2,700[A]**	0%	**2,700[A]**	**2,700[A]**	**2,700[A]**	**2,900[A]**	**2,900[A]**	**2,900[A]**	0%	**2,800[A]**
pH, lab	S.U.	6.5-8.5[A]	9.76[B]	8.24	8.01	7.91	nc	8.01	7.79	8.00	7.90	7.97	7.36	nc	7.85
Anions															
Alkalinity (P as CaCO3)	mg/L	n/v	n/v	<5	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	nc	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	n/v	519	620	600	2%	590	590	530	580	580	570	2%	600
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	n/v	634	750	730	1%	720	720	640	710	710	700	1%	740
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	n/v	<5	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	nc	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	n/v	<5	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	nc	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	1,477[B]	**883[A]**	**940[A]**	**970[A]**	1%	**980[A]**	**1,000[A]**	**1,100[A]**	**1,100[A]**	**1,200[A]**	**1,200[A]**	0%	**1,100[A]**
Chloride	mg/L	100[A]	n/v	<1.0	1.2	1.4	nc	1.2	<1.0	<1.0	<1.0	<1.0	<1.0	nc	<1.0
Fluoride	mg/L	1[A]	n/v	0.19	-	-	-	-	-	-	-	-	-	-	-
Nutrients															
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	n/v	<0.01	<0.010	<0.010	nc	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	nc	<0.040
Orthophosphate (as P)	mg/L	n/v	n/v	<0.15	<0.0030	0.0043	nc	0.0032	<0.0030	0.0036	<0.0030	<0.0030	<0.0030	nc	-
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	1.31[B]	**1.14[A]**	**1.0[A]**	**1.1[A]**	10%	**1.0[A]**	**1.0[A]**	**1.1[A]**	**1.0[A]**	**1.1[A]**	**1.1[A]**	0%	**1.1[A]**
Nitrate (as N)	mg/L	3[A]	n/v	<0.02	<0.010	0.021	nc	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	nc	<0.040
Phosphorus, Dissolved	mg/L	n/v	n/v	-	-	-	-	-	-	-	-	-	-	-	<0.0030
Phosphorus, Total (Dissolved)	mg/L	n/v	n/v	-	<0.0030	<0.0030	nc	<0.0030	0.0042	<0.0030 P2	<0.0030 PRH	<0.0030	<0.0030	nc	-
Phosphorus, Total	mg/L	n/v	n/v	-	-	-	-	-	-	-	-	-	-	-	0.013
Total Kjeldahl Nitrogen	mg/L	n/v	6.1[B]	5.66	1.27	1.30	7%	1.39	1.13	1.52	1.28	1.3	1.3	0%	1.4
Nitrogen	mg/L	n/v	n/v	-	1.3	1.3 DB	7%	1.4 DB	1.1	1.5	1.3	1.3	1.3	0%	1.4
Metals - Dissolved															
Aluminum	mg/L	$0.007/0.05_{n1.e}$[A]	n/v	**0.102[A]**	<0.0030	<0.0030	nc	<0.0030	<0.0030	<0.0030	<0.0030	0.0045	**0.018[A]**	nc	<0.0030
Antimony	mg/L	0.006[A]	n/v	<0.001	<0.00060	<0.00060	nc	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	nc	<0.00060
Arsenic	mg/L	0.005[A]	n/v	<0.001	<0.00020	<0.00020	nc	0.00026	<0.00020	0.00020	<0.00020	<0.00020	<0.00020	nc	0.00026
Barium	mg/L	2[A]	n/v	<0.05	<0.010	<0.010	nc	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	nc	<0.010
Beryllium	mg/L	n/v	n/v	<0.0005	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010
Boron	mg/L	1[A]	0.19[B]	0.15	0.15	0.14	7%	0.15	0.15	0.12	0.13	0.13	0.13	0%	0.15
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	n/v	0.000035	<0.00002	<0.000020	nc	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	nc	<0.000020

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location				RMW16-19-19											
Sample Date				1-Dec-21	6-May-22	17-Nov-22		17-Nov-22	18-May-23	27-Oct-23	16-May-24	26-Sep-24	26-Sep-24		6-Jun-25
Sample ID				RMW16-19-19	RMW16-19-19	22-12		RMW16-19-19	RMW16-19-19	RMW16-19-19	RMW16-19-19	RMW16-19-19	SR24-10		RMW16-19-19
Sampling Company				STANTEC	STANTEC	STANTEC		STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC		STANTEC
Laboratory				AGAT	BV	BV		BV	BV	BV	BV	BV	BV		BV
Laboratory Work Order				21C838865	C230432	C291130		C291130	C335681	C387774	C435132	C476935	C476935		C551949
Laboratory Sample ID				3284875	ASQ365	BHF770		BHF764	BQS286	CDB052	CNR330	CWM898	CWM902		DMO153
Location Description				Tier 2	Tier 2	Tier 2		Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2		Tier 2
Lithology				Bedrock	Bedrock	Bedrock		Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock		Bedrock
Sample Type	Units	2024 AEPA Tier 1	UCL			Field Duplicate	RPD (%)						Field Duplicate	RPD (%)	
Calcium	mg/L	n/v	156[B]	119	110	110	0%	110	130	120	130	130	130	0%	120
Chromium	mg/L	0.05[A]	n/v	<0.0005	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010
Cobalt	mg/L	n/v	n/v	<0.0009	<0.00030	<0.00030	nc	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	nc	<0.00030
Copper	mg/L	0.007[A]	n/v	<0.0008	<0.0010	<0.0010	nc	<0.0010	0.0025	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010
Iron	mg/L	0.3[A]	n/v	<0.1	<0.060	<0.060	nc	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	nc	**2.5[A]**
Lead	mg/L	0.001/0.007$_{n3}$[A]	n/v	0.0002	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020
Lithium	mg/L	n/v	0.1[B]	-	0.053	0.053	nc	0.054	0.053	0.056	0.062	0.069	0.093	nc	0.034
Magnesium	mg/L	n/v	68[B]	45.6	49	46	0%	46	55	52	55	56	56	0%	51
Manganese	mg/L	0.02[A]	0.45[B]	**0.248[A]**	**0.28[A]**	**0.30[A]**	3%	**0.29[A]**	**0.32[A]**	**0.33[A]**	**0.31[A]**	**0.35[A]**	**0.35[A]**	0%	**0.33[A]**
Mercury	mg/L	0.000005[A]	0.000046[B]	-	<0.0000019	<0.0000019	nc	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	nc	<0.0000019
Molybdenum	mg/L	n/v	0.00261[B]	0.002	0.0015	0.0014	0%	0.0014	0.0011	0.0012	0.0011	0.0012	0.0012	0%	0.0012
Nickel	mg/L	0/0.17$_{n3}$[A]	n/v	***<0.003***	***<0.00050***	***<0.00050***	nc	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***	nc	***<0.00050***
Phosphorus	mg/L	n/v	n/v	<0.08	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10
Potassium	mg/L	n/v	6.7[B]	5.3	5.7	5.2	0%	5.2	5.9	5.4	5.4	5.5	5.5	0%	5.1
Selenium	mg/L	0.002[A]	n/v	<0.0005	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020
Silicon	mg/L	n/v	4.3[B]	-	3.6	3.3	0%	3.3	3.7	3.5	3.2	3.4	3.4	0%	3.6
Silver	mg/L	0.00025[A]	n/v	<0.00005	<0.00010	<0.00010	nc	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	nc	<0.00010
Sodium	mg/L	200[A]	645[B]	**486[A]**	**530[A]**	**510[A]**	2%	**500[A]**	**530[A]**	**560[A]**	**560[A]**	**500[A]**	**520[A]**	4%	**490[A]**
Strontium	mg/L	n/v	2.4[B]	-	1.8	1.8	0%	1.8	2.0	1.9	1.8	2.1	2.1	0%	1.9
Sulfur	mg/L	n/v	416[B]	-	320	290	0%	290	310	310	310	340	340	0%	360
Thallium	mg/L	n/v	n/v	<0.0001	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020
Tin	mg/L	n/v	n/v	-	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	0.0018
Titanium	mg/L	n/v	n/v	0.002	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010
Uranium	mg/L	0.01[A]	0.003[B]	0.002	0.00088	0.00087	0%	0.00087	0.00086	0.00090	0.00080	0.00089	0.00089	0%	0.00082
Vanadium	mg/L	n/v	n/v	-	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010
Zinc	mg/L	0.03[A]	n/v	<0.005	<0.0030	<0.0030	nc	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	nc	<0.0030
Metals - Total															
Mercury	mg/L	0.000005[A]	0.000046[B]	**0.000041[A]**	**0.0000099[A]**	**0.0000131[A]**	nc	**0.0000093[A]**	**0.0000077[A]**	0.0000028	<0.0000019	<0.0000019	<0.0000019	nc	<0.0000019
Phosphorus	mg/L	n/v	n/v	8.71	-	-	-	-	-	-	-	-	-	-	-
Microbiological Parameters															
Escherichia coli (E.Coli)	mpn/100mL	n/v	n/v	1	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	nc	<1.0
Fecal Coliforms	mpn/100mL	n/v	n/v	2	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	nc	<1.0
Heterotrophic Plate Count	cfu/mL	n/v	n/v	1,350	140	1,500 SC1	**93%**	550	1,300	16	-	-	-	-	-
Heterotrophic Plate Count	mpn/100mL	n/v	n/v	-	-	-	-	-	-	-	21	820	820	0%	>2400
Total Coliforms	mpn/100mL	n/v	n/v	86	5.2	<1.0	nc	<1.0	<1.0	<1.0	1.0	<1.0	<1.0	nc	1.0

See notes on the last page

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			RMW16-23-13						
Sample Date			13-May-22	18-Nov-22	18-May-23	18-May-23		25-Oct-23	15-May-24
Sample ID			RMW16-23-13	RMW16-23-14	RMW16-23-14	WS2023-3		RMW16-23-14	RMW 16-23-14
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC		STANTEC	STANTEC
Laboratory			BV	BV	BV	BV		BV	BV
Laboratory Work Order			C232198	C291479	C335681	C335681		C386944	C435079
Laboratory Sample ID			ASZ834	BHH853	BQS284	BQS292		CCW512	CNR025
Location Description			Tier 2	Tier 2	Tier 2	Tier 2		Tier 2	Tier 2
Sample Type	Units	2024 AEPA Tier 1	Bedrock	Bedrock	Bedrock	Bedrock Field Duplicate	RPD (%)	Bedrock	Bedrock
Field Parameters									
Dissolved Oxygen, Field	mg/L	n/v	4.73	4.2	3.6	-	-	1.2	1.2
Electrical Conductivity, Field	µS/cm	1,000[A]	**1,257[A]**	**1,015[A]**	**1,064[A]**	-	-	**1,355[A]**	1.355
Oxidation Reduction Potential, field	mV	n/v	81.2	-22.6	93.2	-	-	-254.2	-254.2
pH, Field	S.U.	6.5-8.5[A]	7.49	7.18	7.55	-	-	7.35	7.35
Temperature, Field	deg C	n/v	6.9	6.8	13.7	-	-	2.4	2.4
Calculated Parameters									
Anion Sum	meq/L	n/v	13	13	13	13	nc	12	13
Cation Sum	meq/L	n/v	13	13	17	16	nc	14	13
Hardness (as CaCO3)	mg/L	n/v	340	310	380	360	5%	320	380
Ion Balance	%	n/v	1.1	0.83	13	7.1	nc	7.0	1.7
Nitrate	mg/L	13[A]	0.24	<0.044	<0.044	<0.044	nc	<0.044	<0.044
Nitrate + Nitrite (as N)	mg/L	100[A]	0.054 AT	<0.010	<0.010	<0.010	nc	<0.010	<0.010
Nitrite	mg/L	$0.197/1.97_{n4.a}$[A]	<0.033	<0.033	<0.033	<0.033	nc	<0.033	<0.033
Total Dissolved Solids	mg/L	500[A]	**750[A]**	**740[A]**	**810[A]**	**810[A]**	0%	**750[A]**	**730[A]**
BTEX and Petroleum Hydrocarbons									
Benzene	mg/L	0.005[A]	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	<0.00080	<0.00080	<0.00080	<0.00080	nc	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	<0.00089	<0.00089	<0.00089	<0.00089	nc	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10
Miscellaneous Inorganics									
Dissolved Organic Carbon (DOC)	mg/L	n/v	2.5	1.9	1.4	1.3	nc	1.4	1.3
Electrical Conductivity, Lab	µS/cm	1,000[A]	**1,200[A]**	**1,200[A]**	**1,200[A]**	**1,200[A]**	0%	**1,100[A]**	**1,100[A]**
pH, lab	S.U.	6.5-8.5[A]	7.97	7.85	8.00	7.84	nc	8.03	8.14
Anions									
Alkalinity (P as CaCO3)	mg/L	n/v	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	390	370	370	410	10%	350	380
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	480	460	450	500	11%	430	460
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	**240[A]**	**240[A]**	**240[A]**	**240[A]**	0%	**230[A]**	**220[A]**
Chloride	mg/L	100[A]	16	15	13	13	0%	17	24
Nutrients									
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	<0.010	<0.010	<0.010	<0.010	nc	<0.010	<0.010
Orthophosphate (as P)	mg/L	n/v	<0.0030	0.0048	<0.0030	<0.0030	nc	<0.0030	<0.0030
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	**0.24[A]**	**0.45[A]**	**0.56[A]**	**0.56[A]**	0%	**0.66[A]**	**0.48[A]**
Nitrate (as N)	mg/L	3[A]	0.054	<0.010	<0.010	<0.010	nc	<0.010	<0.010
Phosphorus, Total (Dissolved)	mg/L	n/v	<0.0030	<0.0030	<0.0030	<0.0030	nc	<0.0030	<0.0030
Total Kjeldahl Nitrogen	mg/L	n/v	0.37	0.751	0.571	0.583	2%	0.611	0.769
Nitrogen	mg/L	n/v	0.42 DB	0.75	0.57	0.58	2%	0.61 NNA	0.77
Metals - Dissolved									
Aluminum	mg/L	$0.007/0.05_{n1.e}$[A]	<0.0030	<0.0030	<0.0030	0.0040	nc	<0.0030	<0.0030
Antimony	mg/L	0.006[A]	0.00061	<0.00060	<0.00060	<0.00060	nc	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	0.00021	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020
Barium	mg/L	2[A]	0.030	0.021	0.020	0.019	nc	0.017	0.016
Beryllium	mg/L	n/v	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010
Boron	mg/L	1[A]	0.070	0.054	0.080	0.079	nc	0.064	0.060
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	0.000030	**0.000042[A]**	0.00003	<0.000020	nc	0.000020	<0.000020
Calcium	mg/L	n/v	79	76	90	84	7%	82	93
Chromium	mg/L	0.05[A]	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010
Cobalt	mg/L	n/v	0.00047	<0.00030	<0.00030	<0.00030	nc	<0.00030	<0.00030
Copper	mg/L	0.007[A]	<0.0010	<0.0010	0.0019	0.0022	nc	<0.0010	<0.0010
Iron	mg/L	0.3[A]	<0.060	<0.060	<0.060	<0.060	nc	<0.060	<0.060

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			RMW16-23-13						
Sample Date			13-May-22	18-Nov-22	18-May-23	18-May-23		25-Oct-23	15-May-24
Sample ID			RMW16-23-13	RMW16-23-14	RMW16-23-14	WS2023-3		RMW16-23-14	RMW 16-23-14
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC		STANTEC	STANTEC
Laboratory			BV	BV	BV	BV		BV	BV
Laboratory Work Order			C232198	C291479	C335681	C335681		C386944	C435079
Laboratory Sample ID			ASZ834	BHH853	BQS284	BQS292		CCW512	CNR025
Location Description			Tier 2	Tier 2	Tier 2	Tier 2		Tier 2	Tier 2
Sample Type	Units	2024 AEPA Tier 1	Bedrock	Bedrock	Bedrock	Bedrock Field Duplicate	RPD (%)	Bedrock	Bedrock
Lead	mg/L	0.001/0.007$_{n3}$[A]	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020
Lithium	mg/L	n/v	0.030	0.033	0.042	0.040	nc	0.041	0.034
Magnesium	mg/L	n/v	35	30	37	35	6%	29	37
Manganese	mg/L	0.02[A]	**0.42[A]**	**0.21[A]**	**0.20[A]**	**0.19[A]**	5%	**0.17[A]**	**0.12[A]**
Mercury	mg/L	0.000005[A]	<0.0000019	<0.0000019	<0.0000019	<0.0000019	nc	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	0.0066	0.0014	0.0012	0.0012	0%	0.0014	0.0011
Nickel	mg/L	0/0.17$_{n3}$[A]	**0.00085[A]**	***<0.00050***	***<0.00050***	***<0.00050***	nc	***<0.00050***	***<0.00050***
Phosphorus	mg/L	n/v	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10
Potassium	mg/L	n/v	4.9	4.3	5.5	5.0	10%	4.8	4.5
Selenium	mg/L	0.002[A]	0.00039	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020
Silicon	mg/L	n/v	4.2	3.6	4.8	4.7	2%	4.3	4.2
Silver	mg/L	0.00025[A]	<0.00010	<0.00010	<0.00010	<0.00010	nc	<0.00010	<0.00010
Sodium	mg/L	200[A]	140	150	200	190	5%	170	120
Strontium	mg/L	n/v	0.55	0.83	0.93	0.87	7%	1.0	0.96
Sulfur	mg/L	n/v	79	62	76	82	8%	77	72
Thallium	mg/L	n/v	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020
Tin	mg/L	n/v	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010
Titanium	mg/L	n/v	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	0.0023	0.00050	0.00033	0.00032	nc	0.00028	0.00044
Vanadium	mg/L	n/v	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	<0.0030	<0.0030	<0.0030	<0.0030	nc	<0.0030	<0.0030
Metals - Total									
Mercury	mg/L	0.000005[A]	**0.0000211[A]**	<0.0000019	<0.0000019	0.0000027	nc	<0.0000019	<0.0000019
Microbiological Parameters									
Escherichia coli (E.Coli)	mpn/100mL	n/v	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0
Fecal Coliforms	mpn/100mL	n/v	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0
Heterotrophic Plate Count	cfu/mL	n/v	35	1,200	780	740	5%	110	-
Heterotrophic Plate Count	mpn/100mL	n/v	-	-	-	-	-	-	330
Total Coliforms	mpn/100mL	n/v	8.6	9.7	1.0	1.0	nc	<1.0	<1.0

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			RMW16-23-14	
Sample Date			26-Sep-24	6-Jun-25
Sample ID			RMW16-23-14	RMW16-23-14
Sampling Company			STANTEC	STANTEC
Laboratory			BV	BV
Laboratory Work Order			C476935	C551949
Laboratory Sample ID			CWM900	DMO151
Location Description			Tier 2	Tier 2
Sample Type	Units	2024 AEPA Tier 1	Bedrock	Bedrock
Field Parameters				
Dissolved Oxygen, Field	mg/L	n/v	1.05	5.86
Electrical Conductivity, Field	µS/cm	1,000[A]	**1,172[A]**	**1,179[A]**
Oxidation Reduction Potential, field	mV	n/v	-10	22.5
pH, Field	S.U.	6.5-8.5[A]	7.18	7.35
Temperature, Field	deg C	n/v	7.5	8.72
Calculated Parameters				
Anion Sum	meq/L	n/v	13	13
Cation Sum	meq/L	n/v	13	13
Hardness (as CaCO3)	mg/L	n/v	390	400
Ion Balance	%	n/v	1.7	-
Ion Balance % Difference	%	n/v	-	1.0
Nitrate	mg/L	13_{f}[A]	0.14	<0.18
Nitrate + Nitrite (as N)	mg/L	100[A]	0.031	<0.040
Nitrite	mg/L	$0.197/1.97_{n4.o}$[A]	<0.033	<0.13
Total Dissolved Solids	mg/L	500[A]	**730[A]**	**740[A]**
BTEX and Petroleum Hydrocarbons				
Benzene	mg/L	0.005[A]	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10	<0.10
Miscellaneous Inorganics				
Dissolved Organic Carbon (DOC)	mg/L	n/v	1.2	1.7
Electrical Conductivity, Lab	µS/cm	1,000[A]	**1,100[A]**	**1,200[A]**
pH, lab	S.U.	6.5-8.5[A]	8.04	8.03
Anions				
Alkalinity (P as CaCO3)	mg/L	n/v	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	380	390
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	460	470
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	**210[A]**	**230[A]**
Chloride	mg/L	100[A]	26	29
Nutrients				
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	<0.010	<0.040
Orthophosphate (as P)	mg/L	n/v	<0.0030	-
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	**0.46[A]**	**0.44[A]**
Nitrate (as N)	mg/L	3[A]	0.031	<0.040
Phosphorus, Dissolved	mg/L	n/v	-	<0.0030
Phosphorus, Total (Dissolved)	mg/L	n/v	<0.0030	-
Phosphorus, Total	mg/L	n/v	-	0.0046
Total Kjeldahl Nitrogen	mg/L	n/v	0.51	0.66
Nitrogen	mg/L	n/v	0.54	0.66
Metals - Dissolved				
Aluminum	mg/L	$0.007/0.05_{n1.e}$[A]	0.0034	0.0033
Antimony	mg/L	0.006[A]	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	<0.00020	<0.00020
Barium	mg/L	2[A]	0.014	0.013
Beryllium	mg/L	n/v	<0.0010	<0.0010
Boron	mg/L	1[A]	0.053	0.059
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	<0.000020	<0.000020
Calcium	mg/L	n/v	93	96
Chromium	mg/L	0.05[A]	<0.0010	<0.0010

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			RMW16-23-14	
Sample Date			26-Sep-24	6-Jun-25
Sample ID			RMW16-23-14	RMW16-23-14
Sampling Company			STANTEC	STANTEC
Laboratory			BV	BV
Laboratory Work Order			C476935	C551949
Laboratory Sample ID			CWM900	DMO151
Location Description			Tier 2	Tier 2
Sample Type	Units	2024 AEPA Tier 1	Bedrock	Bedrock
Cobalt	mg/L	n/v	<0.00030	<0.00030
Copper	mg/L	0.007[A]	<0.0010	<0.0010
Iron	mg/L	0.3[A]	<0.060	**0.54[A]**
Lead	mg/L	0.001/0.007$_{n3}$[A]	<0.00020	<0.00020
Lithium	mg/L	n/v	0.030	0.025
Magnesium	mg/L	n/v	38	38
Manganese	mg/L	0.02[A]	**0.13[A]**	**0.13[A]**
Mercury	mg/L	0.000005[A]	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	0.0013	0.0011
Nickel	mg/L	0/0.17$_{n3}$[A]	***<0.00050***	***<0.00050***
Phosphorus	mg/L	n/v	<0.10	<0.10
Potassium	mg/L	n/v	4.5	4.4
Selenium	mg/L	0.002[A]	<0.00020	<0.00020
Silicon	mg/L	n/v	4.0	4.4
Silver	mg/L	0.00025[A]	<0.00010	<0.00010
Sodium	mg/L	200[A]	120	110
Strontium	mg/L	n/v	0.99	0.91
Sulfur	mg/L	n/v	63	77
Thallium	mg/L	n/v	<0.00020	<0.00020
Tin	mg/L	n/v	<0.0010	<0.0010
Titanium	mg/L	n/v	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	0.00052	0.00053
Vanadium	mg/L	n/v	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	<0.0030	<0.0030
Metals - Total				
Mercury	mg/L	0.000005[A]	<0.0000019	<0.0000019
Microbiological Parameters				
Escherichia coli (E.Coli)	mpn/100mL	n/v	<1.0	<1.0
Fecal Coliforms	mpn/100mL	n/v	<1.0	<1.0
Heterotrophic Plate Count	mpn/100mL	n/v	980	440
Total Coliforms	mpn/100mL	n/v	<1.0	2.0

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			RMW16-23-32													
Sample Date			13-May-22	13-May-22	18-Nov-22	18-May-23	25-Oct-23	25-Oct-23		15-May-24	15-May-24		26-Sep-24	6-Jun-25	6-Jun-25	
Sample ID			RMW 16-23-36(32)	RMW 16-23-36(32)	RMW16-23-32	RMW16-23-32	RMW16-23-32	23-11		RMW 16-23-32	SR24-03		RMW16-23-32	RMW16-23-32	SR25-03	
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC		STANTEC	STANTEC		STANTEC	STANTEC	STANTEC	
Laboratory			BV	BV	BV	BV	BV	BV		BV	BV		BV	BV	BV	
Laboratory Work Order			C232198	SRI-2022-FIELD_DATA	C291479	C335681	C386944	C386944		C435079	C435079		C476935	C551949	C551949	
Laboratory Sample ID			ASZ833	UNKNOWN	BHH854	BQS285	CCW513	CCW516		CNR026	CNR028		CWM901	DMO150	DMO159	
Location Description			Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2		Tier 2	Tier 2		Tier 2	Tier 2	Tier 2	
Sample Type	Units	2024 AEPA Tier 1	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock Field Duplicate	RPD (%)	Bedrock	Bedrock Field Duplicate	RPD (%)	Bedrock	Bedrock	Bedrock Field Duplicate	RPD (%)
Field Parameters																
Dissolved Oxygen, Field	mg/L	n/v	3.6	3.59	6.1	4.9	1.8	-	-	1.8	-	-	1.5	4.13	-	-
Electrical Conductivity, Field	µS/cm	1,000[A]	**1,169[A]**	**1,169[A]**	**1,166[A]**	**1,071[A]**	**1,224[A]**	-	-	1.083	-	-	**1,191[A]**	**1,182[A]**	-	-
Oxidation Reduction Potential, field	mV	n/v	27.1	27.1	-23.8	78.2	-268.0	-	-	-57.7	-	-	54.4	-3.5	-	-
pH, Field	S.U.	6.5-8.5[A]	7.71	7.71	7.79	7.68	7.90	-	-	7.82	-	-	7.8	8.05	-	-
Temperature, Field	deg C	n/v	5.5	5.5	5.8	9.0	2.4	-	-	7.6	-	-	6.7	7.44	-	-
Calculated Parameters																
Anion Sum	meq/L	n/v	12	-	13	13	12	13	nc	13	13	nc	14	13	13	nc
Cation Sum	meq/L	n/v	12	-	14	16	13	12	nc	14	13	nc	14	14	13	nc
Hardness (as CaCO3)	mg/L	n/v	63	-	67	81	65	64	2%	71	69	3%	69	70	68	3%
Ion Balance	%	n/v	1.3	-	2.7	10	1.0	0.93	nc	2.7	1.7	nc	0.94	-	-	-
Ion Balance % Difference	%	n/v	-	-	-	-	-	-	-	-	-	-	-	1.1	0.73	nc
Nitrate	mg/L	13_f[A]	0.051	-	0.056	<0.044	0.056	0.082	nc	<0.044	<0.044	nc	<0.044	<0.18	<0.18	nc
Nitrate + Nitrite (as N)	mg/L	100[A]	0.012	-	0.013	<0.010	0.013	0.019	nc	<0.010	<0.010	nc	<0.010	<0.040	<0.040	nc
Nitrite	mg/L	$0.197/1.97_{n4.o}$[A]	<0.033	-	<0.033	<0.033	<0.033	<0.033	nc	<0.033	<0.033	nc	<0.033	<0.13	<0.13	nc
Total Dissolved Solids	mg/L	500[A]	**660[A]**	-	**750[A]**	**780[A]**	**700[A]**	**710[A]**	1%	**730[A]**	**720[A]**	1%	**760[A]**	**750[A]**	**740[A]**	1%
BTEX and Petroleum Hydrocarbons																
Benzene	mg/L	0.005[A]	<0.00040	-	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	nc
Toluene	mg/L	0.024[A]	<0.00040	-	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	nc
Ethylbenzene	mg/L	0.0016[A]	<0.00040	-	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	nc
Xylene, m & p-	mg/L	n/v	<0.00080	-	<0.00080	<0.00080	<0.00080	<0.00080	nc	<0.00080	<0.00080	nc	<0.00080	<0.00080	<0.00080	nc
Xylene, o-	mg/L	n/v	<0.00040	-	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	nc
Xylenes, Total	mg/L	0.02[A]	<0.00089	-	<0.00089	<0.00089	<0.00089	<0.00089	nc	<0.00089	<0.00089	nc	<0.00089	<0.00089	<0.00089	nc
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10	-	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	nc	<0.10	<0.10	<0.10	nc
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10	-	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	nc	<0.10	<0.10	<0.10	nc
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10	-	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	nc	<0.10	<0.10	<0.10	nc
Miscellaneous Inorganics																
Dissolved Organic Carbon (DOC)	mg/L	n/v	1.7	-	1.1	1.3	1.1	1.1	nc	1.5	1.2	nc	0.99	1.2	1.2	nc
Electrical Conductivity, Lab	µS/cm	1,000[A]	**1,200[A]**	-	**1,200[A]**	**1,200[A]**	**1,200[A]**	**1,200[A]**	0%	**1,200[A]**	**1,200[A]**	0%	**1,200[A]**	**1,200[A]**	**1,200[A]**	0%
pH, lab	S.U.	6.5-8.5[A]	8.37	-	8.27	8.26	8.28	8.44	nc	8.40	8.41	nc	8.39	8.34	8.39	nc
Anions																
Alkalinity (P as CaCO3)	mg/L	n/v	4.5	-	<1.0	<1.0	<1.0	6.8	nc	3.9	4.8	nc	6.3	1.2	4.8	nc
Alkalinity, Total (as CaCO3)	mg/L	n/v	480	-	530	530	510	510	0%	540	530	2%	590	540	540	0%
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	570	-	640	650	620	610	2%	650	640	2%	700	660	650	2%
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	5.4	-	<1.0	<1.0	<1.0	8.2	nc	4.7	5.8	nc	7.6	1.4	5.8	nc
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<1.0	-	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0	nc	<1.0	<1.0	<1.0	nc
Sulfate	mg/L	$128/429_{n3}$[A]	110	-	120	100	110	120	9%	100	100	0%	100	120	120	0%
Chloride	mg/L	100[A]	<1.0	-	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0	nc	<1.0	<1.0	<1.0	nc
Nutrients																
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	<0.010	-	<0.010	<0.010	<0.010	<0.010	nc	<0.010	<0.010	nc	<0.010	<0.040	<0.040	nc
Orthophosphate (as P)	mg/L	n/v	0.0076	-	0.0094	0.0070	0.0074	0.0073	nc	0.0074	0.0083	nc	0.0088	-	-	-
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	**0.80[A]**	-	**0.75[A]**	**0.72[A]**	**0.76[A]**	**0.83[A]**	9%	**0.81[A]**	**0.81[A]**	0%	**0.79[A]**	**0.80[A]**	**0.82[A]**	2%
Nitrate (as N)	mg/L	3[A]	0.012	-	0.013	<0.010	0.013	0.019	nc	<0.010	<0.010	nc	<0.010	<0.040	<0.040	nc
Phosphorus, Dissolved	mg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	0.0074	0.0071	nc
Phosphorus, Total (Dissolved)	mg/L	n/v	0.0078	-	0.0051	0.0044 P2	0.0033 P2	0.0050 P2	nc	0.0061 P2	0.0056 P2	nc	0.0054 P2	-	-	-
Phosphorus, Total	mg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	0.0081	0.0079	nc
Total Kjeldahl Nitrogen	mg/L	n/v	0.989	-	0.927	0.759	0.809	0.866	7%	0.880	0.891	1%	0.89	0.93	0.94	1%
Nitrogen	mg/L	n/v	1.0	-	0.94	0.76	0.82	0.88	7%	0.88	0.89	1%	0.89	0.93	0.94	1%
Metals - Dissolved																
Aluminum	mg/L	$0.007/0.05_{n1.e}$[A]	0.0033	-	<0.0030	<0.0030	<0.0030	<0.0030	nc	<0.0030	<0.0030	nc	<0.0030	<0.0030	<0.0030	nc
Antimony	mg/L	0.006[A]	<0.00060	-	<0.00060	<0.00060	<0.00060	<0.00060	nc	<0.00060	<0.00060	nc	<0.00060	<0.00060	<0.00060	nc
Arsenic	mg/L	0.005[A]	0.00056	-	0.00046	0.00054	0.00052	0.00049	nc	0.00046	0.00051	nc	0.00058	0.00053	0.00060	nc
Barium	mg/L	2[A]	0.019	-	0.020	0.022	0.017	0.017	nc	0.020	0.017	nc	0.017	0.017	0.016	nc
Beryllium	mg/L	n/v	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	nc
Boron	mg/L	1[A]	0.087	-	0.080	0.090	0.074	0.076	nc	0.083	0.081	nc	0.081	0.085	0.086	nc
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	<0.00002	-	<0.000020	<0.000020	<0.000020	<0.000020	nc	<0.000020	<0.000020	nc	<0.000020	<0.000020	<0.000020	nc
Calcium	mg/L	n/v	17	-	18	21	16	16	0%	19	18	5%	18	18	18	0%
Chromium	mg/L	0.05[A]	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	nc

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			RMW16-23-32														
Sample Date			13-May-22	13-May-22	18-Nov-22	18-May-23	25-Oct-23	25-Oct-23		15-May-24	15-May-24		26-Sep-24	6-Jun-25	6-Jun-25	
Sample ID			RMW 16-23-36(32)	RMW 16-23-36(32)	RMW16-23-32	RMW16-23-32	RMW16-23-32	23-11		RMW 16-23-32	SR24-03		RMW16-23-32	RMW16-23-32	SR25-03	
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC		STANTEC	STANTEC		STANTEC	STANTEC	STANTEC	
Laboratory			BV	BV	BV	BV	BV	BV		BV	BV		BV	BV	BV	
Laboratory Work Order			C232198	SRI-2022-FIELD_DATA	C291479	C335681	C386944	C386944		C435079	C435079		C476935	C551949	C551949	
Laboratory Sample ID			ASZ833	UNKNOWN	BHH854	BQS285	CCW513	CCW516		CNR026	CNR028		CWM901	DMO150	DMO159	
Location Description			Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2		Tier 2	Tier 2		Tier 2	Tier 2	Tier 2	
Sample Type	Units	2024 AEPA Tier 1	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock Field Duplicate	RPD (%)	Bedrock	Bedrock Field Duplicate	RPD (%)	Bedrock	Bedrock	Bedrock Field Duplicate	RPD (%)
Cobalt	mg/L	n/v	<0.00030	-	<0.00030	<0.00030	<0.00030	<0.00030	nc	<0.00030	<0.00030	nc	<0.00030	<0.00030	<0.00030	nc
Copper	mg/L	0.007[A]	<0.0010	-	<0.0010	0.0019	<0.0010	<0.0010	nc	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	nc
Iron	mg/L	0.3[A]	<0.060	-	<0.060	<0.060	<0.060	<0.060	nc	<0.060	<0.060	nc	<0.060	0.16	0.16	nc
Lead	mg/L	0.001/0.007$_{n3}$[A]	<0.00020	-	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	nc
Lithium	mg/L	n/v	0.037	-	0.051	0.050	0.055	0.054	nc	0.063	0.064	nc	0.054	0.13	0.13	0%
Magnesium	mg/L	n/v	5.1	-	5.6	6.8	5.9	5.9	0%	5.8	5.6	4%	5.7	5.8	5.6	4%
Manganese	mg/L	0.02[A]	**0.027[A]**	-	**0.028[A]**	**0.031[A]**	**0.022[A]**	**0.022[A]**	0%	**0.021[A]**	**0.021[A]**	0%	0.020	**0.022[A]**	**0.021[A]**	5%
Mercury	mg/L	0.000005[A]	<0.0000019	-	<0.0000019	<0.0000019	<0.0000019	0.0000022	nc	<0.0000019	<0.0000019	nc	<0.0000019	<0.0000019	<0.0000019	nc
Molybdenum	mg/L	n/v	0.0022	-	0.0021	0.0020	0.0022	0.0022	0%	0.0017	0.0016	6%	0.0020	0.0018	0.0018	0%
Nickel	mg/L	0/0.17$_{n3}$[A]	***<0.00050***	-	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***	nc	***<0.00050***	***<0.00050***	nc	***<0.00050***	***<0.00050***	***<0.00050***	nc
Phosphorus	mg/L	n/v	<0.10	-	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	nc	<0.10	<0.10	<0.10	nc
Potassium	mg/L	n/v	2.5	-	2.6	3.2	2.3	2.3	0%	2.8	2.7	4%	2.7	2.7	2.7	0%
Selenium	mg/L	0.002[A]	0.00029	-	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	nc
Silicon	mg/L	n/v	3.5	-	3.2	3.9	3.4	3.5	3%	3.4	3.4	0%	3.2	3.6	3.6	0%
Silver	mg/L	0.00025[A]	<0.00010	-	<0.00010	<0.00010	<0.00010	<0.00010	nc	<0.00010	<0.00010	nc	<0.00010	<0.00010	<0.00010	nc
Sodium	mg/L	200[A]	**240[A]**	-	**280[A]**	**320[A]**	**260[A]**	**250[A]**	4%	**280[A]**	**270[A]**	4%	**280[A]**	**280[A]**	**270[A]**	4%
Strontium	mg/L	n/v	0.29	-	0.33	0.36	0.32	0.31	3%	0.33	0.32	3%	0.32	0.32	0.32	0%
Sulfur	mg/L	n/v	38	-	36	38	38	39	3%	37	37	0%	34	41	41	0%
Thallium	mg/L	n/v	<0.00020	-	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	nc
Tin	mg/L	n/v	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	nc	<0.0010	<0.0010	0.0019	nc
Titanium	mg/L	n/v	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	nc
Uranium	mg/L	0.01[A]	0.00024	-	0.00020	0.00018	0.00017	0.00016	nc	0.00014	0.00013	nc	0.00017	0.00012	0.00011	nc
Vanadium	mg/L	n/v	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	nc
Zinc	mg/L	0.03[A]	<0.0030	-	<0.0030	<0.0030	<0.0030	<0.0030	nc	<0.0030	<0.0030	nc	<0.0030	<0.0030	<0.0030	nc
Metals - Total																
Mercury	mg/L	0.000005[A]	0.0000024	-	<0.0000019	<0.0000019	0.0000023	<0.0000019	nc	<0.0000019	<0.0000019	nc	<0.0000019	<0.0000019	<0.0000019	nc
Microbiological Parameters																
Escherichia coli (E.Coli)	mpn/100mL	n/v	<1.0	-	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0	nc	<1.0	<1.0	<1.0	nc
Fecal Coliforms	mpn/100mL	n/v	<1.0	-	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0	nc	<1.0	<1.0	<1.0	nc
Heterotrophic Plate Count	cfu/mL	n/v	110	-	760	87	2.0	1.0	nc	-	-	-	-	-	-	-
Heterotrophic Plate Count	mpn/100mL	n/v	-	-	-	-	-	-	-	11	5.2	**72%**	>2400	1,000	550	**58%**
Total Coliforms	mpn/100mL	n/v	20	-	<1.0	<1.0	<1.0	1.0	nc	<1.0	3.0	nc	<1.0	<1.0	<1.0	nc

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location						RMW16-23-7			
Sample Date			13-May-22	18-Nov-22	18-May-23	25-Oct-23	15-May-24	26-Sep-24	6-Jun-25
Sample ID			RMW16-23-14(7)	RMW16-23-7	RMW16-23-7	RMW16-23-7	RMW 16-23-7	RMW16-23-7	RMW16-23-7
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order			C232198	C291479	C335681	C386944	C435079	C476935	C551949
Laboratory Sample ID			ASZ832	BHH856	BQS283	CCW511	CNR024	CWM899	DMO152
Location Description			Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated
Field Parameters									
Dissolved Oxygen, Field	mg/L	n/v	5.87	4.2	4.2	2.9	2.9	2.32	2.79
Electrical Conductivity, Field	µS/cm	1,000[A]	947	**1,015[A]**	700	**1,041[A]**	0.935	**1,084[A]**	975
Oxidation Reduction Potential, field	mV	n/v	-6.5	-22.6	114.0	-258.1	-17.7	116.7	31
pH, Field	S.U.	6.5-8.5[A]	7.46	7.18	7.49	7.68	7.17	7.37	7.33
Temperature, Field	deg C	n/v	6.4	6.8	12.7	2.0	7.6	7.9	6.39
Calculated Parameters									
Anion Sum	meq/L	n/v	10	11	11	11	11	11	11
Cation Sum	meq/L	n/v	9.7	11	13	11	12	12	12
Hardness (as CaCO3)	mg/L	n/v	390	440	540	460	480	480	480
Ion Balance	%	n/v	2.0	1.7	8.0	1.0	2.6	3.1	-
Ion Balance % Difference	%	n/v	-	-	-	-	-	-	2.2
Nitrate	mg/L	13_f[A]	0.37	<0.044	<0.044	<0.044	<0.044	<0.22	0.19
Nitrate + Nitrite (as N)	mg/L	100[A]	0.098 AT	<0.010	<0.010	<0.010	<0.010	<0.050 MI	0.044
Nitrite	mg/L	$0.197/1.97_{n4.o}$[A]	0.046	<0.033	<0.033	<0.033	<0.033	<0.033	<0.13
Total Dissolved Solids	mg/L	500[A]	**560[A]**	**590[A]**	**630[A]**	**580[A]**	**600[A]**	**610[A]**	**600[A]**
BTEX and Petroleum Hydrocarbons									
Benzene	mg/L	0.005[A]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Miscellaneous Inorganics									
Dissolved Organic Carbon (DOC)	mg/L	n/v	2.8	1.5	2.1	0.97	1.4	1.2	1.5
Electrical Conductivity, Lab	µS/cm	1,000[A]	900	980	980	990	980	990	1,000
pH, lab	S.U.	6.5-8.5[A]	7.98	7.74	7.77	8.06	7.98	7.93	7.92
Anions									
Alkalinity (P as CaCO3)	mg/L	n/v	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	250	340	340	330	330	340	340
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	300	420	410	400	400	410	420
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	**170[A]**	**140[A]**	**140[A]**	**140[A]**	**140[A]**	**140[A]**	**140[A]**
Chloride	mg/L	100[A]	54	47	50	49	51	50	50
Nutrients									
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	0.014	<0.010	<0.010	<0.010	<0.010	<0.010	<0.040
Orthophosphate (as P)	mg/L	n/v	<0.0030	0.0048	<0.0030	<0.0030	<0.0030	<0.0030	-
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	**0.13[A]**	**0.055[A]**	**0.20[A]**	**0.046[A]**	**0.042[A]**	**0.046[A]**	**0.042[A]**
Nitrate (as N)	mg/L	3[A]	0.084	<0.010	<0.010	<0.010	<0.010	<0.050	0.044
Phosphorus, Dissolved	mg/L	n/v	-	-	-	-	-	-	<0.0030
Phosphorus, Total (Dissolved)	mg/L	n/v	0.0066	<0.0030	0.014	<0.0030	<0.0030	<0.0030	-
Phosphorus, Total	mg/L	n/v	-	-	-	-	-	-	0.21
Total Kjeldahl Nitrogen	mg/L	n/v	1.52	<0.20	1.62	0.117	0.133	0.28	0.30
Nitrogen	mg/L	n/v	1.6 DB	<0.20 DB	1.6 DB	0.12	0.13	0.28 DB	0.34 DB
Metals - Dissolved									
Aluminum	mg/L	$0.007/0.05_{n1.e}$[A]	0.0060	<0.0030	0.0040	<0.0030	<0.0030	0.0066	0.0050
Antimony	mg/L	0.006[A]	0.0028	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	0.00039	0.00032	0.00022	<0.00020	<0.00020	<0.00020	0.00025
Barium	mg/L	2[A]	0.11	0.10	0.099	0.063	0.045	0.047	0.047
Beryllium	mg/L	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron	mg/L	1[A]	0.027	<0.020	0.028	0.024	0.021	0.031	0.027
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	<0.00002	**0.000043[A]**	**0.000045[A]**	0.000021	<0.000020	<0.000020	<0.000020
Calcium	mg/L	n/v	99	110	130	100	120	120	110
Chromium	mg/L	0.05[A]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			RMW16-23-7						
Sample Date			13-May-22	18-Nov-22	18-May-23	25-Oct-23	15-May-24	26-Sep-24	6-Jun-25
Sample ID			RMW16-23-14(7)	RMW16-23-7	RMW16-23-7	RMW16-23-7	RMW 16-23-7	RMW16-23-7	RMW16-23-7
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order			C232198	C291479	C335681	C386944	C435079	C476935	C551949
Laboratory Sample ID			ASZ832	BHH856	BQS283	CCW511	CNR024	CWM899	DMO152
Location Description			Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated
Cobalt	mg/L	n/v	0.00036	0.00069	0.00066	0.00072	0.00042	0.00056	0.00060
Copper	mg/L	0.007[A]	<0.0010	<0.0010	0.0020	<0.0010	<0.0010	<0.0010	<0.0010
Iron	mg/L	0.3[A]	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	0.30
Lead	mg/L	0.001/0.007$_{n3}$[A]	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Lithium	mg/L	n/v	<0.020	<0.020	<0.020	0.023	<0.020	<0.020	0.020
Magnesium	mg/L	n/v	34	41	54	48	46	47	46
Manganese	mg/L	0.02[A]	**0.074[A]**	**0.26[A]**	**0.35[A]**	**0.41[A]**	**0.39[A]**	**0.40[A]**	**0.45[A]**
Mercury	mg/L	0.000005[A]	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	0.0076	0.0015	0.0010	0.0012	0.0010	0.0011	0.0010
Nickel	mg/L	0/0.17$_{n3}$[A]	**0.0016[A]**	**0.0025[A]**	**0.0017[A]**	**0.0014[A]**	**0.00075[A]**	**0.0012[A]**	**0.00091[A]**
Phosphorus	mg/L	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Potassium	mg/L	n/v	7.6	5.2	5.6	4.8	4.7	5.0	4.6
Selenium	mg/L	0.002[A]	**0.0023[A]**	<0.00020	0.00026	0.00020	<0.00020	<0.00020	<0.00020
Silicon	mg/L	n/v	3.4	3.4	4.2	3.8	3.6	3.5	3.8
Silver	mg/L	0.00025[A]	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium	mg/L	200[A]	40	44	50	42	45	47	45
Strontium	mg/L	n/v	0.44	0.72	0.75	0.70	0.70	0.73	0.67
Sulfur	mg/L	n/v	48	38	48	46	45	40	50
Thallium	mg/L	n/v	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Tin	mg/L	n/v	0.0014	<0.0010	0.0011	0.0010	0.0016	0.0041	0.0024
Titanium	mg/L	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	**0.011[A]**	0.0031	0.0023	0.0022	0.0018	0.0021	0.0017
Vanadium	mg/L	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	<0.0030	<0.0030	<0.0030	<0.0030	0.0030	<0.0030	<0.0030
Metals - Total									
Mercury	mg/L	0.000005[A]	**0.000377[A]**	**0.000206[A]**	**0.000186[A]**	0.0000022	**0.0000149[A]**	**0.000058 DB[A]**	**0.0000145[A]**
Microbiological Parameters									
Escherichia coli (E.Coli)	mpn/100mL	n/v	<1.0	<100 MI	<10 Z8	<2.0 Z8	<2.0 MI	<1.0	<1.0
Fecal Coliforms	mpn/100mL	n/v	<1.0	<100 MI	<10 Z8	<2.0 Z8	<2.0 MI	<1.1 VV	<1.0
Heterotrophic Plate Count	cfu/mL	n/v	2,000	640	32,000 Z8	790	-	-	-
Heterotrophic Plate Count	mpn/100mL	n/v	-	-	-	-	>2400	>2400	>2400
Total Coliforms	mpn/100mL	n/v	3.1	<100 MI	<10 Z8	4.0 Z8	<2.0 MI	25	98

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			RRMW16-17-8			
Sample Date			23-Oct-23	13-May-24	19-Sep-24	2-Jun-25
Sample ID			RRMW16-17-8	RRMW16-17-8	RRMW16-17-8	RRMW16-17-8
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			BV	BV	BV	BV
Laboratory Work Order			C386148	C433947	C474428	C550086
Laboratory Sample ID			CCP846	CNL869	CVW762	DME304
Location Description			Tier 2	Tier 2	Tier 2	Tier 2
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated
Field Parameters						
Dissolved Oxygen, Field	mg/L	n/v	11.9	5.9	3.74	2.77
Electrical Conductivity, Field	µS/cm	1,000[A]	**6,521[A]**	10.95	**12,126[A]**	**11,897[A]**
Oxidation Reduction Potential, field	mV	n/v	-98.6	61.5	88.9	74.2
pH, Field	S.U.	6.5-8.5[A]	6.99	6.77	6.91	6.81
Temperature, Field	deg C	n/v	1.7	9.5	8.5	10
Calculated Parameters						
Anion Sum	meq/L	n/v	190	210	200	180
Cation Sum	meq/L	n/v	210	190	190	210
Hardness (as CaCO3)	mg/L	n/v	5,700	5,200	5,500	5,800
Ion Balance	%	n/v	4.3	4.6	3.0	-
Ion Balance % Difference	%	n/v	-	-	-	7.6
Nitrate	mg/L	13_{f}[A]	0.41	<0.22	<1.1	<1.8
Nitrate + Nitrite (as N)	mg/L	100[A]	0.093 Z8	<0.050 MI	<0.25 MI	<0.40 MI
Nitrite	mg/L	$0.197/1.97_{n4.o}$[A]	<0.033	<0.033	<0.033	<0.13
Total Dissolved Solids	mg/L	500[A]	**13,000[A]**	**13,000[A]**	**13,000[A]**	**12,000[A]**
BTEX and Petroleum Hydrocarbons						
Benzene	mg/L	0.005[A]	<0.00040	<0.00040	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	<0.00040	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	<0.00040	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	<0.00080	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	<0.00040	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	<0.00089	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	<0.10	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	<0.10	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	<0.10	<0.10	<0.10	<0.10
Miscellaneous Inorganics						
Dissolved Organic Carbon (DOC)	mg/L	n/v	22 DSM	23	23 PRH	26
Electrical Conductivity, Lab	µS/cm	1,000[A]	**12,000[A]**	**12,000[A]**	**12,000[A]**	**12,000[A]**
pH, lab	S.U.	6.5-8.5[A]	8.06	7.26	8.15	7.91
Anions						
Alkalinity (P as CaCO3)	mg/L	n/v	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	830	940	950	970
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	1,000	1,200	1,200	1,200
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	**8,500[A]**	**9,100[A]**	**8,900[A]**	**7,700[A]**
Chloride	mg/L	100[A]	4.5	6.9	5.2	4.7
Nutrients						
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	<0.010	<0.010	<0.010	<0.040
Orthophosphate (as P)	mg/L	n/v	0.0052	0.0049	0.0074	0.0044
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	**0.51[A]**	**0.56[A]**	**0.89[A]**	**0.52[A]**
Nitrate (as N)	mg/L	3[A]	0.093	<0.050	<0.25	<0.40
Phosphorus, Dissolved	mg/L	n/v	-	-	-	0.0034 P2
Phosphorus, Total (Dissolved)	mg/L	n/v	<0.0030 P2	0.0057	0.0040 PRH P2	-
Total Kjeldahl Nitrogen	mg/L	n/v	2.10	2.74	2.4	<2.0
Nitrogen	mg/L	n/v	2.19	2.7	2.4 DB	<2.0 DB NNA
Metals - Dissolved						
Aluminum	mg/L	$0.007/0.05_{n1,e}$[A]	0.0059	<0.0030	**0.014[A]**	**0.013[A]**
Antimony	mg/L	0.006[A]	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	0.00087	0.00072	0.00073	0.00055
Barium	mg/L	2[A]	0.015	0.015	0.013	<0.010
Beryllium	mg/L	n/v	<0.0010	<0.0010	<0.0010	<0.0010
Boron	mg/L	1[A]	0.18	0.16	0.17	0.16
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	**0.00014[A]**	**0.00013[A]**	**0.00014[A]**	<0.000020
Calcium	mg/L	n/v	420	390	390	390
Chromium	mg/L	0.05[A]	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt	mg/L	n/v	0.0070	0.0064	0.0067	0.0064

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Sample Location			RRMW16-17-8			
Sample Date			23-Oct-23	13-May-24	19-Sep-24	2-Jun-25
Sample ID			RRMW16-17-8	RRMW16-17-8	RRMW16-17-8	RRMW16-17-8
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			BV	BV	BV	BV
Laboratory Work Order			C386148	C433947	C474428	C550086
Laboratory Sample ID			CCP846	CNL869	CVW762	DME304
Location Description			Tier 2	Tier 2	Tier 2	Tier 2
Sample Type	Units	2024 AEPA Tier 1	Unconsolidated	Unconsolidated	Unconsolidated	Unconsolidated
Copper	mg/L	0.007[A]	0.0028	0.0019	0.0026	0.0013
Iron	mg/L	0.3[A]	<0.060	<0.060	<0.060	**0.31[A]**
Lead	mg/L	0.001/0.007$_{n3}$[A]	<0.00020	<0.00020	<0.00020	<0.00020
Lithium	mg/L	n/v	0.12	0.11	0.10	0.10
Magnesium	mg/L	n/v	1,100	1,000	1,100	1,200
Manganese	mg/L	0.02[A]	**2.7[A]**	**2.5[A]**	**2.4[A]**	**2.5[A]**
Mercury	mg/L	0.000005[A]	<0.0000019	<0.0000019	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	0.0018	0.0016	0.0012	0.00083
Nickel	mg/L	0/0.17$_{n3}$[A]	**0.0099[A]**	**0.0093[A]**	**0.0098[A]**	**0.0081[A]**
Phosphorus	mg/L	n/v	<0.10	<0.10	<0.10	<0.10
Potassium	mg/L	n/v	15	13	13	13
Selenium	mg/L	0.002[A]	0.0011	0.00057	0.00052	0.00033
Silicon	mg/L	n/v	5.7	5.2	5.3	5.1
Silver	mg/L	0.00025[A]	<0.00010	<0.00010	<0.00010	<0.00010
Sodium	mg/L	200[A]	**2,200[A]**	**2,000[A]**	**1,900[A]**	**2,200[A]**
Strontium	mg/L	n/v	10	9.4	11	11
Sulfur	mg/L	n/v	2,900	2,700	2,800	3,000
Thallium	mg/L	n/v	<0.00020	<0.00020	<0.00020	<0.00020
Tin	mg/L	n/v	<0.0010	<0.0010	<0.0010	<0.0010
Titanium	mg/L	n/v	0.0021	<0.0010	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	**0.049[A]**	**0.043[A]**	**0.046[A]**	**0.044[A]**
Vanadium	mg/L	n/v	<0.0010	<0.0010	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	<0.0030	0.0048	0.0036	0.0064
Metals - Total						
Mercury	mg/L	0.000005[A]	**0.000066[A]**	**0.00026 DB[A]**	**0.000191 DB[A]**	**0.000093 DB[A]**
Microbiological Parameters						
Escherichia coli (E.Coli)	mpn/100mL	n/v	<100 Z8	<50 MI	<100 MI	<10 Z8
Fecal Coliforms	mpn/100mL	n/v	<100 Z8	<50 MI	<100 MI	<10 Z8
Heterotrophic Plate Count	cfu/mL	n/v	26,000 Z8	-	-	-
Heterotrophic Plate Count	mpn/100mL	n/v	-	99,000 MI	>2400	>4800 MI
Total Coliforms	mpn/100mL	n/v	610 Z8	23,000 MI	3,800 MI	52 Z8

See notes on last page.

Table C.1 Historical Groundwater Analytical Results - Tier 2 and EIA Project Wells

Notes:

2024 AEPA Tier 1 [A]	Alberta Environment and Protected Areas (AEPA). 2024. Alberta Tier 1 Soil and Groundwater Remediation Guidelines. Land Policy Branch 189 pp.
	Table 2. Alberta Tier 1 Groundwater Remediation Guidelines - Agricultural - Fine
Site Specific [B]	Upper Control Limits
	Upper Control Limits
6.5[A]	Concentration exceeds the indicated standard.
15.2	Measured concentration did not exceed the indicated standard.
<0.50	Laboratory reporting limit was greater than the applicable standard.
<0.03	Analyte was not detected at a concentration greater than the laboratory reporting limit.
n/v	No standard/guideline value.
-	Parameter not analyzed / not available.
f	Guidelines only provided for Nitrate (as N). Nitrate guideline (as NO3) is calculated by multiplying the Nitrate (as N) guideline by 4.43.
n1,e	Standard varies with pH, long term guideline is shown.
n2	Standard varies with pH and temperature.
n3	Standard varies with hardness, long term guideline is shown.
n4	Standard varies with chloride, maximum 30-d Average Nitrite-N guideline is shown.
n4,q	Standard varies with chloride, maximum Nitrite-N guideline is shown.
AG	Ammonia greater than TKN. Results are within acceptable limits of precision.
AT	Detection limit raised due to interference.
CD	Detection limits raised due to dilution to bring analyte within the calibrated range.
CZA	Client supplied DM vial contained particulate which may increase uncertainty associated with result.
DB	Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.
DSM	Detection limits raised due to sample matrix
DVM	Detection limit raised based on sample volume used and sample matrix.
DXE	Dissolved greater than total. Unable to re-analyze due to insufficient sample.
EC	Detection limit raised due to interferent.
IF	RDL raised due to sample matrix interference.
MA	Matrix Spike outside acceptance limits due to matrix interference. Reanalysis yields similar results.
MI	Detection limits raised due to matrix interference.
MSE	Matrix spike exceeds acceptance limits due to probable matrix interference.
MSY	Matrix spike exceeds acceptance limits due to matrix interference.
NF	Duplicate exceeds acceptance criteria due to sample non homogeneity.
NH	Duplicate exceeds acceptance criteria due to sample non homogeneity. Reanalysis yields similar results.
NN	Nitrogen < Nitrate: Both values fall within the method uncertainty for duplicates and are likely equivalent.
NNA	Nitrogen < Ammonia: Both values fall within the method uncertainty for duplicates and are likely equivalent.
OG	Orthophosphate greater than phosphate. Results within acceptable limits of precision.
P2	Phosphorus < Orthophosphate: Both values fall within the method uncertainty for duplicates and are likely equivalent.
PRH	Sample filtered and preserved past method specified hold time
SC1	Spreader colony present. Quantitative colony reporting is not possible due to bacterial density.
SVH	Sample analyzed over hold time. Sample analysis is recommended within 24 hours of sampling.
VV	Detection limit raised based on sample volume used for analysis.
Z8	Detection limit raised due to matrix interference.
Z9	Detection limit raised due to matrix interference. One big Spreader colony obscured other colonies.
RPD	Relative Percent Difference.
61%	RPD exceeds data quality objective of 30%.
nc	RPD is not calculated if one or more values is non detect or if one or more values is less than five times the reportable detection limit.

Table C.2 Groundwater Analytical Results - Tier 2a, Tier 3 and One-Time Domestic Monitoring Wells

Sample Location							NE7-R3-01							N
Sample Date				25-May-22	16-Nov-22	16-May-23	24-Oct-23	15-May-24	25-Sep-24	5-Jun-25	11-Jan-22	14-Nov-22	17-May-23	26-Oct-23
Sample ID				NE7R3-1	NE7R3-1	NE7R3-1	NE7R3-1	NE7-R3-01	NE7-R3-01	NE7-R3-01	NE20R3-01	NE20R3-2	NE20R3-2	NE20R3-2
Laboratory				BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order				C235072	C290717	C334712	C386477	C434999	C476327	C551520	C201468	C289871	C335152	C387360
Laboratory Sample ID				ATQ226	BHD548	BQN672	CCT429	CNQ629	CWJ887	DML534	AMW361	BGY829	BQP600	CCY428
Location Description				Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3
Lithology	Units	2024 AEPA Tier 1	GCDWQ	Unconsolidated (alluvial)	Unconsolidated (alluvial)	Unconsolidated (alluvial)	Unconsolidated (alluvial)	Unconsolidated (alluvial)	Unconsolidated (alluvial)	Unconsolidated (alluvial)	Bedrock	Bedrock	Bedrock	Bedrock
Field Parameters														
Dissolved Oxygen, Field	mg/L	n/v	n/v	11.48	10.2	16.9	7.7	10.6	8.02	11.72	9.25	8.6	9.5	-
Electrical Conductivity, Field	µS/cm	1,000[A]	n/v	496	527	462	577	0.929	566	321	**1,600[A]**	**1,424[A]**	**1,135[A]**	-
Oxidation Reduction Potential, field	mV	n/v	n/v	107.6	-53.4	215.0	-122.1	6.6	98	90.3	147.47	-14.8	213.4	-
pH, Field	S.U.	6.5-8.5[A]	7.0-10.5[B]	7.67	**6.80[B]**	7.58	7.36	7.56	7.56	7.57	7.78	7.48	7.34	-
Temperature, Field	deg C	n/v	≤15[B]	3.8	7.5	4.0	6.4	4.6	9.9	4.27	11.5	12.7	**15.4[B]**	-
Calculated Parameters														
Anion Sum	meq/L	n/v	n/v	5.3	5.6	5.5	6.0	5.1	6.2	6.3	18	17	17	15
Cation Sum	meq/L	n/v	n/v	5.8	5.3	6.0	6.2	5.6	6.1	5.5	20	16	17	21
Hardness (as CaCO3)	mg/L	n/v	n/v	270	250	280	290	260	280	260	690	490	580	680
Ion Balance	%	n/v	n/v	4.7	2.8	4.9	1.7	4.4	0.60	-	4.9	3.0	2.0	15
Ion Balance % Difference	%	n/v	n/v	-	-	-	-	-	0.60	6.8	-	-	-	-
Total Dissolved Solids	mg/L	500[A]	≤500[B]	290	290	300	320	280	320	320	**1,100[AB]**	**930[AB]**	**940[AB]**	**960[AB]**
BTEX and Petroleum Hydrocarbons														
Benzene	mg/L	0.005[A]	0.005[C]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	0.024[B]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	0.0031
Ethylbenzene	mg/L	0.0016[A]	0.0016[B]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	n/v	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	n/v	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	0.02[B]	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Miscellaneous Inorganics														
Dissolved Organic Carbon (DOC)	mg/L	n/v	n/v	<0.50	1.2	2.0	0.88	1.5	1.0	0.69	2.2	2.1	2.4	2.0
Electrical Conductivity, Lab	µS/cm	1,000[A]	n/v	500	530	500	530	460	560	550	**1,600[A]**	**1,500[A]**	**1,500[A]**	**1,400[A]**
pH, lab	S.U.	6.5-8.5[A]	7.0-10.5[B]	7.60	7.56	7.67	8.38	7.65	8.29	7.78	7.77	7.83	7.62	8.12
Anions														
Alkalinity (P as CaCO3)	mg/L	n/v	n/v	<1.0	<1.0	<1.0	5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	n/v	180	200	190	220	190	230	230	440	440	450	390
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	n/v	220	240	230	260	230	280	280	530	530	550	480
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	n/v	<1.0	<1.0	<1.0	5.9	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	n/v	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	≤500[B]	67	65	64	65	48	60	72	**320[A]**	**290[A]**	**270[A]**	**290[A]**
Chloride	mg/L	100[A]	≤250[B]	6.0	8.4	8.8	5.2	10	8.4	7.7	**110[A]**	76	69	49
Fluoride	mg/L	1[A]	1.5[C]	-	-	-	-	-	-	-	-	-	-	-
Nutrients														
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	1[C]	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.040	<0.010	<0.010	<0.010	<0.010
Orthophosphate (as P)	mg/L	n/v	n/v	<0.0030	<0.0030	<0.0030	0.0034	<0.0030	<0.0030	-	<0.0030	0.0065	<0.0030	<0.0030
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	n/v	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	**0.14[A]**	**0.23[A]**	**0.41[A]**	**0.65[A]**
Nitrate (as N)	mg/L	3[A]	10[C]	0.39	0.45	0.79	0.32	0.94	0.62	0.46	0.72	0.77	0.51	0.15
Nitrate + Nitrite (as N)	mg/L	100[A]	n/v	0.39	0.45	0.79	0.32	0.94	0.62	0.46	0.72	0.77 MI	0.51	0.15
Phosphorus, Dissolved	mg/L	n/v	n/v	-	-	-	-	-	<0.0030	<0.0030	-	-	-	-
Phosphorus, Total (Dissolved)	mg/L	n/v	n/v	<0.0030	<0.0030	<0.0030	<0.0030 P2	<0.0030	<0.0030	-	<0.0030	<0.0030	<0.0030	<0.0030
Phosphorus, Total	mg/L	n/v	n/v	-	-	-	-	-	-	0.0050	-	-	-	-
Total Kjeldahl Nitrogen	mg/L	n/v	n/v	0.409	0.040	<0.020	0.068	0.112	0.085	0.052	0.356	1.13	0.302	0.614
Nitrogen	mg/L	n/v	n/v	0.80	0.49	0.78 NN	0.391	1.1	0.71	0.52	1.1	1.9	0.81	0.76
Metals - Dissolved														
Aluminum	mg/L	$0.007/0.05_{n1,e}$[A]	0.1_a[B]	<0.0030	**0.73[AB]**	<0.0030	<0.0030	<0.0030	0.0056	0.0031	<0.0030	<0.0030	<0.0030	<0.0030
Antimony	mg/L	0.006[A]	0.006[C]	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	0.010_{ALARA}[C]	<0.00020	0.00046	0.00040	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Barium	mg/L	2[A]	2.0[C]	0.11	0.12	0.11	0.13	0.099	0.14	0.11	0.022	0.018	0.018	0.018
Beryllium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron	mg/L	1[A]	5[C]	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.059	0.063	0.059	0.059
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	0.007[C]	<0.00002	**0.000048[A]**	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000039	**0.000046[A]**	**0.000086[A]**	**0.000093[A]**
Calcium	mg/L	n/v	n/v	74	69	77	81	71	79	70	150	94	130	150
Chromium	mg/L	0.05[A]	0.05[C]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt	mg/L	n/v	n/v	<0.00030	0.00038	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030

Table C.2 Groundwater Analytical Results - Tier 2a, Tier 3 and One-Time Domestic Monitoring Wells

Sample Location							NE7-R3-01								N
Sample Date				25-May-22	16-Nov-22	16-May-23	24-Oct-23	15-May-24	25-Sep-24	5-Jun-25	11-Jan-22	14-Nov-22	17-May-23	26-Oct-23	
Sample ID				NE7R3-1	NE7R3-1	NE7R3-1	NE7R3-1	NE7-R3-01	NE7-R3-01	NE7-R3-01	NE20R3-01	NE2OR3-2	NE20R3-2	NE20R3-2	
Laboratory				BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	
Laboratory Work Order				C235072	C290717	C334712	C386477	C434999	C476327	C551520	C201468	C289871	C335152	C387360	
Laboratory Sample ID				ATQ226	BHD548	BQN672	CCT429	CNQ629	CWJ887	DML534	AMW361	BGY829	BQP600	CCY428	
Location Description				Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	
Lithology	Units	2024 AEPA Tier 1	GCDWQ	Unconsolidated (alluvial)	Unconsolidated (alluvial)	Unconsolidated (alluvial)	Unconsolidated (alluvial)	Unconsolidated (alluvial)	Unconsolidated (alluvial)	Unconsolidated (alluvial)	Bedrock	Bedrock	Bedrock	Bedrock	
Copper	mg/L	0.007[A]	≤1.0[B]	**0.017[A]**	0.0022	0.0026	<0.0010	<0.0010	0.0011	<0.0010	0.0041	0.0039	0.0057	0.0028	
Iron	mg/L	0.3[A]	≤0.1[B]	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	
Lead	mg/L	0.001/0.007$_{n3}$[A]	0.005$_{ALARA}$[C]	**0.0012[A]**	0.00097	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00021	<0.00020	
Lithium	mg/L	n/v	n/v	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.044	0.032	0.040	0.059	
Magnesium	mg/L	n/v	n/v	20	18	21	21	19	21	20	78	63	65	77	
Manganese	mg/L	0.02[A]	≤0.02[B]	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.0088	<0.0040	**0.051[AB]**	**0.066[AB]**	
Mercury	mg/L	0.000005[A]	0.001[C]	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	
Molybdenum	mg/L	n/v	n/v	0.00061	0.00069	0.00074	0.00080	0.00067	0.00074	0.00064	0.0011	0.00093	0.00087	0.00088	
Nickel	mg/L	0/0.17$_{n3}$[A]	n/v	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***	**0.0021[A]**	**0.0021[A]**	**0.0029[A]**	**0.0026[A]**	
Phosphorus	mg/L	n/v	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Potassium	mg/L	n/v	n/v	3.8	3.9	3.7	4.5	3.4	4.2	3.1	8.0	6.6	6.4	7.2	
Selenium	mg/L	0.002[A]	0.05[C]	0.00061	0.00074	0.00063	0.00068	0.00046	0.00055	0.00076	0.00038	0.00028	<0.00020	<0.00020	
Silicon	mg/L	n/v	n/v	2.8	2.6	2.7	3.0	2.5	3.2	2.8	3.8	3.5	3.9	4.7	
Silver	mg/L	0.00025[A]	n/v	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Sodium	mg/L	200[A]	≤200[B]	6.8	7.0	7.9	7.1	8.3	7.8	6.4	140	140	120	160	
Strontium	mg/L	n/v	7.0[C]	0.35	0.34	0.36	0.40	0.32	0.39	0.37	1.8	1.7	1.6	1.8	
Sulfur	mg/L	n/v	n/v	25	17	23	21	14	17	25	97	86	98	110	
Thallium	mg/L	n/v	n/v	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Tin	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Titanium	mg/L	n/v	n/v	<0.0010	0.015	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Uranium	mg/L	0.01[A]	0.02[C]	0.00070	0.00085	0.00072	0.00073	0.00061	0.00081	0.00060	0.0055	0.0036	0.0035	0.0026	
Vanadium	mg/L	n/v	n/v	<0.0010	0.0020	0.0020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Zinc	mg/L	0.03[A]	≤5.0[B]	0.018	0.012	0.011	**0.20[A]**	0.0089	0.0079	0.0055	0.018	0.017	0.018	**0.066[A]**	
Metals - Total															
Mercury	mg/L	0.000005[A]	0.001[C]	<0.0000019	<0.0000019	<0.0000019	0.0000035	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	**0.0000056[A]**	
Microbiological Parameters															
Escherichia coli (E.Coli)	mpn/100mL	n/v	0[D]	***<1.0***	***<1.0***	***<1.0***	**1.0[D]**	***<1.0***	**2.0[D]**	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	
Fecal Coliforms	mpn/100mL	n/v	0[D]	***<1.0***	***<1.0***	***<1.0***	***<1.0***	**1.0[D]**	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	
Heterotrophic Plate Count	cfu/mL	n/v	n/v	1.0	12	3.0	66	-	-	-	68	160	83	16	
Heterotrophic Plate Count	mpn/100mL	n/v	n/v	-	-	-	-	170	1,400	730	-	-	-	-	
Total Coliforms	mpn/100mL	n/v	0[D]	***<1.0***	**9.8[D]**	***<1.0***	**31[D]**	***<1.0***	**340[D]**	**1.0[D]**	***<1.0***	***<1.0 PH***	***<1.0***	***<1.0***	

See notes on the last page

Table C.2 Groundwater Analytical Results - Tier 2a, Tier 3 and One-Time Domestic Monitoring Wells

Sample Location				NE20-R3-01					SE35-R4-01	SE35-R4-02	SW2-R4-01	SW2-R4-02	SW11-R4-01					SW11-R4-02			
Sample Date				13-May-24	25-Sep-24	3-Jun-25	3-Jun-25		10-Jan-22	25-May-22	11-Jan-22	26-May-22	12-Jan-22	12-Jan-22	27-May-22	27-May-22		19-May-23	24-Oct-23	14-May-24	19-Sep-24
Sample ID				NE20-R3-01	NE20-R3-01	NE20-R3-01	SR25-01		SE35R4-01	SE35R4-2	SW2R4-01	SW2R4-2	SW11R4-01	SW11R4-02	SW11R4-2	SW22-1		SW11R4-2	SW11R4-2	SW11R4-2	SW11R4-2
Laboratory				BV	BV	BV	BV		BV	BV	BV	BV	BV	BV	BV	BV		BV	BV	BV	BV
Laboratory Work Order				C433976	C476327	C550515	C550515		C201202	C235072	C201468	C235441	C201825	C201825	C235756	C235756		C335907	C386477	C434265	C474428
Laboratory Sample ID				CNL997	CWJ889	DMG756	DMG758		AMU845	ATQ221	AMW360	ATR966	AMY181	AMY182	ATT544	ATT543		BQT306	CCT428	CNN532	CVW761
Location Description				Tier 3	Tier 3	Tier 3	Tier 3		One Time	One Time	One Time	One Time	One Time	Tier 3	Tier 3	Bedrock		Tier 3	Tier 3	Tier 3	Tier 3
Lithology	Units	2024 AEPA Tier 1	GCDWQ	Bedrock	Bedrock	Bedrock	Bedrock Field Duplicate	RPD (%)	Bedrock	Bedrock	Unknown	Unknown	Bedrock	Bedrock	Bedrock	Field Duplicate	RPD (%)	Bedrock	Bedrock	Bedrock	Bedrock
Field Parameters																					
Dissolved Oxygen, Field	mg/L	n/v	n/v	8.0	7.35	8.73	-	-	5.05	2.32	3.65	6.77	1.97	1.12	1.88	-	-	3.0	1.6	2.6	1.86
Electrical Conductivity, Field	µS/cm	1,000[A]	n/v	1.479	**1,134[A]**	**1,123[A]**	-	-	**1,307[A]**	**1,265[A]**	**1,923[A]**	**2,999[A]**	408	460	477	-	-	442	485	0.415	318
Oxidation Reduction Potential, field	mV	n/v	n/v	80.4	128.1	174.4	-	-	52.4	-43	125.1	142	-163.4	-1.33	3	-	-	179.7	-192.1	-72.7	-25.7
pH, Field	S.U.	6.5-8.5[A]	7.0-10.5[B]	7.33	7.41	7.29	-	-	7.19	7.28	7.33	7.23	**8.71[A]**	8.38	7.84	-	-	7.73	8.15	8.22	7.98
Temperature, Field	deg C	n/v	≤15[B]	13.2	11.4	12.66	-	-	5.4	8.3	5.9	12.5	5.5	5.7	8.6	-	-	7.6	3.9	7.2	7.1
Calculated Parameters																					
Anion Sum	meq/L	n/v	n/v	18	17	17	17	nc	15	14	27	39	4.6	4.9	5.2	5.2	nc	5.1	5.4	5.2	5.2
Cation Sum	meq/L	n/v	n/v	18	18	16	16	nc	16	15	26	38	4.9	5.3	5.1	5.7	nc	5.5	5.0	5.4	5.1
Hardness (as CaCO3)	mg/L	n/v	n/v	600	570	530	530	0%	590	610	810	860	58	46	55	62	12%	62	56	71	69
Ion Balance	%	n/v	n/v	1.5	2.1	-	-	-	3.7	4.6	0.51	0.34	3.3	3.8	0.52	3.9	nc	4.2	3.9	1.8	0.77
Ion Balance % Difference	%	n/v	n/v	-	2.1	4.2	2.7	nc	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Dissolved Solids	mg/L	500[A]	≤500[B]	**1,000[AB]**	**960[AB]**	**940[AB]**	**930[AB]**	1%	**820[AB]**	**720[AB]**	**1,600[AB]**	**2,500[AB]**	250	280	290	300	3%	300	290	290	290
BTEX and Petroleum Hydrocarbons																					
Benzene	mg/L	0.005[A]	0.005[C]	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	0.024[B]	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	0.0016[B]	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	n/v	<0.00080	<0.00080	<0.00080	<0.00080	nc	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	nc	<0.00080	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	n/v	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	0.02[B]	<0.00089	<0.00089	<0.00089	<0.00089	nc	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	nc	<0.00089	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	n/v	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	n/v	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	n/v	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10
Miscellaneous Inorganics																					
Dissolved Organic Carbon (DOC)	mg/L	n/v	n/v	2.1 MSY	2.0	1.8	1.7	nc	1.6	1.5	3.4	3.1	0.52	0.57	<0.50	<0.50	nc	2.2	<0.50	<0.50	<0.50 PRH
Electrical Conductivity, Lab	µS/cm	1,000[A]	n/v	**1,600[A]**	**1,500[A]**	**1,500[A]**	**1,500[A]**	0%	**1,300[A]**	**1,300[A]**	**2,200[A]**	**3,000[A]**	410	460	490	490	0%	480	490	480	500
pH, lab	S.U.	6.5-8.5[A]	7.0-10.5[B]	7.99	8.00	7.87	7.98	nc	7.41	7.36	7.56	7.55	8.21	8.08	8.35	8.35	nc	8.15	7.99	8.21	7.26
Anions																					
Alkalinity (P as CaCO3)	mg/L	n/v	n/v	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.5	2.0	nc	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	n/v	430	460	490	470	4%	490	430	480	460	210	190	190	190	0%	190	210	190	190
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	n/v	530	560	590	580	2%	590	520	590	570	260	230	230	230	0%	230	250	230	230
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	n/v	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.8	2.4	nc	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	n/v	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	≤500[B]	**290[A]**	**280[A]**	**280[A]**	**280[A]**	0%	**160[A]**	74	**720[AB]**	**1,400[AB]**	14	51	60	62	3%	57	56	62	59
Chloride	mg/L	100[A]	≤250[B]	100	64	63	63	0%	63	**120[A]**	54	3.3	2.0	5.2	4.6	4.5	nc	4.9	4.3	4.8	5.9
Fluoride	mg/L	1[A]	1.5[C]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nutrients																					
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	1[C]	<0.010	**0.096[A]**	<0.040	<0.040	nc	<0.010	<0.010	0.012	<0.010	<0.010	<0.010	<0.010	<0.010	nc	<0.010	<0.010	<0.010	<0.010
Orthophosphate (as P)	mg/L	n/v	n/v	<0.0030	<0.0030	<0.0030	<0.0030	nc	<0.0030	<0.0030	0.0032	<0.0030	0.012	0.0040	0.0043	0.0045	nc	0.0033	0.0032	0.0032	<0.0030
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	n/v	**0.12[A]**	**0.57[A]**	**0.64[A]**	**0.64[A]**	0%	**0.058[A]**	**0.26[A]**	**0.21[A]**	**0.38[A]**	**0.14[A]**	**0.16[A]**	**0.19[A]**	**0.19[A]**	0%	**0.17[A]**	**0.18[A]**	**0.19[A]**	**0.18[A]**
Nitrate (as N)	mg/L	3[A]	10[C]	1.1	0.44	0.40	0.40	0%	0.78	<0.010	**5.8[A]**	0.32	0.030	<0.010	<0.010	<0.010	nc	<0.010	<0.010	<0.010	<0.010
Nitrate + Nitrite (as N)	mg/L	100[A]	n/v	1.1	0.53	0.40	0.40 MSE	0%	0.78	<0.010	5.8	0.32	0.030	<0.010	<0.010	<0.010	nc	<0.010	<0.010	<0.010	<0.010
Phosphorus, Dissolved	mg/L	n/v	n/v	-	<0.0030	<0.0030	<0.0030	nc	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Total (Dissolved)	mg/L	n/v	n/v	<0.0030	<0.0030	-	-	-	<0.0030	<0.0030	0.0031	<0.0030	0.0087	0.0057	<0.0030	<0.0030	nc	<0.0030 P2	<0.0030 P2	<0.0030 P2	<0.0030 PRH
Phosphorus, Total	mg/L	n/v	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Kjeldahl Nitrogen	mg/L	n/v	n/v	0.208	0.63	0.73	0.84	14%	0.076	0.382	0.71	0.929	0.260	0.157	0.188	0.167	12%	0.183	0.201	0.268	0.21
Nitrogen	mg/L	n/v	n/v	1.3	1.2	1.1	1.2	9%	0.86	0.38	6.5	1.3	0.29	0.16	0.19	0.17	11%	0.18	0.201	0.27	0.21
Metals - Dissolved																					
Aluminum	mg/L	$0.007/0.05_{n1,e}$[A]	0.1_a[B]	<0.0030	0.0054	<0.0030	<0.0030	nc	<0.0030	<0.0030	<0.0030	<0.0030	0.0043	0.0050	<0.0030	<0.0030	nc	<0.0030	<0.0030	<0.0030	<0.0030
Antimony	mg/L	0.006[A]	0.006[C]	<0.00060	<0.00060	<0.00060	<0.00060	nc	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	nc	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	0.010_{ALARA}[C]	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	<0.00020	0.0023	0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	<0.00020
Barium	mg/L	2[A]	2.0[C]	0.021	0.018	0.015	0.017	nc	0.025	0.030	0.034	<0.010	0.28	0.069	0.088	0.097	10%	0.081	0.074	0.078	0.086
Beryllium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010
Boron	mg/L	1[A]	5[C]	0.049	0.055	0.050	0.050	nc	0.074	0.058	0.089	0.16	0.061	0.031	0.045	0.047	nc	0.055	0.032	0.029	0.034
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	0.007[C]	0.000022	**0.000043[A]**	0.000036	0.000034	nc	0.000026	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	nc	<0.000020	<0.000020	<0.000020	<0.000020
Calcium	mg/L	n/v	n/v	130	130	110	120	9%	130	140	180	210	14	12	15	16	6%	17	14	19	18
Chromium	mg/L	0.05[A]	0.05[C]	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt	mg/L	n/v	n/v	<0.00030	<0.00030	<0.00030	<0.00030	nc	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	nc	<0.00030	<0.00030	<0.00030	<0.00030

Table C.2 Groundwater Analytical Results - Tier 2a, Tier 3 and One-Time Domestic Monitoring Wells

Sample Location				NE20-R3-01					SE35-R4-01	SE35-R4-02	SW2-R4-01	SW2-R4-02	SW11-R4-01					SW11-R4-02			
Sample Date				13-May-24	25-Sep-24	3-Jun-25	3-Jun-25		10-Jan-22	25-May-22	11-Jan-22	26-May-22	12-Jan-22	12-Jan-22	27-May-22	27-May-22		19-May-23	24-Oct-23	14-May-24	19-Sep-24
Sample ID				NE20-R3-01	NE20-R3-01	NE20-R3-01	SR25-01		SE35R4-01	SE35R4-2	SW2R4-01	SW2R4-2	SW11R4-01	SW11R4-02	SW11R4-2	SW22-1		SW11R4-2	SW11R4-2	SW11R4-2	SW11R4-2
Laboratory				BV	BV	BV	BV		BV	BV	BV	BV	BV	BV	BV	BV		BV	BV	BV	BV
Laboratory Work Order				C433976	C476327	C550515	C550515		C201202	C235072	C201468	C235441	C201825	C201825	C235756	C235756		C335907	C386477	C434265	C474428
Laboratory Sample ID				CNL997	CWJ889	DMG756	DMG758		AMU845	ATQ221	AMW360	ATR966	AMY181	AMY182	ATT544	ATT543		BQT306	CCT428	CNN532	CVW761
Location Description				Tier 3	Tier 3	Tier 3	Tier 3		One Time	One Time	One Time	One Time	One Time	Tier 3	Tier 3	Tier 3		Tier 3	Tier 3	Tier 3	Tier 3
Lithology	Units	2024 AEPA Tier 1	GCDWQ	Bedrock	Bedrock	Bedrock	Bedrock Field Duplicate	RPD (%)	Bedrock	Bedrock	Unknown	Unknown	Bedrock	Bedrock	Bedrock	Bedrock Field Duplicate	RPD (%)	Bedrock	Bedrock	Bedrock	Bedrock
Copper	mg/L	0.007[A]	≤1.0[B]	0.0041	0.0024	0.0018	0.0018	nc	0.0045	<0.0010	0.0034	**0.013[A]**	0.00045	0.00094	0.0013	<0.0010	nc	0.0015	<0.0010	<0.0010	<0.0010
Iron	mg/L	0.3[A]	≤0.1[B]	<0.060	<0.060	<0.060	<0.060	nc	<0.060	**0.47[AB]**	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	nc	<0.060	<0.060	<0.060	<0.060
Lead	mg/L	0.001/0.007$_{n3}$[A]	0.005$_{ALARA}$[C]	0.00022	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	0.00024	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	0.00020	<0.00020
Lithium	mg/L	n/v	n/v	0.040	0.030	0.039	0.039	nc	0.026	<0.020	0.071	0.11	<0.020	0.024	<0.020	<0.020	nc	0.036	0.021	<0.020	<0.020
Magnesium	mg/L	n/v	n/v	69	63	58	59	2%	66	65	88	83	5.4	4.0	4.5	5.1	13%	5.0	5.0	6.0	5.7
Manganese	mg/L	0.02[A]	≤0.02[B]	0.0069	**0.033[AB]**	**0.028[AB]**	**0.028[AB]**	0%	0.0040	**0.071[AB]**	**0.062[AB]**	**0.15[AB]**	0.015	**0.039[AB]**	**0.048[AB]**	**0.052[AB]**	8%	**0.051[AB]**	**0.059[AB]**	**0.057[AB]**	**0.050[AB]**
Mercury	mg/L	0.000005[A]	0.001[C]	<0.0000019	<0.0000019	<0.0000019	<0.0000019	nc	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	nc	<0.0000019	0.0000023	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	n/v	0.00077	0.00082	0.00079	0.00079	nc	0.0012	0.00023	0.00066	0.00036	0.0012	0.0019	0.0016	0.0016	0%	0.0013	0.0018	0.0017	0.0018
Nickel	mg/L	0/0.17$_{n3}$[A]	n/v	**0.0015[A]**	**0.0018[A]**	**0.0018[A]**	**0.0019[A]**	nc	**0.00054[A]**	***<0.00050***	**0.00062[A]**	**0.0078[A]**	***<0.00050***	***<0.00050***	**0.0010[A]**	***<0.00050***	nc	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***
Phosphorus	mg/L	n/v	n/v	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	<0.10
Potassium	mg/L	n/v	n/v	6.5	6.6	5.7	5.8	2%	6.4	6.2	4.0	4.9	0.91	0.80	0.76	0.84	nc	0.92	0.84	0.92	0.93
Selenium	mg/L	0.002[A]	0.05[C]	0.00034	0.00030	<0.00020	<0.00020	nc	**0.0039[A]**	**0.012[A]**	0.0014	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	<0.00020
Silicon	mg/L	n/v	n/v	4.0	3.9	4.0	4.0	0%	3.8	4.0	4.4	5.3	4.0	3.5	3.9	3.9	0%	4.0	3.8	3.7	3.7
Silver	mg/L	0.00025[A]	n/v	<0.00010	<0.00010	<0.00010	<0.00010	nc	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	nc	<0.00010	<0.00010	<0.00010	<0.00010
Sodium	mg/L	200[A]	≤200[B]	140	140	120	120	0%	97	59	**230[AB]**	**480[AB]**	85	100	92	100	8%	98	89	90	86
Strontium	mg/L	n/v	7.0[C]	1.7	1.8	1.6	1.6	0%	1.4	1.7	1.8	3.5	0.22	0.25	0.32	0.35	9%	0.34	0.32	0.38	0.41
Sulfur	mg/L	n/v	n/v	98	85	95	96	1%	53	29	200	490	6.0	16	20	19	5%	19	18	19	18
Thallium	mg/L	n/v	n/v	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	<0.00020
Tin	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010
Titanium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	0.02[C]	0.0034	0.0029	0.0023	0.0023	0%	0.0050	0.0033	0.010	0.00019	<0.00010	<0.00010	<0.00010	<0.00010	nc	<0.00010	<0.00010	<0.00010	<0.00010
Vanadium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	≤5.0[B]	0.019	0.017	0.012	0.013	nc	0.0096	<0.0030	0.024	**0.053[A]**	<0.0030	0.0039	**0.052[A]**	**0.040[A]**	26%	0.028	**0.036[A]**	0.028	**0.043[A]**
Metals - Total																					
Mercury	mg/L	0.000005[A]	0.001[C]	<0.0000019	<0.0000019	<0.0000019	<0.0000019	nc	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	nc	<0.0000019	<0.0000019	<0.0000019	<0.0000019
Microbiological Parameters																					
Escherichia coli (E.Coli)	mpn/100mL	n/v	0[D]	***<1.0***	***<1.0***	***<1.0***	***<1.0***	nc	***<1.0***	***<2.0 AT***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	nc	***<1.0***	***<1.0***	***<1.0***	***<1.0***
Fecal Coliforms	mpn/100mL	n/v	0[D]	***<1.0***	***<1.0***	***<1.0***	***<1.0***	nc	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	nc	***<1.0***	***<1.0***	***<1.0***	***<1.0***
Heterotrophic Plate Count	cfu/mL	n/v	n/v	-	-	-	-	-	370	300	33	>6000	470	340	72	96	29%	28	890	-	-
Heterotrophic Plate Count	mpn/100mL	n/v	n/v	>2400	>2400	>2400	>2400	nc	-	-	-	-	-	-	-	-	-	-	-	1,000	2,400
Total Coliforms	mpn/100mL	n/v	0[D]	***<1.0***	***<1.0***	***<1.0***	***<1.0***	nc	***<1.0***	***3,500 < AT***	**1.0[D]**	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	nc	***<1.0***	***<1.0***	***<1.0***	***<1.0***

See notes on the last page

Table C.2 Groundwater Analytical Results - Tier 2a, Tier 3 and One-Time Domestic Monitoring Wells

Sample Location				SW35-R4-01							WS11-01									WS20-1	
Sample Date				2-Jun-25	15-Nov-22	16-May-23	26-Oct-23	16-May-24	21-Sep-24	4-Jun-25	26-Apr-16	25-Nov-22	17-May-23	17-May-23		23-Oct-23	14-May-24	20-Sep-24	3-Jun-25	24-May-23	24-May-23
Sample ID				SW11-R4-02	SW35R4-1	SW35R4-1	SW35R4-1	SW35-R4-01	SW35-R4-01	SW35-R4-01	WS11-01	WS11-1	WS11-1	WS2023-2		WS11-1	WS11-01	WS11-01	WS11-01	WS20-1	WS20-2
Laboratory				BV	BV	BV	BV	BV	BV	BV	MAXX	BV	BV	BV		BV	BV	BV	BV	BV	BV
Laboratory Work Order				C550086	C290290	C334712	C387360	C435151	C475057	C551030	B631208	C293015	C335152	C335152		C386148	C434263	C474887	C550515	C336854	C336854
Laboratory Sample ID				DME305	BHB174	BQN671	CCY427	CNR363	CWB153	DMJ307	ON0858	BHR664	BQP593	BQP604		CCP845	CNN524	CVZ682	DMG755	BQZ215	BQZ216
Location Description				Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3		Tier 3	Tier 3	Tier 3	Tier 3	One Time	One Time
Lithology				Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Field Duplicate	RPD	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Unknown
	Units	2024 AEPA Tier 1	GCDWQ												(%)						
Field Parameters																					
Dissolved Oxygen, Field	mg/L	n/v	n/v	4.58	3.0	5.8	2.6	1.9	4.3	5.07	-	16.2	6.7	-	-	5.0	5.8	3.9	5.75	5.7	8.5
Electrical Conductivity, Field	µS/cm	1,000[A]	n/v	310	**1,302[A]**	**1,305[A]**	**1,361[A]**	1.274	**1,388[A]**	891	-	898	747	-	-	**1,001[A]**	0.699	846	549	385	325
Oxidation Reduction Potential, field	mV	n/v	n/v	84.2	-44.2	162.7	239.3	7.4	87.3	55.2	-	-31.5	149.7	-	-	-173.0	11.0	-18.6	71.6	52.3	250.9
pH, Field	S.U.	6.5-8.5[A]	7.0-10.5[B]	8.04	7.64	7.59	7.63	7.51	7.64	7.73	-	8.42	7.55	-	-	7.13	7.54	7.629	7.54	7.58	7.70
Temperature, Field	deg C	n/v	≤15[B]	7.09	8.7	7.4	6.9	7.1	7.4	7.22	-	5	12.6	-	-	2.7	6.8	7.4	8.58	5.6	13.7
Calculated Parameters																					
Anion Sum	meq/L	n/v	n/v	5.1	15	16	15	16	17	16	47	10	9.5	9.0	nc	9.1	9.4	9.6	9.6	4.7	3.9
Cation Sum	meq/L	n/v	n/v	5.2	17	17	18	16	15	15	43	11	9.3	9.4	nc	11	9.5	10	8.6	4.3	3.8
Hardness (as CaCO3)	mg/L	n/v	n/v	74	82	73	96	82	79	69	510	240	240	240	0%	270	250	270	230	120	190
Ion Balance	%	n/v	n/v	-	3.4	2.2	9.0	1.8	4.3	-	0.92	1.7	1.1	2.5	nc	8.1	0.87	2.3	-	4.8	1.8
Ion Balance % Difference	%	n/v	n/v	0.36	-	-	-	-	-	2.4	-	-	-	-	-	-	-	-	5.4	-	-
Total Dissolved Solids	mg/L	500[A]	≤500[B]	290	**900[AB]**	**930[AB]**	**940[AB]**	**900[AB]**	**900[AB]**	**900[AB]**	**2,800[AB]**	**540[AB]**	480	460	4%	490	470	490	460	250	210
BTEX and Petroleum Hydrocarbons																					
Benzene	mg/L	0.005[A]	0.005[C]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	-	<0.00040	0.00041	0.00042	nc	0.0014	0.00065	0.00040	0.00056	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	0.024[B]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	-	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	0.00040	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	0.0016[B]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	-	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	0.00040	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	n/v	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	-	<0.00080	<0.00080	<0.00080	nc	<0.00080	<0.00080	0.00080	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	n/v	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	-	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	0.00040	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	0.02[B]	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	-	<0.00089	<0.00089	<0.00089	nc	<0.00089	<0.00089	0.00089	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	nc	<0.10	<0.10	0.10	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	nc	<0.10	<0.10	0.10	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	nc	<0.10	<0.10	0.10	<0.10	<0.10	<0.10
Miscellaneous Inorganics																					
Dissolved Organic Carbon (DOC)	mg/L	n/v	n/v	<0.50	0.89	1.8	1.2	1.4	1.2	1.2	-	2.9	1.8	1.4	nc	2.5	1.8	0.98	1.6	<0.50	0.73
Electrical Conductivity, Lab	µS/cm	1,000[A]	n/v	490	**1,400[A]**	**1,400[A]**	**1,400[A]**	**1,400[A]**	**1,400[A]**	**1,500[A]**	**3,800[A]**	920	830	820	1%	790	810	840	820	420	350
pH, lab	S.U.	6.5-8.5[A]	7.0-10.5[B]	8.41	8.09	8.17	**8.67[A]**	8.15	8.23	8.40	8.09	8.19	7.88	7.93	nc	8.12	8.04	7.86	8.08	7.94	8.02
Anions																					
Alkalinity (P as CaCO3)	mg/L	n/v	n/v	3.9	<1.0	<1.0	38	<1.0	<1.0	6.1	<0.50	<1.0	<1.0	<1.0	nc	<1.0	<1.0	1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	n/v	180	580	610	580	580	650	620	1,100	450	450	430	5%	430	450	450	460	160	140
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	n/v	220	710	750	610	710	800	740	1,300	550	550	520	6%	530	540	550	560	190	160
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	n/v	4.7	<1.0	<1.0	46	<1.0	<1.0	7.3	<0.50	<1.0	<1.0	<1.0	nc	<1.0	<1.0	1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	n/v	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	nc	<1.0	<1.0	1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	128/429$_{n3}$[A]	≤500$_i$[B]	61	**170[A]**	**170[A]**	**170[A]**	**170[A]**	**150[A]**	**170[A]**	**1,200 CD[AB]**	25	13	12	8%	10	15	17	13	70	59
Chloride	mg/L	100[A]	≤250[B]	5.9	4.3	4.8	4.6	5.7	5.6	5.3	15	29	6.3	6.1	3%	5.5	3.8	4.5	5.2	2.7	<1.0
Fluoride	mg/L	1[A]	1.5[C]	-	-	-	-	-	-	-	0.37	-	-	-	-	-	-	-	-	-	-
Nutrients																					
Nitrite (as N)	mg/L	0.06/0.6$_{n4}$[A]	1[C]	<0.040	<0.010	<0.010	0.021	<0.050 MI MSE	0.011	<0.040	0.027	<0.010	<0.010	<0.010	nc	<0.010	<0.010	0.010	<0.040	<0.010	<0.010
Orthophosphate (as P)	mg/L	n/v	n/v	<0.0030	0.0087	0.0089	0.0086	0.0090	0.0093	-	-	<0.0030	<0.0030	0.0031	nc	<0.0030	<0.0030	0.0030	<0.0030	<0.0030	<0.0030
Ammonia (as N)	mg/L	0.035/125$_{n2}$[A]	n/v	**0.18[A]**	**0.064[A]**	**0.23[A]**	**0.19[A]**	**0.18[A]**	**0.12[A]**	**0.24[A]**	-	**0.29[A]**	**0.25[A]**	**0.25[A]**	0%	**0.23[A]**	**0.25[A]**	**0.24[A]**	**0.24[A]**	<0.015	<0.015
Nitrate (as N)	mg/L	3[A]	10[C]	<0.040	1.2	0.92	1.5	1.3	1.5	0.78	0.071	0.013	0.015	0.014	nc	0.13	<0.010	0.010	<0.040	<0.010	0.13
Nitrate + Nitrite (as N)	mg/L	100[A]	n/v	<0.040	1.2	0.92 Z8	1.5	1.3	1.5	0.78	0.098	0.013	0.015	0.014	nc	0.13	<0.010	0.010	<0.040	<0.010	0.13
Phosphorus, Dissolved	mg/L	n/v	n/v	<0.0030	-	-	-	-	-	0.0056	-	-	-	-	-	-	-	-	0.0038	-	-
Phosphorus, Total (Dissolved)	mg/L	n/v	n/v	-	0.0091	0.0070 P2	0.0060	0.0049 P2	0.0049 P2	-	-	0.0061	0.011	0.0080	nc	0.062	0.0082	0.0036	-	<0.0030	<0.0030
Phosphorus, Total	mg/L	n/v	n/v	-	-	-	-	-	-	0.032	-	-	-	-	-	-	-	-	-	-	-
Total Kjeldahl Nitrogen	mg/L	n/v	n/v	0.19	0.099	0.371	0.29	<0.20	<0.050	0.18	-	0.57	0.332	0.291	13%	0.631	0.448	0.50	0.34	<2.0	0.027
Nitrogen	mg/L	n/v	n/v	0.19	1.3	1.3	1.8 DB	1.1 NN	1.4 NNA	0.96	-	0.59 DB	0.35	0.30	15%	0.761	0.45	0.50	0.34	<2.0 DB	0.16
Metals - Dissolved																					
Aluminum	mg/L	0.007/0.05$_{n1,e}$[A]	0.1$_a$[B]	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	0.0056	0.0037	<0.0030	0.0034	nc	0.0041	<0.0030	0.0030	<0.0030	0.0045	0.0038
Antimony	mg/L	0.006[A]	0.006[C]	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	0.0033	<0.00060	<0.00060	nc	<0.00060	<0.00060	0.00060	<0.00060	<0.00060	0.00094
Arsenic	mg/L	0.005[A]	0.010$_{ALARA}$[C]	<0.00020	0.00055	0.00072	0.00049	0.00052	0.00049	0.00067	0.00085	0.0021	0.00089	0.0010	nc	0.00060	0.00028	0.00033	0.00023	<0.00020	<0.00020
Barium	mg/L	2[A]	2.0[C]	0.072	0.026	0.024	0.026	0.024	0.022	0.024	0.019	0.17	0.21	0.21	0%	0.31	0.28	0.28	0.36	0.035	0.055
Beryllium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	0.0010	<0.0010	<0.0010	<0.0010
Boron	mg/L	1[A]	5[C]	0.031	0.073	0.086	0.085	0.077	0.076	0.084	0.14	**1.2[A]**	0.54	0.53	2%	0.43	0.31	0.32	0.26	<0.020	<0.020
Cadmium	mg/L	0.00004/0.00037$_{n3}$[A]	0.007[C]	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000028	<0.000020	<0.000020	<0.000020	nc	<0.000020	<0.000020	0.000020	<0.000020	<0.000020	<0.000020
Calcium	mg/L	n/v	n/v	20	21	19	24	22	20	18	98	54	50	51	2%	58	54	58	49	29	50
Chromium	mg/L	0.05[A]	0.05[C]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	0.0010	<0.0010	<0.0010	<0.0010
Cobalt	mg/L	n/v	n/v	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	0.00046	0.00053	<0.00030	<0.00030	nc	<0.00030	<0.00030	0.00030	<0.00030	<0.00030	<0.00030

Table C.2 Groundwater Analytical Results - Tier 2a, Tier 3 and One-Time Domestic Monitoring Wells

Sample Location				SW35-R4-01							WS11-01									WS20-1	WS20-2
Sample Date				2-Jun-25	15-Nov-22	16-May-23	26-Oct-23	16-May-24	21-Sep-24	4-Jun-25	26-Apr-16	25-Nov-22	17-May-23	17-May-23		23-Oct-23	14-May-24	20-Sep-24	3-Jun-25	24-May-23	24-May-23
Sample ID				SW11-R4-02	SW35R4-1	SW35R4-1	SW35R4-1	SW35-R4-01	SW35-R4-01	SW35-R4-01	WS11-01	WS11-1	WS11-1	WS2023-2		WS11-1	WS11-01	WS11-01	WS11-01	WS20-1	WS20-2
Laboratory				BV	BV	BV	BV	BV	BV	BV	MAXX	BV	BV	BV		BV	BV	BV	BV	BV	BV
Laboratory Work Order				C550086	C290290	C334712	C387360	C435151	C475057	C551030	B631208	C293015	C335152	C335152		C386148	C434263	C474887	C550515	C336854	C336854
Laboratory Sample ID				DME305	BHB174	BQN671	CCY427	CNR363	CWB153	DMJ307	ON0858	BHR664	BQP593	BQP604		CCP845	CNN524	CVZ682	DMG755	BQZ215	BQZ216
Location Description				Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Bedrock		Tier 3	Tier 3	Tier 3	Tier 3	One Time	One Time
Lithology	Units	2024 AEPA Tier 1	GCDWQ	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Field Duplicate	RPD (%)	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Unknown
Copper	mg/L	0.007[A]	≤1.0[B]	<0.0010	0.0017	0.0026	0.0034	0.0012	0.0034	0.0034	0.0016	<0.0010	<0.0010	0.0014	nc	<0.0010	<0.0010	0.0010	<0.0010	0.0025	**0.019[A]**
Iron	mg/L	0.3[A]	≤0.1[B]	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	**0.14[B]**	<0.060	<0.060	<0.060	nc	<0.060	<0.060	0.060	0.089	<0.060	<0.060
Lead	mg/L	0.001/0.007$_{n3}$[A]	0.005$_{ALARA}$[C]	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	0.00020	<0.00020	<0.00020	<0.00020
Lithium	mg/L	n/v	n/v	<0.020	0.072	0.077	0.096	0.077	0.062	0.069	0.14	0.026	<0.020	<0.020	nc	<0.020	<0.020	0.020	<0.020	<0.020	<0.020
Magnesium	mg/L	n/v	n/v	6.1	7.0	6.0	8.6	6.9	6.7	5.8	64	26	27	27	0%	30	29	31	26	12	15
Manganese	mg/L	0.02[A]	≤0.02[B]	**0.052[AB]**	0.0060	0.0097	0.011	0.013	0.0092	0.017	**0.18[AB]**	**0.28[AB]**	**0.32[AB]**	**0.32[AB]**	0%	**0.29[AB]**	**0.36[AB]**	**0.38[AB]**	**0.34[AB]**	**0.11[AB]**	<0.0040
Mercury	mg/L	0.000005[A]	0.001[C]	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000020	0.0000039	<0.0000019	<0.0000019	nc	<0.0000019	<0.0000019	0.0000019	<0.0000019	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	n/v	0.0017	0.0058	0.0052	0.0047	0.0035	0.0052	0.0043	0.0032	0.0068	0.0030	0.0031	3%	0.0061	0.0088	0.0037	0.0041	0.0025	0.00062
Nickel	mg/L	0/0.17$_{n3}$[A]	n/v	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***	**0.0024[A]**	**0.0013[A]**	**0.00078[A]**	**0.00085[A]**	nc	**0.0018[A]**	**0.00058[A]**	**0.00050[A]**	***<0.00050***	**0.00057[A]**	***<0.00050***
Phosphorus	mg/L	n/v	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	0.10	<0.10	<0.10	<0.10
Potassium	mg/L	n/v	n/v	0.88	2.7	2.8	3.3	2.9	2.7	2.6	3.3	6.4	5.1	5.3	4%	6.1	4.8	4.8	4.0	1.3	0.56
Selenium	mg/L	0.002[A]	0.05[C]	<0.00020	0.0011	0.00091	0.0018	0.0014	0.0014	0.00058	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	0.00020	<0.00020	0.00022	0.00073
Silicon	mg/L	n/v	n/v	4.0	2.8	3.2	3.5	3.0	2.8	3.0	2.7	5.0	5.8	5.9	2%	5.5	5.4	6.0	5.5	1.1	2.4
Silver	mg/L	0.00025[A]	n/v	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	nc	<0.00010	<0.00010	0.00010	<0.00010	<0.00010	<0.00010
Sodium	mg/L	200[A]	≤200[B]	84	**340[AB]**	**350[AB]**	**380[AB]**	**330[AB]**	**310[AB]**	**320[AB]**	**750 CD[AB]**	130	100	100	0%	120	99	100	88	42	1.9
Strontium	mg/L	n/v	7.0[C]	0.37	0.32	0.31	0.35	0.35	0.31	0.32	1.5	2.8	2.6	2.6	0%	2.9	2.7	2.8	2.6	0.26	0.40
Sulfur	mg/L	n/v	n/v	20	51	59	65	54	49	59	270	7.9	4.5	4.4	2%	3.6	4.4	5.7	4.1	18	22
Thallium	mg/L	n/v	n/v	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	0.00020	<0.00020	<0.00020	<0.00020
Tin	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	0.0010	<0.0010	0.0023	<0.0010
Titanium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	0.0010	<0.0010	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	0.02[C]	<0.00010	0.00058	0.00048	0.00057	0.00060	0.00063	0.00048	0.0022	0.00045	0.00012	<0.00010	nc	0.00013	0.00012	0.00010	0.00019	<0.00010	0.00042
Vanadium	mg/L	n/v	n/v	<0.0010	<0.0010	0.0018	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	0.0010	<0.0010	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	≤5.0[B]	0.018	0.0056	0.017	0.020	0.015	0.018	0.011	0.010	0.0049	0.0035	0.0045	nc	<0.0030	<0.0030	0.0030	<0.0030	<0.0030	0.021
Metals - Total																					
Mercury	mg/L	0.000005[A]	0.001[C]	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000020	**0.00094[A]**	0.0000026	0.0000041	nc	0.0000022	<0.0000019	0.0000019	<0.0000019	<0.0000019	<0.0000019
Microbiological Parameters																					
Escherichia coli (E.Coli)	mpn/100mL	n/v	0[D]	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<10 MI***	***<1.0***	***<1.0***	nc	***<100 Z8***	***<1.0***	**1.0[D]**	***<1.0***	***<2.0 Z8***	***<1.0***
Fecal Coliforms	mpn/100mL	n/v	0[D]	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	-	***<10 MI***	***<1.0***	***<1.0***	nc	***<100 Z8***	***<1.0***	**1.0[D]**	***<1.0***	***<2.0 Z8***	***<1.0***
Heterotrophic Plate Count	cfu/mL	n/v	n/v	-	100	1.0	26	-	-	-	-	110	320	190	**51%**	870 SVH	-	-	-	120	<1.0
Heterotrophic Plate Count	mpn/100mL	n/v	n/v	>2400	-	-	-	65	2,000	1,700	-	-	-	-	-	-	>2400	>2400	>2400	-	-
Total Coliforms	mpn/100mL	n/v	0[D]	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	**10 MI[D]**	**>2400[D]**	**>2400[D]**	nc	**2,300 Z8[D]**	***<1.0***	**1.0[D]**	***<1.0***	***<2.0 Z8***	**1.0[D]**

See notes on the last page

Table C.2 Groundwater Analytical Results - Tier 2a, Tier 3 and One-Time Domestic Monitoring Wells

Sample Location				WS20-2		WS27-01	WS36-01	WS36-02	WS36-03	WS36-04			WS41-02				WS42-01	WS42-02	WS48-01	WS50-01			WS51-01
Sample Date				24-May-23		24-May-23	24-May-23	24-May-23	24-May-23	24-May-23	5-Apr-16	26-May-22	14-Nov-22	15-May-23	3-Jun-25	26-May-22	26-May-22	13-Jan-22	23-May-23	13-Jan-22	23-May-23	14-May-24
Sample ID				WS2023-5		WS27-1	WS36-1	WS36-2	WS36-3	WS36-4	WS41-02	WS41-2	WS41-2	WS41-2	WS41-02	WS42-1	WS42-2	WS48-01	WS50-1	WS51-01	WS51-1	WS51-01
Laboratory				BV		BV	BV	BV	BV	BV	MAXX	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order				C336854		C336854	C336854	C336854	C336854	C336854	B624910	C235445	C289871	C334367	C550515	C235450	C235450	C202060	C336439	C202060	C336439	C434266
Laboratory Sample ID				BQZ217		BQZ214	BQZ210	BQZ211	BQZ212	BQZ213	OJ8684	ATR988	BGY828	BQM167	DMG757	ATR997	ATR998	AMZ440	BQW246	AMZ441	BQW245	CNN533
Location Description				One Time		One Time	One Time	One Time	One Time	One Time	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	One Time	One Time	One Time	One Time	Tier 3	Tier 3	Tier 3
Lithology	Units	2024 AEPA Tier 1	GCDWQ	Unknown Field Duplicate	RPD (%)	Unknown	Unknown	Unknown	Unknown	Unknown	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Unknown	Bedrock	Bedrock	Bedrock
Field Parameters																						
Dissolved Oxygen, Field	mg/L	n/v	n/v	-	-	3.4	7.5	2.5	4.8	2.2	-	4.37	3.8	5.4	3.33	6.07	4.78	3.49	4.1	1.75	2.9	2.5
Electrical Conductivity, Field	µS/cm	1,000[A]	n/v	-	-	979	904	**1,884[A]**	**1,431[A]**	**1,304[A]**	-	**1,182[A]**	**1,082[A]**	**1,080[A]**	**1,138[A]**	**1,102[A]**	**1,070[A]**	**1,823[A]**	**2,138[A]**	793	724	0.664
Oxidation Reduction Potential, field	mV	n/v	n/v	-	-	139.3	135.1	123.1	40.9	100.1	-	91.7	13.8	130.0	66.9	101.3	112.3	-102.9	16.4	-129.9	-81.3	-104.9
pH, Field	S.U.	6.5-8.5[A]	7.0-10.5[B]	-	-	7.57	7.55	7.41	7.45	7.36	-	7.21	7.28	7.46	7.3	**6.99[B]**	7.04	7.7	7.74	7.86	7.61	7.95
Temperature, Field	deg C	n/v	≤15[B]	-	-	7.1	7.6	8.0	8.8	12.2	-	7.6	6.5	6.9	7.08	6.3	7.7	4.4	7.1	6.9	8.5	6.9
Calculated Parameters																						
Anion Sum	meq/L	n/v	n/v	3.9	nc	11	12	21	18	16	12	13	12	14	13	12	11	22	-	8.8	-	9.0
Cation Sum	meq/L	n/v	n/v	3.7	nc	13	13	23	19	17	11	14	14	14	12	13	12	21	-	9.6	-	9.0
Hardness (as CaCO3)	mg/L	n/v	n/v	180	5%	270	530	760	520	510	56	250	410	170	270	560	550	600	140	190	190	190
Ion Balance	%	n/v	n/v	3.2	nc	5.4	5.2	4.6	3.5	4.1	0.93	3.3	5.1	2.2	-	4.2	4.2	3.0	0.66	4.2	2.8	0.0070
Ion Balance % Difference	%	n/v	n/v	-	-	-	-	-	-	-	-	-	-	-	4.3	-	-	-	-	-	-	-
Total Dissolved Solids	mg/L	500[A]	≤500[B]	200	5%	**650[AB]**	**620[AB]**	**1,100[AB]**	**1,000[AB]**	**870[AB]**	**640[AB]**	**730[AB]**	**670[AB]**	**750[AB]**	**680[AB]**	**610[AB]**	**600[AB]**	**1,400[AB]**	**1,600[AB]**	**510[AB]**	**520[AB]**	**520[AB]**
BTEX and Petroleum Hydrocarbons																						
Benzene	mg/L	0.005[A]	0.005[C]	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	0.024[B]	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	0.0016[B]	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	n/v	<0.00080	nc	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	-	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	n/v	<0.00040	nc	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	0.02[B]	<0.00089	nc	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	-	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	n/v	<0.10	nc	<0.10	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	n/v	<0.10	nc	<0.10	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	n/v	<0.10	nc	<0.10	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Miscellaneous Inorganics																						
Dissolved Organic Carbon (DOC)	mg/L	n/v	n/v	1.1	nc	1.2	0.88	1.4	1.3	1.3	-	2.2	1.9	1.7	1.6	2.1	1.8	1.2	1.7	0.64	0.66	1.1
Electrical Conductivity, Lab	µS/cm	1,000[A]	n/v	350	0%	1,000	1,000	**2,000[A]**	**1,500[A]**	**1,400[A]**	**1,100[A]**	**1,200[A]**	**1,100[A]**	**1,200[A]**	**1,200[A]**	**1,100[A]**	**1,100[A]**	**1,800[A]**	**2,400[A]**	810	800	790
pH, lab	S.U.	6.5-8.5[A]	7.0-10.5[B]	7.89	nc	8.38	8.29	7.80	8.23	8.01	7.99	7.75	7.62	8.04	8.20	7.38	7.44	7.65	8.50	7.84	8.21	7.91
Anions																						
Alkalinity (P as CaCO3)	mg/L	n/v	n/v	<1.0	nc	6.5	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	17	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	n/v	130	7%	420	440	510	540	500	520	530	450	580	520	380	380	210	630	310	310	300
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	n/v	160	0%	490	530	630	650	610	640	640	550	710	630	460	460	260	730	380	380	370
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	n/v	<1.0	nc	7.8	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	21	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	n/v	<1.0	nc	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	≤500[B]	58	2%	100	77	94	**180[A]**	**140[A]**	65	80	60	86	61	64	58	**870[AB]**	**650[AB]**	120	**130[A]**	**140[A]**
Chloride	mg/L	100[A]	≤250[B]	1.6	nc	35	50	**290[AB]**	**110[A]**	96	3.3	34	60	23	49	95	94	2.2	4.3	<1.0	<1.0	<1.0
Fluoride	mg/L	1[A]	1.5[C]	-	-	-	-	-	-	-	0.62	-	-	-	-	-	-	-	-	-	-	-
Nutrients																						
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	1[C]	<0.010	nc	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.011	<0.010	<0.010	<0.040	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Orthophosphate (as P)	mg/L	n/v	n/v	<0.0030	nc	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	-	<0.0030	0.0035	<0.0030	<0.0030	<0.0030	<0.0030	0.0032	0.0036	0.0032	<0.0030	<0.0030
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	n/v	<0.015	nc	**0.19[A]**	<0.015	<0.015	**0.38[A]**	**0.23[A]**	-	**0.20[A]**	0.018	**0.25[A]**	**0.11[A]**	<0.015	<0.015	**0.58[A]**	**0.57[A]**	**0.26[A]**	**0.24[A]**	**0.26[A]**
Nitrate (as N)	mg/L	3[A]	10[C]	0.13	0%	0.87	0.72	**3.5[A]**	**3.4[A]**	0.75	0.64	1.9	**4.5[A]**	0.99	2.2	0.34	1.0	<0.010	<0.010	<0.010	<0.010	<0.010
Nitrate + Nitrite (as N)	mg/L	100[A]	n/v	0.13	0%	0.87	0.72	3.5	3.4	0.75	0.64	1.9	4.5	0.99	2.2	0.34	1.0	<0.010	<0.010	<0.010	<0.010	<0.010
Phosphorus, Dissolved	mg/L	n/v	n/v	-	-	-	-	-	-	-	-	-	-	-	<0.0030	-	-	-	-	-	-	-
Phosphorus, Total (Dissolved)	mg/L	n/v	n/v	<0.0030	nc	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	-	<0.0030	<0.0030	<0.0030	-	<0.0030	<0.0030	0.026	<0.0030 P2	<0.0030	<0.0030	<0.0030
Phosphorus, Total	mg/L	n/v	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Kjeldahl Nitrogen	mg/L	n/v	n/v	<0.020	nc	0.231	<0.020	<0.10	0.28	0.207	-	0.20	2.23	0.409	<0.20	0.784	0.092	0.724	0.727	0.269	0.270	0.388
Nitrogen	mg/L	n/v	n/v	0.15	6%	1.1	0.58 NN	3.4 NN	3.7	0.96	-	2.1	6.7	1.4	2.2 NN	1.1	1.1	0.72	0.73	0.27	0.27	0.39
Metals - Dissolved																						
Aluminum	mg/L	$0.007/0.05_{n1,e}$[A]	0.1_a[B]	0.0055	nc	<0.0030	0.0032	0.0035	**0.025[A]**	**0.012[A]**	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	-	<0.0030	-	<0.0030
Antimony	mg/L	0.006[A]	0.006[C]	<0.00060	nc	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	-	<0.00060	-	<0.00060
Arsenic	mg/L	0.005[A]	0.010_{ALARA}[C]	<0.00020	nc	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00045	<0.00020	<0.00020	<0.00020	<0.00020	-	0.00054	-	0.00070
Barium	mg/L	2[A]	2.0[C]	0.055	0%	0.051	0.031	0.051	0.032	0.036	0.022	0.055	0.080	0.045	0.059	0.049	0.050	<0.010	-	0.015	-	0.015
Beryllium	mg/L	n/v	n/v	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	-	<0.0010
Boron	mg/L	1[A]	5[C]	<0.020	nc	0.047	0.055	0.078	0.086	0.085	0.047	0.059	0.053	0.055	0.050	0.036	0.036	0.081	-	0.10	-	0.095
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	0.007[C]	<0.000020	nc	<0.000020	<0.000020	0.00003	<0.000020	<0.000020	<0.000020	0.000023	0.00003	<0.000020	0.000027	0.000030	<0.00002	<0.00002	-	<0.00002	-	<0.000020
Calcium	mg/L	n/v	n/v	48	4%	58	110	170	120	110	14	57	90	41	59	130	120	170	33	57	59	57
Chromium	mg/L	0.05[A]	0.05[C]	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	-	<0.0010
Cobalt	mg/L	n/v	n/v	<0.00030	nc	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	-	<0.00030	-	<0.00030

Table C.2 Groundwater Analytical Results - Tier 2a, Tier 3 and One-Time Domestic Monitoring Wells

Sample Location				WS20-2		WS27-01	WS36-01	WS36-02	WS36-03	WS36-04			WS41-02				WS42-01	WS42-02	WS48-01	WS50-01			WS51-01
Sample Date				24-May-23		24-May-23	24-May-23	24-May-23	24-May-23	24-May-23	5-Apr-16	26-May-22	14-Nov-22	15-May-23	3-Jun-25	26-May-22	26-May-22	13-Jan-22	23-May-23	13-Jan-22	23-May-23	14-May-24
Sample ID				WS2023-5		WS27-1	WS36-1	WS36-2	WS36-3	WS36-4	WS41-02	WS41-2	WS41-2	WS41-2	WS41-02	WS42-1	WS42-2	WS48-01	WS50-01	WS51-01	WS51-1	WS51-01
Laboratory				BV		BV	BV	BV	BV	BV	MAXX	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order				C336854		C336854	C336854	C336854	C336854	C336854	B624910	C235445	C289871	C334367	C550515	C235450	C235450	C202060	C336439	C202060	C336439	C434266
Laboratory Sample ID				BQZ217		BQZ214	BQZ210	BQZ211	BQZ212	BQZ213	OJ8684	ATR988	BGY828	BQM167	DMG757	ATR997	ATR998	AMZ440	BQW246	AMZ441	BQW245	CNN533
Location Description				One Time		One Time	One Time	One Time	One Time	One Time	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	One Time	One Time	One Time	One Time	Tier 3	Tier 3	Tier 3
Lithology	Units	2024 AEPA Tier 1	GCDWQ	Unknown Field Duplicate	RPD (%)	Unknown	Unknown	Unknown	Unknown	Unknown	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Unknown	Bedrock	Bedrock	Bedrock
Copper	mg/L	0.007[A]	≤1.0[B]	**0.019[A]**	0%	0.0012	<0.0010	**0.017[A]**	<0.0010	0.0010	<0.00020	0.0018	0.0067	0.0031	0.0013	<0.0010	0.0011	0.0025	-	<0.00020	-	<0.0010
Iron	mg/L	0.3[A]	≤0.1[B]	<0.060	nc	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060
Lead	mg/L	0.001/0.007$_{n3}$[A]	0.005$_{ALARA}$[C]	<0.00020	nc	<0.00020	<0.00020	0.00024	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	-	<0.00020	-	<0.00020
Lithium	mg/L	n/v	n/v	<0.020	nc	0.053	0.020	0.027	0.053	0.056	0.052	0.035	<0.020	0.036	0.029	<0.020	<0.020	0.030	-	0.023	-	0.024
Magnesium	mg/L	n/v	n/v	14	7%	29	62	79	53	59	4.8	27	44	18	29	60	60	43	13	11	11	11
Manganese	mg/L	0.02[A]	≤0.02[B]	<0.0040	nc	0.016	<0.0040	<0.0040	**0.023[AB]**	**0.044[AB]**	0.017	0.013	<0.0040	0.0077	0.0052	<0.0040	<0.0040	**0.40[AB]**	**0.10[AB]**	**0.13[AB]**	**0.16[AB]**	**0.14[AB]**
Mercury	mg/L	0.000005[A]	0.001[C]	<0.0000019	nc	<0.0000019	<0.0000019	0.0000021	<0.0000019	<0.0000019	<0.0000020	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	n/v	0.00053	nc	0.0036	0.00046	0.0010	0.0031	0.00072	0.0053	0.0076	0.0044	0.0089	0.0060	0.0011	0.00068	0.0022	-	0.0051	-	0.0052
Nickel	mg/L	0/0.17$_{n3}$[A]	n/v	***<0.00050***	nc	***<0.00050***	***<0.00050***	**0.0014[A]**	**0.0011[A]**	***<0.00050***	***<0.00050***	**0.0012[A]**	**0.00078[A]**	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***	-	***<0.00050***	-	***<0.00050***
Phosphorus	mg/L	n/v	n/v	<0.10	nc	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-	<0.10	-	<0.10
Potassium	mg/L	n/v	n/v	0.54	nc	4.1	6.3	7.7	7.0	7.0	2.2	5.1	6.2	4.0	4.8	5.4	5.5	5.5	2.0	1.1	1.1	1.1
Selenium	mg/L	0.002[A]	0.05[C]	0.00072	nc	**0.0024[A]**	**0.016[A]**	0.0015	**0.0044[A]**	0.00082	0.00026	**0.0037[A]**	**0.0063[A]**	0.0020	**0.0063[A]**	**0.0073[A]**	**0.0071[A]**	<0.00020	-	<0.00020	-	<0.00020
Silicon	mg/L	n/v	n/v	2.3	nc	2.7	4.1	3.2	3.4	3.6	2.5	3.0	3.3	2.7	2.8	4.3	4.3	4.8	-	5.0	-	4.8
Silver	mg/L	0.00025[A]	n/v	<0.00010	nc	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	-	<0.00010	-	<0.00010
Sodium	mg/L	200[A]	≤200[B]	1.9	nc	170	52	170	190	150	**230[AB]**	**210[AB]**	120	**230[AB]**	150	29	29	**210[AB]**	**550[AB]**	130	130	120
Strontium	mg/L	n/v	7.0[C]	0.40	0%	0.74	1.3	1.8	1.2	1.6	0.27	0.79	1.3	0.63	0.88	1.1	1.1	1.6	-	0.56	-	0.52
Sulfur	mg/L	n/v	n/v	21	5%	26	28	27	50	41	20	28	21	29	20	22	20	250	-	39	-	42
Thallium	mg/L	n/v	n/v	<0.00020	nc	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	-	<0.00020	-	<0.00020
Tin	mg/L	n/v	n/v	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	-	<0.0010
Titanium	mg/L	n/v	n/v	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	-	<0.0010
Uranium	mg/L	0.01[A]	0.02[C]	0.00040	nc	0.0021	0.0042	0.0059	0.0059	0.0040	0.00032 MD	0.0031	0.0037	0.0031	0.0032	0.0046	0.0042	<0.00010	-	0.00015	-	0.00015
Vanadium	mg/L	n/v	n/v	<0.0010	nc	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	-	<0.0010
Zinc	mg/L	0.03[A]	≤5.0[B]	0.022	5%	0.0033	<0.0030	0.012	0.0062	<0.0030	0.023	0.0072	0.026	0.011	0.0042	<0.0030	<0.0030	**0.036[A]**	-	<0.0030	-	<0.0030
Metals - Total																						
Mercury	mg/L	0.000005[A]	0.001[C]	<0.0000019	nc	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000020	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	0.0000021	<0.0000019	<0.0000019	<0.0000019	<0.0000019
Microbiological Parameters																						
Escherichia coli (E.Coli)	mpn/100mL	n/v	0[D]	***<1.0***	nc	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***
Fecal Coliforms	mpn/100mL	n/v	0[D]	***<1.0***	nc	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	-	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***
Heterotrophic Plate Count	cfu/mL	n/v	n/v	6.0	nc	400	<1.0	6.0	64	2.0	-	240	1,300	<1.0	-	15	2.0	600	4.0	1.0	1.0	-
Heterotrophic Plate Count	mpn/100mL	n/v	n/v	-	-	-	-	-	-	-	-	-	-	-	54	-	-	-	-	-	-	85
Total Coliforms	mpn/100mL	n/v	0[D]	**3.1[D]**	nc	***<1.0***	***<1.0***	**2.0[D]**	***<1.0***	***<1.0***	**24[D]**	***<1.0***	***<1.0***	***<1.0***	**4.1[D]**	***<1.0***	**1.0[D]**	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***

See notes on the last page

Table C.2 Groundwater Analytical Results - Tier 2a, Tier 3 and One-Time Domestic Monitoring Wells

Sample Location				WS56-01				WS56-02		WS62-01					
Sample Date				25-Sep-24	2-Jun-25	26-Apr-16	10-Jun-22	26-Apr-16	10-Jun-22	14-Jan-22	25-May-22	16-Nov-22	16-May-23	24-Oct-23	15-May-24
Sample ID				WS51-01	WS51-01	WS56-01	WS56-01	WS56-02	WS56-02	WS62-01	WS62-01	WS62-1	WS62-1	WS62-1	WS62-01
Laboratory				BV	BV	MAXX	BV	MAXX	BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order				C476327	C550086	B631208	C201202	B631208	C201202	C202261	C235072	C290717	C334712	C386477	C434999
Laboratory Sample ID				CWJ883	DME306	ON0856	AMU843	ON0857	AMU844	ANA368	ATQ222	BHD547	BQN673	CCT430	CNQ628
Location Description				Tier 3	Tier 3	One Time	One Time	One Time	One Time	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3
Lithology	Units	2024 AEPA Tier 1	GCDWQ	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Unconsolidated (alluvial)	Unconsolidated (alluvial)	Unconsolidated (alluvial)	Unconsolidated (alluvial)	Unconsolidated (alluvial)	Unconsolidated (alluvial)
Field Parameters															
Dissolved Oxygen, Field	mg/L	n/v	n/v	1.61	2.96	-	6.59	-	1.75	6.76	5.81	5.3	12.6	-	5.3
Electrical Conductivity, Field	µS/cm	1,000[A]	n/v	518	501	-	**1,341[A]**	-	**2,009[A]**	582	625	605	572	-	0.582
Oxidation Reduction Potential, field	mV	n/v	n/v	-129.2	-115.4	-	-35.8	-	122	108.2	88.4	-44.0	213.6	-	61.6
pH, Field	S.U.	6.5-8.5[A]	7.0-10.5[B]	7.64	7.63	-	7.01	-	7.19	7.67	7.5	7.01	7.45	-	7.12
Temperature, Field	deg C	n/v	≤15[B]	8.2	7.2	-	6.3	-	7.8	3.4	4.3	8.1	4.0	-	3.5
Calculated Parameters															
Anion Sum	meq/L	n/v	n/v	8.6	8.5	15	15	18	19	6.5	6.9	7.0	7.1	6.4	7.1
Cation Sum	meq/L	n/v	n/v	8.3	8.9	15	16	19	21	7.0	7.3	6.2	7.3	6.6	7.6
Hardness (as CaCO3)	mg/L	n/v	n/v	170	180	580	670	780	11	330	340	290	350	310	360
Ion Balance	%	n/v	n/v	1.8	-	1.0	3.6	1.0	3.2	3.5	3.0	6.2	2.0	1.5	3.1
Ion Balance % Difference	%	n/v	n/v	1.8	2.0	-	-	-	-	-	-	-	-	-	-
Total Dissolved Solids	mg/L	500[A]	≤500[B]	480	490	**770[AB]**	**760[AB]**	**950[AB]**	**1,100[AB]**	350	370	360	380	340	390
BTEX and Petroleum Hydrocarbons															
Benzene	mg/L	0.005[A]	0.005[C]	<0.00040	<0.00040	-	<0.00040	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	0.024[B]	<0.00040	<0.00040	-	<0.00040	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	0.0016[B]	<0.00040	<0.00040	-	<0.00040	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	n/v	<0.00080	<0.00080	-	<0.00080	-	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	n/v	<0.00040	<0.00040	-	<0.00040	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	0.02[B]	<0.00089	<0.00089	-	<0.00089	-	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	n/v	<0.10	<0.10	-	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	n/v	<0.10	<0.10	-	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	n/v	<0.10	<0.10	-	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Miscellaneous Inorganics															
Dissolved Organic Carbon (DOC)	mg/L	n/v	n/v	0.98	1.0	-	1.2	-	11	1.1	0.93	1.5	1.9	0.76	1.6
Electrical Conductivity, Lab	µS/cm	1,000[A]	n/v	780	780	**1,400[A]**	**1,300[A]**	**1,900[A]**	**2,000[A]**	590	630	620	630	580	620
pH, lab	S.U.	6.5-8.5[A]	7.0-10.5[B]	8.35	8.30	7.63	7.40	7.56	7.35	7.47	7.37	7.51	7.83	8.09	7.73
Anions															
Alkalinity (P as CaCO3)	mg/L	n/v	n/v	2.6	<1.0	<0.50	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	n/v	300	290	400	430	370	380	240	240	250	240	230	240
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	n/v	360	350	490	530	450	460	290	290	300	290	280	290
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	n/v	3.2	<1.0	<0.50	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	n/v	<1.0	<1.0	<0.50	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	≤500[B]	**130[A]**	**130[A]**	78	86	49	56	76	91	87	98	77	100
Chloride	mg/L	100[A]	≤250[B]	<1.0	<1.0	**180[A]**	**140[A]**	**350 CD[AB]**	**380[AB]**	5.8	6.6	8.1	6.8	5.8	5.0
Fluoride	mg/L	1[A]	1.5[C]	-	-	0.15	-	0.11	-	-	-	-	-	-	-
Nutrients															
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	1[C]	<0.010	<0.040	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Orthophosphate (as P)	mg/L	n/v	n/v	<0.0030	<0.0030	-	<0.0030	-	<0.0030	0.0077	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	n/v	**0.22[A]**	**0.25[A]**	-	**0.34[A]**	-	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Nitrate (as N)	mg/L	3[A]	10[C]	<0.010	<0.040	<0.010	0.012	0.24	0.17	0.030	0.063	0.032	0.10	0.036	0.11
Nitrate + Nitrite (as N)	mg/L	100[A]	n/v	<0.010	<0.040	<0.020	0.012	0.24	0.17	0.030	0.063	0.032	0.10	0.036	0.11
Phosphorus, Dissolved	mg/L	n/v	n/v	<0.0030	<0.0030	-	-	-	-	-	-	-	-	-	-
Phosphorus, Total (Dissolved)	mg/L	n/v	n/v	<0.0030	-	-	0.056	-	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Phosphorus, Total	mg/L	n/v	n/v	-	-	-	-	-	-	-	-	-	-	-	-
Total Kjeldahl Nitrogen	mg/L	n/v	n/v	0.31	0.25	-	0.522	-	0.046	0.053	0.123	0.061	<0.020	0.072	0.154
Nitrogen	mg/L	n/v	n/v	0.31	0.25 NNA	-	0.53	-	0.22	0.083	0.19	0.093	0.11	0.108	0.26
Metals - Dissolved															
Aluminum	mg/L	$0.007/0.05_{n1,e}$[A]	0.1_a[B]	0.0066	<0.0030	0.0056	<0.0030	0.0065	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Antimony	mg/L	0.006[A]	0.006[C]	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	0.010_{ALARA}[C]	0.00045	0.00078	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Barium	mg/L	2[A]	2.0[C]	0.014	0.014	0.044	0.039	0.068	<0.010	0.063	0.066	0.062	0.066	0.069	0.067
Beryllium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron	mg/L	1[A]	5[C]	0.10	0.092	0.10	0.11	0.065 MD	0.063	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	0.007[C]	<0.000020	<0.000020	0.000033	0.000022	**0.000077[A]**	<0.00002	<0.00002	<0.00002	<0.000020	<0.000020	<0.000020	<0.000020
Calcium	mg/L	n/v	n/v	51	56	130	150	180	1.7	92	96	81	96	83	99
Chromium	mg/L	0.05[A]	0.05[C]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt	mg/L	n/v	n/v	<0.00030	<0.00030	<0.00030	0.00038	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030

Table C.2 Groundwater Analytical Results - Tier 2a, Tier 3 and One-Time Domestic Monitoring Wells

Sample Location				WS56-01				WS56-02		WS62-01					
Sample Date				25-Sep-24	2-Jun-25	26-Apr-16	10-Jun-22	26-Apr-16	10-Jun-22	14-Jan-22	25-May-22	16-Nov-22	16-May-23	24-Oct-23	15-May-24
Sample ID				WS51-01	WS51-01	WS56-01	WS56-01	WS56-02	WS56-02	WS62-01	WS62-01	WS62-1	WS62-1	WS62-1	WS62-01
Laboratory				BV	BV	MAXX	BV	MAXX	BV	BV	BV	BV	BV	BV	BV
Laboratory Work Order				C476327	C550086	B631208	C201202	B631208	C201202	C202261	C235072	C290717	C334712	C386477	C434999
Laboratory Sample ID				CWJ883	DME306	ON0856	AMU843	ON0857	AMU844	ANA368	ATQ222	BHD547	BQN673	CCT430	CNQ628
Location Description				Tier 3	Tier 3	One Time	One Time	One Time	One Time	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3
Lithology	Units	2024 AEPA Tier 1	GCDWQ	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Unconsolidated (alluvial)	Unconsolidated (alluvial)	Unconsolidated (alluvial)	Unconsolidated (alluvial)	Unconsolidated (alluvial)	Unconsolidated (alluvial)
Copper	mg/L	0.007[A]	≤1.0[B]	<0.0010	<0.0010	<0.00020	<0.00020	**0.012[A]**	**0.011[A]**	**0.013[A]**	**0.017[A]**	**0.023[A]**	**0.018[A]**	**0.048[A]**	**0.020[A]**
Iron	mg/L	0.3[A]	≤0.1[B]	<0.060	**0.27[B]**	**0.25[B]**	**0.41[AB]**	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060
Lead	mg/L	0.001/0.007$_{n3}$[A]	0.005$_{ALARA}$[C]	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00066	<0.00020
Lithium	mg/L	n/v	n/v	<0.020	0.022	0.027	0.043	0.023 MD	0.036	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Magnesium	mg/L	n/v	n/v	10	10	60	74	82	1.5	24	25	21	26	25	26
Manganese	mg/L	0.02[A]	≤0.02[B]	**0.13[AB]**	**0.13[AB]**	**0.12[AB]**	**0.20[AB]**	<0.0040	<0.0040	0.0063	0.0062	<0.0040	0.0070	0.0045	0.0044
Mercury	mg/L	0.000005[A]	0.001[C]	<0.0000019	<0.0000019	<0.0000020	<0.0000019	<0.00000200	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	n/v	0.0055	0.0050	0.00074	0.00028	0.00084	0.00067	0.00041	0.00040	0.00048	0.00054	0.00054	0.00045
Nickel	mg/L	0/0.17$_{n3}$[A]	n/v	***<0.00050***	***<0.00050***	***<0.00050***	**0.00070[A]**	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***
Phosphorus	mg/L	n/v	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Potassium	mg/L	n/v	n/v	1.1	1.1	6.5	7.4	7.1	1.3	2.0	2.0	1.8	2.0	1.8	2.3
Selenium	mg/L	0.002[A]	0.05[C]	<0.00020	<0.00020	0.00063	0.0014	**0.0059[A]**	**0.0063[A]**	0.00061	0.0011	0.00062	0.0012	0.00066	0.0015
Silicon	mg/L	n/v	n/v	4.5	5.2	3.0	3.2	3.5	3.9	2.7	2.9	2.5	2.9	3.1	2.8
Silver	mg/L	0.00025[A]	n/v	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium	mg/L	200[A]	≤200[B]	110	120	73	43	71	**470[AB]**	8.8	8.6	8.1	8.6	7.6	8.2
Strontium	mg/L	n/v	7.0[C]	0.48	0.46	2.1	2.3	2.0	<0.020	0.46	0.47	0.42	0.46	0.46	0.46
Sulfur	mg/L	n/v	n/v	39	44	24	28	15	18	25	33	23	33	26	31
Thallium	mg/L	n/v	n/v	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Tin	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Titanium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	0.02[C]	0.00025	0.00020	0.0023	0.0022	0.0053	0.0057	0.00067	0.0010	0.00080	0.0011	0.00070	0.0012
Vanadium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0013	<0.0010	<0.0010	<0.0010	0.0020	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	≤5.0[B]	<0.0030	<0.0030	**0.057[A]**	**0.058[A]**	0.0050	<0.0030	0.0057	0.028	0.012	0.016	**0.057[A]**	**0.050[A]**
Metals - Total															
Mercury	mg/L	0.000005[A]	0.001[C]	<0.0000019	<0.0000019	0.0000028	<0.0000019	<0.0000020	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019
Microbiological Parameters															
Escherichia coli (E.Coli)	mpn/100mL	n/v	0[D]	***<1.0***	**3.1[D]**	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***
Fecal Coliforms	mpn/100mL	n/v	0[D]	***<1.0***	***<1.0***	-	***<1.0***	-	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***
Heterotrophic Plate Count	cfu/mL	n/v	n/v	-	-	-	2.0	-	<1.0	16	7.0	<1.0	25	8.0	-
Heterotrophic Plate Count	mpn/100mL	n/v	n/v	1.0	>2400	-	-	-	-	-	-	-	-	-	35
Total Coliforms	mpn/100mL	n/v	0[D]	***<1.0***	**55[D]**	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	**1.0[D]**	***<1.0***	***<1.0***	***<1.0***	***<1.0***

See notes on the last page

Table C.2 Groundwater Analytical Results - Tier 2a, Tier 3 and One-Time Domestic Monitoring Wells

Sample Location						WS65-01	WS65-02	WS67-01						WS81-01					
Sample Date				25-Sep-24	5-Jun-25	12-Jan-22	12-Jan-22	25-May-22	11-Jan-22	25-May-22	17-May-23	17-May-23		25-Oct-23	15-May-24	15-May-24		25-Sep-24	4-Jun-25
Sample ID				WS62-01	WS62-01	WS65-01	WS65-02	WS67-01	WS81-01	WS81-01	WS81-1	WS2023-1		WS81-1	WS81-01	SR24-02		WS81-01	WS81-01
Laboratory				BV	BV	BV	BV	BV	BV	BV	BV	BV		BV	BV	BV		BV	BV
Laboratory Work Order				C476327	C551520	C201825	C201825	C235072	C201468	C235072	C335152	C335152		C386944	C434936	C435079		C476327	C551030
Laboratory Sample ID				CWJ888	DML535	AMY183	AMY184	ATQ225	AMW362	ATQ223	BQP602	BQP603		CCW510	CNQ415	CNR027		CWJ886	DMJ308
Location Description				Tier 3	Tier 3	One Time	One Time	One Time	Tier 2a	Tier 2a	Tier 2a	Tier 2a		Tier 2a	Tier 2a	Tier 2a		Tier 2a	Tier 2a
Lithology	Units	2024 AEPA Tier 1	GCDWQ	Unconsolidated (alluvial)	Unconsolidated (alluvial)	Bedrock	Unknown	Unconsolidated (alluvial)	Bedrock	Bedrock	Bedrock	Field Duplicate	RPD (%)	Bedrock	Bedrock	Field Duplicate	RPD (%)	Bedrock	Bedrock
Field Parameters																			
Dissolved Oxygen, Field	mg/L	n/v	n/v	4.46	7.34	10.13	1.16	3.76	2.18	7.93	6.3	-	-	3.5	5.6	-	-	4.01	4.08
Electrical Conductivity, Field	µS/cm	1,000[A]	n/v	470	636	448	549	520	**1,201[A]**	**1,209[A]**	**1,128[A]**	-	-	**1,317[A]**	1.223	-	-	929	858
Oxidation Reduction Potential, field	mV	n/v	n/v	133.6	151.2	63.2	-25.8	-94.4	158.9	63.9	221.3	-	-	-209.3	14.2	-	-	56.4	145.6
pH, Field	S.U.	6.5-8.5[A]	7.0-10.5[B]	7.3	7.36	7.73	8.29	7.47	7.45	7.66	7.43	-	-	7.19	7.21	-	-	7.05	7.43
Temperature, Field	deg C	n/v	≤15[B]	10	4.09	5.5	4.4	8	5.8	8	7.9	-	-	8.5	6.9	-	-	9	8.81
Calculated Parameters																			
Anion Sum	meq/L	n/v	n/v	7.4	7.5	4.9	5.7	5.5	14	14	14	14	nc	14	15	15	nc	15	14
Cation Sum	meq/L	n/v	n/v	7.3	6.9	5.2	6.4	5.6	15	15	14	14	nc	15	15	16	nc	15	14
Hardness (as CaCO3)	mg/L	n/v	n/v	340	320	250	21	260	450	440	440	440	0%	470	470	480	2%	490	220
Ion Balance	%	n/v	n/v	1.2	-	3.0	5.5	1.2	5.7	3.5	0.043	0.91	nc	3.9	0.92	2.2	nc	1.1	-
Ion Balance % Difference	%	n/v	n/v	1.2	4.3	-	-	-	-	-	-	-	-	-	-	-	-	1.1	2.9
Total Dissolved Solids	mg/L	500[A]	≤500[B]	390	390	270	340	280	**790[AB]**	**790[AB]**	**770[AB]**	**780[AB]**	1%	**790[AB]**	**840[AB]**	**840[AB]**	0%	**820[AB]**	**800[AB]**
BTEX and Petroleum Hydrocarbons																			
Benzene	mg/L	0.005[A]	0.005[C]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	0.024[B]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	0.0016[B]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	n/v	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	nc	<0.00080	<0.00080	<0.00080	nc	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	n/v	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040	<0.00040	nc	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	0.02[B]	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	nc	<0.00089	<0.00089	<0.00089	nc	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	nc	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	nc	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	nc	<0.10	<0.10
Miscellaneous Inorganics																			
Dissolved Organic Carbon (DOC)	mg/L	n/v	n/v	1.2	1.0	0.86	1.3	3.3	2.0	1.9	2.2	2.4	nc	2.2	2.4	2.4	nc	2.5	1.6
Electrical Conductivity, Lab	µS/cm	1,000[A]	n/v	670	660	450	550	500	**1,200[A]**	**1,200[A]**	**1,200[A]**	**1,200[A]**	0%	**1,300[A]**	**1,300[A]**	**1,300[A]**	0%	**1,300[A]**	**1,300[A]**
pH, lab	S.U.	6.5-8.5[A]	7.0-10.5[B]	8.18	7.75	7.55	8.05	7.38	7.47	7.80	7.57	7.56	nc	8.08	8.05	8.01	nc	8.11	8.36
Anions																			
Alkalinity (P as CaCO3)	mg/L	n/v	n/v	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0	<1.0	nc	<1.0	3.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	n/v	270	260	160	220	230	440	420	440	450	2%	420	420	420	0%	440	470
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	n/v	330	320	200	260	280	530	520	540	540	0%	510	510	520	2%	530	560
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	n/v	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0	<1.0	nc	<1.0	3.6
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	n/v	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	nc	<1.0	<1.0	<1.0	nc	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	≤500[B]	88	95	74	69	43	**190[A]**	**190[A]**	**180[A]**	**190[A]**	5%	**170[A]**	**160[A]**	**160[A]**	0%	**160[A]**	**180[A]**
Chloride	mg/L	100[A]	≤250[B]	8.0	7.6	2.8	<1.0	1.9	26	42	38	38	0%	54	90	84	7%	71	36
Fluoride	mg/L	1[A]	1.5[C]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nutrients																			
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	1[C]	<0.010	<0.040	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	nc	<0.010	<0.010	<0.010	nc	<0.010	<0.040
Orthophosphate (as P)	mg/L	n/v	n/v	<0.0030	-	0.0033	0.0038	<0.0030	0.0036	0.0031	<0.0030	<0.0030	nc	<0.0030	0.0031	<0.0030	nc	<0.0030	-
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	n/v	<0.015	<0.015	<0.015	**0.58[A]**	**1.0[A]**	<0.015	<0.015	<0.015	<0.015	nc	<0.015	<0.015	<0.015	nc	<0.015	<0.015
Nitrate (as N)	mg/L	3[A]	10[C]	0.044	0.084	0.22	0.022	0.063	**3.3[A]**	**4.4[A]**	**5.6[A]**	**5.4[A]**	4%	**7.5[A]**	**12[AC]**	**11[AC]**	9%	**12[AC]**	**4.7[A]**
Nitrate + Nitrite (as N)	mg/L	100[A]	n/v	0.044	0.084	0.22	0.022	0.063	3.3	4.4	5.6	5.4	4%	7.5	12	11	9%	12	4.7
Phosphorus, Dissolved	mg/L	n/v	n/v	<0.0030	<0.0030	-	-	-	-	-	-	-	-	-	-	-	-	<0.0030	<0.0030
Phosphorus, Total (Dissolved)	mg/L	n/v	n/v	<0.0030	-	<0.0030	0.41 DB	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	nc	<0.0030	<0.0030 P2	<0.0030	nc	<0.0030	-
Phosphorus, Total	mg/L	n/v	n/v	-	<0.0030	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0030
Total Kjeldahl Nitrogen	mg/L	n/v	n/v	0.090	0.069	0.082	<2.0	2.78	1.56	0.23	<0.20	<0.20	nc	<0.20	<0.25	<0.25	nc	<0.25	<0.20
Nitrogen	mg/L	n/v	n/v	0.13	0.15	0.30	<2.0 DB	2.8 DB	4.9	4.6	5.1 NN	5.5	8%	6.7 NN	8.9 NN	10 NN	12%	12 NNA	4.5 NN
Metals - Dissolved																			
Aluminum	mg/L	$0.007/0.05_{n1,e}$[A]	0.1_a[B]	0.0066	<0.0030	**0.0081[A]**	0.0066	<0.0030	<0.0030	<0.0030	<0.0030	**0.021[A]**	nc	<0.0030	<0.0030	<0.0030	nc	<0.0030	<0.0030
Antimony	mg/L	0.006[A]	0.006[C]	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	nc	<0.00060	<0.00060	<0.00060	nc	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	0.010_{ALARA}[C]	<0.00020	<0.00020	<0.00020	0.00048	0.00033	<0.00020	<0.00020	0.00027	0.00026	nc	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020
Barium	mg/L	2[A]	2.0[C]	0.080	0.065	0.082	0.025	0.17	0.023	0.023	0.023	0.023	nc	0.025	0.025	0.026	nc	0.026	0.015
Beryllium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010
Boron	mg/L	1[A]	5[C]	<0.020	<0.020	<0.020	0.075	<0.020	0.16	0.16	0.14	0.14	0%	0.13	0.14	0.14	0%	0.12	0.20
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	0.007[C]	<0.000020	<0.000020	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.000020	<0.000020	nc	<0.000020	<0.000020	<0.000020	nc	<0.000020	<0.000020
Calcium	mg/L	n/v	n/v	96	89	70	6.4	76	95	91	88	87	1%	91	99	100	1%	100	47
Chromium	mg/L	0.05[A]	0.05[C]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010
Cobalt	mg/L	n/v	n/v	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	nc	<0.00030	<0.00030	<0.00030	nc	<0.00030	<0.00030

Table C.2 Groundwater Analytical Results - Tier 2a, Tier 3 and One-Time Domestic Monitoring Wells

Sample Location														WS81-01					
Sample Date				25-Sep-24	5-Jun-25	WS65-01	WS65-02	WS67-01	11-Jan-22	25-May-22	17-May-23	17-May-23		25-Oct-23	15-May-24	15-May-24		25-Sep-24	4-Jun-25
Sample ID				WS62-01	WS62-01	12-Jan-22	12-Jan-22	25-May-22	WS81-01	WS81-01	WS81-1	WS2023-1		WS81-1	WS81-01	SR24-02		WS81-01	WS81-01
Laboratory				BV	BV	BV	BV	BV	BV	BV	BV	BV		BV	BV	BV		BV	BV
Laboratory Work Order				C476327	C551520	C201825	C201825	C235072	C201468	C235072	C335152	C335152		C386944	C434936	C435079		C476327	C551030
Laboratory Sample ID				CWJ888	DML535	AMY183	AMY184	ATQ225	AMW362	ATQ223	BQP602	BQP603		CCW510	CNQ415	CNR027		CWJ886	DMJ308
Location Description				Tier 3	Tier 3	One Time	One Time	One Time	Tier 2a	Tier 2a	Tier 2a	Tier 2a		Tier 2a	Tier 2a	Tier 2a		Tier 2a	Tier 2a
Lithology	Units	2024 AEPA Tier 1	GCDWQ	Unconsolidated (alluvial)	Unconsolidated (alluvial)	Bedrock	Unknown	Unconsolidated (alluvial)	Bedrock	Bedrock	Bedrock	Field Duplicate	RPD (%)	Bedrock	Bedrock	Field Duplicate	RPD (%)	Bedrock	Bedrock
Copper	mg/L	0.007[A]	≤1.0[B]	**0.040[A]**	**0.012[A]**	0.0035	0.00052	<0.0010	0.0028 NH	0.0044	**0.014[A]**	**0.014[A]**	0%	**0.010[A]**	0.0049	0.0045	nc	0.0044	0.0030
Iron	mg/L	0.3[A]	≤0.1[B]	<0.060	<0.060	<0.060	**0.11[B]**	0.072	<0.060	<0.060	<0.060	<0.060	nc	<0.060	<0.060	<0.060	nc	<0.060	<0.060
Lead	mg/L	0.001/0.007$_{n3}$[A]	0.005$_{ALARA}$[C]	0.00025	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00054	0.00052	nc	0.00050	<0.00020	<0.00020	nc	0.00022	<0.00020
Lithium	mg/L	n/v	n/v	<0.020	<0.020	<0.020	0.032	<0.020	0.039	0.031	0.034	0.033	nc	0.041	0.045	0.047	nc	0.022	0.038
Magnesium	mg/L	n/v	n/v	25	25	18	1.3	18	52	51	53	53	0%	59	55	56	2%	57	25
Manganese	mg/L	0.02[A]	≤0.02[B]	<0.0040	0.0054	<0.0040	0.0064	**0.42[AB]**	<0.0040	<0.0040	<0.0040	<0.0040	nc	<0.0040	<0.0040	<0.0040	nc	<0.0040	<0.0040
Mercury	mg/L	0.000005[A]	0.001[C]	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	nc	0.0000032	<0.0000019	<0.0000019	nc	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	n/v	0.00052	0.00035	0.00068	0.0074	0.00052	0.0048	0.0052	0.0059	0.0058	2%	0.0045	0.0042	0.0042	0%	0.0037	0.0098
Nickel	mg/L	0/0.17$_{n3}$[A]	n/v	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***	***<0.00050***	**0.00052[A]**	**0.0014[A]**	**0.0012[A]**	nc	**0.00056[A]**	**0.00061[A]**	**0.00057[A]**	nc	**0.00083[A]**	***<0.00050***
Phosphorus	mg/L	n/v	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	nc	<0.10	<0.10	<0.10	nc	<0.10	<0.10
Potassium	mg/L	n/v	n/v	2.3	1.8	0.88	1.7	3.3	2.4	2.2	2.0	2.0	0%	2.3	2.2	2.3	4%	2.3	1.4
Selenium	mg/L	0.002[A]	0.05[C]	0.00059	0.0012	0.00078	<0.00020	<0.00020	**0.0032[A]**	**0.0038[A]**	**0.0026[A]**	**0.0029[A]**	11%	**0.0025[A]**	**0.0022[A]**	**0.0026[A]**	17%	**0.0022[A]**	**0.0027[A]**
Silicon	mg/L	n/v	n/v	3.2	3.0	2.1	2.6	3.7	3.3	3.4	3.3	3.3	0%	3.4	3.5	3.4	3%	3.3	3.2
Silver	mg/L	0.00025[A]	n/v	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	nc	<0.00010	<0.00010	<0.00010	nc	<0.00010	<0.00010
Sodium	mg/L	200[A]	≤200[B]	8.3	7.9	3.9	140	4.2	140	140	120	120	0%	130	130	140	7%	110	**210[AB]**
Strontium	mg/L	n/v	7.0[C]	0.49	0.48	0.40	0.080	0.31	1.1	1.1	1.1	1.1	0%	1.3	1.2	1.3	8%	1.3	0.72
Sulfur	mg/L	n/v	n/v	27	34	23	22	15	57	65	61	61	0%	53	50	48	4%	46	58
Thallium	mg/L	n/v	n/v	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020	<0.00020	nc	<0.00020	<0.00020
Tin	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010
Titanium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	0.02[C]	0.00085	0.00080	0.00048	0.00018	<0.00010	0.0041	0.0038	0.0039	0.0042	7%	0.0036	0.0033	0.0032	3%	0.0036	0.0025
Vanadium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010	<0.0010	nc	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	≤5.0[B]	**0.061[A]**	0.0095	0.011	<0.0030	**1.2[A]**	<0.0030	0.0061	0.023	0.025	8%	0.0087	0.011	0.0089	nc	0.0056	<0.0030
Metals - Total																			
Mercury	mg/L	0.000005[A]	0.001[C]	<0.0000019	<0.0000019	<0.0000019	***<0.000019***	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	nc	<0.0000019	<0.0000019	<0.0000019	nc	<0.0000019	<0.0000019
Microbiological Parameters																			
Escherichia coli (E.Coli)	mpn/100mL	n/v	0[D]	***<1.0***	***<1.0***	***<1.0***	***<10 VV***	***<2.0 AT***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	nc	***<1.0***	***<1.0***	***<1.0***	nc	***<1.0***	***<1.0***
Fecal Coliforms	mpn/100mL	n/v	0[D]	***<1.0***	**1.0[D]**	***<1.0***	***<10 VV HX***	***<2.0 AT***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	nc	***<1.0***	***<1.0***	***<1.0***	nc	***<1.0***	***<1.0***
Heterotrophic Plate Count	cfu/mL	n/v	n/v	-	-	29	>6000 DSM	220	82	41	<1.0	6.0	nc	2.0	-	-	-	-	-
Heterotrophic Plate Count	mpn/100mL	n/v	n/v	65	1,600	-	-	-	-	-	-	-	-	-	57	36	**45%**	330	2,400
Total Coliforms	mpn/100mL	n/v	0[D]	***<1.0***	***<1.0***	**6.3[D]**	**240 VV[D]**	***30 < AT***	**2.0[D]**	**28[D]**	**30[D]**	**18[D]**	**50%**	**26[D]**	***<1.0***	***<1.0***	nc	**17[D]**	***<1.0***

See notes on the last page

Table C.2 Groundwater Analytical Results - Tier 2a, Tier 3 and One-Time Domestic Monitoring Wells

Sample Location				WS81-02					
Sample Date				11-Jan-22	25-May-22	17-May-23	25-Oct-23	15-May-24	25-Sep-24
Sample ID				WS81-02	WS81-02	WS81-2	WS81-2	WS81-02	WS81-02
Laboratory				BV	BV	BV	BV	BV	BV
Laboratory Work Order				C201468	C235072	C335152	C386944	C434936	C476327
Laboratory Sample ID				AMW363	ATQ224	BQP601	CCW509	CNQ416	CWJ885
Location Description				Tier 2a	Tier 2a	Tier 2a	Tier 2a	Tier 2a	Tier 2a
Lithology	Units	2024 AEPA Tier 1	GCDWQ	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock
Field Parameters									
Dissolved Oxygen, Field	mg/L	n/v	n/v	1.96	1.73	4.7	1.6	1.9	1.68
Electrical Conductivity, Field	µS/cm	1,000[A]	n/v	**1,350[A]**	**1,443[A]**	**1,357[A]**	**1,675[A]**	1.469	**1,022[A]**
Oxidation Reduction Potential, field	mV	n/v	n/v	-53.7	-46	16.4	-261.0	-109.2	-72.5
pH, Field	S.U.	6.5-8.5[A]	7.0-10.5[B]	7.48	7.35	7.46	7.48	7.63	7.41
Temperature, Field	deg C	n/v	≤15[B]	5.2	6.9	6.2	5.2	6.6	8.3
Calculated Parameters									
Anion Sum	meq/L	n/v	n/v	15	16	16	18	18	17
Cation Sum	meq/L	n/v	n/v	17	18	16	18	19	17
Hardness (as CaCO3)	mg/L	n/v	n/v	220	250	260	240	270	230
Ion Balance	%	n/v	n/v	5.9	5.4	0.23	0.10	2.7	0.33
Ion Balance % Difference	%	n/v	n/v	-	-	-	-	-	0.33
Total Dissolved Solids	mg/L	500[A]	≤500[B]	**890[AB]**	**940[AB]**	**930[AB]**	**1,000[AB]**	**1,000[AB]**	**960[AB]**
BTEX and Petroleum Hydrocarbons									
Benzene	mg/L	0.005[A]	0.005[C]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Toluene	mg/L	0.024[A]	0.024[B]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Ethylbenzene	mg/L	0.0016[A]	0.0016[B]	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylene, m & p-	mg/L	n/v	n/v	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Xylene, o-	mg/L	n/v	n/v	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Xylenes, Total	mg/L	0.02[A]	0.02[B]	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089	<0.00089
PHC F1 (C6-C10 range)	mg/L	n/v	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F1 (C6-C10 range) minus BTEX	mg/L	2.2[A]	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
PHC F2 (>C10-C16 range)	mg/L	1.1[A]	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Miscellaneous Inorganics									
Dissolved Organic Carbon (DOC)	mg/L	n/v	n/v	2.8	3.3	3.7	3.0	2.6	2.7
Electrical Conductivity, Lab	µS/cm	1,000[A]	n/v	**1,300[A]**	**1,500[A]**	**1,500[A]**	**1,600[A]**	**1,600[A]**	**1,500[A]**
pH, lab	S.U.	6.5-8.5[A]	7.0-10.5[B]	7.82	7.59	7.58	8.37	8.18	8.22
Anions									
Alkalinity (P as CaCO3)	mg/L	n/v	n/v	<1.0	<1.0	<1.0	7.2	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	n/v	n/v	550	550	550	580	570	570
Alkalinity, Bicarbonate (as CaCO3)	mg/L	n/v	n/v	670	670	670	700	700	690
Alkalinity, Carbonate (as CaCO3)	mg/L	n/v	n/v	<1.0	<1.0	<1.0	8.6	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	n/v	n/v	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	$128/429_{n3}$[A]	≤500$_j$[B]	**190[A]**	**220[A]**	**240[A]**	**270[A]**	**270[A]**	**250[A]**
Chloride	mg/L	100[A]	≤250[B]	9.0	14	18	19	18	13
Fluoride	mg/L	1[A]	1.5[C]	-	-	-	-	-	-
Nutrients									
Nitrite (as N)	mg/L	$0.06/0.6_{n4}$[A]	1[C]	0.047	0.041	**0.083[A]**	<0.010	0.044	0.018
Orthophosphate (as P)	mg/L	n/v	n/v	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Ammonia (as N)	mg/L	$0.035/125_{n2}$[A]	n/v	0.031	**0.038[A]**	0.027	**0.075[A]**	**0.036[A]**	<0.015
Nitrate (as N)	mg/L	3[A]	10[C]	0.21	0.16	0.35	0.027	0.89	0.86
Nitrate + Nitrite (as N)	mg/L	100[A]	n/v	0.26	0.21	0.43	0.027	0.94	0.88
Phosphorus, Dissolved	mg/L	n/v	n/v	-	-	-	-	-	<0.0030
Phosphorus, Total (Dissolved)	mg/L	n/v	n/v	<0.0030	<0.0030	0.093	<0.0030	<0.0030	<0.0030
Phosphorus, Total	mg/L	n/v	n/v	-	-	-	-	-	-
Total Kjeldahl Nitrogen	mg/L	n/v	n/v	0.123	0.239	0.062	0.254	<0.020	<0.20
Nitrogen	mg/L	n/v	n/v	0.38	0.45	0.49	0.28	0.94	0.91 DB
Metals - Dissolved									
Aluminum	mg/L	$0.007/0.05_{n1,e}$[A]	0.1_a[B]	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	0.0052
Antimony	mg/L	0.006[A]	0.006[C]	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic	mg/L	0.005[A]	0.010_{ALARA}[C]	<0.00020	<0.00020	0.00026	<0.00020	<0.00020	0.00024
Barium	mg/L	2[A]	2.0[C]	0.041	0.045	0.045	0.036	0.042	0.038
Beryllium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron	mg/L	1[A]	5[C]	0.15	0.16	0.15	0.18	0.17	0.16
Cadmium	mg/L	$0.00004/0.00037_{n3}$[A]	0.007[C]	<0.00002	<0.00002	<0.000020	<0.000020	<0.000020	<0.000020
Calcium	mg/L	n/v	n/v	47	53	54	51	60	52
Chromium	mg/L	0.05[A]	0.05[C]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt	mg/L	n/v	n/v	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030

Table C.2 Groundwater Analytical Results - Tier 2a, Tier 3 and One-Time Domestic Monitoring Wells

Sample Location				WS81-02					
Sample Date				11-Jan-22	25-May-22	17-May-23	25-Oct-23	15-May-24	25-Sep-24
Sample ID				WS81-02	WS81-02	WS81-2	WS81-2	WS81-02	WS81-02
Laboratory				BV	BV	BV	BV	BV	BV
Laboratory Work Order				C201468	C235072	C335152	C386944	C434936	C476327
Laboratory Sample ID				AMW363	ATQ224	BQP601	CCW509	CNQ416	CWJ885
Location Description				Tier 2a	Tier 2a	Tier 2a	Tier 2a	Tier 2a	Tier 2a
Lithology				Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock
	Units	2024 AEPA Tier 1	GCDWQ						
Copper	mg/L	0.007[A]	≤1.0[B]	0.00032	<0.0010	0.0021	<0.0010	<0.0010	<0.0010
Iron	mg/L	0.3[A]	≤0.1[B]	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060
Lead	mg/L	0.001/0.007$_{n3}$[A]	0.005$_{ALARA}$[C]	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Lithium	mg/L	n/v	n/v	0.042	0.037	0.035	0.049	0.045	0.032
Magnesium	mg/L	n/v	n/v	25	27	29	28	29	25
Manganese	mg/L	0.02[A]	≤0.02[B]	0.013	**0.022**[AB]	0.016	**0.075**[AB]	0.016	0.010
Mercury	mg/L	0.000005[A]	0.001[C]	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019	<0.0000019
Molybdenum	mg/L	n/v	n/v	0.0017	0.0015	0.0016	0.0015	0.0018	0.0024
Nickel	mg/L	0/0.17$_{n3}$[A]	n/v	***<0.00050***	***<0.00050***	**0.00055**[A]	***<0.00050***	**0.00064**[A]	**0.00051**[A]
Phosphorus	mg/L	n/v	n/v	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Potassium	mg/L	n/v	n/v	1.6	1.6	1.6	1.5	1.8	1.7
Selenium	mg/L	0.002[A]	0.05[C]	0.0013	0.0013	0.00098	0.00059	0.0011	**0.0022**[A]
Silicon	mg/L	n/v	n/v	3.1	3.3	3.2	3.2	3.1	2.8
Silver	mg/L	0.00025[A]	n/v	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium	mg/L	200[A]	≤200[B]	**290**[AB]	**300**[AB]	**260**[AB]	**300**[AB]	**300**[AB]	**280**[AB]
Strontium	mg/L	n/v	7.0[C]	0.76	0.88	0.91	0.94	1.0	0.89
Sulfur	mg/L	n/v	n/v	61	78	81	95	94	71
Thallium	mg/L	n/v	n/v	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Tin	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Titanium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Uranium	mg/L	0.01[A]	0.02[C]	0.0052	0.0051	0.0061	0.0049	0.0058	0.0059
Vanadium	mg/L	n/v	n/v	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc	mg/L	0.03[A]	≤5.0[B]	0.0042	0.0033	0.0031	<0.0030	0.0052	<0.0030
Metals - Total									
Mercury	mg/L	0.000005[A]	0.001[C]	<0.0000019	<0.0000019	<0.0000019	0.0000020	<0.0000019	<0.0000019
Microbiological Parameters									
Escherichia coli (E.Coli)	mpn/100mL	n/v	0[D]	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***
Fecal Coliforms	mpn/100mL	n/v	0[D]	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***	***<1.0***
Heterotrophic Plate Count	cfu/mL	n/v	n/v	3.0	22	<1.0	1.0	-	-
Heterotrophic Plate Count	mpn/100mL	n/v	n/v	-	-	-	-	75	170
Total Coliforms	mpn/100mL	n/v	0[D]	***<1.0***	**1.0**[D]	***<1.0***	***<1.0***	***<1.0***	***<1.0***

See notes on the last page

Table C.2 Groundwater Analytical Results - Tier 2a, Tier 3 and One-Time Domestic Monitoring Wells

Notes:

2024 AEPA Tier 1	Alberta Environment and Protected Areas (AEPA). 2024. Alberta Tier 1 Soil and Groundwater Remediation Guidelines. Land Policy Branch 189 pp.
A	Table 2. Alberta Tier 1 Groundwater Remediation Guidelines - Agricultural - Fine
GCDWQ	Health Canada (March 2025). Guidelines for Canadian Drinking Water Quality—Summary Table. Water and Air Quality Bureau, Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.
B	Guidelines for Canadian Drinking Water Quality - Aesthetic Objectives/ Operational Guidelines
C	Guidelines for Canadian Drinking Water Quality - Maximum Acceptable Concentration
6.5[A]	Concentration exceeds the indicated standard.
15.2	Measured concentration did not exceed the indicated standard.
<0.50	Laboratory reporting limit was greater than the applicable standard.
<0.03	Analyte was not detected at a concentration greater than the laboratory reporting limit.
n/v	No standard/guideline value.
-	Parameter not analyzed / not available.
ALARA	This is an operational guidance value, designed to apply only to drinking water treatment plants using aluminum-based coagulants; it does not apply to naturally occurring aluminum found in groundwater. The operational as low as reasonably achievable
f	Guidelines only provided for Nitrate (as N). Nitrate guideline (as NO3) is calculated by multiplying the Nitrate (as N) guideline by 4.43.
i	High levels (above 500 mg/L) can cause physiological effects such as diarrhea or dehydration.
n1,e	Standard varies with pH, long term guideline is shown.
n2	Standard varies with pH and temperature.
n3	Standard varies with hardness, long term guideline is shown.
n4	Standard varies with chloride, maximum 30-d Average Nitrite-N guideline is shown.
n4,q	Standard varies with chloride, maximum Nitrite-N guideline is shown.
<	Less than.
AT	Detection limit raised due to interference.
CD	Detection limits raised due to dilution to bring analyte within the calibrated range.
DB	Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.
DSM	Detection limits raised due to sample matrix
MSE	Matrix spike exceeds acceptance limits due to probable matrix interference.
MSY	Matrix spike exceeds acceptance limits due to matrix interference.
NH	Duplicate exceeds acceptance criteria due to sample non homogeneity. Reanalysis yields similar results.
NN	Nitrogen < Nitrate: Both values fall within the method uncertainty for duplicates and are likely equivalent.
NNA	Nitrogen < Ammonia: Both values fall within the method uncertainty for duplicates and are likely equivalent.
P2	Phosphorus < Orthophosphate: Both values fall within the method uncertainty for duplicates and are likely equivalent.
PH	Sample received past hold time.
PRH	Sample filtered and preserved past method specified hold time
SVH	Sample analyzed over hold time. Sample analysis is recommended within 24 hours of sampling.
VV	Detection limit raised based on sample volume used for analysis.
Z8	Detection limit raised due to matrix interference.
RPD	Relative Percent Difference.
61%	RPD exceeds data quality objective of 30%.
nc	RPD is not calculated if one or more values is non detect or if one or more values is less than five times the reportable detection limit.

MD	Dissolved greater than total. Results are within limits of uncertainty.

Your Project #: 110773396
Your C.O.C. #: 1/1

Attention: DYLAN KING

STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
EDMONTON, AB
CANADA T5J 0K4

Report Date: 2025/06/10
Report #: R3672004
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C550086
Received: 2025/06/02, 16:42

Sample Matrix: Water
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH	3	N/A	2025/06/05	AB SOP-00005	SM 24 2320 B m
BTEX/F1 in Water by HS GC/MS/FID	3	N/A	2025/06/07	AB SOP-00039	CCME CWS/EPA 8260d m
F1-BTEX	3	N/A	2025/06/07		Auto Calc
Cadmium - low level CCME - Dissolved	3	N/A	2025/06/05		Auto Calc
Chloride/Sulphate by Auto Colourimetry	3	N/A	2025/06/03	AB SOP-00020	SM24-4500-Cl/SO4-E m
Fecal Coliforms (MPN/100mL)	3	2025/06/03	2025/06/04	AB SOP-00089	SM 24 9223 A,B m
Heterotrophic Plate Count Quant	3	2025/06/03	2025/06/05	CAL SOP-00012	SM 24 9215 A, E m
Total Coliforms and E.Coli	3	2025/06/03	2025/06/04	AB SOP-00089	SM 24 9223 A,B m
Carbon (DOC) (1)	3	N/A	2025/06/08	AB SOP-00087	MMCW 119 1996 m
Conductivity @25C	3	N/A	2025/06/05	AB SOP-00005	SM 24 2510 B m
CCME Hydrocarbons in Water (F2; C10-C16) (2)	3	2025/06/03	2025/06/04	AB SOP-00037 AB SOP-00040	CCME PHC-CWS m
Hardness	3	N/A	2025/06/04		Auto Calc
Mercury (Dissolved) by CV (3)	3	2025/06/09	2025/06/09	AB SOP-00084	BCMOE BCLM Oct2013 m
Mercury (Total) by CV	3	2025/06/09	2025/06/09	AB SOP-00084	BCMOE BCLM Oct2013 m
Elements by ICP - Dissolved (3)	2	N/A	2025/06/03	AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Dissolved (3)	1	N/A	2025/06/04	AB SOP-00042	EPA 6010d R5 m
Elements by ICPMS - Dissolved (3)	3	N/A	2025/06/04	AB SOP-00043	EPA 6020b R2 m
Ion Balance	3	N/A	2025/06/06		Auto Calc
Sum of cations, anions	3	N/A	2025/06/04		Auto Calc
Ammonia-N (Total)	3	N/A	2025/06/06	AB SOP-00007	SM 24 4500 NH3 A G m
Nitrate and Nitrite	3	N/A	2025/06/04		Auto Calc
NO2 (N); NO2 (N) + NO3 (N) in Water	2	N/A	2025/06/03	AB SOP-00091	SM 24 4500 NO3m
NO2 (N); NO2 (N) + NO3 (N) in Water	1	N/A	2025/06/04	AB SOP-00091	SM 24 4500 NO3m
Nitrate (as N)	3	2025/06/02	2025/06/04		Auto Calc
pH @25°C (4)	3	N/A	2025/06/05	AB SOP-00005	SM 24 4500-H+B m
Orthophosphate by Automated Analyzer (5)	3	N/A	2025/06/04	AB SOP-00025	SM 24 4500-P A,F m
Total Dissolved Solids (Calculated)	3	N/A	2025/06/06		Auto Calc
Total Kjeldahl Nitrogen (Total)	3	N/A	2025/06/04		Auto Calc
Nitrogen (Total)	3	2025/06/03	2025/06/04	AB SOP-00093	SM 24 4500-N C m
Total Phosphorus Dissolved client FF/FP (6)	3	2025/06/03	2025/06/03	AB SOP-00024	SM 24 4500-P A,B,F m

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Your Project #: 110773396
Your C.O.C. #: 1/1

Attention: DYLAN KING

STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
EDMONTON, AB
CANADA T5J 0K4

Report Date: 2025/06/10
Report #: R3672004
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C550086
Received: 2025/06/02, 16:42

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) DOC present in the sample should be considered as non-purgeable DOC. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(2) Silica gel clean up employed.
(3) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(4) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.
(5) Orthophosphate > Total Phosphorus Imbalance: When applicable, Orthophosphate, Total Phosphorus and dissolved Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
(6) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.

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Your Project #: 110773396
Your C.O.C. #: 1/1

Attention: DYLAN KING

STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
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Report Date: 2025/06/10
Report #: R3672004
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C550086
Received: 2025/06/02, 16:42

Encryption Key

AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas
10 Jun 2025 13:41:21

Please direct all questions regarding this Certificate of Analysis to:
Geraldlyn Gouthro, Key Account Specialist
Email: geraldlyn.gouthro@bureauveritas.com
Phone# (403) 291-3077

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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

AT1 BTEX AND F1-F2 IN WATER (WATER)

Bureau Veritas ID		DME304		DME305		DME306			
Sampling Date		2025/06/02 12:40		2025/06/02 11:43		2025/06/02 15:02			
COC Number		1/1		1/1		1/1			
	UNITS	RRMW16-17-8	MU	SW11-R4-02	MU	WS51-01	MU	RDL	QC Batch
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B969279
Volatiles									
Benzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B972413
Toluene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B972413
Ethylbenzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B972413
m & p-Xylene	mg/L	<0.00080	N/A	<0.00080	N/A	<0.00080	N/A	0.00080	B972413
o-Xylene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B972413
Xylenes (Total)	mg/L	<0.00089	N/A	<0.00089	N/A	<0.00089	N/A	0.00089	B971180
F1 (C6-C10) - BTEX	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B971180
F1 (C6-C10)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B972413
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	101	N/A	102	N/A	101	N/A	N/A	B972413
4-Bromofluorobenzene (sur.)	%	92	N/A	96	N/A	96	N/A	N/A	B972413
D4-1,2-Dichloroethane (sur.)	%	102	N/A	98	N/A	99	N/A	N/A	B972413
O-TERPHENYL (sur.)	%	104	N/A	104	N/A	105	N/A	N/A	B969279

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

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ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DME304			DME305			
Sampling Date		2025/06/02 12:40			2025/06/02 11:43			
COC Number		1/1			1/1			
	UNITS	RRMW16-17-8	MU	RDL	SW11-R4-02	MU	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	180	N/A	N/A	5.1	N/A	N/A	B971123
Cation Sum	meq/L	210	N/A	N/A	5.2	N/A	N/A	B971123
Hardness (CaCO3)	mg/L	5800	N/A	0.50	74	N/A	0.50	B970621
Ion Balance (% Difference)	%	7.6	N/A	N/A	0.36	N/A	N/A	B970623
Nitrate (N)	mg/L	<0.40	N/A	0.40	<0.040	N/A	0.040	B970494
Nitrate (NO3)	mg/L	<1.8	N/A	1.8	<0.18	N/A	0.18	B970493
Nitrite (NO2)	mg/L	<0.13	N/A	0.13	<0.13	N/A	0.13	B970493
Calculated Total Dissolved Solids	mg/L	12000	N/A	100	290	N/A	10	B971127
Elements								
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	0.020	<0.020	N/A	0.020	B970162
Misc. Inorganics								
Conductivity	uS/cm	12000	+/- 310	2.0	490	+/- 13	2.0	B973554
pH	pH	7.91	+/- 0.0784	N/A	8.41	+/- 0.0833	N/A	B973553
Anions								
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	1.0	3.9	+/- <RDL	1.0	B973551
Alkalinity (Total as CaCO3)	mg/L	970	+/- 72	1.0	180	+/- 14	1.0	B973551
Bicarbonate (HCO3)	mg/L	1200	+/- 18	1.0	220	+/- 3.5	1.0	B973551
Carbonate (CO3)	mg/L	<1.0	N/A	1.0	4.7	N/A	1.0	B973551
Hydroxide (OH)	mg/L	<1.0	N/A	1.0	<1.0	N/A	1.0	B973551
Chloride (Cl)	mg/L	4.7	+/- 1.2	1.0	5.9	+/- 1.3	1.0	B972813
Sulphate (SO4)	mg/L	7700	+/- 490	100	61	+/- 4.2	1.0	B972813
Nutrients								
Nitrite (N)	mg/L	<0.040	N/A	0.040	<0.040	N/A	0.040	B972389
Nitrate plus Nitrite (N)	mg/L	<0.40 (1)	N/A	0.40	<0.040	N/A	0.040	B972389
Elements								
Dissolved Aluminum (Al)	mg/L	0.013	+/- 0.0030	0.0030	<0.0030	N/A	0.0030	B973510
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	0.00060	<0.00060	N/A	0.00060	B973510
Dissolved Arsenic (As)	mg/L	0.00055	+/- 0.00020	0.00020	<0.00020	N/A	0.00020	B973510
Dissolved Barium (Ba)	mg/L	<0.010	N/A	0.010	0.072	+/- <RDL	0.010	B972640
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B973510

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Detection limits raised due to matrix interference.

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ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DME304			DME305			
Sampling Date		2025/06/02 12:40			2025/06/02 11:43			
COC Number		1/1			1/1			
	UNITS	RRMW16-17-8	MU	RDL	SW11-R4-02	MU	RDL	QC Batch
Dissolved Boron (B)	mg/L	0.16	+/- 0.024	0.020	0.031	+/- <RDL	0.020	B972640
Dissolved Calcium (Ca)	mg/L	390	+/- 31	0.30	20	+/- 1.6	0.30	B972640
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B973510
Dissolved Cobalt (Co)	mg/L	0.0064	+/- 0.0010	0.00030	<0.00030	N/A	0.00030	B973510
Dissolved Copper (Cu)	mg/L	0.0013	+/- <RDL	0.0010	<0.0010	N/A	0.0010	B973510
Dissolved Iron (Fe)	mg/L	0.31	+/- <RDL	0.060	<0.060	N/A	0.060	B972640
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	0.00020	<0.00020	N/A	0.00020	B973510
Dissolved Lithium (Li)	mg/L	0.10	+/- <RDL	0.020	<0.020	N/A	0.020	B972640
Dissolved Magnesium (Mg)	mg/L	1200	+/- 55	2.0	6.1	+/- 0.30	0.20	B972640
Dissolved Manganese (Mn)	mg/L	2.5	+/- 0.15	0.0040	0.052	+/- <RDL	0.0040	B972640
Dissolved Molybdenum (Mo)	mg/L	0.00083	+/- <RDL	0.00020	0.0017	+/- <RDL	0.00020	B973510
Dissolved Nickel (Ni)	mg/L	0.0081	+/- 0.00094	0.00050	<0.00050	N/A	0.00050	B973510
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	0.10	<0.10	N/A	0.10	B972640
Dissolved Potassium (K)	mg/L	13	+/- 0.62	0.30	0.88	+/- <RDL	0.30	B972640
Dissolved Selenium (Se)	mg/L	0.00033	+/- <RDL	0.00020	<0.00020	N/A	0.00020	B973510
Dissolved Silicon (Si)	mg/L	5.1	+/- 0.86	0.50	4.0	+/- 0.67	0.50	B972640
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	0.00010	<0.00010	N/A	0.00010	B973510
Dissolved Sodium (Na)	mg/L	2200	+/- 210	5.0	84	+/- 8.1	0.50	B972640
Dissolved Strontium (Sr)	mg/L	11	+/- 0.95	0.20	0.37	+/- 0.033	0.020	B972640
Dissolved Sulphur (S)	mg/L	3000	+/- 260	2.0	20	+/- 1.7	0.20	B972640
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	0.00020	<0.00020	N/A	0.00020	B973510
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B973510
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B973510
Dissolved Uranium (U)	mg/L	0.044	+/- 0.0068	0.00010	<0.00010	N/A	0.00010	B973510
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B973510
Dissolved Zinc (Zn)	mg/L	0.0064	+/- <RDL	0.0030	0.018	+/- <RDL	0.0030	B973510

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

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ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DME306			
Sampling Date		2025/06/02 15:02			
COC Number		1/1			
	UNITS	WS51-01	MU	RDL	QC Batch
Calculated Parameters					
Anion Sum	meq/L	8.5	N/A	N/A	B971123
Cation Sum	meq/L	8.9	N/A	N/A	B971123
Hardness (CaCO3)	mg/L	180	N/A	0.50	B970621
Ion Balance (% Difference)	%	2.0	N/A	N/A	B970623
Nitrate (N)	mg/L	<0.040	N/A	0.040	B970494
Nitrate (NO3)	mg/L	<0.18	N/A	0.18	B970493
Nitrite (NO2)	mg/L	<0.13	N/A	0.13	B970493
Calculated Total Dissolved Solids	mg/L	490	N/A	10	B971127
Elements					
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	0.020	B970162
Misc. Inorganics					
Conductivity	uS/cm	780	+/- 21	2.0	B973554
pH	pH	8.30	+/- 0.0822	N/A	B973553
Anions					
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	1.0	B973551
Alkalinity (Total as CaCO3)	mg/L	290	+/- 21	1.0	B973551
Bicarbonate (HCO3)	mg/L	350	+/- 5.5	1.0	B973551
Carbonate (CO3)	mg/L	<1.0	N/A	1.0	B973551
Hydroxide (OH)	mg/L	<1.0	N/A	1.0	B973551
Chloride (Cl)	mg/L	<1.0	N/A	1.0	B972813
Sulphate (SO4)	mg/L	130	+/- 8.7	5.0	B972813
Nutrients					
Nitrite (N)	mg/L	<0.040	N/A	0.040	B973544
Nitrate plus Nitrite (N)	mg/L	<0.040	N/A	0.040	B973544
Elements					
Dissolved Aluminum (Al)	mg/L	<0.0030	N/A	0.0030	B973510
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	0.00060	B973510
Dissolved Arsenic (As)	mg/L	0.00078	+/- 0.00025	0.00020	B973510
Dissolved Barium (Ba)	mg/L	0.014	+/- <RDL	0.010	B972640
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	0.0010	B973510
Dissolved Boron (B)	mg/L	0.092	+/- 0.020	0.020	B972640

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

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ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DME306			
Sampling Date		2025/06/02 15:02			
COC Number		1/1			
	UNITS	WS51-01	MU	RDL	QC Batch
Dissolved Calcium (Ca)	mg/L	56	+/- 4.6	0.30	B972640
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	0.0010	B973510
Dissolved Cobalt (Co)	mg/L	<0.00030	N/A	0.00030	B973510
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	0.0010	B973510
Dissolved Iron (Fe)	mg/L	0.27	+/- <RDL	0.060	B972640
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	0.00020	B973510
Dissolved Lithium (Li)	mg/L	0.022	+/- <RDL	0.020	B972640
Dissolved Magnesium (Mg)	mg/L	10	+/- 0.50	0.20	B972640
Dissolved Manganese (Mn)	mg/L	0.13	+/- 0.0084	0.0040	B972640
Dissolved Molybdenum (Mo)	mg/L	0.0050	+/- 0.00036	0.00020	B973510
Dissolved Nickel (Ni)	mg/L	<0.00050	N/A	0.00050	B973510
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	0.10	B972640
Dissolved Potassium (K)	mg/L	1.1	+/- <RDL	0.30	B972640
Dissolved Selenium (Se)	mg/L	<0.00020	N/A	0.00020	B973510
Dissolved Silicon (Si)	mg/L	5.2	+/- 0.87	0.50	B972640
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	0.00010	B973510
Dissolved Sodium (Na)	mg/L	120	+/- 11	0.50	B972640
Dissolved Strontium (Sr)	mg/L	0.46	+/- 0.042	0.020	B972640
Dissolved Sulphur (S)	mg/L	44	+/- 3.7	0.20	B972640
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	0.00020	B973510
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	0.0010	B973510
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	0.0010	B973510
Dissolved Uranium (U)	mg/L	0.00020	+/- 0.00020	0.00010	B973510
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	0.0010	B973510
Dissolved Zinc (Zn)	mg/L	<0.0030	N/A	0.0030	B973510

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

TOTAL KJELDAHL NITROGEN (TOTAL)

Bureau Veritas ID		DME304			DME305		DME306			
Sampling Date		2025/06/02 12:40			2025/06/02 11:43		2025/06/02 15:02			
COC Number		1/1			1/1		1/1			
	UNITS	RRMW16-17-8	MU	RDL	SW11-R4-02	MU	WS51-01	MU	RDL	QC Batch
Calculated Parameters										
Total Kjeldahl Nitrogen (Calc)	mg/L	<2.0	N/A	2.0	0.19	N/A	0.25	N/A	0.040	B969886
Nutrients										
Total Nitrogen (N)	mg/L	<2.0 (1)	N/A	2.0	0.19	+/- 0.031	0.25 (2)	+/- 0.037	0.020	B971961

RDL = Reportable Detection Limit

MU = Measurement Uncertainty

N/A = Not Applicable

(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly. Nitrogen < Ammonia: Both values fall within the method uncertainty for duplicates and are likely equivalent.

(2) Nitrogen < Ammonia: Both values fall within the method uncertainty for duplicates and are likely equivalent.

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DME304		DME304			
Sampling Date		2025/06/02 12:40		2025/06/02 12:40			
COC Number		1/1		1/1			
	UNITS	RRMW16-17-8	MU	RRMW16-17-8 Lab-Dup	MU	RDL	QC Batch
Misc. Inorganics							
Dissolved Organic Carbon (C)	mg/L	26	+/- 2.6	N/A	N/A	1.0	B977851
Microbiological Param.							
E.Coli DST	MPN/100mL	<10 (1)	N/A	N/A	N/A	10	B971793
Fecal Coliforms	MPN/100mL	<10 (1)	N/A	N/A	N/A	10	B971802
Heterotrophic DST	MPN/100mL	>4800 (2)	N/A	N/A	N/A	2.0	B971674
Total Coliforms DST	MPN/100mL	52 (1)	N/A	N/A	N/A	10	B971793
Nutrients							
Total Ammonia (N)	mg/L	0.52	+/- 0.058	N/A	N/A	0.015	B976532
Orthophosphate (P)	mg/L	0.0044	+/- 0.023	N/A	N/A	0.0030	B973783
Dissolved Phosphorus (P)	mg/L	0.0034 (3)	+/- 0.0048	0.0036	+/- 0.0048	0.0030	B972026

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Detection limit raised due to matrix interference.
(2) Detection limits raised due to matrix interference.
(3) Phosphorus < Orthophosphate: Both values fall within the method uncertainty for duplicates and are likely equivalent.

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DME305		DME305			DME306			
Sampling Date		2025/06/02 11:43		2025/06/02 11:43			2025/06/02 15:02			
COC Number		1/1		1/1			1/1			
	UNITS	SW11-R4-02	MU	SW11-R4-02 Lab-Dup	MU	QC Batch	WS51-01	MU	RDL	QC Batch
Misc. Inorganics										
Dissolved Organic Carbon (C)	mg/L	<0.50	N/A	<0.50	N/A	B978452	1.0	+/- <RDL	0.50	B977851
Microbiological Param.										
E.Coli DST	MPN/100mL	<1.0	N/A	N/A	N/A	B971793	3.1	N/A	1.0	B971793
Fecal Coliforms	MPN/100mL	<1.0	N/A	N/A	N/A	B971802	<1.0	N/A	1.0	B971802
Heterotrophic DST	MPN/100mL	>2400	N/A	N/A	N/A	B971674	>2400	N/A	1.0	B971674
Total Coliforms DST	MPN/100mL	<1.0	N/A	N/A	N/A	B971793	55	N/A	1.0	B971793
Nutrients										
Total Ammonia (N)	mg/L	0.18	+/- 0.022	0.18	+/- 0.022	B976532	0.25	+/- 0.030	0.015	B976532
Orthophosphate (P)	mg/L	<0.0030	N/A	N/A	N/A	B973783	<0.0030	N/A	0.0030	B973783
Dissolved Phosphorus (P)	mg/L	<0.0030	N/A	N/A	N/A	B972026	<0.0030	N/A	0.0030	B972026

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas ID		DME306			
Sampling Date		2025/06/02 15:02			
COC Number		1/1			
	UNITS	WS51-01 Lab-Dup	MU	RDL	QC Batch
Nutrients					
Orthophosphate (P)	mg/L	<0.0030	N/A	0.0030	B973783

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

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MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		DME304		DME304			DME305		DME306			
Sampling Date		2025/06/02 12:40		2025/06/02 12:40			2025/06/02 11:43		2025/06/02 15:02			
COC Number		1/1		1/1			1/1		1/1			
	UNITS	**RRMW16-17-8**	**MU**	**RRMW16-17-8 Lab-Dup**	**MU**	**RDL**	**SW11-R4-02**	**MU**	**WS51-01**	**MU**	**RDL**	**QC Batch**
Elements												
Dissolved Mercury (Hg)	ug/L	<0.0019	N/A	<0.0019	N/A	0.0019	<0.0019	N/A	<0.0019	N/A	0.0019	B980281
Total Mercury (Hg)	ug/L	0.093 (1)	+/- <RDL	N/A	N/A	0.019	<0.0019	N/A	<0.0019	N/A	0.0019	B980278

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	6.7°C

The estimate of uncertainty has been reported as an expanded uncertainty and calculated using a coverage factor of 2, which gives a level of confidence of 95%.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B969279	VP4	Matrix Spike	O-TERPHENYL (sur.)	2025/06/04		104	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2025/06/04		109	%	60 - 140
B969279	VP4	Spiked Blank	O-TERPHENYL (sur.)	2025/06/04		103	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2025/06/04		106	%	60 - 140
B969279	VP4	Method Blank	O-TERPHENYL (sur.)	2025/06/04		102	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2025/06/04	<0.10		mg/L	
B969279	VP4	RPD	F2 (C10-C16 Hydrocarbons)	2025/06/04	NC		%	30
B971674	CT6	Method Blank	Heterotrophic DST	2025/06/05	<1.0		mpn/100mL	
B971674	CT6	RPD	Heterotrophic DST	2025/06/05	NC		%	N/A
B971793	CT6	Method Blank	E.Coli DST	2025/06/04	<1.0		mpn/100mL	
			Total Coliforms DST	2025/06/04	<1.0		mpn/100mL	
B971793	CT6	RPD	Total Coliforms DST	2025/06/04	18		%	N/A
B971802	CT6	Method Blank	Fecal Coliforms	2025/06/04	<1.0		MPN/100mL	
B971802	CT6	RPD	Fecal Coliforms	2025/06/04	39		%	N/A
B971961	YL7	Matrix Spike	Total Nitrogen (N)	2025/06/04		100	%	80 - 120
B971961	YL7	QC Standard	Total Nitrogen (N)	2025/06/04		105	%	80 - 120
B971961	YL7	Spiked Blank	Total Nitrogen (N)	2025/06/04		95	%	80 - 120
B971961	YL7	Method Blank	Total Nitrogen (N)	2025/06/04	<0.020		mg/L	
B971961	YL7	RPD	Total Nitrogen (N)	2025/06/04	NC		%	20
B972026	HAP	Matrix Spike [DME304-03]	Dissolved Phosphorus (P)	2025/06/03		103	%	80 - 120
B972026	HAP	QC Standard	Dissolved Phosphorus (P)	2025/06/03		84	%	80 - 120
B972026	HAP	Spiked Blank	Dissolved Phosphorus (P)	2025/06/03		93	%	80 - 120
B972026	HAP	Method Blank	Dissolved Phosphorus (P)	2025/06/03	<0.0030		mg/L	
B972026	HAP	RPD [DME304-03]	Dissolved Phosphorus (P)	2025/06/03	7.5		%	20
B972389	KKC	Matrix Spike	Nitrite (N)	2025/06/03		102	%	80 - 120
			Nitrate plus Nitrite (N)	2025/06/03		129 (1)	%	80 - 120
B972389	KKC	Spiked Blank	Nitrite (N)	2025/06/03		105	%	80 - 120
			Nitrate plus Nitrite (N)	2025/06/03		110	%	80 - 120
B972389	KKC	Method Blank	Nitrite (N)	2025/06/03	<0.040		mg/L	
			Nitrate plus Nitrite (N)	2025/06/03	<0.040		mg/L	
B972389	KKC	RPD	Nitrite (N)	2025/06/03	NC		%	20
			Nitrate plus Nitrite (N)	2025/06/03	NC		%	20
B972413	DO1	Matrix Spike	1,4-Difluorobenzene (sur.)	2025/06/06		97	%	50 - 140
			4-Bromofluorobenzene (sur.)	2025/06/06		108	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2025/06/06		96	%	50 - 140
			Benzene	2025/06/06		91	%	50 - 140
			Toluene	2025/06/06		91	%	50 - 140
			Ethylbenzene	2025/06/06		92	%	50 - 140
			m & p-Xylene	2025/06/06		92	%	50 - 140
			o-Xylene	2025/06/06		87	%	50 - 140
			F1 (C6-C10)	2025/06/06		113	%	60 - 140
B972413	DO1	Spiked Blank	1,4-Difluorobenzene (sur.)	2025/06/06		96	%	50 - 140
			4-Bromofluorobenzene (sur.)	2025/06/06		109	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2025/06/06		96	%	50 - 140
			Benzene	2025/06/06		95	%	60 - 130
			Toluene	2025/06/06		94	%	60 - 130
			Ethylbenzene	2025/06/06		96	%	60 - 130
			m & p-Xylene	2025/06/06		95	%	60 - 130
			o-Xylene	2025/06/06		90	%	60 - 130
			F1 (C6-C10)	2025/06/06		115	%	60 - 140
B972413	DO1	Method Blank	1,4-Difluorobenzene (sur.)	2025/06/06		102	%	50 - 140
			4-Bromofluorobenzene (sur.)	2025/06/06		101	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2025/06/06		100	%	50 - 140

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Benzene	2025/06/06	<0.00040		mg/L	
			Toluene	2025/06/06	<0.00040		mg/L	
			Ethylbenzene	2025/06/06	<0.00040		mg/L	
			m & p-Xylene	2025/06/06	<0.00080		mg/L	
			o-Xylene	2025/06/06	<0.00040		mg/L	
			F1 (C6-C10)	2025/06/06	<0.10		mg/L	
B972413	DO1	RPD	Benzene	2025/06/06	NC		%	30
			Toluene	2025/06/06	NC		%	30
			Ethylbenzene	2025/06/06	NC		%	30
			m & p-Xylene	2025/06/06	NC		%	30
			o-Xylene	2025/06/06	NC		%	30
			F1 (C6-C10)	2025/06/06	NC		%	30
B972640	KHU	Matrix Spike	Dissolved Barium (Ba)	2025/06/03		96	%	80 - 120
			Dissolved Boron (B)	2025/06/03		97	%	80 - 120
			Dissolved Calcium (Ca)	2025/06/03		104	%	80 - 120
			Dissolved Iron (Fe)	2025/06/03		101	%	80 - 120
			Dissolved Lithium (Li)	2025/06/03		99	%	80 - 120
			Dissolved Magnesium (Mg)	2025/06/03		106	%	80 - 120
			Dissolved Manganese (Mn)	2025/06/03		96	%	80 - 120
			Dissolved Phosphorus (P)	2025/06/03		102	%	80 - 120
			Dissolved Potassium (K)	2025/06/03		106	%	80 - 120
			Dissolved Silicon (Si)	2025/06/03		97	%	80 - 120
			Dissolved Sodium (Na)	2025/06/03		101	%	80 - 120
			Dissolved Strontium (Sr)	2025/06/03		95	%	80 - 120
			Dissolved Sulphur (S)	2025/06/03		100	%	80 - 120
B972640	KHU	Spiked Blank	Dissolved Barium (Ba)	2025/06/03		94	%	80 - 120
			Dissolved Boron (B)	2025/06/03		94	%	80 - 120
			Dissolved Calcium (Ca)	2025/06/03		100	%	80 - 120
			Dissolved Iron (Fe)	2025/06/03		92	%	80 - 120
			Dissolved Lithium (Li)	2025/06/03		95	%	80 - 120
			Dissolved Magnesium (Mg)	2025/06/03		100	%	80 - 120
			Dissolved Manganese (Mn)	2025/06/03		89	%	80 - 120
			Dissolved Phosphorus (P)	2025/06/03		94	%	80 - 120
			Dissolved Potassium (K)	2025/06/03		100	%	80 - 120
			Dissolved Silicon (Si)	2025/06/03		94	%	80 - 120
			Dissolved Sodium (Na)	2025/06/03		98	%	80 - 120
			Dissolved Strontium (Sr)	2025/06/03		93	%	80 - 120
			Dissolved Sulphur (S)	2025/06/03		92	%	80 - 120
B972640	KHU	Method Blank	Dissolved Barium (Ba)	2025/06/03	<0.010		mg/L	
			Dissolved Boron (B)	2025/06/03	<0.020		mg/L	
			Dissolved Calcium (Ca)	2025/06/03	<0.30		mg/L	
			Dissolved Iron (Fe)	2025/06/03	<0.060		mg/L	
			Dissolved Lithium (Li)	2025/06/03	<0.020		mg/L	
			Dissolved Magnesium (Mg)	2025/06/03	<0.20		mg/L	
			Dissolved Manganese (Mn)	2025/06/03	<0.0040		mg/L	
			Dissolved Phosphorus (P)	2025/06/03	<0.10		mg/L	
			Dissolved Potassium (K)	2025/06/03	<0.30		mg/L	
			Dissolved Silicon (Si)	2025/06/03	<0.50		mg/L	
			Dissolved Sodium (Na)	2025/06/03	<0.50		mg/L	
			Dissolved Strontium (Sr)	2025/06/03	<0.020		mg/L	
			Dissolved Sulphur (S)	2025/06/03	<0.20		mg/L	
B972640	KHU	RPD	Dissolved Barium (Ba)	2025/06/03	NC		%	20
			Dissolved Boron (B)	2025/06/03	NC		%	20
			Dissolved Calcium (Ca)	2025/06/03	2.8		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Iron (Fe)	2025/06/03	11		%	20
			Dissolved Lithium (Li)	2025/06/03	NC		%	20
			Dissolved Magnesium (Mg)	2025/06/03	2.9		%	20
			Dissolved Manganese (Mn)	2025/06/03	7.0		%	20
			Dissolved Phosphorus (P)	2025/06/03	NC		%	20
			Dissolved Potassium (K)	2025/06/03	0.54		%	20
			Dissolved Silicon (Si)	2025/06/03	4.3		%	20
			Dissolved Sodium (Na)	2025/06/03	2.7		%	20
			Dissolved Strontium (Sr)	2025/06/03	NC		%	20
			Dissolved Sulphur (S)	2025/06/03	0.43		%	20
B972813	TOR	Matrix Spike	Chloride (Cl)	2025/06/03		107	%	80 - 120
			Sulphate (SO4)	2025/06/03		104	%	80 - 120
B972813	TOR	Spiked Blank	Chloride (Cl)	2025/06/03		103	%	80 - 120
			Sulphate (SO4)	2025/06/03		99	%	80 - 120
B972813	TOR	Method Blank	Chloride (Cl)	2025/06/03	<1.0		mg/L	
			Sulphate (SO4)	2025/06/03	<1.0		mg/L	
B972813	TOR	RPD	Chloride (Cl)	2025/06/03	NC		%	20
			Sulphate (SO4)	2025/06/03	NC		%	20
B973510	KH2	Matrix Spike	Dissolved Aluminum (Al)	2025/06/04		101	%	80 - 120
			Dissolved Antimony (Sb)	2025/06/04		104	%	80 - 120
			Dissolved Arsenic (As)	2025/06/04		107	%	80 - 120
			Dissolved Beryllium (Be)	2025/06/04		110	%	80 - 120
			Dissolved Chromium (Cr)	2025/06/04		97	%	80 - 120
			Dissolved Cobalt (Co)	2025/06/04		96	%	80 - 120
			Dissolved Copper (Cu)	2025/06/04		95	%	80 - 120
			Dissolved Lead (Pb)	2025/06/04		100	%	80 - 120
			Dissolved Molybdenum (Mo)	2025/06/04		104	%	80 - 120
			Dissolved Nickel (Ni)	2025/06/04		95	%	80 - 120
			Dissolved Selenium (Se)	2025/06/04		107	%	80 - 120
			Dissolved Silver (Ag)	2025/06/04		98	%	80 - 120
			Dissolved Thallium (Tl)	2025/06/04		105	%	80 - 120
			Dissolved Tin (Sn)	2025/06/04		101	%	80 - 120
			Dissolved Titanium (Ti)	2025/06/04		104	%	80 - 120
			Dissolved Uranium (U)	2025/06/04		98	%	80 - 120
			Dissolved Vanadium (V)	2025/06/04		100	%	80 - 120
			Dissolved Zinc (Zn)	2025/06/04		99	%	80 - 120
B973510	KH2	Spiked Blank	Dissolved Aluminum (Al)	2025/06/04		88	%	80 - 120
			Dissolved Antimony (Sb)	2025/06/04		91	%	80 - 120
			Dissolved Arsenic (As)	2025/06/04		91	%	80 - 120
			Dissolved Beryllium (Be)	2025/06/04		93	%	80 - 120
			Dissolved Chromium (Cr)	2025/06/04		84	%	80 - 120
			Dissolved Cobalt (Co)	2025/06/04		84	%	80 - 120
			Dissolved Copper (Cu)	2025/06/04		83	%	80 - 120
			Dissolved Lead (Pb)	2025/06/04		86	%	80 - 120
			Dissolved Molybdenum (Mo)	2025/06/04		87	%	80 - 120
			Dissolved Nickel (Ni)	2025/06/04		84	%	80 - 120
			Dissolved Selenium (Se)	2025/06/04		92	%	80 - 120
			Dissolved Silver (Ag)	2025/06/04		84	%	80 - 120
			Dissolved Thallium (Tl)	2025/06/04		90	%	80 - 120
			Dissolved Tin (Sn)	2025/06/04		89	%	80 - 120
			Dissolved Titanium (Ti)	2025/06/04		91	%	80 - 120
			Dissolved Uranium (U)	2025/06/04		81	%	80 - 120
			Dissolved Vanadium (V)	2025/06/04		85	%	80 - 120
			Dissolved Zinc (Zn)	2025/06/04		85	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B973510	KH2	Method Blank	Dissolved Aluminum (Al)	2025/06/04	<0.0030		mg/L	
			Dissolved Antimony (Sb)	2025/06/04	<0.00060		mg/L	
			Dissolved Arsenic (As)	2025/06/04	<0.00020		mg/L	
			Dissolved Beryllium (Be)	2025/06/04	<0.0010		mg/L	
			Dissolved Chromium (Cr)	2025/06/04	<0.0010		mg/L	
			Dissolved Cobalt (Co)	2025/06/04	<0.00030		mg/L	
			Dissolved Copper (Cu)	2025/06/04	<0.0010		mg/L	
			Dissolved Lead (Pb)	2025/06/04	<0.00020		mg/L	
			Dissolved Molybdenum (Mo)	2025/06/04	<0.00020		mg/L	
			Dissolved Nickel (Ni)	2025/06/04	<0.00050		mg/L	
			Dissolved Selenium (Se)	2025/06/04	<0.00020		mg/L	
			Dissolved Silver (Ag)	2025/06/04	<0.00010		mg/L	
			Dissolved Thallium (Tl)	2025/06/04	<0.00020		mg/L	
			Dissolved Tin (Sn)	2025/06/04	<0.0010		mg/L	
			Dissolved Titanium (Ti)	2025/06/04	<0.0010		mg/L	
			Dissolved Uranium (U)	2025/06/04	<0.00010		mg/L	
			Dissolved Vanadium (V)	2025/06/04	<0.0010		mg/L	
			Dissolved Zinc (Zn)	2025/06/04	<0.0030		mg/L	
B973510	KH2	RPD	Dissolved Aluminum (Al)	2025/06/04	NC		%	20
			Dissolved Antimony (Sb)	2025/06/04	NC		%	20
			Dissolved Arsenic (As)	2025/06/04	NC		%	20
			Dissolved Beryllium (Be)	2025/06/04	NC		%	20
			Dissolved Chromium (Cr)	2025/06/04	NC		%	20
			Dissolved Cobalt (Co)	2025/06/04	NC		%	20
			Dissolved Copper (Cu)	2025/06/04	NC		%	20
			Dissolved Lead (Pb)	2025/06/04	NC		%	20
			Dissolved Molybdenum (Mo)	2025/06/04	2.3		%	20
			Dissolved Nickel (Ni)	2025/06/04	9.2		%	20
			Dissolved Selenium (Se)	2025/06/04	NC		%	20
			Dissolved Silver (Ag)	2025/06/04	NC		%	20
			Dissolved Thallium (Tl)	2025/06/04	NC		%	20
			Dissolved Tin (Sn)	2025/06/04	NC		%	20
			Dissolved Titanium (Ti)	2025/06/04	NC		%	20
			Dissolved Uranium (U)	2025/06/04	0.16		%	20
			Dissolved Vanadium (V)	2025/06/04	NC		%	20
			Dissolved Zinc (Zn)	2025/06/04	NC		%	20
B973544	KKC	Matrix Spike	Nitrite (N)	2025/06/04		100	%	80 - 120
			Nitrate plus Nitrite (N)	2025/06/04		NC	%	80 - 120
B973544	KKC	Spiked Blank	Nitrite (N)	2025/06/04		105	%	80 - 120
			Nitrate plus Nitrite (N)	2025/06/04		107	%	80 - 120
B973544	KKC	Method Blank	Nitrite (N)	2025/06/04	<0.040		mg/L	
			Nitrate plus Nitrite (N)	2025/06/04	<0.040		mg/L	
B973544	KKC	RPD	Nitrite (N)	2025/06/04	1.8		%	20
			Nitrate plus Nitrite (N)	2025/06/04	1.6		%	20
B973551	JVM	Spiked Blank	Alkalinity (Total as CaCO3)	2025/06/05		97	%	80 - 120
B973551	JVM	Method Blank	Alkalinity (PP as CaCO3)	2025/06/05	<1.0		mg/L	
			Alkalinity (Total as CaCO3)	2025/06/05	<1.0		mg/L	
			Bicarbonate (HCO3)	2025/06/05	<1.0		mg/L	
			Carbonate (CO3)	2025/06/05	<1.0		mg/L	
			Hydroxide (OH)	2025/06/05	<1.0		mg/L	
B973551	JVM	RPD	Alkalinity (PP as CaCO3)	2025/06/05	NC		%	20
			Alkalinity (Total as CaCO3)	2025/06/05	1.4		%	20
			Bicarbonate (HCO3)	2025/06/05	0.19		%	20
			Carbonate (CO3)	2025/06/05	NC		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Hydroxide (OH)	2025/06/05	NC		%	20
B973553	JVM	Spiked Blank	pH	2025/06/05		100	%	97 - 103
B973553	JVM	RPD	pH	2025/06/05	0.59		%	N/A
B973554	JVM	Spiked Blank	Conductivity	2025/06/05		102	%	90 - 110
B973554	JVM	Method Blank	Conductivity	2025/06/05	<2.0		uS/cm	
B973554	JVM	RPD	Conductivity	2025/06/05	0.89		%	10
B973783	MAP	Matrix Spike [DME304-01]	Orthophosphate (P)	2025/06/04		96	%	80 - 120
B973783	MAP	Spiked Blank	Orthophosphate (P)	2025/06/04		102	%	80 - 120
B973783	MAP	Method Blank	Orthophosphate (P)	2025/06/04	<0.0030		mg/L	
B973783	MAP	RPD [DME306-01]	Orthophosphate (P)	2025/06/04	NC		%	20
B976532	KKC	Matrix Spike [DME305-07]	Total Ammonia (N)	2025/06/06		105	%	80 - 120
B976532	KKC	Spiked Blank	Total Ammonia (N)	2025/06/06		105	%	80 - 120
B976532	KKC	Method Blank	Total Ammonia (N)	2025/06/06	<0.015		mg/L	
B976532	KKC	RPD [DME305-07]	Total Ammonia (N)	2025/06/06	0.53		%	20
B977851	JYU	Matrix Spike	Dissolved Organic Carbon (C)	2025/06/08		NC	%	75 - 125
B977851	JYU	Spiked Blank	Dissolved Organic Carbon (C)	2025/06/08		108	%	80 - 120
B977851	JYU	Method Blank	Dissolved Organic Carbon (C)	2025/06/08	<0.50		mg/L	
B977851	JYU	RPD	Dissolved Organic Carbon (C)	2025/06/08	1.6		%	20
B978452	JYU	Matrix Spike [DME305-03]	Dissolved Organic Carbon (C)	2025/06/08		104	%	75 - 125
B978452	JYU	Spiked Blank	Dissolved Organic Carbon (C)	2025/06/08		107	%	80 - 120
B978452	JYU	Method Blank	Dissolved Organic Carbon (C)	2025/06/08	<0.50		mg/L	
B978452	JYU	RPD [DME305-03]	Dissolved Organic Carbon (C)	2025/06/08	NC		%	20
B980278	KKM	Matrix Spike	Total Mercury (Hg)	2025/06/09		89	%	80 - 120
B980278	KKM	Spiked Blank	Total Mercury (Hg)	2025/06/09		92	%	80 - 120
B980278	KKM	Method Blank	Total Mercury (Hg)	2025/06/09	<0.0019		ug/L	
B980278	KKM	RPD	Total Mercury (Hg)	2025/06/09	NC		%	20
B980281	KKM	Matrix Spike [DME306-08]	Dissolved Mercury (Hg)	2025/06/09		87	%	80 - 120
B980281	KKM	Spiked Blank	Dissolved Mercury (Hg)	2025/06/09		99	%	80 - 120
B980281	KKM	Method Blank	Dissolved Mercury (Hg)	2025/06/09	<0.0019		ug/L	
B980281	KKM	RPD [DME304-08]	Dissolved Mercury (Hg)	2025/06/09	NC		%	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

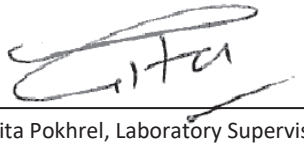
NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:



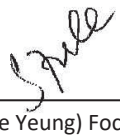
Gita Pokhrel, Laboratory Supervisor



Rahul Suryawanshi, Senior Analyst



Sandy Yuan, M.Sc., QP, Scientific Specialist



Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist



Bureau Veritas Certified by Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

C550086
2025/06/02 16:42

CHAIN OF CUSTODY RECORD
ENV COC - 00013v3

Page 1 of 1

Invoice Information		Report Information (if differs from invoice)		Project Information	
Company:	Stantec	Company:		Quotation #:	
Contact Name:	Dylan King	Contact Name:		P.O. #/ AFE#:	
Street Address:	#300, 10220 103Ave NW	Street Address:		Project #:	110773396
City:	Edmonton Prov: AB Postal Code: T5J0K4	City: Prov: Postal Code:		Site #:	
Phone:	780 969 2223	Phone:		Site Location:	
Email:	dylan.king@stantec.com	Email:	EDDe@stantec.com	Site Location Province:	AB
Copies:		Copies:	wesley.tse@stantec.com	Sampled By:	TH/DB

LAB USE ONLY - PLACE STICKER HERE

Rush Confirmation #:

Regulatory Criteria

☑ AT1 ☐ CCME ☐ Drinking Water - Canada ☐ Drinking Water - Manitoba
☐ Saskatchewan ☐ Drinking Water - Alberta ☐ Other _____

Regular Turnaround Time (TAT)
☑ 5 to 7 Day ☐ 10 Day

Rush Turnaround Time (TAT) Surcharges apply
☐ Same Day ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ 4 Day

Date Required: YY MM DD

Comments

SAMPLES MUST BE KEPT COOL (<10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

	Sample Identification	Date Sampled YY	MM	DD	Time (24hr) HH	MM	Matrix	1 FIELD FILTERED	2 FIELD PRESERVED	3 LAB FILTRATION REQUIRED	4 BTEX, F1	5 VOCs	6 BTEX F1-F2	7 BTEX F1-F4	8 Routine water	9 Regulated metals - total	10 Regulated metals - dissolved	11 Mercury - total	12 Mercury - dissolved	13 DOC	14 ~~Sum of Components~~ TKN	15 Texture (% sand, silt, clay)	16 Basic class II landfill	17 Diss. phosphorus	18 phosphate	19 ammonia	20 Bacteriological	21 # OF CONTAINERS SUBMITTED	22 HOLD - DO NOT ANALYZE
1	RRMW16-17-8	25	06	02	12	40	W	X	X				X		X		X	X	X	X	X			X	X	X	X	11	
2	SW11-R4-02	25	06	02	11	53	↓	X	X				X		X		X	X	X	X	X			X	X	X	X	11	
3	WS51-01	25	06	02	15	02	↓	X	X				X		X		X	X	X	X	X			X	X	X	X	11	
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

MCAL-2025-06-030

*UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS AND CONDITIONS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS OR BY CALLING THE LABORATORY LISTED ABOVE TO OBTAIN A COPY

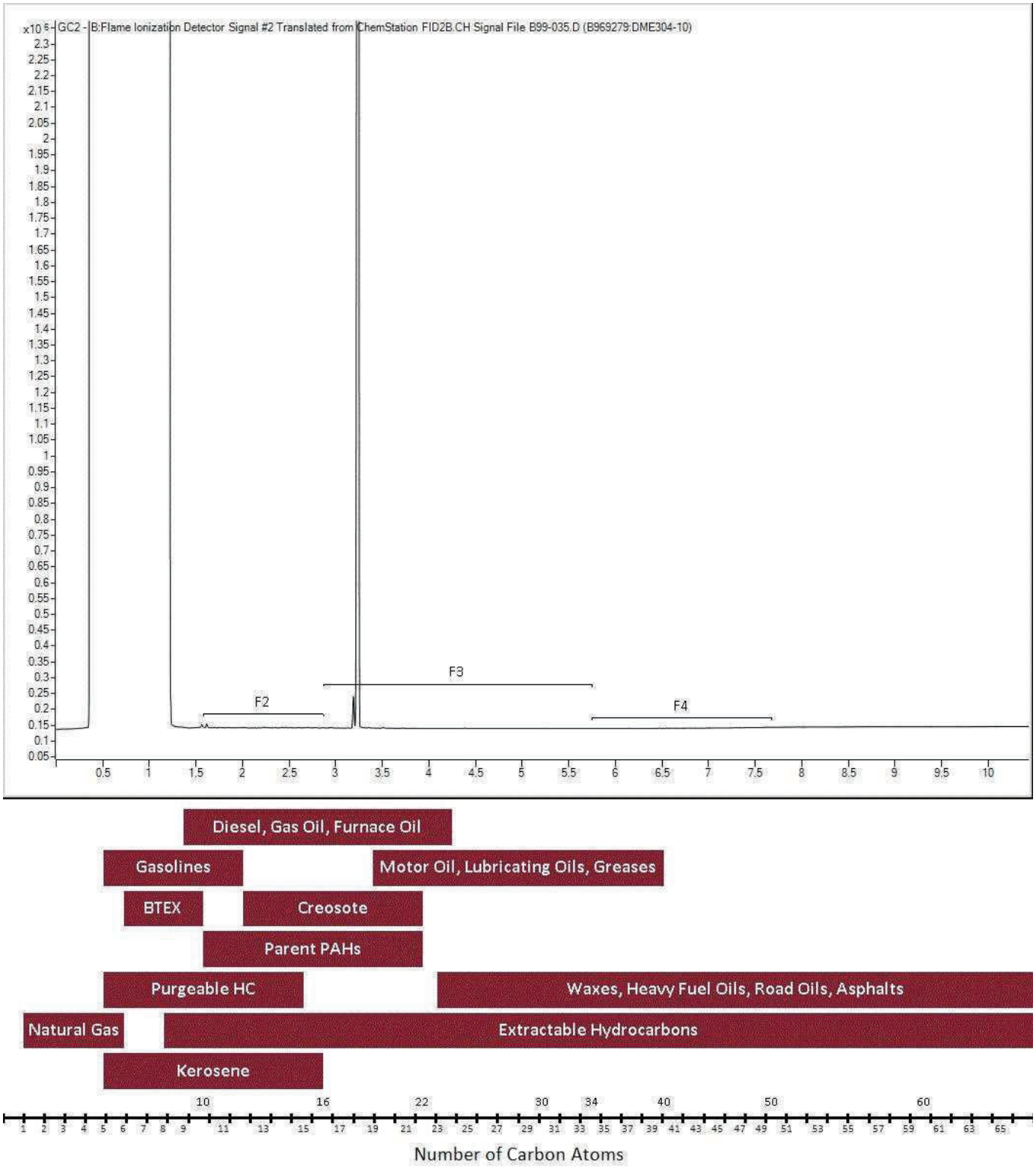
LAB USE ONLY	Yes	No	°C	Temperature reading by:
Seal present		✓		
Seal intact		✓		
Cooling media present	✓		6.7.7	

LAB USE ONLY	Yes	No	°C
Seal present			
Seal intact			
Cooling media present			

LAB USE ONLY	Yes	No	°C
Seal present			
Seal intact			
Cooling media present			

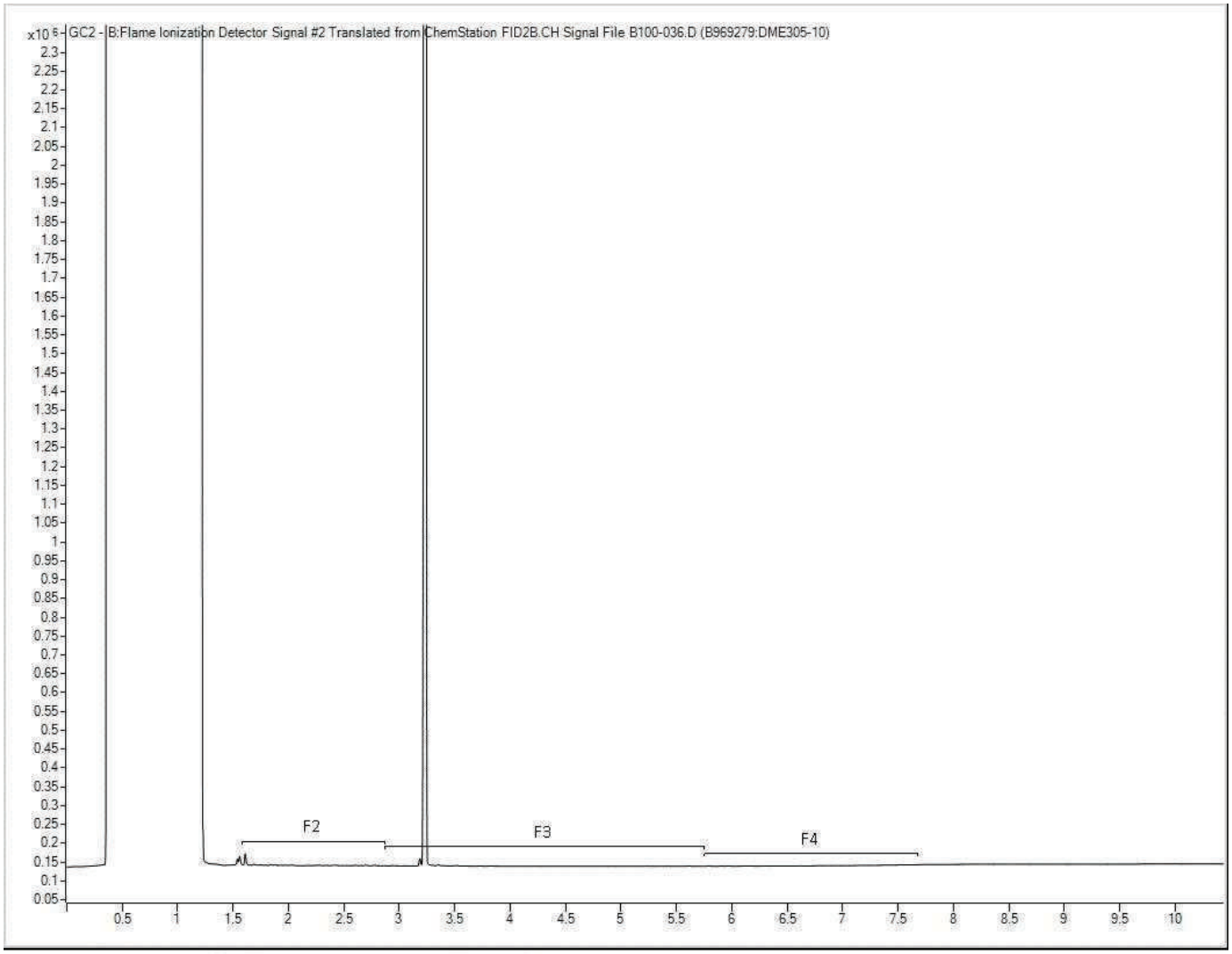
Relinquished by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM	Received by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM	Special instructions
1 Taylor Harris	2025	06	02	16	41	1 Marjorie Lutke	2025	06	02	16	42	* total and fecal coliforms, ecoli, heterotrophic plate count.
2						2						

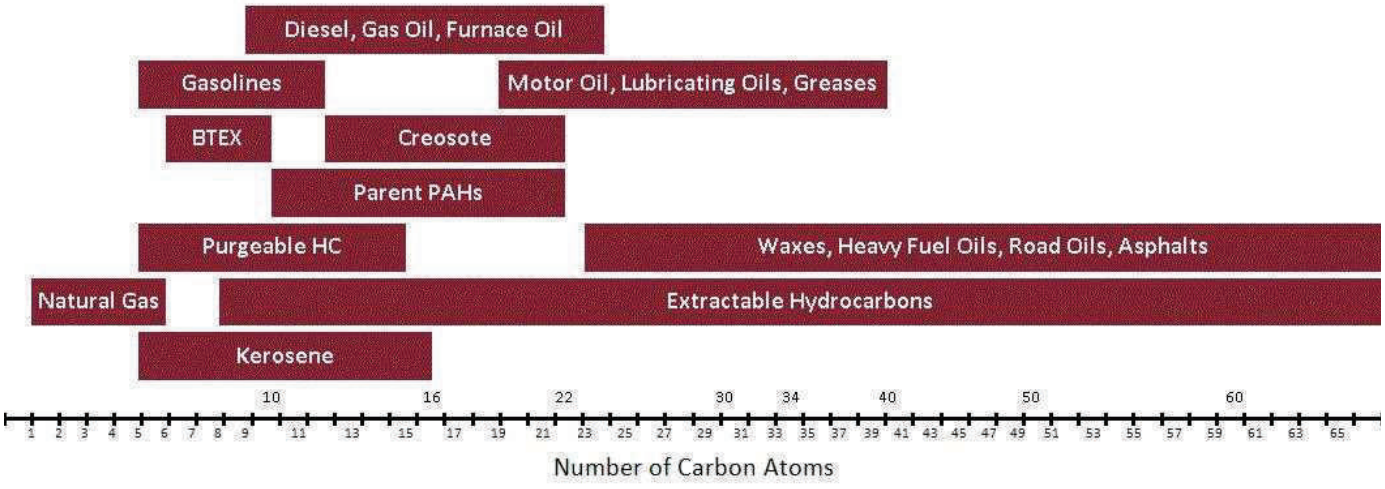
CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





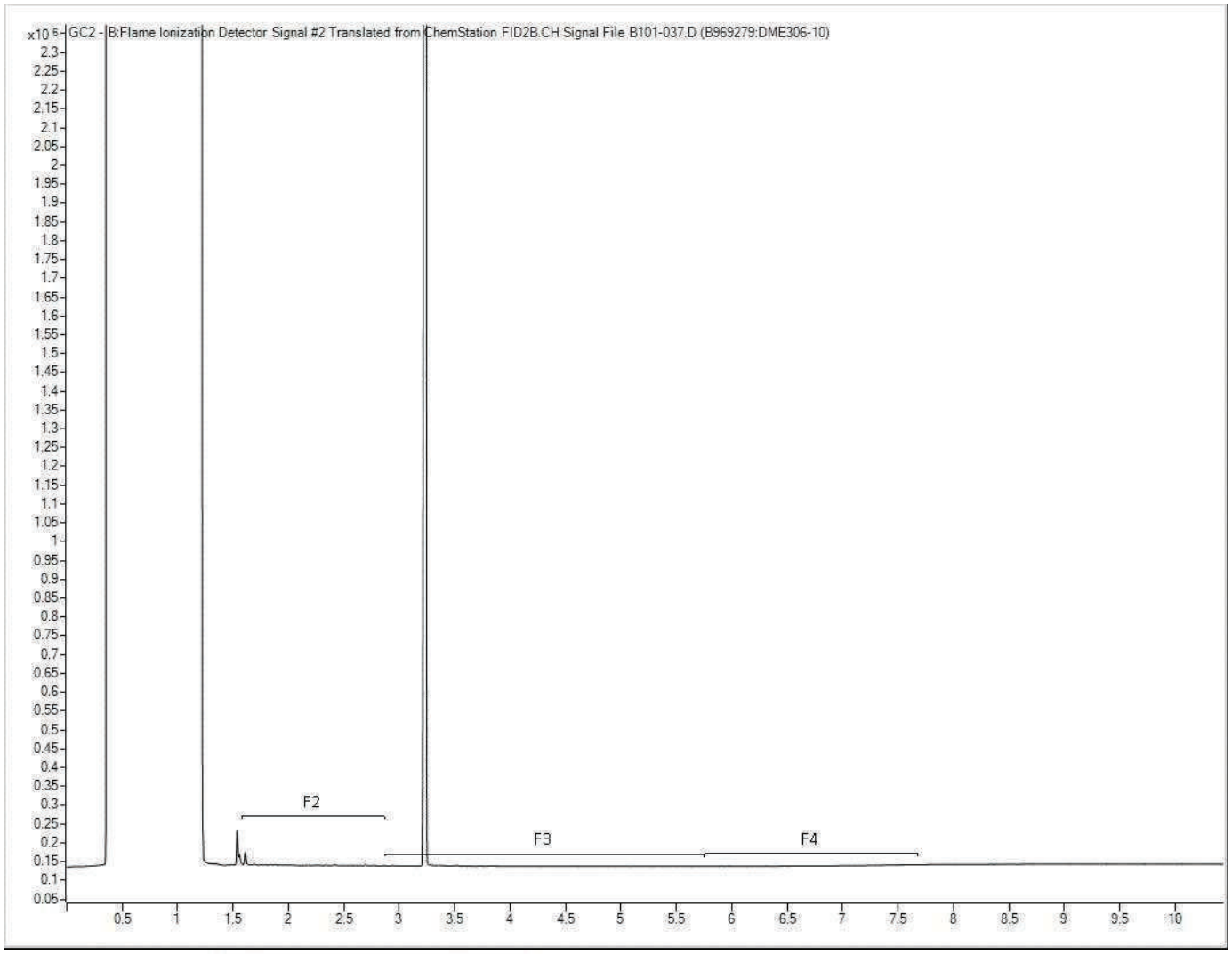
hpchem23\HPchem\1\DATA\2025\06\0604

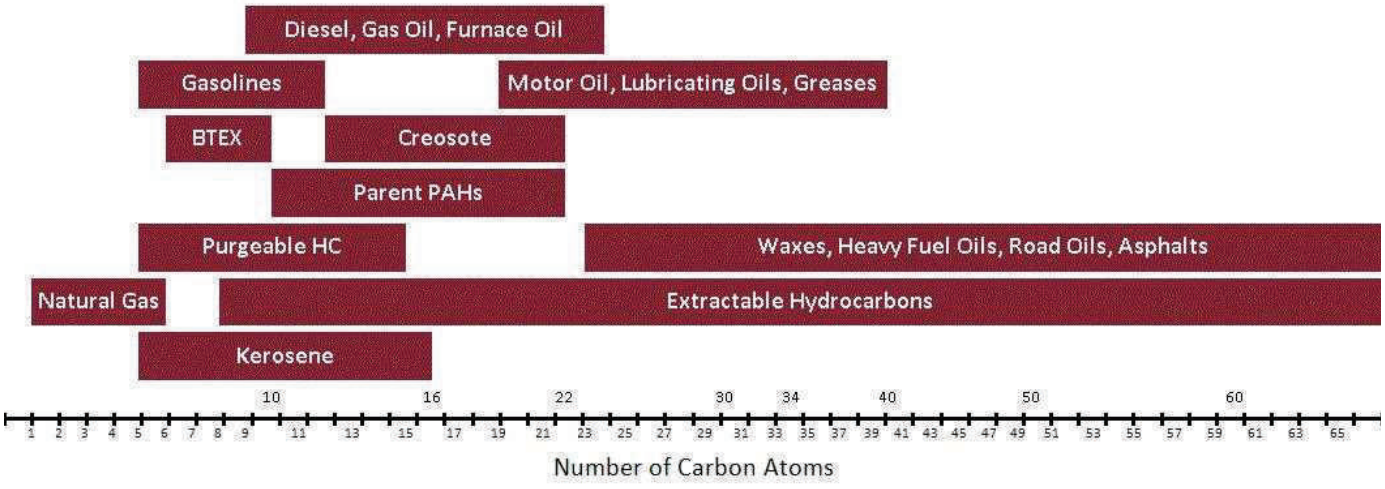
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C550086
Report Date: 2025/06/10
Bureau Veritas Sample: DME306

STANTEC CONSULTING LTD
Client Project #: 110773396
Client ID: WS51-01

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





hpchem23\HPchem\1\DATA\2025\06\0604

Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your Project #: 110773396
Site Location: SRI
Your C.O.C. #: 1OF1

Attention: Wesley Tsen

STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
EDMONTON, AB
CANADA T5J 0K4

Report Date: 2025/06/17
Report #: R3675268
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C550515
Received: 2025/06/03, 17:09

Sample Matrix: Water
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH	4	N/A	2025/06/05	AB SOP-00005	SM 24 2320 B m
Alkalinity @25C (pp, total), CO3,HCO3,OH	4	N/A	2025/06/06	AB SOP-00005	SM 24 2320 B m
BTEX/F1 in Water by HS GC/MS/FID	8	N/A	2025/06/07	AB SOP-00039	CCME CWS/EPA 8260d m
F1-BTEX	8	N/A	2025/06/08		Auto Calc
Cadmium - low level CCME - Dissolved	7	N/A	2025/06/05		Auto Calc
Cadmium - low level CCME - Dissolved	1	N/A	2025/06/06		Auto Calc
Chloride/Sulphate by Auto Colourimetry	8	N/A	2025/06/05	AB SOP-00020	SM24-4500-Cl/SO4-E m
Fecal Coliforms (MPN/100mL)	8	2025/06/04	2025/06/05	AB SOP-00089	SM 24 9223 A,B m
Heterotrophic Plate Count Quant	8	2025/06/04	2025/06/06	CAL SOP-00012	SM 24 9215 A, E m
Total Coliforms and E.Coli	8	2025/06/04	2025/06/05	AB SOP-00089	SM 24 9223 A,B m
Carbon (DOC) (1)	8	N/A	2025/06/09	AB SOP-00087	MMCW 119 1996 m
Conductivity @25C	4	N/A	2025/06/05	AB SOP-00005	SM 24 2510 B m
Conductivity @25C	4	N/A	2025/06/06	AB SOP-00005	SM 24 2510 B m
CCME Hydrocarbons in Water (F2; C10-C16) (2)	8	2025/06/05	2025/06/05	AB SOP-00037 AB SOP-00040	CCME PHC-CWS m
Hardness	8	N/A	2025/06/05		Auto Calc
Mercury (Dissolved) by CV (3)	8	2025/06/10	2025/06/10	AB SOP-00084	BCMOE BCLM Oct2013 m
Mercury (Total) by CV	7	2025/06/10	2025/06/10	AB SOP-00084	BCMOE BCLM Oct2013 m
Mercury (Total) by CV	1	2025/06/11	2025/06/11	AB SOP-00084	BCMOE BCLM Oct2013 m
Elements by ICP - Dissolved (3)	7	N/A	2025/06/04	AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Dissolved (3)	1	N/A	2025/06/05	AB SOP-00042	EPA 6010d R5 m
Elements by ICPMS - Dissolved (3)	8	N/A	2025/06/05	AB SOP-00043	EPA 6020b R2 m
Ion Balance	8	N/A	2025/06/06		Auto Calc
Sum of cations, anions	8	N/A	2025/06/05		Auto Calc
Ammonia-N (Total)	8	N/A	2025/06/06	AB SOP-00007	SM 24 4500 NH3 A G m
Nitrate and Nitrite	8	N/A	2025/06/05		Auto Calc
NO2 (N); NO2 (N) + NO3 (N) in Water	8	N/A	2025/06/05	AB SOP-00091	SM 24 4500 NO3m
Nitrate (as N)	8	2025/06/03	2025/06/05		Auto Calc
pH @25°C (4)	4	N/A	2025/06/05	AB SOP-00005	SM 24 4500-H+B m
pH @25°C (4)	4	N/A	2025/06/06	AB SOP-00005	SM 24 4500-H+B m
Orthophosphate by Automated Analyzer (5)	8	N/A	2025/06/05	AB SOP-00025	SM 24 4500-P A,F m
Total Dissolved Solids (Calculated)	8	N/A	2025/06/06		Auto Calc

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Your Project #: 110773396
Site Location: SRI
Your C.O.C. #: 1OF1

Attention: Wesley Tsen

STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
EDMONTON, AB
CANADA T5J 0K4

Report Date: 2025/06/17
Report #: R3675268
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C550515
Received: 2025/06/03, 17:09

Sample Matrix: Water
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Total Kjeldahl Nitrogen (Total)	8	N/A	2025/06/05		Auto Calc
Nitrogen (Total)	8	2025/06/05	2025/06/05	AB SOP-00093	SM 24 4500-N C m
Total Phosphorus Dissolved client FF/FP (6)	8	2025/06/05	2025/06/05	AB SOP-00024	SM 24 4500-P A,B,F m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) DOC present in the sample should be considered as non-purgeable DOC. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(2) Silica gel clean up employed.
(3) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(4) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.
(5) Orthophosphate > Total Phosphorus Imbalance: When applicable, Orthophosphate, Total Phosphorus and dissolved Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
(6) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.

Your Project #: 110773396
Site Location: SRI
Your C.O.C. #: 1OF1

Attention: Wesley Tsen

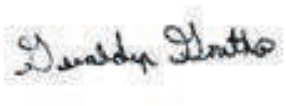
STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
EDMONTON, AB
CANADA T5J 0K4

Report Date: 2025/06/17
Report #: R3675268
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C550515
Received: 2025/06/03, 17:09

Encryption Key



Geraldlyn Gouthro
Key Account Specialist
17 Jun 2025 09:50:54

Please direct all questions regarding this Certificate of Analysis to:
Geraldlyn Gouthro, Key Account Specialist
Email: geraldlyn.gouthro@bureauveritas.com
Phone# (403) 291-3077

==========

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Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C550515
Report Date: 2025/06/17

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

AT1 BTEX AND F1-F2 IN WATER (WATER)

Bureau Veritas ID		DMG751		DMG752		DMG753		DMG754			
Sampling Date		2025/06/03 10:02		2025/06/03 10:54		2025/06/03 12:38		2025/06/03 13:47			
COC Number		1OF1		1OF1		1OF1		1OF1			
	UNITS	MW21-3-15	MU	MW16-7-5	MU	RMW16-5-12	MU	MW16-2-6	MU	RDL	QC Batch
Ext. Pet. Hydrocarbon											
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B974314
Volatiles											
Benzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B973126
Toluene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B973126
Ethylbenzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B973126
m & p-Xylene	mg/L	<0.00080	N/A	<0.00080	N/A	<0.00080	N/A	<0.00080	N/A	0.00080	B973126
o-Xylene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B973126
Xylenes (Total)	mg/L	<0.00089	N/A	<0.00089	N/A	<0.00089	N/A	<0.00089	N/A	0.00089	B972599
F1 (C6-C10) - BTEX	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B972599
F1 (C6-C10)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B973126
Surrogate Recovery (%)											
1,4-Difluorobenzene (sur.)	%	104	N/A	103	N/A	104	N/A	103	N/A	N/A	B973126
4-Bromofluorobenzene (sur.)	%	95	N/A	94	N/A	94	N/A	94	N/A	N/A	B973126
D4-1,2-Dichloroethane (sur.)	%	93	N/A	95	N/A	93	N/A	96	N/A	N/A	B973126
O-TERPHENYL (sur.)	%	88	N/A	89	N/A	88	N/A	91	N/A	N/A	B974314

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C550515
Report Date: 2025/06/17

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

AT1 BTEX AND F1-F2 IN WATER (WATER)

Bureau Veritas ID		DMG755		DMG756		DMG757		DMG758			
Sampling Date		2025/06/03 15:07		2025/06/03 11:44		2025/06/03 14:33		2025/06/03			
COC Number		1OF1		1OF1		1OF1		1OF1			
	UNITS	WS11-01	MU	NE20-R3-01	MU	WS41-02	MU	SR25-01	MU	RDL	QC Batch
Ext. Pet. Hydrocarbon											
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B974314
Volatiles											
Benzene	mg/L	0.00056	+/- <RDL	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B973126
Toluene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B973126
Ethylbenzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B973126
m & p-Xylene	mg/L	<0.00080	N/A	<0.00080	N/A	<0.00080	N/A	<0.00080	N/A	0.00080	B973126
o-Xylene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B973126
Xylenes (Total)	mg/L	<0.00089	N/A	<0.00089	N/A	<0.00089	N/A	<0.00089	N/A	0.00089	B972599
F1 (C6-C10) - BTEX	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B972599
F1 (C6-C10)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B973126
Surrogate Recovery (%)											
1,4-Difluorobenzene (sur.)	%	103	N/A	104	N/A	103	N/A	104	N/A	N/A	B973126
4-Bromofluorobenzene (sur.)	%	95	N/A	95	N/A	93	N/A	94	N/A	N/A	B973126
D4-1,2-Dichloroethane (sur.)	%	94	N/A	94	N/A	93	N/A	93	N/A	N/A	B973126
O-TERPHENYL (sur.)	%	89	N/A	89	N/A	88	N/A	92	N/A	N/A	B974314

RDL = Reportable Detection Limit
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N/A = Not Applicable

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ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DMG751				DMG752			
Sampling Date		2025/06/03 10:02				2025/06/03 10:54			
COC Number		1OF1				1OF1			
	UNITS	MW21-3-15	MU	RDL	QC Batch	MW16-7-5	MU	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	14	N/A	N/A	B972620	34	N/A	N/A	B972620
Cation Sum	meq/L	12	N/A	N/A	B972620	30	N/A	N/A	B972620
Hardness (CaCO3)	mg/L	12	N/A	0.50	B972790	840	N/A	0.50	B972790
Ion Balance (% Difference)	%	6.3	N/A	N/A	B972793	5.6	N/A	N/A	B972793
Nitrate (N)	mg/L	<0.040	N/A	0.040	B972439	<0.040	N/A	0.040	B972439
Nitrate (NO3)	mg/L	<0.18	N/A	0.18	B972844	<0.18	N/A	0.18	B972844
Nitrite (NO2)	mg/L	<0.13	N/A	0.13	B972844	<0.13	N/A	0.13	B972844
Calculated Total Dissolved Solids	mg/L	750	N/A	10	B972809	2000	N/A	25	B972809
Elements									
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	0.020	B972788	0.029	+/- 0.020	0.020	B972788
Misc. Inorganics									
Conductivity	uS/cm	1300	+/- 34	2.0	B974770	2700	+/- 69	2.0	B974770
pH	pH	8.58	+/- 0.0851	N/A	B974769	8.06	+/- 0.0799	N/A	B974769
Anions									
Alkalinity (PP as CaCO3)	mg/L	12	+/- 1.0	1.0	B974765	<1.0	N/A	1.0	B974765
Alkalinity (Total as CaCO3)	mg/L	530	+/- 40	1.0	B974765	500	+/- 37	1.0	B974765
Bicarbonate (HCO3)	mg/L	620	+/- 9.5	1.0	B974765	610	+/- 9.3	1.0	B974765
Carbonate (CO3)	mg/L	15	N/A	1.0	B974765	<1.0	N/A	1.0	B974765
Hydroxide (OH)	mg/L	<1.0	N/A	1.0	B974765	<1.0	N/A	1.0	B974765
Chloride (Cl)	mg/L	1.2	+/- 1.2	1.0	B975227	2.6	+/- 1.2	1.0	B975034
Sulphate (SO4)	mg/L	150	+/- 9.7	5.0	B975227	1100	+/- 72	25	B975034
Nutrients									
Nitrite (N)	mg/L	<0.040	N/A	0.040	B975263	<0.040	N/A	0.040	B975263
Nitrate plus Nitrite (N)	mg/L	<0.040	N/A	0.040	B975263	<0.040	N/A	0.040	B975263
Elements									
Dissolved Aluminum (Al)	mg/L	0.0043	+/- <RDL	0.0030	B974964	<0.0030	N/A	0.0030	B974964
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	0.00060	B974964	<0.00060	N/A	0.00060	B974964
Dissolved Arsenic (As)	mg/L	0.00063	+/- 0.00022	0.00020	B974964	0.00026	+/- <RDL	0.00020	B974964
Dissolved Barium (Ba)	mg/L	0.014	+/- <RDL	0.010	B974298	0.020	+/- <RDL	0.010	B974298
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	0.0010	B974964	<0.0010	N/A	0.0010	B974964

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N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C550515
Report Date: 2025/06/17

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DMG751				DMG752			
Sampling Date		2025/06/03 10:02				2025/06/03 10:54			
COC Number		1OF1				1OF1			
	UNITS	MW21-3-15	MU	RDL	QC Batch	MW16-7-5	MU	RDL	QC Batch
Dissolved Boron (B)	mg/L	0.19	+/- 0.026	0.020	B974298	0.099	+/- 0.021	0.020	B974298
Dissolved Calcium (Ca)	mg/L	4.1	+/- 0.37	0.30	B974298	140	+/- 11	0.30	B974298
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	0.0010	B974964	<0.0010	N/A	0.0010	B974964
Dissolved Cobalt (Co)	mg/L	<0.00030	N/A	0.00030	B974964	<0.00030	N/A	0.00030	B974964
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	0.0010	B974964	<0.0010	N/A	0.0010	B974964
Dissolved Iron (Fe)	mg/L	<0.060	N/A	0.060	B974298	<0.060	N/A	0.060	B974298
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	0.00020	B974964	<0.00020	N/A	0.00020	B974964
Dissolved Lithium (Li)	mg/L	0.023	+/- <RDL	0.020	B974298	0.047	+/- <RDL	0.020	B974298
Dissolved Magnesium (Mg)	mg/L	0.31	+/- <RDL	0.20	B974298	120	+/- 5.5	0.20	B974298
Dissolved Manganese (Mn)	mg/L	0.012	+/- <RDL	0.0040	B974298	0.13	+/- 0.0083	0.0040	B974298
Dissolved Molybdenum (Mo)	mg/L	0.0023	+/- <RDL	0.00020	B974964	0.00091	+/- <RDL	0.00020	B974964
Dissolved Nickel (Ni)	mg/L	<0.00050	N/A	0.00050	B974964	0.0019	+/- <RDL	0.00050	B974964
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	0.10	B974298	<0.10	N/A	0.10	B974298
Dissolved Potassium (K)	mg/L	0.52	+/- <RDL	0.30	B974298	4.0	+/- <RDL	0.30	B974298
Dissolved Selenium (Se)	mg/L	<0.00020	N/A	0.00020	B974964	0.00022	+/- <RDL	0.00020	B974964
Dissolved Silicon (Si)	mg/L	3.5	+/- 0.60	0.50	B974298	4.4	+/- 0.74	0.50	B974298
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	0.00010	B974964	<0.00010	N/A	0.00010	B974964
Dissolved Sodium (Na)	mg/L	270	+/- 26	0.50	B974298	300	+/- 29	0.50	B974298
Dissolved Strontium (Sr)	mg/L	0.054	+/- <RDL	0.020	B974298	1.4	+/- 0.13	0.020	B974298
Dissolved Sulphur (S)	mg/L	47	+/- 4.0	0.20	B974298	360	+/- 30	0.20	B974298
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	0.00020	B974964	<0.00020	N/A	0.00020	B974964
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	0.0010	B974964	<0.0010	N/A	0.0010	B974964
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	0.0010	B974964	<0.0010	N/A	0.0010	B974964
Dissolved Uranium (U)	mg/L	0.00041	+/- 0.00021	0.00010	B974964	0.010	+/- 0.0016	0.00010	B974964
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	0.0010	B974964	<0.0010	N/A	0.0010	B974964
Dissolved Zinc (Zn)	mg/L	<0.0030	N/A	0.0030	B974964	<0.0030	N/A	0.0030	B974964

RDL = Reportable Detection Limit
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N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DMG752				DMG753			
Sampling Date		2025/06/03 10:54				2025/06/03 12:38			
COC Number		1OF1				1OF1			
	UNITS	MW16-7-5 Lab-Dup	MU	RDL	QC Batch	RMW16-5-12	MU	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	N/A	N/A	N/A	B972620	9.2	N/A	N/A	B972620
Cation Sum	meq/L	N/A	N/A	N/A	B972620	8.2	N/A	N/A	B972620
Hardness (CaCO3)	mg/L	N/A	N/A	0.50	B972790	270	N/A	0.50	B972790
Ion Balance (% Difference)	%	N/A	N/A	N/A	B972793	5.4	N/A	N/A	B972793
Nitrate (N)	mg/L	N/A	N/A	0.040	B972439	0.066	N/A	0.040	B972439
Nitrate (NO3)	mg/L	N/A	N/A	0.18	B972844	0.29	N/A	0.18	B972844
Nitrite (NO2)	mg/L	N/A	N/A	0.13	B972844	<0.13	N/A	0.13	B972844
Calculated Total Dissolved Solids	mg/L	N/A	N/A	25	B972809	450	N/A	10	B972809
Elements									
Dissolved Cadmium (Cd)	ug/L	N/A	N/A	0.020	B972788	<0.020	N/A	0.020	B972788
Misc. Inorganics									
Conductivity	uS/cm	N/A	N/A	2.0	B974770	780	+/- 21	2.0	B974918
pH	pH	N/A	N/A	N/A	B974769	8.02	+/- 0.0795	N/A	B974916
Anions									
Alkalinity (PP as CaCO3)	mg/L	N/A	N/A	1.0	B974765	<1.0	N/A	1.0	B974912
Alkalinity (Total as CaCO3)	mg/L	N/A	N/A	1.0	B974765	410	+/- 31	1.0	B974912
Bicarbonate (HCO3)	mg/L	N/A	N/A	1.0	B974765	500	+/- 7.7	1.0	B974912
Carbonate (CO3)	mg/L	N/A	N/A	1.0	B974765	<1.0	N/A	1.0	B974912
Hydroxide (OH)	mg/L	N/A	N/A	1.0	B974765	<1.0	N/A	1.0	B974912
Chloride (Cl)	mg/L	N/A	N/A	1.0	B975034	1.9	+/- 1.2	1.0	B975034
Sulphate (SO4)	mg/L	N/A	N/A	25	B975034	42	+/- 3.0	1.0	B975034
Nutrients									
Nitrite (N)	mg/L	N/A	N/A	0.040	B975263	<0.040	N/A	0.040	B975263
Nitrate plus Nitrite (N)	mg/L	N/A	N/A	0.040	B975263	0.066	+/- <RDL	0.040	B975263
Elements									
Dissolved Aluminum (Al)	mg/L	N/A	N/A	0.0030	B974964	<0.0030	N/A	0.0030	B974964
Dissolved Antimony (Sb)	mg/L	N/A	N/A	0.00060	B974964	<0.00060	N/A	0.00060	B974964
Dissolved Arsenic (As)	mg/L	N/A	N/A	0.00020	B974964	<0.00020	N/A	0.00020	B974964
Dissolved Barium (Ba)	mg/L	0.015	+/- <RDL	0.010	B974298	0.047	+/- <RDL	0.010	B974298

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Lab-Dup = Laboratory Initiated Duplicate
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Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C550515
Report Date: 2025/06/17

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DMG752				DMG753			
Sampling Date		2025/06/03 10:54				2025/06/03 12:38			
COC Number		1OF1				1OF1			
	UNITS	MW16-7-5 Lab-Dup	MU	RDL	QC Batch	RMW16-5-12	MU	RDL	QC Batch
Dissolved Beryllium (Be)	mg/L	N/A	N/A	0.0010	B974964	<0.0010	N/A	0.0010	B974964
Dissolved Boron (B)	mg/L	0.095	+/- 0.020	0.020	B974298	0.091	+/- 0.020	0.020	B974298
Dissolved Calcium (Ca)	mg/L	140	+/- 11	0.30	B974298	58	+/- 4.7	0.30	B974298
Dissolved Chromium (Cr)	mg/L	N/A	N/A	0.0010	B974964	<0.0010	N/A	0.0010	B974964
Dissolved Cobalt (Co)	mg/L	N/A	N/A	0.00030	B974964	<0.00030	N/A	0.00030	B974964
Dissolved Copper (Cu)	mg/L	N/A	N/A	0.0010	B974964	<0.0010	N/A	0.0010	B974964
Dissolved Iron (Fe)	mg/L	<0.060	N/A	0.060	B974298	0.099	+/- <RDL	0.060	B974298
Dissolved Lead (Pb)	mg/L	N/A	N/A	0.00020	B974964	<0.00020	N/A	0.00020	B974964
Dissolved Lithium (Li)	mg/L	0.047	+/- <RDL	0.020	B974298	<0.020	N/A	0.020	B974298
Dissolved Magnesium (Mg)	mg/L	120	+/- 5.5	0.20	B974298	31	+/- 1.5	0.20	B974298
Dissolved Manganese (Mn)	mg/L	0.13	+/- 0.0084	0.0040	B974298	0.15	+/- 0.0093	0.0040	B974298
Dissolved Molybdenum (Mo)	mg/L	N/A	N/A	0.00020	B974964	0.00060	+/- <RDL	0.00020	B974964
Dissolved Nickel (Ni)	mg/L	N/A	N/A	0.00050	B974964	<0.00050	N/A	0.00050	B974964
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	0.10	B974298	<0.10	N/A	0.10	B974298
Dissolved Potassium (K)	mg/L	4.1	+/- <RDL	0.30	B974298	5.5	+/- 0.30	0.30	B974298
Dissolved Selenium (Se)	mg/L	N/A	N/A	0.00020	B974964	0.0011	+/- 0.00034	0.00020	B974964
Dissolved Silicon (Si)	mg/L	4.4	+/- 0.74	0.50	B974298	2.9	+/- <RDL	0.50	B974298
Dissolved Silver (Ag)	mg/L	N/A	N/A	0.00010	B974964	<0.00010	N/A	0.00010	B974964
Dissolved Sodium (Na)	mg/L	300	+/- 29	0.50	B974298	60	+/- 5.8	0.50	B974298
Dissolved Strontium (Sr)	mg/L	1.5	+/- 0.13	0.020	B974298	1.2	+/- 0.11	0.020	B974298
Dissolved Sulphur (S)	mg/L	360	+/- 30	0.20	B974298	13	+/- 1.1	0.20	B974298
Dissolved Thallium (Tl)	mg/L	N/A	N/A	0.00020	B974964	<0.00020	N/A	0.00020	B974964
Dissolved Tin (Sn)	mg/L	N/A	N/A	0.0010	B974964	<0.0010	N/A	0.0010	B974964
Dissolved Titanium (Ti)	mg/L	N/A	N/A	0.0010	B974964	<0.0010	N/A	0.0010	B974964
Dissolved Uranium (U)	mg/L	N/A	N/A	0.00010	B974964	0.0011	+/- 0.00026	0.00010	B974964
Dissolved Vanadium (V)	mg/L	N/A	N/A	0.0010	B974964	<0.0010	N/A	0.0010	B974964
Dissolved Zinc (Zn)	mg/L	N/A	N/A	0.0030	B974964	<0.0030	N/A	0.0030	B974964

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Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DMG754				DMG755			
Sampling Date		2025/06/03 13:47				2025/06/03 15:07			
COC Number		1OF1				1OF1			
	UNITS	MW16-2-6	MU	RDL	QC Batch	WS11-01	MU	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	96	N/A	N/A	B972852	9.6	N/A	N/A	B972852
Cation Sum	meq/L	91	N/A	N/A	B972852	8.6	N/A	N/A	B972852
Hardness (CaCO3)	mg/L	2900	N/A	0.50	B972790	230	N/A	0.50	B972790
Ion Balance (% Difference)	%	2.4	N/A	N/A	B972793	5.4	N/A	N/A	B972793
Nitrate (N)	mg/L	<0.20	N/A	0.20	B972439	<0.040	N/A	0.040	B972439
Nitrate (NO3)	mg/L	<0.89	N/A	0.89	B972844	<0.18	N/A	0.18	B972844
Nitrite (NO2)	mg/L	<0.13	N/A	0.13	B972844	<0.13	N/A	0.13	B972844
Calculated Total Dissolved Solids	mg/L	6000	N/A	50	B972809	460	N/A	10	B972809
Elements									
Dissolved Cadmium (Cd)	ug/L	0.026	+/- <RDL	0.020	B972788	<0.020	N/A	0.020	B972788
Misc. Inorganics									
Conductivity	uS/cm	6500	+/- 170	2.0	B974770	820	+/- 22	2.0	B974918
pH	pH	7.95	+/- 0.0788	N/A	B974769	8.08	+/- 0.0801	N/A	B974916
Anions									
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	1.0	B974765	<1.0	N/A	1.0	B974912
Alkalinity (Total as CaCO3)	mg/L	670	+/- 50	1.0	B974765	460	+/- 34	1.0	B974912
Bicarbonate (HCO3)	mg/L	820	+/- 12	1.0	B974765	560	+/- 8.6	1.0	B974912
Carbonate (CO3)	mg/L	<1.0	N/A	1.0	B974765	<1.0	N/A	1.0	B974912
Hydroxide (OH)	mg/L	<1.0	N/A	1.0	B974765	<1.0	N/A	1.0	B974912
Chloride (Cl)	mg/L	2.0	+/- 1.2	1.0	B975034	5.2	+/- 1.2	1.0	B975227
Sulphate (SO4)	mg/L	3900	+/- 250	50	B975034	13	+/- 1.4	1.0	B975227
Nutrients									
Nitrite (N)	mg/L	<0.040	N/A	0.040	B975263	<0.040	N/A	0.040	B975263
Nitrate plus Nitrite (N)	mg/L	<0.20 (1)	N/A	0.20	B975263	<0.040	N/A	0.040	B975263
Elements									
Dissolved Aluminum (Al)	mg/L	<0.0030	N/A	0.0030	B974964	<0.0030	N/A	0.0030	B975667
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	0.00060	B974964	<0.00060	N/A	0.00060	B975667
Dissolved Arsenic (As)	mg/L	0.00032	+/- <RDL	0.00020	B974964	0.00023	+/- <RDL	0.00020	B975667
Dissolved Barium (Ba)	mg/L	<0.010	N/A	0.010	B974298	0.36	+/- 0.032	0.010	B974298

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Detection limits raised due to matrix interference.

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DMG754				DMG755			
Sampling Date		2025/06/03 13:47				2025/06/03 15:07			
COC Number		1OF1				1OF1			
	UNITS	MW16-2-6	MU	RDL	QC Batch	WS11-01	MU	RDL	QC Batch
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	0.0010	B974964	<0.0010	N/A	0.0010	B975667
Dissolved Boron (B)	mg/L	0.095	+/- 0.020	0.020	B974298	0.26	+/- 0.030	0.020	B974298
Dissolved Calcium (Ca)	mg/L	380	+/- 31	0.30	B974298	49	+/- 4.0	0.30	B974298
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	0.0010	B974964	<0.0010	N/A	0.0010	B975667
Dissolved Cobalt (Co)	mg/L	0.0019	+/- 0.00036	0.00030	B974964	<0.00030	N/A	0.00030	B975667
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	0.0010	B974964	<0.0010	N/A	0.0010	B975667
Dissolved Iron (Fe)	mg/L	0.065	+/- <RDL	0.060	B974298	0.089	+/- <RDL	0.060	B974298
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	0.00020	B974964	<0.00020	N/A	0.00020	B975667
Dissolved Lithium (Li)	mg/L	0.10	+/- <RDL	0.020	B974298	<0.020	N/A	0.020	B974298
Dissolved Magnesium (Mg)	mg/L	470	+/- 22	0.20	B974298	26	+/- 1.2	0.20	B974298
Dissolved Manganese (Mn)	mg/L	1.1	+/- 0.069	0.0040	B974298	0.34	+/- 0.021	0.0040	B974298
Dissolved Molybdenum (Mo)	mg/L	0.00068	+/- <RDL	0.00020	B974964	0.0041	+/- 0.00030	0.00020	B975667
Dissolved Nickel (Ni)	mg/L	0.0056	+/- 0.00070	0.00050	B974964	<0.00050	N/A	0.00050	B975667
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	0.10	B974298	<0.10	N/A	0.10	B974298
Dissolved Potassium (K)	mg/L	7.4	+/- 0.38	0.30	B974298	4.0	+/- <RDL	0.30	B974298
Dissolved Selenium (Se)	mg/L	<0.00020	N/A	0.00020	B974964	<0.00020	N/A	0.00020	B975667
Dissolved Silicon (Si)	mg/L	4.8	+/- 0.81	0.50	B974298	5.5	+/- 0.93	0.50	B974298
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	0.00010	B974964	<0.00010	N/A	0.00010	B975667
Dissolved Sodium (Na)	mg/L	780	+/- 74	2.5	B974298	88	+/- 8.5	0.50	B974298
Dissolved Strontium (Sr)	mg/L	6.1	+/- 0.55	0.10	B974298	2.6	+/- 0.23	0.020	B974298
Dissolved Sulphur (S)	mg/L	1400	+/- 120	1.0	B974298	4.1	+/- 0.38	0.20	B974298
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	0.00020	B974964	<0.00020	N/A	0.00020	B975667
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	0.0010	B974964	<0.0010	N/A	0.0010	B975667
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	0.0010	B974964	<0.0010	N/A	0.0010	B975667
Dissolved Uranium (U)	mg/L	0.026	+/- 0.0040	0.00010	B974964	0.00019	+/- 0.00020	0.00010	B975667
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	0.0010	B974964	<0.0010	N/A	0.0010	B975667
Dissolved Zinc (Zn)	mg/L	<0.0030	N/A	0.0030	B974964	<0.0030	N/A	0.0030	B975667

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DMG756				DMG757			
Sampling Date		2025/06/03 11:44				2025/06/03 14:33			
COC Number		1OF1				1OF1			
	UNITS	NE20-R3-01	MU	RDL	QC Batch	WS41-02	MU	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	17	N/A	N/A	B972852	13	N/A	N/A	B972852
Cation Sum	meq/L	16	N/A	N/A	B972852	12	N/A	N/A	B972852
Hardness (CaCO3)	mg/L	530	N/A	0.50	B972790	270	N/A	0.50	B972851
Ion Balance (% Difference)	%	4.2	N/A	N/A	B972793	4.3	N/A	N/A	B972793
Nitrate (N)	mg/L	0.40	N/A	0.040	B972439	2.2	N/A	0.20	B972854
Nitrate (NO3)	mg/L	1.8	N/A	0.18	B972844	10	N/A	0.89	B972844
Nitrite (NO2)	mg/L	<0.13	N/A	0.13	B972844	<0.13	N/A	0.13	B972844
Calculated Total Dissolved Solids	mg/L	940	N/A	10	B972809	680	N/A	10	B972809
Elements									
Dissolved Cadmium (Cd)	ug/L	0.036	+/- 0.022	0.020	B972788	0.027	+/- 0.020	0.020	B972788
Misc. Inorganics									
Conductivity	uS/cm	1500	+/- 40	2.0	B974918	1200	+/- 31	2.0	B974770
pH	pH	7.87	+/- 0.0780	N/A	B974916	8.20	+/- 0.0813	N/A	B974769
Anions									
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	1.0	B974912	<1.0	N/A	1.0	B974765
Alkalinity (Total as CaCO3)	mg/L	490	+/- 36	1.0	B974912	520	+/- 38	1.0	B974765
Bicarbonate (HCO3)	mg/L	590	+/- 9.1	1.0	B974912	630	+/- 9.6	1.0	B974765
Carbonate (CO3)	mg/L	<1.0	N/A	1.0	B974912	<1.0	N/A	1.0	B974765
Hydroxide (OH)	mg/L	<1.0	N/A	1.0	B974912	<1.0	N/A	1.0	B974765
Chloride (Cl)	mg/L	63	+/- 5.0	1.0	B975227	49	+/- 4.0	1.0	B975227
Sulphate (SO4)	mg/L	280	+/- 18	5.0	B975227	61	+/- 4.2	1.0	B975227
Nutrients									
Nitrite (N)	mg/L	<0.040	N/A	0.040	B975263	<0.040	N/A	0.040	B975263
Nitrate plus Nitrite (N)	mg/L	0.40	+/- 0.040	0.040	B975263	2.2	+/- 0.20	0.20	B975263
Elements									
Dissolved Aluminum (Al)	mg/L	<0.0030	N/A	0.0030	B974964	<0.0030	N/A	0.0030	B974964
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	0.00060	B974964	<0.00060	N/A	0.00060	B974964
Dissolved Arsenic (As)	mg/L	<0.00020	N/A	0.00020	B974964	<0.00020	N/A	0.00020	B974964
Dissolved Barium (Ba)	mg/L	0.015	+/- <RDL	0.010	B974298	0.059	+/- <RDL	0.010	B974298
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	0.0010	B974964	<0.0010	N/A	0.0010	B974964

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

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ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DMG756				DMG757			
Sampling Date		2025/06/03 11:44				2025/06/03 14:33			
COC Number		1OF1				1OF1			
	UNITS	NE20-R3-01	MU	RDL	QC Batch	WS41-02	MU	RDL	QC Batch
Dissolved Boron (B)	mg/L	0.050	+/- <RDL	0.020	B974298	0.050	+/- <RDL	0.020	B974298
Dissolved Calcium (Ca)	mg/L	110	+/- 9.3	0.30	B974298	59	+/- 4.8	0.30	B974298
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	0.0010	B974964	<0.0010	N/A	0.0010	B974964
Dissolved Cobalt (Co)	mg/L	<0.00030	N/A	0.00030	B974964	<0.00030	N/A	0.00030	B974964
Dissolved Copper (Cu)	mg/L	0.0018	+/- <RDL	0.0010	B974964	0.0013	+/- <RDL	0.0010	B974964
Dissolved Iron (Fe)	mg/L	<0.060	N/A	0.060	B974298	<0.060	N/A	0.060	B974298
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	0.00020	B974964	<0.00020	N/A	0.00020	B974964
Dissolved Lithium (Li)	mg/L	0.039	+/- <RDL	0.020	B974298	0.029	+/- <RDL	0.020	B974298
Dissolved Magnesium (Mg)	mg/L	58	+/- 2.7	0.20	B974298	29	+/- 1.4	0.20	B974298
Dissolved Manganese (Mn)	mg/L	0.028	+/- <RDL	0.0040	B974298	0.0052	+/- <RDL	0.0040	B974298
Dissolved Molybdenum (Mo)	mg/L	0.00079	+/- <RDL	0.00020	B974964	0.0060	+/- 0.00043	0.00020	B974964
Dissolved Nickel (Ni)	mg/L	0.0018	+/- <RDL	0.00050	B974964	<0.00050	N/A	0.00050	B974964
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	0.10	B974298	<0.10	N/A	0.10	B974298
Dissolved Potassium (K)	mg/L	5.7	+/- 0.31	0.30	B974298	4.8	+/- <RDL	0.30	B974298
Dissolved Selenium (Se)	mg/L	<0.00020	N/A	0.00020	B974964	0.0063	+/- 0.0016	0.00020	B974964
Dissolved Silicon (Si)	mg/L	4.0	+/- 0.67	0.50	B974298	2.8	+/- <RDL	0.50	B974298
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	0.00010	B974964	<0.00010	N/A	0.00010	B974964
Dissolved Sodium (Na)	mg/L	120	+/- 12	0.50	B974298	150	+/- 15	0.50	B974298
Dissolved Strontium (Sr)	mg/L	1.6	+/- 0.14	0.020	B974298	0.88	+/- 0.079	0.020	B974298
Dissolved Sulphur (S)	mg/L	95	+/- 8.1	0.20	B974298	20	+/- 1.8	0.20	B974298
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	0.00020	B974964	<0.00020	N/A	0.00020	B974964
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	0.0010	B974964	<0.0010	N/A	0.0010	B974964
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	0.0010	B974964	<0.0010	N/A	0.0010	B974964
Dissolved Uranium (U)	mg/L	0.0023	+/- 0.00041	0.00010	B974964	0.0032	+/- 0.00054	0.00010	B974964
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	0.0010	B974964	<0.0010	N/A	0.0010	B974964
Dissolved Zinc (Zn)	mg/L	0.012	+/- <RDL	0.0030	B974964	0.0042	+/- <RDL	0.0030	B974964

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

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ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DMG758		DMG758			
Sampling Date		2025/06/03		2025/06/03			
COC Number		1OF1		1OF1			
	UNITS	SR25-01	MU	SR25-01 Lab-Dup	MU	RDL	QC Batch
Calculated Parameters							
Anion Sum	meq/L	17	N/A	N/A	N/A	N/A	B972852
Cation Sum	meq/L	16	N/A	N/A	N/A	N/A	B972852
Hardness (CaCO3)	mg/L	530	N/A	N/A	N/A	0.50	B972851
Ion Balance (% Difference)	%	2.7	N/A	N/A	N/A	N/A	B972793
Nitrate (N)	mg/L	0.40	N/A	N/A	N/A	0.040	B972854
Nitrate (NO3)	mg/L	1.8	N/A	N/A	N/A	0.18	B972844
Nitrite (NO2)	mg/L	<0.13	N/A	N/A	N/A	0.13	B972844
Calculated Total Dissolved Solids	mg/L	930	N/A	N/A	N/A	10	B972809
Elements							
Dissolved Cadmium (Cd)	ug/L	0.034	+/- 0.022	N/A	N/A	0.020	B972788
Misc. Inorganics							
Conductivity	uS/cm	1500	+/- 39	1500	+/- 39	2.0	B974770
pH	pH	7.98	+/- 0.0791	7.97	+/- 0.0790	N/A	B974769
Anions							
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	<1.0	N/A	1.0	B974765
Alkalinity (Total as CaCO3)	mg/L	470	+/- 35	460	+/- 34	1.0	B974765
Bicarbonate (HCO3)	mg/L	580	+/- 8.8	560	+/- 8.6	1.0	B974765
Carbonate (CO3)	mg/L	<1.0	N/A	<1.0	N/A	1.0	B974765
Hydroxide (OH)	mg/L	<1.0	N/A	<1.0	N/A	1.0	B974765
Chloride (Cl)	mg/L	63	+/- 4.9	N/A	N/A	1.0	B975034
Sulphate (SO4)	mg/L	280	+/- 18	N/A	N/A	5.0	B975034
Nutrients							
Nitrite (N)	mg/L	<0.040	N/A	<0.040	N/A	0.040	B975272
Nitrate plus Nitrite (N)	mg/L	0.40 (1)	+/- 0.040	0.41	+/- 0.040	0.040	B975272
Elements							
Dissolved Aluminum (Al)	mg/L	<0.0030	N/A	N/A	N/A	0.0030	B974964
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	N/A	N/A	0.00060	B974964
Dissolved Arsenic (As)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B974964

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Matrix spike exceeds acceptance limits due to probable matrix interference.

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C550515
Report Date: 2025/06/17

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DMG758		DMG758			
Sampling Date		2025/06/03		2025/06/03			
COC Number		1OF1		1OF1			
	UNITS	SR25-01	MU	SR25-01 Lab-Dup	MU	RDL	QC Batch
Dissolved Barium (Ba)	mg/L	0.017	+/- <RDL	N/A	N/A	0.010	B974298
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B974964
Dissolved Boron (B)	mg/L	0.050	+/- <RDL	N/A	N/A	0.020	B974298
Dissolved Calcium (Ca)	mg/L	120	+/- 9.4	N/A	N/A	0.30	B974298
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B974964
Dissolved Cobalt (Co)	mg/L	<0.00030	N/A	N/A	N/A	0.00030	B974964
Dissolved Copper (Cu)	mg/L	0.0018	+/- <RDL	N/A	N/A	0.0010	B974964
Dissolved Iron (Fe)	mg/L	<0.060	N/A	N/A	N/A	0.060	B974298
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B974964
Dissolved Lithium (Li)	mg/L	0.039	+/- <RDL	N/A	N/A	0.020	B974298
Dissolved Magnesium (Mg)	mg/L	59	+/- 2.7	N/A	N/A	0.20	B974298
Dissolved Manganese (Mn)	mg/L	0.028	+/- <RDL	N/A	N/A	0.0040	B974298
Dissolved Molybdenum (Mo)	mg/L	0.00079	+/- <RDL	N/A	N/A	0.00020	B974964
Dissolved Nickel (Ni)	mg/L	0.0019	+/- <RDL	N/A	N/A	0.00050	B974964
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	N/A	N/A	0.10	B974298
Dissolved Potassium (K)	mg/L	5.8	+/- 0.31	N/A	N/A	0.30	B974298
Dissolved Selenium (Se)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B974964
Dissolved Silicon (Si)	mg/L	4.0	+/- 0.68	N/A	N/A	0.50	B974298
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	N/A	N/A	0.00010	B974964
Dissolved Sodium (Na)	mg/L	120	+/- 12	N/A	N/A	0.50	B974298
Dissolved Strontium (Sr)	mg/L	1.6	+/- 0.14	N/A	N/A	0.020	B974298
Dissolved Sulphur (S)	mg/L	96	+/- 8.1	N/A	N/A	0.20	B974298
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B974964
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B974964
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B974964
Dissolved Uranium (U)	mg/L	0.0023	+/- 0.00040	N/A	N/A	0.00010	B974964
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B974964
Dissolved Zinc (Zn)	mg/L	0.013	+/- <RDL	N/A	N/A	0.0030	B974964

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C550515
Report Date: 2025/06/17

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

TOTAL KJELDAHL NITROGEN (TOTAL)

Bureau Veritas ID		DMG751		DMG752			DMG753		DMG754			
Sampling Date		2025/06/03 10:02		2025/06/03 10:54			2025/06/03 12:38		2025/06/03 13:47			
COC Number		1OF1		1OF1			1OF1		1OF1			
	UNITS	MW21-3-15	MU	MW16-7-5	MU	RDL	RMW16-5-12	MU	MW16-2-6	MU	RDL	QC Batch
Calculated Parameters												
Total Kjeldahl Nitrogen (Calc)	mg/L	0.47	N/A	0.47	N/A	0.20	<2.0	N/A	<2.0	N/A	2.0	B972795
Nutrients												
Total Nitrogen (N)	mg/L	0.47 (1)	+/- <RDL	0.47 (1)	+/- <RDL	0.20	<2.0 (2)	N/A	<2.0 (3)	N/A	2.0	B974600

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.
(2) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly. Nitrogen < Nitrate: Both values fall within the method uncertainty for duplicates and are likely equivalent. Nitrogen < Ammonia: Both values fall within the method uncertainty for duplicates and are likely equivalent.
(3) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly. Nitrogen < Ammonia: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Bureau Veritas ID		DMG755		DMG756			DMG757			
Sampling Date		2025/06/03 15:07		2025/06/03 11:44			2025/06/03 14:33			
COC Number		1OF1		1OF1			1OF1			
	UNITS	WS11-01	MU	NE20-R3-01	MU	RDL	WS41-02	MU	RDL	QC Batch
Calculated Parameters										
Total Kjeldahl Nitrogen (Calc)	mg/L	0.34	N/A	0.73	N/A	0.040	<0.20	N/A	0.20	B972795
Nutrients										
Total Nitrogen (N)	mg/L	0.34	+/- 0.047	1.1	+/- 0.14	0.020	2.2 (1)	+/- 0.28	0.10	B974600

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Nitrogen < Nitrate: Both values fall within the method uncertainty for duplicates and are likely equivalent.

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TOTAL KJELDAHL NITROGEN (TOTAL)

Bureau Veritas ID		DMG758			
Sampling Date		2025/06/03			
COC Number		1OF1			
	UNITS	SR25-01	MU	RDL	QC Batch
Calculated Parameters					
Total Kjeldahl Nitrogen (Calc)	mg/L	0.84	N/A	0.040	B972795
Nutrients					
Total Nitrogen (N)	mg/L	1.2	+/- 0.16	0.020	B974600

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

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Bureau Veritas Job #: C550515
Report Date: 2025/06/17

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DMG751		DMG751			DMG752			
Sampling Date		2025/06/03 10:02		2025/06/03 10:02			2025/06/03 10:54			
COC Number		1OF1		1OF1			1OF1			
	UNITS	MW21-3-15	MU	MW21-3-15 Lab-Dup	MU	RDL	MW16-7-5	MU	RDL	QC Batch
Misc. Inorganics										
Dissolved Organic Carbon (C)	mg/L	1.5	+/- <RDL	N/A	N/A	0.50	2.4	+/- <RDL	0.50	B979571
Microbiological Param.										
E.Coli DST	MPN/100mL	<2.0 (1)	N/A	N/A	N/A	2.0	<5.0 (1)	N/A	5.0	B973575
Fecal Coliforms	MPN/100mL	2.0 (1)	N/A	2.0	N/A	2.0	<5.0 (1)	N/A	5.0	B973668
Heterotrophic DST	MPN/100mL	>2400	N/A	N/A	N/A	1.0	>12000 (2)	N/A	5.0	B973370
Total Coliforms DST	MPN/100mL	<2.0 (1)	N/A	N/A	N/A	2.0	79 (1)	N/A	5.0	B973575
Nutrients										
Total Ammonia (N)	mg/L	0.36	+/- 0.040	N/A	N/A	0.015	0.036	+/- <RDL	0.015	B976965
Orthophosphate (P)	mg/L	0.018	+/- 0.023	N/A	N/A	0.0030	0.0069	+/- 0.023	0.0030	B975113
Dissolved Phosphorus (P)	mg/L	0.015 (3)	+/- 0.0050	N/A	N/A	0.0030	0.0059 (3)	+/- 0.0048	0.0030	B974756

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Detection limit raised due to matrix interference.
(2) Detection limits raised due to matrix interference.
(3) Phosphorus < Orthophosphate: Both values fall within the method uncertainty for duplicates and are likely equivalent.

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Bureau Veritas Job #: C550515
Report Date: 2025/06/17

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DMG752			DMG753		DMG754			
Sampling Date		2025/06/03 10:54			2025/06/03 12:38		2025/06/03 13:47			
COC Number		1OF1			1OF1		1OF1			
	UNITS	MW16-7-5 Lab-Dup	MU	RDL	RMW16-5-12	MU	MW16-2-6	MU	RDL	QC Batch
Misc. Inorganics										
Dissolved Organic Carbon (C)	mg/L	N/A	N/A	0.50	1.2	+/- <RDL	3.5	+/- 0.50	0.50	B979571
Microbiological Param.										
E.Coli DST	MPN/100mL	N/A	N/A	5.0	<10 (1)	N/A	<10 (1)	N/A	10	B973575
Fecal Coliforms	MPN/100mL	N/A	N/A	5.0	<10 (1)	N/A	<10 (1)	N/A	10	B973668
Heterotrophic DST	MPN/100mL	N/A	N/A	5.0	>24000 (2)	N/A	>24000 (2)	N/A	10	B973370
Total Coliforms DST	MPN/100mL	N/A	N/A	5.0	<10 (1)	N/A	<10 (1)	N/A	10	B973575
Nutrients										
Total Ammonia (N)	mg/L	0.035	+/- <RDL	0.015	0.22	+/- 0.027	0.21	+/- 0.026	0.015	B976965
Orthophosphate (P)	mg/L	N/A	N/A	0.0030	<0.0030	N/A	0.0036	+/- 0.023	0.0030	B975113
Dissolved Phosphorus (P)	mg/L	N/A	N/A	0.0030	<0.0030	N/A	<0.0030 (3)	N/A	0.0030	B974756

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Detection limit raised due to matrix interference.
(2) Detection limits raised due to matrix interference.
(3) Phosphorus < Orthophosphate: Both values fall within the method uncertainty for duplicates and are likely equivalent.

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Bureau Veritas Job #: C550515
Report Date: 2025/06/17

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DMG755		DMG756		DMG756			
Sampling Date		2025/06/03 15:07		2025/06/03 11:44		2025/06/03 11:44			
COC Number		1OF1		1OF1		1OF1			
	UNITS	WS11-01	MU	NE20-R3-01	MU	NE20-R3-01 Lab-Dup	MU	RDL	QC Batch
Misc. Inorganics									
Dissolved Organic Carbon (C)	mg/L	1.6	+/- <RDL	1.8	+/- <RDL	N/A	N/A	0.50	B979571
Microbiological Param.									
E.Coli DST	MPN/100mL	<1.0	N/A	<1.0	N/A	N/A	N/A	1.0	B973575
Fecal Coliforms	MPN/100mL	<1.0	N/A	<1.0	N/A	N/A	N/A	1.0	B973668
Heterotrophic DST	MPN/100mL	>2400	N/A	>2400	N/A	>2400	N/A	1.0	B973370
Total Coliforms DST	MPN/100mL	<1.0	N/A	<1.0	N/A	N/A	N/A	1.0	B973575
Nutrients									
Total Ammonia (N)	mg/L	0.24	+/- 0.029	0.64	+/- 0.070	N/A	N/A	0.015	B976965
Orthophosphate (P)	mg/L	<0.0030	N/A	<0.0030	N/A	N/A	N/A	0.0030	B975113
Dissolved Phosphorus (P)	mg/L	0.0038	+/- 0.0048	<0.0030	N/A	N/A	N/A	0.0030	B974756

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas ID		DMG757		DMG758		DMG758			
Sampling Date		2025/06/03 14:33		2025/06/03		2025/06/03			
COC Number		1OF1		1OF1		1OF1			
	UNITS	WS41-02	MU	SR25-01	MU	SR25-01 Lab-Dup	MU	RDL	QC Batch
Misc. Inorganics									
Dissolved Organic Carbon (C)	mg/L	1.6	+/- <RDL	1.7	+/- <RDL	1.6	+/- <RDL	0.50	B979571
Microbiological Param.									
E.Coli DST	MPN/100mL	<1.0	N/A	<1.0	N/A	N/A	N/A	1.0	B973575
Fecal Coliforms	MPN/100mL	<1.0	N/A	<1.0	N/A	N/A	N/A	1.0	B973668
Heterotrophic DST	MPN/100mL	54	N/A	>2400	N/A	N/A	N/A	1.0	B973370
Total Coliforms DST	MPN/100mL	4.1	N/A	<1.0	N/A	N/A	N/A	1.0	B973575
Nutrients									
Total Ammonia (N)	mg/L	0.11	+/- 0.016	0.64	+/- 0.070	N/A	N/A	0.015	B976965
Orthophosphate (P)	mg/L	<0.0030	N/A	<0.0030	N/A	N/A	N/A	0.0030	B975113
Dissolved Phosphorus (P)	mg/L	<0.0030	N/A	<0.0030	N/A	N/A	N/A	0.0030	B974756

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

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MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		DMG751		DMG752			DMG753			
Sampling Date		2025/06/03 10:02		2025/06/03 10:54			2025/06/03 12:38			
COC Number		1OF1		1OF1			1OF1			
	UNITS	MW21-3-15	MU	MW16-7-5	MU	RDL	RMW16-5-12	MU	RDL	QC Batch
Elements										
Dissolved Mercury (Hg)	ug/L	<0.0019	N/A	0.0293 (1)	+/- 0.0053	0.0019	<0.0019	N/A	0.0019	B981500
Total Mercury (Hg)	ug/L	0.0157	+/- 0.0032	<0.0019	N/A	0.0019	0.210 (2)	+/- 0.036	0.019	B981508

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Client supplied DM vial contained particulate which may increase uncertainty associated with result.
(2) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Bureau Veritas ID		DMG754				DMG755			DMG756			
Sampling Date		2025/06/03 13:47				2025/06/03 15:07			2025/06/03 11:44			
COC Number		1OF1				1OF1			1OF1			
	UNITS	MW16-2-6	MU	RDL	QC Batch	WS11-01	MU	QC Batch	NE20-R3-01	MU	RDL	QC Batch
Elements												
Dissolved Mercury (Hg)	ug/L	<0.0019	N/A	0.0019	B981519	<0.0019	N/A	B981519	<0.0019	N/A	0.0019	B981519
Total Mercury (Hg)	ug/L	0.189 (1)	+/- 0.032	0.019	B981508	<0.0019	N/A	B982778	<0.0019	N/A	0.0019	B981508

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Bureau Veritas ID		DMG756		DMG757			DMG758			
Sampling Date		2025/06/03 11:44		2025/06/03 14:33			2025/06/03			
COC Number		1OF1		1OF1			1OF1			
	UNITS	NE20-R3-01 Lab-Dup	MU	WS41-02	MU	QC Batch	SR25-01	MU	RDL	QC Batch
Elements										
Dissolved Mercury (Hg)	ug/L	<0.0019	N/A	<0.0019	N/A	B981519	<0.0019	N/A	0.0019	B981500
Total Mercury (Hg)	ug/L	N/A	N/A	<0.0019	N/A	B981508	<0.0019	N/A	0.0019	B981508

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	5.3°C
Package 2	4.7°C

The following changes were requested by Wesley Tsen on 2025/06/16.
Sample DMG755 Sample ID WS11-1-01 changed to WS11-01

The estimate of uncertainty has been reported as an expanded uncertainty and calculated using a coverage factor of 2, which gives a level of confidence of 95%.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B973126	KSN	Matrix Spike	1,4-Difluorobenzene (sur.)	2025/06/07		99	%	50 - 140
			4-Bromofluorobenzene (sur.)	2025/06/07		98	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2025/06/07		94	%	50 - 140
			Benzene	2025/06/07		87	%	50 - 140
			Toluene	2025/06/07		90	%	50 - 140
			Ethylbenzene	2025/06/07		90	%	50 - 140
			m & p-Xylene	2025/06/07		91	%	50 - 140
			o-Xylene	2025/06/07		84	%	50 - 140
			F1 (C6-C10)	2025/06/07		93	%	60 - 140
B973126	KSN	Spiked Blank	1,4-Difluorobenzene (sur.)	2025/06/07		98	%	50 - 140
			4-Bromofluorobenzene (sur.)	2025/06/07		103	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2025/06/07		89	%	50 - 140
			Benzene	2025/06/07		85	%	60 - 130
			Toluene	2025/06/07		90	%	60 - 130
			Ethylbenzene	2025/06/07		93	%	60 - 130
			m & p-Xylene	2025/06/07		94	%	60 - 130
			o-Xylene	2025/06/07		91	%	60 - 130
			F1 (C6-C10)	2025/06/07		116	%	60 - 140
B973126	KSN	Method Blank	1,4-Difluorobenzene (sur.)	2025/06/07		105	%	50 - 140
			4-Bromofluorobenzene (sur.)	2025/06/07		89	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2025/06/07		99	%	50 - 140
			Benzene	2025/06/07	<0.00040		mg/L	
			Toluene	2025/06/07	<0.00040		mg/L	
			Ethylbenzene	2025/06/07	<0.00040		mg/L	
			m & p-Xylene	2025/06/07	<0.00080		mg/L	
			o-Xylene	2025/06/07	<0.00040		mg/L	
			F1 (C6-C10)	2025/06/07	<0.10		mg/L	
B973126	KSN	RPD	Benzene	2025/06/07	NC		%	30
			Toluene	2025/06/07	7.7		%	30
			Ethylbenzene	2025/06/07	4.0		%	30
			m & p-Xylene	2025/06/07	6.0		%	30
			o-Xylene	2025/06/07	3.6		%	30
			F1 (C6-C10)	2025/06/07	NC		%	30
B973370	R4S	Method Blank	Heterotrophic DST	2025/06/06	<1.0		mpn/100mL	
B973370	R4S	RPD [DMG756-05]	Heterotrophic DST	2025/06/06	NC		%	N/A
B973575	R4S	Method Blank	E.Coli DST	2025/06/05	<1.0		mpn/100mL	
			Total Coliforms DST	2025/06/05	<1.0		mpn/100mL	
B973575	R4S	RPD	E.Coli DST	2025/06/05	45		%	N/A
			Total Coliforms DST	2025/06/05	NC		%	N/A
B973668	R4S	Method Blank	Fecal Coliforms	2025/06/05	<1.0		MPN/100mL	
B973668	R4S	RPD [DMG751-05]	Fecal Coliforms	2025/06/05	0		%	N/A
B974298	KHU	Matrix Spike [DMG752-02]	Dissolved Barium (Ba)	2025/06/04		92	%	80 - 120
			Dissolved Boron (B)	2025/06/04		91	%	80 - 120
			Dissolved Calcium (Ca)	2025/06/04		NC	%	80 - 120
			Dissolved Iron (Fe)	2025/06/04		100	%	80 - 120
			Dissolved Lithium (Li)	2025/06/04		88	%	80 - 120
			Dissolved Magnesium (Mg)	2025/06/04		NC	%	80 - 120
			Dissolved Manganese (Mn)	2025/06/04		99	%	80 - 120
			Dissolved Phosphorus (P)	2025/06/04		103	%	80 - 120
			Dissolved Potassium (K)	2025/06/04		91	%	80 - 120
			Dissolved Silicon (Si)	2025/06/04		94	%	80 - 120
			Dissolved Sodium (Na)	2025/06/04		NC	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Strontium (Sr)	2025/06/04		87	%	80 - 120
			Dissolved Sulphur (S)	2025/06/04		NC	%	80 - 120
B974298	KHU	Spiked Blank	Dissolved Barium (Ba)	2025/06/04		96	%	80 - 120
			Dissolved Boron (B)	2025/06/04		93	%	80 - 120
			Dissolved Calcium (Ca)	2025/06/04		90	%	80 - 120
			Dissolved Iron (Fe)	2025/06/04		100	%	80 - 120
			Dissolved Lithium (Li)	2025/06/04		89	%	80 - 120
			Dissolved Magnesium (Mg)	2025/06/04		98	%	80 - 120
			Dissolved Manganese (Mn)	2025/06/04		98	%	80 - 120
			Dissolved Phosphorus (P)	2025/06/04		100	%	80 - 120
			Dissolved Potassium (K)	2025/06/04		92	%	80 - 120
			Dissolved Silicon (Si)	2025/06/04		96	%	80 - 120
			Dissolved Sodium (Na)	2025/06/04		90	%	80 - 120
			Dissolved Strontium (Sr)	2025/06/04		96	%	80 - 120
			Dissolved Sulphur (S)	2025/06/04		99	%	80 - 120
B974298	KHU	Method Blank	Dissolved Barium (Ba)	2025/06/04	<0.010		mg/L	
			Dissolved Boron (B)	2025/06/04	<0.020		mg/L	
			Dissolved Calcium (Ca)	2025/06/04	<0.30		mg/L	
			Dissolved Iron (Fe)	2025/06/04	<0.060		mg/L	
			Dissolved Lithium (Li)	2025/06/04	<0.020		mg/L	
			Dissolved Magnesium (Mg)	2025/06/04	<0.20		mg/L	
			Dissolved Manganese (Mn)	2025/06/04	<0.0040		mg/L	
			Dissolved Phosphorus (P)	2025/06/04	<0.10		mg/L	
			Dissolved Potassium (K)	2025/06/04	<0.30		mg/L	
			Dissolved Silicon (Si)	2025/06/04	<0.50		mg/L	
			Dissolved Sodium (Na)	2025/06/04	<0.50		mg/L	
			Dissolved Strontium (Sr)	2025/06/04	<0.020		mg/L	
			Dissolved Sulphur (S)	2025/06/04	<0.20		mg/L	
B974298	KHU	RPD [DMG752-02]	Dissolved Barium (Ba)	2025/06/04	NC		%	20
			Dissolved Boron (B)	2025/06/04	4.3		%	20
			Dissolved Calcium (Ca)	2025/06/04	0.36		%	20
			Dissolved Iron (Fe)	2025/06/04	NC		%	20
			Dissolved Lithium (Li)	2025/06/04	0.13		%	20
			Dissolved Magnesium (Mg)	2025/06/04	0.11		%	20
			Dissolved Manganese (Mn)	2025/06/04	0.16		%	20
			Dissolved Phosphorus (P)	2025/06/04	NC		%	20
			Dissolved Potassium (K)	2025/06/04	0.35		%	20
			Dissolved Silicon (Si)	2025/06/04	0.57		%	20
			Dissolved Sodium (Na)	2025/06/04	0.32		%	20
			Dissolved Strontium (Sr)	2025/06/04	0.55		%	20
			Dissolved Sulphur (S)	2025/06/04	0.10		%	20
B974314	RRA	Spiked Blank	O-TERPHENYL (sur.)	2025/06/05		91	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2025/06/05		89	%	60 - 140
B974314	RRA	Method Blank	O-TERPHENYL (sur.)	2025/06/05		92	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2025/06/05	<0.10		mg/L	
B974600	YL7	Matrix Spike	Total Nitrogen (N)	2025/06/05		114	%	80 - 120
B974600	YL7	QC Standard	Total Nitrogen (N)	2025/06/05		108	%	80 - 120
B974600	YL7	Spiked Blank	Total Nitrogen (N)	2025/06/05		102	%	80 - 120
B974600	YL7	Method Blank	Total Nitrogen (N)	2025/06/05	<0.020		mg/L	
B974600	YL7	RPD	Total Nitrogen (N)	2025/06/05	NC		%	20
B974756	HAP	Matrix Spike	Dissolved Phosphorus (P)	2025/06/05		100	%	80 - 120
B974756	HAP	QC Standard	Dissolved Phosphorus (P)	2025/06/05		85	%	80 - 120
B974756	HAP	Spiked Blank	Dissolved Phosphorus (P)	2025/06/05		96	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B974756	HAP	Method Blank	Dissolved Phosphorus (P)	2025/06/05	<0.0030		mg/L	
B974756	HAP	RPD	Dissolved Phosphorus (P)	2025/06/05	NC		%	20
B974765	AYE	Spiked Blank	Alkalinity (Total as CaCO3)	2025/06/05		100	%	80 - 120
B974765	AYE	Method Blank	Alkalinity (PP as CaCO3)	2025/06/05	<1.0		mg/L	
			Alkalinity (Total as CaCO3)	2025/06/05	<1.0		mg/L	
			Bicarbonate (HCO3)	2025/06/05	<1.0		mg/L	
			Carbonate (CO3)	2025/06/05	<1.0		mg/L	
			Hydroxide (OH)	2025/06/05	<1.0		mg/L	
B974765	AYE	RPD [DMG758-01]	Alkalinity (PP as CaCO3)	2025/06/05	NC		%	20
			Alkalinity (Total as CaCO3)	2025/06/05	3.2		%	20
			Bicarbonate (HCO3)	2025/06/05	3.2		%	20
			Carbonate (CO3)	2025/06/05	NC		%	20
			Hydroxide (OH)	2025/06/05	NC		%	20
B974769	AYE	Spiked Blank	pH	2025/06/05		100	%	97 - 103
B974769	AYE	RPD [DMG758-01]	pH	2025/06/05	0.14		%	N/A
B974770	AYE	Spiked Blank	Conductivity	2025/06/05		103	%	90 - 110
B974770	AYE	Method Blank	Conductivity	2025/06/05	<2.0		uS/cm	
B974770	AYE	RPD [DMG758-01]	Conductivity	2025/06/05	1.1		%	10
B974912	AYE	Spiked Blank	Alkalinity (Total as CaCO3)	2025/06/05		100	%	80 - 120
B974912	AYE	Method Blank	Alkalinity (PP as CaCO3)	2025/06/05	<1.0		mg/L	
			Alkalinity (Total as CaCO3)	2025/06/05	<1.0		mg/L	
			Bicarbonate (HCO3)	2025/06/05	<1.0		mg/L	
			Carbonate (CO3)	2025/06/05	<1.0		mg/L	
			Hydroxide (OH)	2025/06/05	<1.0		mg/L	
B974912	AYE	RPD	Alkalinity (PP as CaCO3)	2025/06/05	NC		%	20
			Alkalinity (Total as CaCO3)	2025/06/05	2.3		%	20
			Bicarbonate (HCO3)	2025/06/05	2.3		%	20
			Carbonate (CO3)	2025/06/05	NC		%	20
			Hydroxide (OH)	2025/06/05	NC		%	20
B974916	AYE	Spiked Blank	pH	2025/06/05		100	%	97 - 103
B974916	AYE	RPD	pH	2025/06/05	0.65		%	N/A
B974918	AYE	Spiked Blank	Conductivity	2025/06/05		102	%	90 - 110
B974918	AYE	Method Blank	Conductivity	2025/06/05	<2.0		uS/cm	
B974918	AYE	RPD	Conductivity	2025/06/05	0.17		%	10
B974964	JAB	Matrix Spike	Dissolved Aluminum (Al)	2025/06/05		98	%	80 - 120
			Dissolved Antimony (Sb)	2025/06/05		102	%	80 - 120
			Dissolved Arsenic (As)	2025/06/05		105	%	80 - 120
			Dissolved Beryllium (Be)	2025/06/05		101	%	80 - 120
			Dissolved Chromium (Cr)	2025/06/05		95	%	80 - 120
			Dissolved Cobalt (Co)	2025/06/05		95	%	80 - 120
			Dissolved Copper (Cu)	2025/06/05		93	%	80 - 120
			Dissolved Lead (Pb)	2025/06/05		95	%	80 - 120
			Dissolved Molybdenum (Mo)	2025/06/05		109	%	80 - 120
			Dissolved Nickel (Ni)	2025/06/05		94	%	80 - 120
			Dissolved Selenium (Se)	2025/06/05		102	%	80 - 120
			Dissolved Silver (Ag)	2025/06/05		98	%	80 - 120
			Dissolved Thallium (Tl)	2025/06/05		101	%	80 - 120
			Dissolved Tin (Sn)	2025/06/05		102	%	80 - 120
			Dissolved Titanium (Ti)	2025/06/05		104	%	80 - 120
			Dissolved Uranium (U)	2025/06/05		93	%	80 - 120
			Dissolved Vanadium (V)	2025/06/05		98	%	80 - 120
			Dissolved Zinc (Zn)	2025/06/05		92	%	80 - 120
B974964	JAB	Spiked Blank	Dissolved Aluminum (Al)	2025/06/05		96	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Antimony (Sb)	2025/06/05		102	%	80 - 120
			Dissolved Arsenic (As)	2025/06/05		102	%	80 - 120
			Dissolved Beryllium (Be)	2025/06/05		100	%	80 - 120
			Dissolved Chromium (Cr)	2025/06/05		97	%	80 - 120
			Dissolved Cobalt (Co)	2025/06/05		96	%	80 - 120
			Dissolved Copper (Cu)	2025/06/05		97	%	80 - 120
			Dissolved Lead (Pb)	2025/06/05		95	%	80 - 120
			Dissolved Molybdenum (Mo)	2025/06/05		103	%	80 - 120
			Dissolved Nickel (Ni)	2025/06/05		97	%	80 - 120
			Dissolved Selenium (Se)	2025/06/05		104	%	80 - 120
			Dissolved Silver (Ag)	2025/06/05		98	%	80 - 120
			Dissolved Thallium (Tl)	2025/06/05		101	%	80 - 120
			Dissolved Tin (Sn)	2025/06/05		101	%	80 - 120
			Dissolved Titanium (Ti)	2025/06/05		102	%	80 - 120
			Dissolved Uranium (U)	2025/06/05		89	%	80 - 120
			Dissolved Vanadium (V)	2025/06/05		98	%	80 - 120
			Dissolved Zinc (Zn)	2025/06/05		96	%	80 - 120
B974964	JAB	Method Blank	Dissolved Aluminum (Al)	2025/06/05	<0.0030		mg/L	
			Dissolved Antimony (Sb)	2025/06/05	<0.00060		mg/L	
			Dissolved Arsenic (As)	2025/06/05	<0.00020		mg/L	
			Dissolved Beryllium (Be)	2025/06/05	<0.0010		mg/L	
			Dissolved Chromium (Cr)	2025/06/05	<0.0010		mg/L	
			Dissolved Cobalt (Co)	2025/06/05	<0.00030		mg/L	
			Dissolved Copper (Cu)	2025/06/05	<0.0010		mg/L	
			Dissolved Lead (Pb)	2025/06/05	<0.00020		mg/L	
			Dissolved Molybdenum (Mo)	2025/06/05	<0.00020		mg/L	
			Dissolved Nickel (Ni)	2025/06/05	<0.00050		mg/L	
			Dissolved Selenium (Se)	2025/06/05	<0.00020		mg/L	
			Dissolved Silver (Ag)	2025/06/05	<0.00010		mg/L	
			Dissolved Thallium (Tl)	2025/06/05	<0.00020		mg/L	
			Dissolved Tin (Sn)	2025/06/05	<0.0010		mg/L	
			Dissolved Titanium (Ti)	2025/06/05	<0.0010		mg/L	
			Dissolved Uranium (U)	2025/06/05	<0.00010		mg/L	
			Dissolved Vanadium (V)	2025/06/05	<0.0010		mg/L	
			Dissolved Zinc (Zn)	2025/06/05	<0.0030		mg/L	
B974964	JAB	RPD	Dissolved Aluminum (Al)	2025/06/05	NC		%	20
			Dissolved Antimony (Sb)	2025/06/05	NC		%	20
			Dissolved Arsenic (As)	2025/06/05	6.3		%	20
			Dissolved Beryllium (Be)	2025/06/05	NC		%	20
			Dissolved Chromium (Cr)	2025/06/05	NC		%	20
			Dissolved Cobalt (Co)	2025/06/05	8.7		%	20
			Dissolved Copper (Cu)	2025/06/05	NC		%	20
			Dissolved Lead (Pb)	2025/06/05	NC		%	20
			Dissolved Molybdenum (Mo)	2025/06/05	0.14		%	20
			Dissolved Nickel (Ni)	2025/06/05	4.1		%	20
			Dissolved Selenium (Se)	2025/06/05	NC		%	20
			Dissolved Silver (Ag)	2025/06/05	NC		%	20
			Dissolved Thallium (Tl)	2025/06/05	NC		%	20
			Dissolved Tin (Sn)	2025/06/05	6.0		%	20
			Dissolved Titanium (Ti)	2025/06/05	NC		%	20
			Dissolved Uranium (U)	2025/06/05	4.3		%	20
			Dissolved Vanadium (V)	2025/06/05	NC		%	20
			Dissolved Zinc (Zn)	2025/06/05	NC		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B975034	TOR	Matrix Spike	Chloride (Cl)	2025/06/05		82	%	80 - 120
			Sulphate (SO4)	2025/06/05		97	%	80 - 120
B975034	TOR	Spiked Blank	Chloride (Cl)	2025/06/05		100	%	80 - 120
			Sulphate (SO4)	2025/06/05		101	%	80 - 120
B975034	TOR	Method Blank	Chloride (Cl)	2025/06/05	<1.0		mg/L	
			Sulphate (SO4)	2025/06/05	<1.0		mg/L	
B975034	TOR	RPD	Chloride (Cl)	2025/06/05	0.68		%	20
B975113	MAP	Matrix Spike	Orthophosphate (P)	2025/06/05		105	%	80 - 120
B975113	MAP	Spiked Blank	Orthophosphate (P)	2025/06/05		107	%	80 - 120
B975113	MAP	Method Blank	Orthophosphate (P)	2025/06/05	<0.0030		mg/L	
B975113	MAP	RPD	Orthophosphate (P)	2025/06/05	NC		%	20
B975227	TOR	Matrix Spike	Chloride (Cl)	2025/06/05		80	%	80 - 120
			Sulphate (SO4)	2025/06/05		NC	%	80 - 120
B975227	TOR	Spiked Blank	Chloride (Cl)	2025/06/05		101	%	80 - 120
			Sulphate (SO4)	2025/06/05		101	%	80 - 120
B975227	TOR	Method Blank	Chloride (Cl)	2025/06/05	<1.0		mg/L	
			Sulphate (SO4)	2025/06/05	<1.0		mg/L	
B975227	TOR	RPD	Chloride (Cl)	2025/06/05	0.18		%	20
			Sulphate (SO4)	2025/06/05	0.16		%	20
B975263	ISW	Matrix Spike	Nitrite (N)	2025/06/05		95	%	80 - 120
			Nitrate plus Nitrite (N)	2025/06/05		121 (1)	%	80 - 120
B975263	ISW	Spiked Blank	Nitrite (N)	2025/06/05		106	%	80 - 120
			Nitrate plus Nitrite (N)	2025/06/05		109	%	80 - 120
B975263	ISW	Method Blank	Nitrite (N)	2025/06/05	<0.040		mg/L	
			Nitrate plus Nitrite (N)	2025/06/05	<0.040		mg/L	
B975263	ISW	RPD	Nitrite (N)	2025/06/05	NC		%	20
			Nitrate plus Nitrite (N)	2025/06/05	10		%	20
B975272	ISW	Matrix Spike [DMG758-01]	Nitrite (N)	2025/06/05		103	%	80 - 120
			Nitrate plus Nitrite (N)	2025/06/05		77 (1)	%	80 - 120
B975272	ISW	Spiked Blank	Nitrite (N)	2025/06/05		99	%	80 - 120
			Nitrate plus Nitrite (N)	2025/06/05		109	%	80 - 120
B975272	ISW	Method Blank	Nitrite (N)	2025/06/05	<0.040		mg/L	
			Nitrate plus Nitrite (N)	2025/06/05	<0.040		mg/L	
B975272	ISW	RPD [DMG758-01]	Nitrite (N)	2025/06/05	NC		%	20
			Nitrate plus Nitrite (N)	2025/06/05	1.7		%	20
B975667	JAB	Matrix Spike	Dissolved Aluminum (Al)	2025/06/05		97	%	80 - 120
			Dissolved Antimony (Sb)	2025/06/05		102	%	80 - 120
			Dissolved Arsenic (As)	2025/06/05		105	%	80 - 120
			Dissolved Beryllium (Be)	2025/06/05		102	%	80 - 120
			Dissolved Chromium (Cr)	2025/06/05		94	%	80 - 120
			Dissolved Cobalt (Co)	2025/06/05		94	%	80 - 120
			Dissolved Copper (Cu)	2025/06/05		92	%	80 - 120
			Dissolved Lead (Pb)	2025/06/05		95	%	80 - 120
			Dissolved Molybdenum (Mo)	2025/06/05		107	%	80 - 120
			Dissolved Nickel (Ni)	2025/06/05		94	%	80 - 120
			Dissolved Selenium (Se)	2025/06/05		104	%	80 - 120
			Dissolved Silver (Ag)	2025/06/05		97	%	80 - 120
			Dissolved Thallium (Tl)	2025/06/05		101	%	80 - 120
			Dissolved Tin (Sn)	2025/06/05		103	%	80 - 120
			Dissolved Titanium (Ti)	2025/06/05		101	%	80 - 120
			Dissolved Uranium (U)	2025/06/05		92	%	80 - 120
			Dissolved Vanadium (V)	2025/06/05		97	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Zinc (Zn)	2025/06/05		96	%	80 - 120
B975667	JAB	Spiked Blank	Dissolved Aluminum (Al)	2025/06/05		92	%	80 - 120
			Dissolved Antimony (Sb)	2025/06/05		100	%	80 - 120
			Dissolved Arsenic (As)	2025/06/05		100	%	80 - 120
			Dissolved Beryllium (Be)	2025/06/05		97	%	80 - 120
			Dissolved Chromium (Cr)	2025/06/05		92	%	80 - 120
			Dissolved Cobalt (Co)	2025/06/05		92	%	80 - 120
			Dissolved Copper (Cu)	2025/06/05		92	%	80 - 120
			Dissolved Lead (Pb)	2025/06/05		94	%	80 - 120
			Dissolved Molybdenum (Mo)	2025/06/05		99	%	80 - 120
			Dissolved Nickel (Ni)	2025/06/05		92	%	80 - 120
			Dissolved Selenium (Se)	2025/06/05		102	%	80 - 120
			Dissolved Silver (Ag)	2025/06/05		94	%	80 - 120
			Dissolved Thallium (Tl)	2025/06/05		99	%	80 - 120
			Dissolved Tin (Sn)	2025/06/05		98	%	80 - 120
			Dissolved Titanium (Ti)	2025/06/05		97	%	80 - 120
			Dissolved Uranium (U)	2025/06/05		89	%	80 - 120
			Dissolved Vanadium (V)	2025/06/05		93	%	80 - 120
			Dissolved Zinc (Zn)	2025/06/05		91	%	80 - 120
B975667	JAB	Method Blank	Dissolved Aluminum (Al)	2025/06/06	<0.0030		mg/L	
			Dissolved Antimony (Sb)	2025/06/06	<0.00060		mg/L	
			Dissolved Arsenic (As)	2025/06/06	<0.00020		mg/L	
			Dissolved Beryllium (Be)	2025/06/06	<0.0010		mg/L	
			Dissolved Chromium (Cr)	2025/06/06	<0.0010		mg/L	
			Dissolved Cobalt (Co)	2025/06/06	<0.00030		mg/L	
			Dissolved Copper (Cu)	2025/06/06	<0.0010		mg/L	
			Dissolved Lead (Pb)	2025/06/06	<0.00020		mg/L	
			Dissolved Molybdenum (Mo)	2025/06/06	<0.00020		mg/L	
			Dissolved Nickel (Ni)	2025/06/06	<0.00050		mg/L	
			Dissolved Selenium (Se)	2025/06/06	<0.00020		mg/L	
			Dissolved Silver (Ag)	2025/06/06	<0.00010		mg/L	
			Dissolved Thallium (Tl)	2025/06/06	<0.00020		mg/L	
			Dissolved Tin (Sn)	2025/06/06	<0.0010		mg/L	
			Dissolved Titanium (Ti)	2025/06/06	<0.0010		mg/L	
			Dissolved Uranium (U)	2025/06/06	<0.00010		mg/L	
			Dissolved Vanadium (V)	2025/06/06	<0.0010		mg/L	
			Dissolved Zinc (Zn)	2025/06/06	<0.0030		mg/L	
B975667	JAB	RPD	Dissolved Arsenic (As)	2025/06/05	0.15		%	20
			Dissolved Chromium (Cr)	2025/06/05	NC		%	20
			Dissolved Copper (Cu)	2025/06/05	NC		%	20
			Dissolved Lead (Pb)	2025/06/05	3.5		%	20
			Dissolved Zinc (Zn)	2025/06/05	NC		%	20
B976965	MAP	Matrix Spike [DMG752-10]	Total Ammonia (N)	2025/06/06		102	%	80 - 120
B976965	MAP	Spiked Blank	Total Ammonia (N)	2025/06/06		105	%	80 - 120
B976965	MAP	Method Blank	Total Ammonia (N)	2025/06/06	<0.015		mg/L	
B976965	MAP	RPD [DMG752-10]	Total Ammonia (N)	2025/06/06	0.82		%	20
B979571	MDO	Matrix Spike [DMG758-03]	Dissolved Organic Carbon (C)	2025/06/09		99	%	75 - 125
B979571	MDO	Spiked Blank	Dissolved Organic Carbon (C)	2025/06/09		101	%	80 - 120
B979571	MDO	Method Blank	Dissolved Organic Carbon (C)	2025/06/09	<0.50		mg/L	
B979571	MDO	RPD [DMG758-03]	Dissolved Organic Carbon (C)	2025/06/09	7.4		%	20
B981500	KKM	Matrix Spike	Dissolved Mercury (Hg)	2025/06/10		92	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B981500	KKM	Spiked Blank	Dissolved Mercury (Hg)	2025/06/10		96	%	80 - 120
B981500	KKM	Method Blank	Dissolved Mercury (Hg)	2025/06/10	<0.0019		ug/L	
B981500	KKM	RPD	Dissolved Mercury (Hg)	2025/06/10	NC		%	20
B981508	KKM	Matrix Spike	Total Mercury (Hg)	2025/06/10		94	%	80 - 120
B981508	KKM	Spiked Blank	Total Mercury (Hg)	2025/06/10		95	%	80 - 120
B981508	KKM	Method Blank	Total Mercury (Hg)	2025/06/10	<0.0019		ug/L	
B981508	KKM	RPD	Total Mercury (Hg)	2025/06/10	2.7		%	20
B981519	KKM	Matrix Spike [DMG757-07]	Dissolved Mercury (Hg)	2025/06/10		93	%	80 - 120
B981519	KKM	Spiked Blank	Dissolved Mercury (Hg)	2025/06/10		96	%	80 - 120
B981519	KKM	Method Blank	Dissolved Mercury (Hg)	2025/06/10	<0.0019		ug/L	
B981519	KKM	RPD [DMG756-07]	Dissolved Mercury (Hg)	2025/06/10	NC		%	20
B982778	KKM	Matrix Spike	Total Mercury (Hg)	2025/06/11		96	%	80 - 120
B982778	KKM	Spiked Blank	Total Mercury (Hg)	2025/06/11		97	%	80 - 120
B982778	KKM	Method Blank	Total Mercury (Hg)	2025/06/11	<0.0019		ug/L	
B982778	KKM	RPD	Total Mercury (Hg)	2025/06/11	NC		%	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

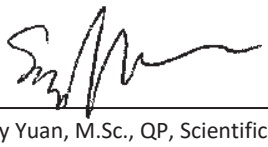
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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:



Rahul Suryawanshi, Senior Analyst



Sandy Yuan, M.Sc., QP, Scientific Specialist



Veronica Falk, B.Sc., P.Chem., QP, Scientific Specialist, Organics

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CHAIN OF CUSTODY RECORD
ENV COC - 00013v5

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Invoice Information	Invoice to (requires report) ☐	Report Information (if differs from Invoice)		Project Information		LAB USE ONLY - PLACE STICKER HERE
Company:	Stantec	Company:		Quotation #:		
Contact Name:	Dylan King	Contact Name:		P.O. #/ AFE#:		
Street Address:	#300, 10220 103Ave NW	Street Address:		Project #:	110773396	
City:	Edmonton Prov: AB Postal Code: T5	City: Prov: Postal Code:		Site #:		
Phone:	780 969 2223	Phone:		Site Location:	SR1	Rush Confirmation #:
Email:	dylan.king@stantec.com	Email:	EDDR@stantec.com	Site Location Province:	AB	
Copies:		Copies:	wesley.teen@stantec.com	Sampled By:	TH/DB	

Regulatory Criteria

☐ AT1 ☐ CCME ☐ Drinking Water - Canada ☐ Drinking Water - Manitoba ☐ Saskatchewan ☐ Drinking Water - Alberta ☐ Other _____

SAMPLES MUST BE KEPT COOL (<10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

	Sample Identification	Date Sampled YY	MM	DD	Time (24hr) HH	MM	Matrix	1 FIELD FILTERED	2 FIELD PRESERVED	3 LAB FILTRATION REQUIRED	4 BTEX F1	5 VOCs	6 BTEX F1-F2	7 BTEX F3-F4	8 Routine water	9 Regulated metals - total	10 Regulated metals - dissolved	11 Mercury - total	12 Mercury - dissolved	13 ~~Solvent~~ DOC	14 Silver (Ag) (Ultra-low) TKN	15 Texture (% sand, silt, clay)	16 Basic class II landfill	17 dissolved phosphorous	18 phosphate	19 ammonia	20 Bacteriological	21 # OF CONTAINERS SUBMITTED	22 HOLD - DO NOT ANALYZE
1	MW21-3-15	25	06	03	10	02	W	X	X				X		X		X	X	X	X	X			X	X	X	X	11	
2	MW16-7-5	↑	↑	↑	10	54	↑	X	X				X		X		X	X	X	X	X			X	X	X	X	11	
3	RMW16-5-12				12	38		X	X				X		X		X	X	X	X	X			X	X	X	X	11	
4	MW16-2-6				13	47		X	X				X		X		X	X	X	X	X	[illegible]		X	X	X	X	11	
5	WS11-1-01				15	07		X	X				X		X		X	X	X	X	X			X	X	X	X	11	
6	NE20-R3-01				11	44		X	X				X		X		X	X	X	X	X			X	X	X	X	11	
7	WS41-02				14	33		X	X				X		X		X	X	X	X	X			X	X	X	X	11	
8	SR25-01	↓	↓	↓			↓	X	X				X		X		X	X	X	X	X			X	X	X	X	11	
9																													
10																													
11																													
12																													

Regular Turnaround Time (TAT)
- [x] 5 to 7 Day ☐ 10 Day

Rush Turnaround Time (TAT) Surcharges apply
- ☐ Same Day ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ 4 Day

Date Required: YY MM DD

Comments

MCAL-2025-06-148

*UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS AND CONDITIONS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS OR BY CALLING THE LABORATORY LISTED ABOVE TO OBTAIN A COPY

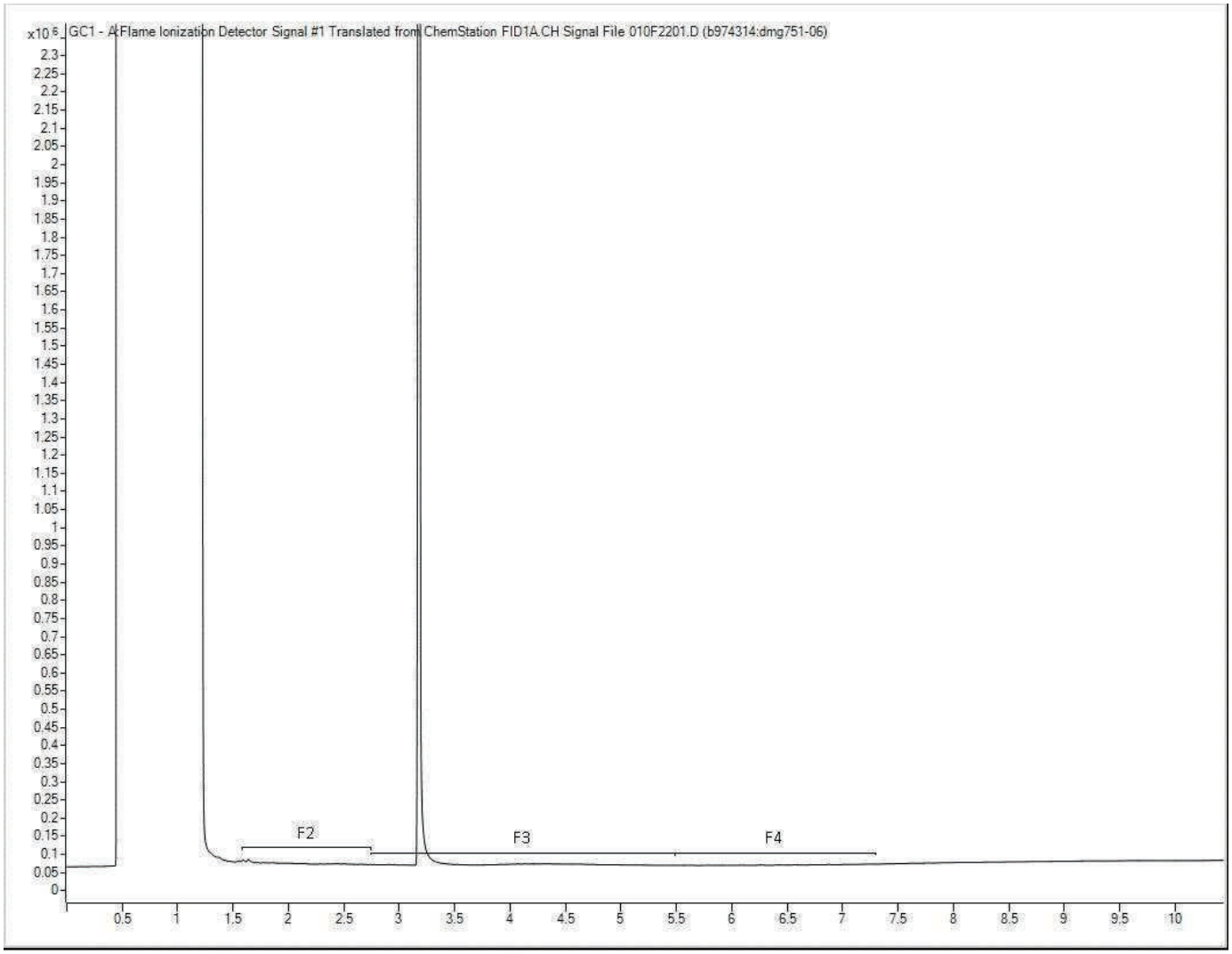
LAB USE ONLY	Yes	No	°C				LAB USE ONLY	Yes	No	°C				LAB USE ONLY	Yes	No	°C				Temperature reading by:
Seal present		✓					Seal present		✓					Seal present							
Seal intact							Seal intact							Seal intact							
Cooling media present	✓			5	5	6	Cooling media present	✓			4	5	5	Cooling media present				1	2	3	
				1	2	3					1	2	3								

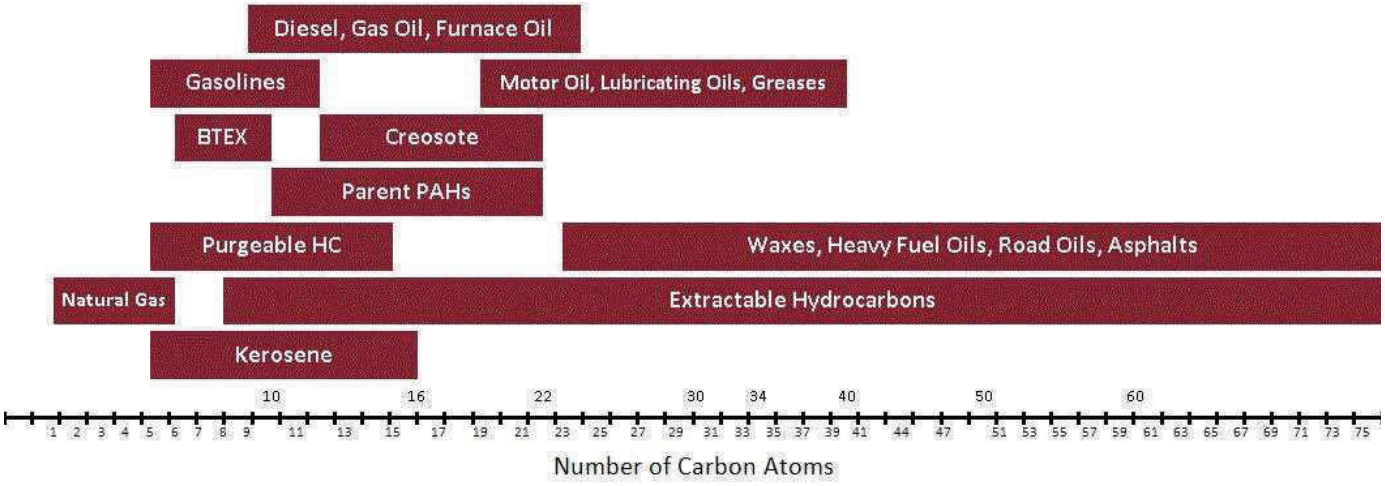
Relinquished by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM	Received by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM	Special Instructions
1 Taylor Harris	2025	06	03	17	10	1 Marjorie Lauchy	2025	06	03	17	09	*Fecal ant total coliforms e.coli, heterotrophic plate count.
2						2						

Bureau Veritas Job #: C550515
Report Date: 2025/06/17
Bureau Veritas Sample: DMG751

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Reference: SRI
Client ID: MW21-3-15

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





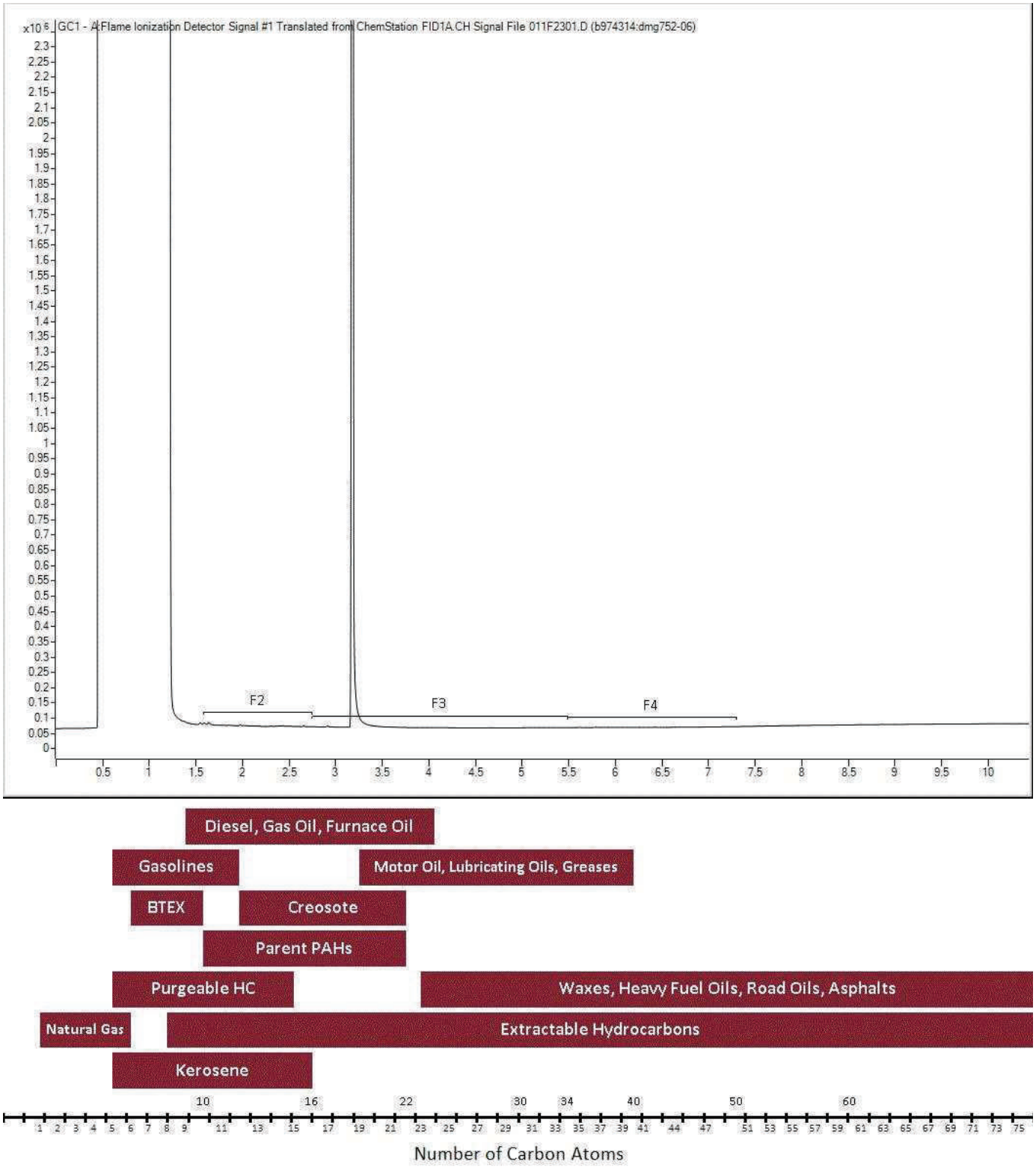
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Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C550515
Report Date: 2025/06/17
Bureau Veritas Sample: DMG752

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Reference: SRI
Client ID: MW16-7-5

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

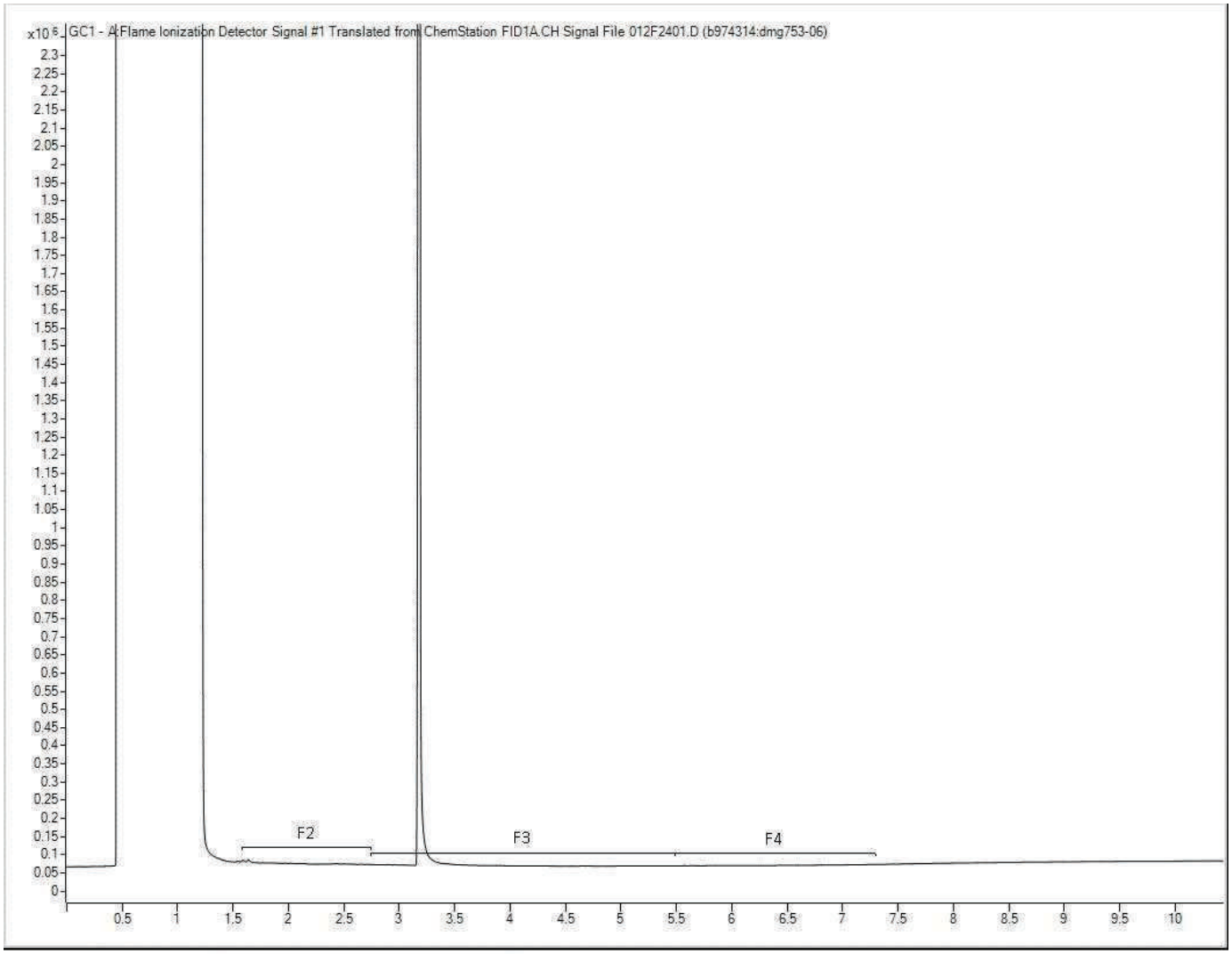


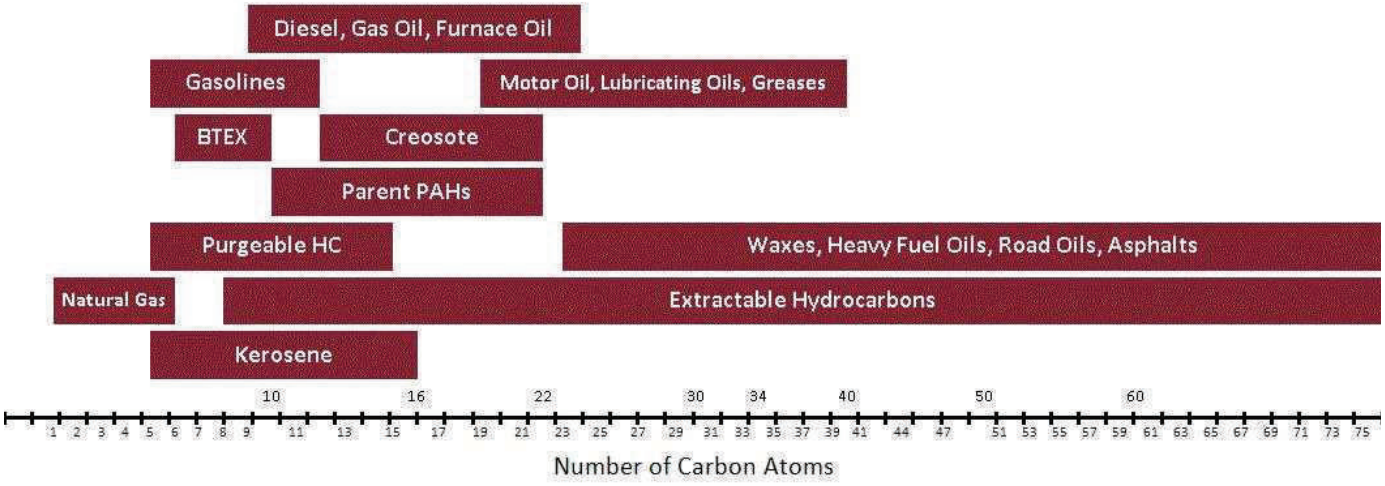
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C550515
Report Date: 2025/06/17
Bureau Veritas Sample: DMG753

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Reference: SRI
Client ID: RMW16-5-12

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





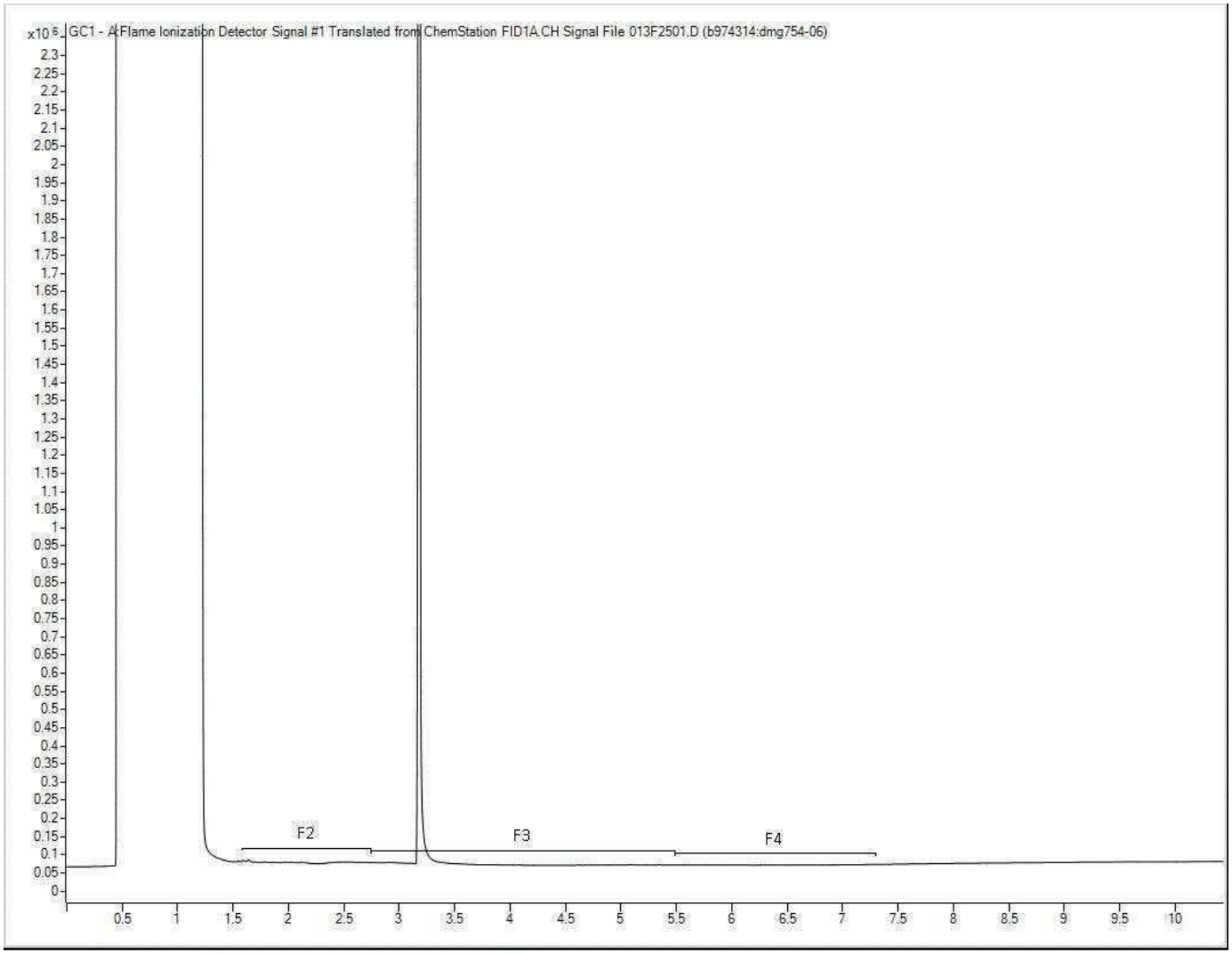
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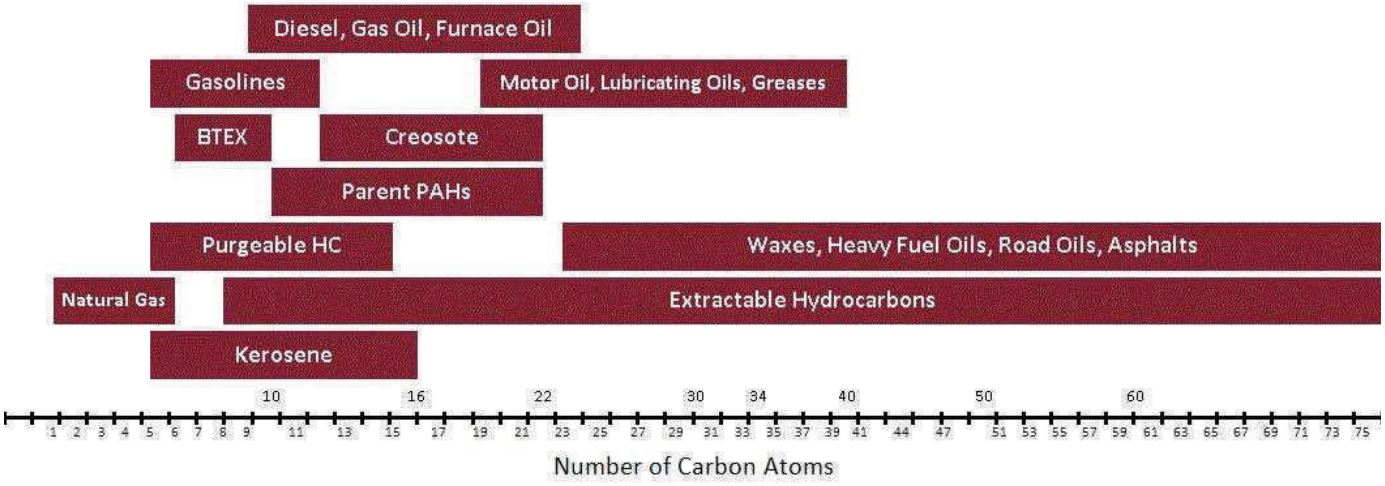
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C550515
Report Date: 2025/06/17
Bureau Veritas Sample: DMG754

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Reference: SRI
Client ID: MW16-2-6

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





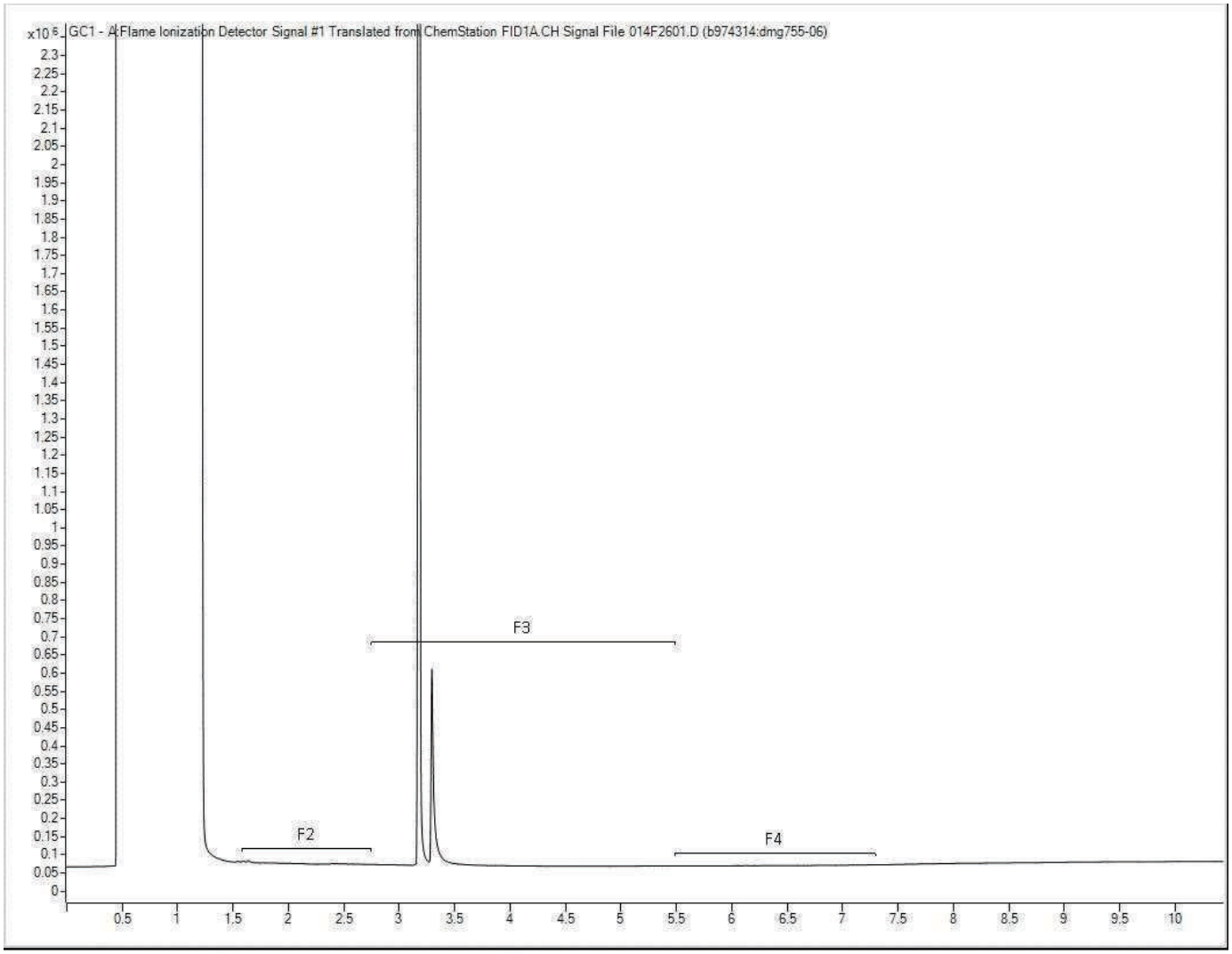
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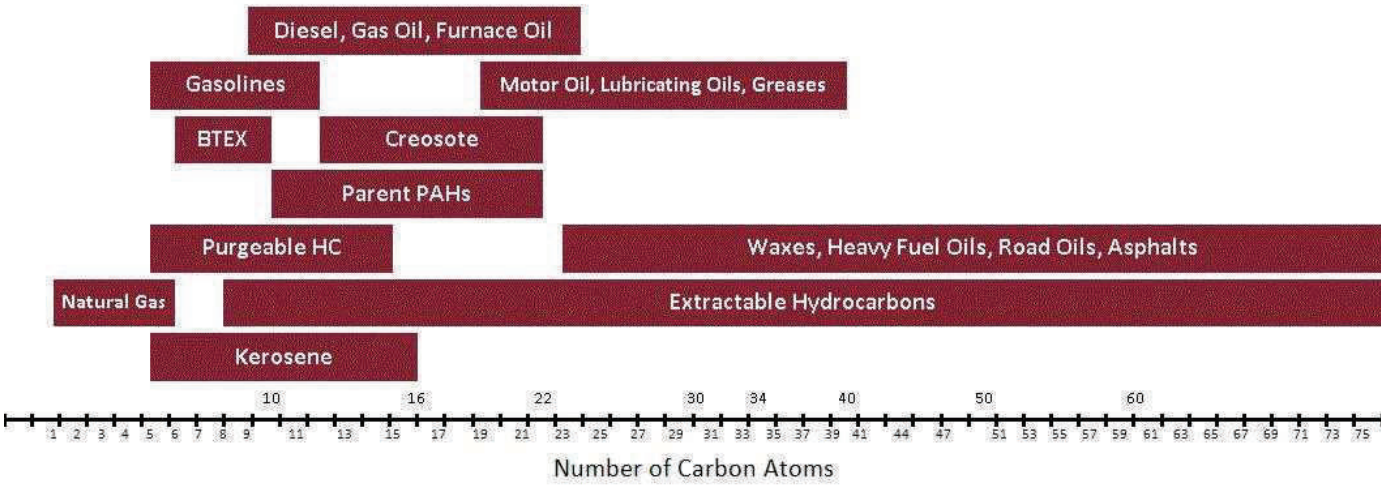
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C550515
Report Date: 2025/06/17
Bureau Veritas Sample: DMG755

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Reference: SRI
Client ID: WS11-01

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





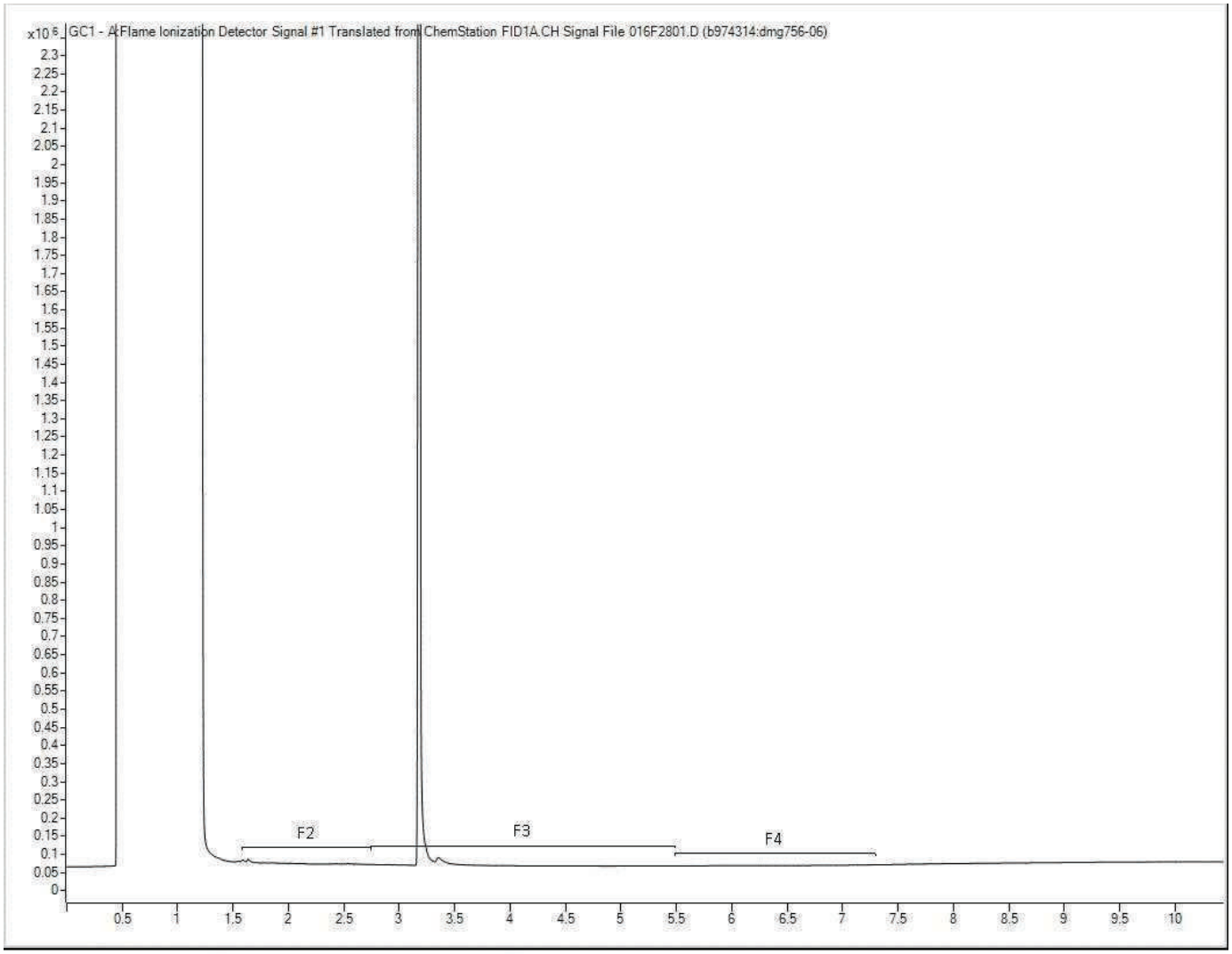
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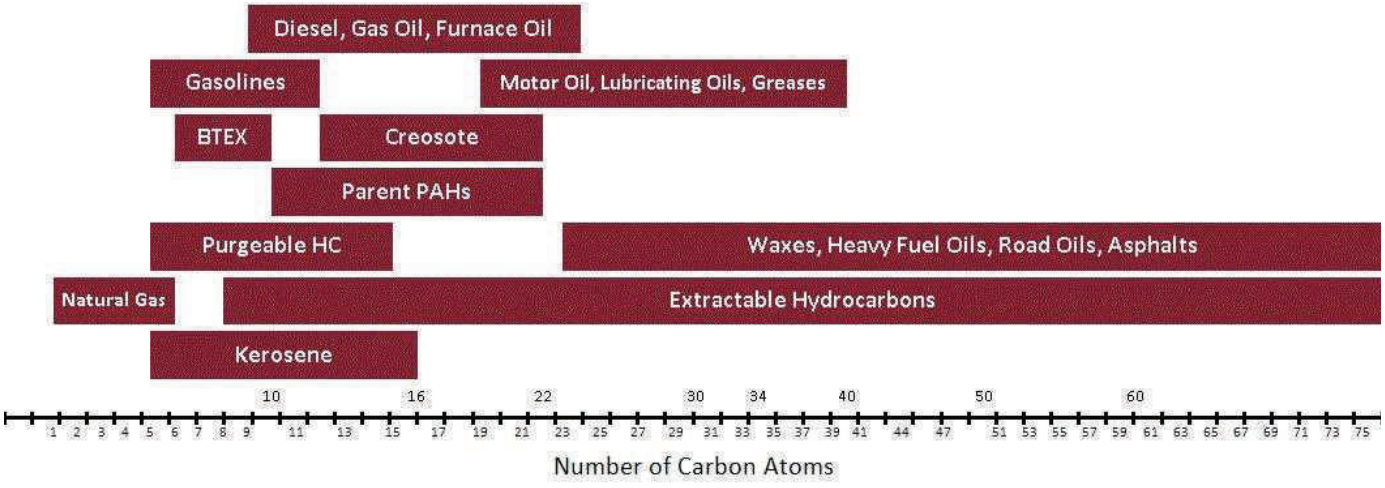
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C550515
Report Date: 2025/06/17
Bureau Veritas Sample: DMG756

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Reference: SRI
Client ID: NE20-R3-01

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





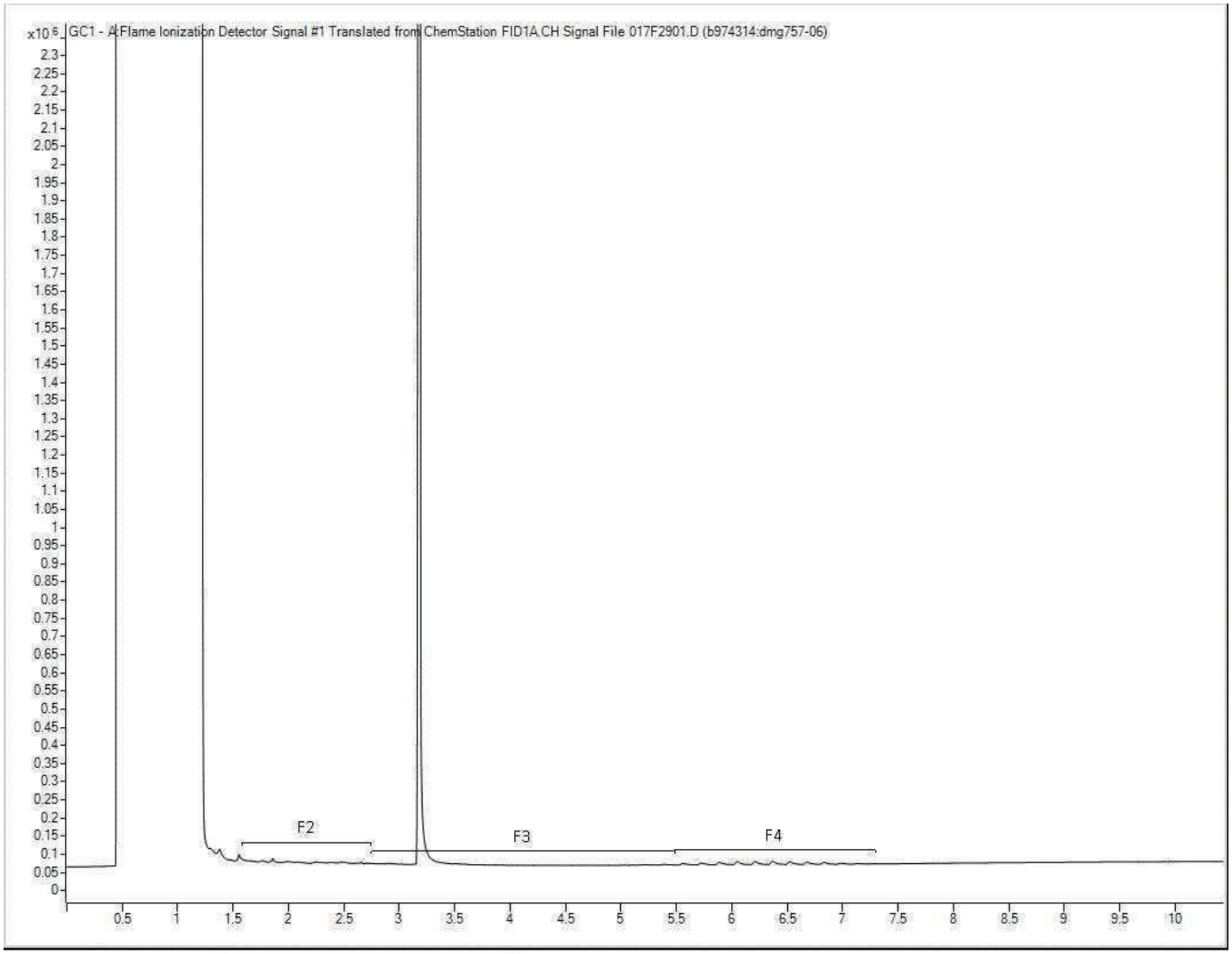
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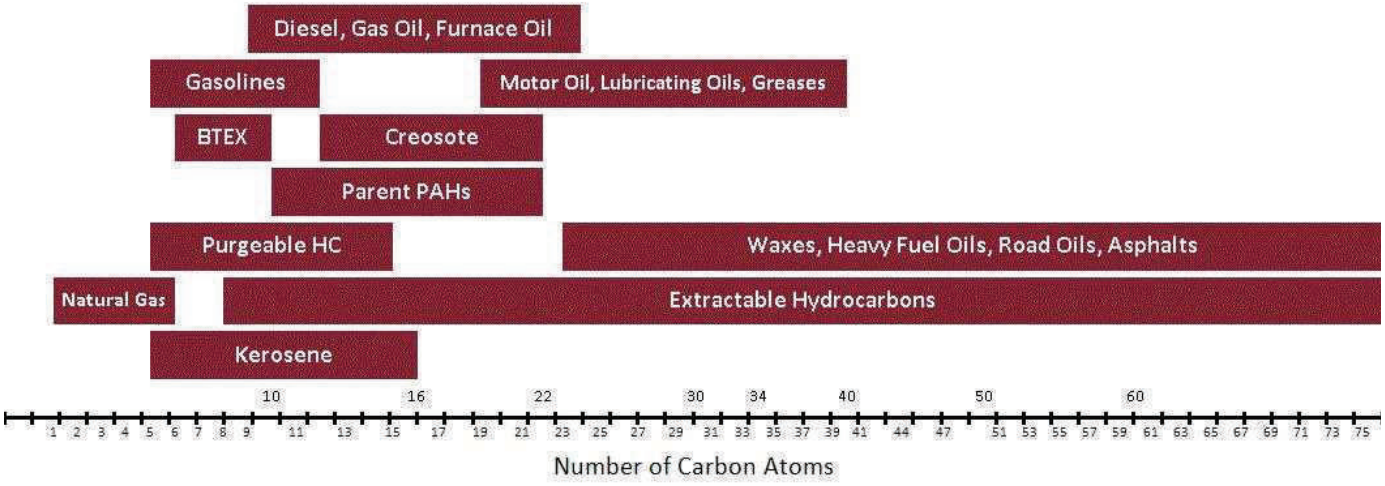
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C550515
Report Date: 2025/06/17
Bureau Veritas Sample: DMG757

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Reference: SRI
Client ID: WS41-02

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





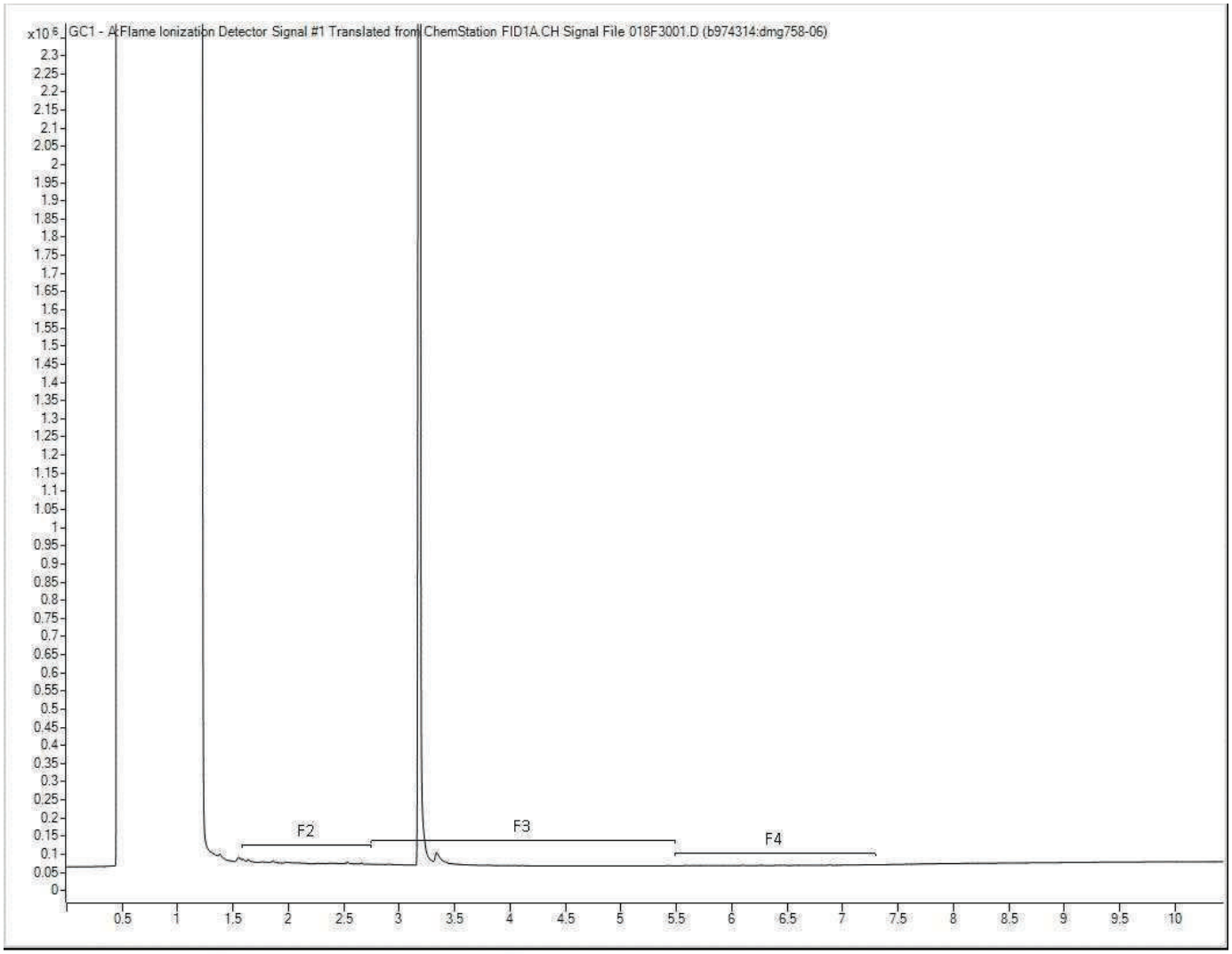
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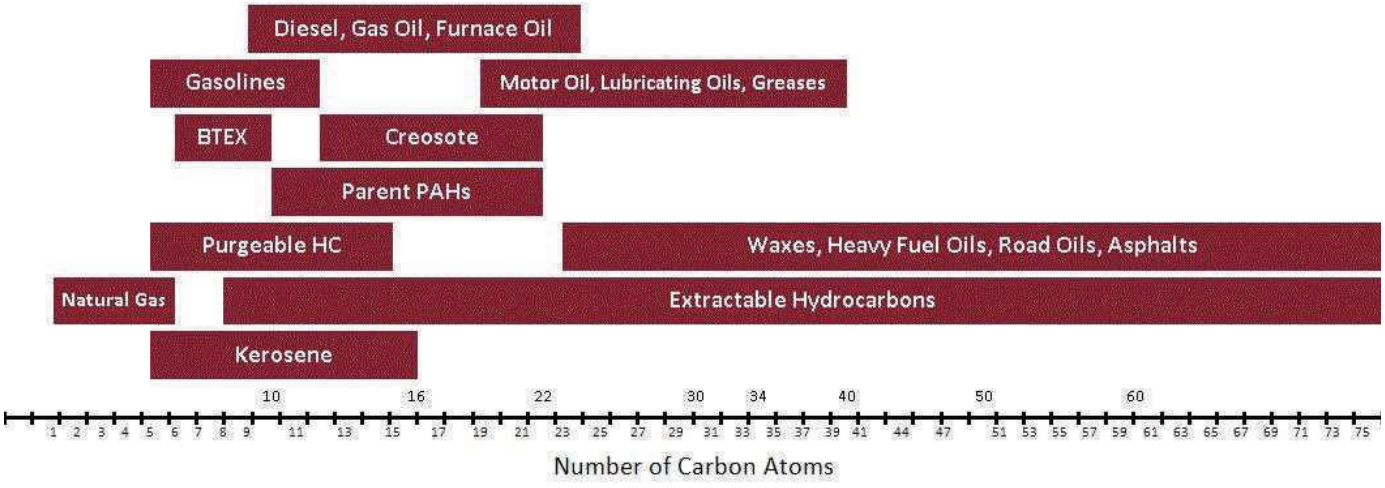
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C550515
Report Date: 2025/06/17
Bureau Veritas Sample: DMG758

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Reference: SRI
Client ID: SR25-01

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





hpchem13\HPchem\1\DATA\2025\06\RUN0605

Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your Project #: 110773396
Site Location: SRI
Your C.O.C. #: 1OF1

Attention: DYLAN KING

STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
EDMONTON, AB
CANADA T5J 0K4

Report Date: 2025/06/17
Report #: R3675270
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C551030
Received: 2025/06/04, 16:50

Sample Matrix: Water
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH	1	N/A	2025/06/06	AB SOP-00005	SM 24 2320 B m
Alkalinity @25C (pp, total), CO3,HCO3,OH	5	N/A	2025/06/07	AB SOP-00005	SM 24 2320 B m
BTEX/F1 in Water by HS GC/MS/FID	5	N/A	2025/06/10	AB SOP-00039	CCME CWS/EPA 8260d m
BTEX/F1 in Water by HS GC/MS/FID	1	N/A	2025/06/11	AB SOP-00039	CCME CWS/EPA 8260d m
F1-BTEX	6	N/A	2025/06/11		Auto Calc
Cadmium - low level CCME - Dissolved	6	N/A	2025/06/06		Auto Calc
Chloride/Sulphate by Auto Colourimetry	6	N/A	2025/06/05	AB SOP-00020	SM24-4500-Cl/SO4-E m
Fecal Coliforms (MPN/100mL)	6	2025/06/05	2025/06/06	AB SOP-00089	SM 24 9223 A,B m
Heterotrophic Plate Count Quant	6	2025/06/05	2025/06/07	CAL SOP-00012	SM 24 9215 A, E m
Total Coliforms and E.Coli	6	2025/06/05	2025/06/06	AB SOP-00089	SM 24 9223 A,B m
Carbon (DOC) (1)	2	N/A	2025/06/11	AB SOP-00087	MMCW 119 1996 m
Carbon (DOC) (1)	4	N/A	2025/06/12	AB SOP-00087	MMCW 119 1996 m
Conductivity @25C	1	N/A	2025/06/06	AB SOP-00005	SM 24 2510 B m
Conductivity @25C	5	N/A	2025/06/07	AB SOP-00005	SM 24 2510 B m
CCME Hydrocarbons in Water (F2; C10-C16) (2)	5	2025/06/06	2025/06/06	AB SOP-00037 AB SOP-00040	CCME PHC-CWS m
CCME Hydrocarbons in Water (F2; C10-C16) (2)	1	2025/06/06	2025/06/07	AB SOP-00037 AB SOP-00040	CCME PHC-CWS m
Hardness	4	N/A	2025/06/06		Auto Calc
Hardness	2	N/A	2025/06/07		Auto Calc
Mercury (Dissolved) by CV (3)	6	2025/06/11	2025/06/11	AB SOP-00084	BCMOE BCLM Oct2013 m
Mercury (Total) by CV	6	2025/06/11	2025/06/11	AB SOP-00084	BCMOE BCLM Oct2013 m
Elements by ICP - Dissolved (3)	6	N/A	2025/06/06	AB SOP-00042	EPA 6010d R5 m
Elements by ICPMS - Dissolved (3)	3	N/A	2025/06/05	AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Dissolved (3)	3	N/A	2025/06/06	AB SOP-00043	EPA 6020b R2 m
Ion Balance	6	N/A	2025/06/07		Auto Calc
Sum of cations, anions	4	N/A	2025/06/06		Auto Calc
Sum of cations, anions	2	N/A	2025/06/07		Auto Calc
Ammonia-N (Total)	6	N/A	2025/06/10	AB SOP-00007	SM 24 4500 NH3 A G m
Nitrate and Nitrite	6	N/A	2025/06/06		Auto Calc
NO2 (N); NO2 (N) + NO3 (N) in Water	6	N/A	2025/06/06	AB SOP-00091	SM 24 4500 NO3m
Nitrate (as N)	6	2025/06/04	2025/06/06		Auto Calc

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Your Project #: 110773396
Site Location: SRI
Your C.O.C. #: 1OF1

Attention: DYLAN KING

STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
EDMONTON, AB
CANADA T5J 0K4

Report Date: 2025/06/17
Report #: R3675270
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C551030
Received: 2025/06/04, 16:50

Sample Matrix: Water
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
pH @25°C (4)	1	N/A	2025/06/06	AB SOP-00005	SM 24 4500-H+B m
pH @25°C (4)	5	N/A	2025/06/07	AB SOP-00005	SM 24 4500-H+B m
Total Dissolved Solids (Calculated)	6	N/A	2025/06/07		Auto Calc
Total Kjeldahl Nitrogen (Total)	6	N/A	2025/06/06		Auto Calc
Nitrogen (Total)	6	2025/06/06	2025/06/06	AB SOP-00093	SM 24 4500-N C m
Total Phosphorus Dissolved client FF/FP (5)	6	2025/06/06	2025/06/06	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus	6	2025/06/06	2025/06/06	AB SOP-00024	SM 24 4500-P A,B,F m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) DOC present in the sample should be considered as non-purgeable DOC. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(2) Silica gel clean up employed.
(3) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(4) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Your Project #: 110773396
Site Location: SRI
Your C.O.C. #: 1OF1

Attention: DYLAN KING

STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
EDMONTON, AB
CANADA T5J 0K4

Report Date: 2025/06/17
Report #: R3675270
Version: 2 - Revision

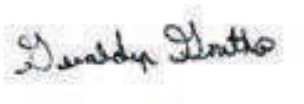
CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C551030

Received: 2025/06/04, 16:50

(5) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.

Encryption Key



Geraldlyn Gouthro
Key Account Specialist
17 Jun 2025 09:49:55

Please direct all questions regarding this Certificate of Analysis to:
Geraldlyn Gouthro, Key Account Specialist
Email: geraldlyn.gouthro@bureauveritas.com
Phone# (403) 291-3077

==========

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C551030
Report Date: 2025/06/17

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

AT1 BTEX AND F1-F2 IN WATER (WATER)

Bureau Veritas ID		DMJ304		DMJ305		DMJ306		DMJ307			
Sampling Date		2025/06/04 12:01		2025/06/04 12:52		2025/06/04 15:35		2025/06/04 13:43			
COC Number		1OF1		1OF1		1OF1		1OF1			
	UNITS	RMW16-16-17	MU	MW21-6-12	MU	RMW16-15-39	MU	SW35-R4-01	MU	RDL	QC Batch
Ext. Pet. Hydrocarbon											
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B976045
Volatiles											
Benzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B975138
Toluene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B975138
Ethylbenzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B975138
m & p-Xylene	mg/L	<0.00080	N/A	<0.00080	N/A	<0.00080	N/A	<0.00080	N/A	0.00080	B975138
o-Xylene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B975138
Xylenes (Total)	mg/L	<0.00089	N/A	<0.00089	N/A	<0.00089	N/A	<0.00089	N/A	0.00089	B974469
F1 (C6-C10) - BTEX	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B974469
F1 (C6-C10)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B975138
Surrogate Recovery (%)											
1,4-Difluorobenzene (sur.)	%	102	N/A	104	N/A	105	N/A	105	N/A	N/A	B975138
4-Bromofluorobenzene (sur.)	%	111	N/A	95	N/A	110	N/A	111	N/A	N/A	B975138
D4-1,2-Dichloroethane (sur.)	%	96	N/A	101	N/A	97	N/A	100	N/A	N/A	B975138
O-TERPHENYL (sur.)	%	94	N/A	97	N/A	97	N/A	95	N/A	N/A	B976045

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

AT1 BTEX AND F1-F2 IN WATER (WATER)

Bureau Veritas ID		DMJ308		DMJ309			
Sampling Date		2025/06/04 10:30		2025/06/04			
COC Number		1OF1		1OF1			
	UNITS	WS81-01	MU	SR25-02	MU	RDL	QC Batch
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	N/A	<0.10	N/A	0.10	B976045
Volatiles							
Benzene	mg/L	<0.00040	N/A	<0.00040	N/A	0.00040	B975138
Toluene	mg/L	<0.00040	N/A	<0.00040	N/A	0.00040	B975138
Ethylbenzene	mg/L	<0.00040	N/A	<0.00040	N/A	0.00040	B975138
m & p-Xylene	mg/L	<0.00080	N/A	<0.00080	N/A	0.00080	B975138
o-Xylene	mg/L	<0.00040	N/A	<0.00040	N/A	0.00040	B975138
Xylenes (Total)	mg/L	<0.00089	N/A	<0.00089	N/A	0.00089	B974469
F1 (C6-C10) - BTEX	mg/L	<0.10	N/A	<0.10	N/A	0.10	B974469
F1 (C6-C10)	mg/L	<0.10	N/A	<0.10	N/A	0.10	B975138
Surrogate Recovery (%)							
1,4-Difluorobenzene (sur.)	%	105	N/A	102	N/A	N/A	B975138
4-Bromofluorobenzene (sur.)	%	112	N/A	108	N/A	N/A	B975138
D4-1,2-Dichloroethane (sur.)	%	99	N/A	95	N/A	N/A	B975138
O-TERPHENYL (sur.)	%	93	N/A	92	N/A	N/A	B976045

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C551030
Report Date: 2025/06/17

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DMJ304			DMJ305			
Sampling Date		2025/06/04 12:01			2025/06/04 12:52			
COC Number		1OF1			1OF1			
	UNITS	RMW16-16-17	MU	RDL	MW21-6-12	MU	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	67	N/A	N/A	21	N/A	N/A	B974136
Cation Sum	meq/L	63	N/A	N/A	21	N/A	N/A	B974136
Hardness (CaCO3)	mg/L	1300	N/A	0.50	450	N/A	0.50	B974134
Ion Balance (% Difference)	%	3.2	N/A	N/A	0.43	N/A	N/A	B973844
Nitrate (N)	mg/L	<0.040	N/A	0.040	0.064	N/A	0.040	B973853
Nitrate (NO3)	mg/L	<0.18	N/A	0.18	0.28	N/A	0.18	B974273
Nitrite (NO2)	mg/L	<0.13	N/A	0.13	<0.13	N/A	0.13	B974273
Calculated Total Dissolved Solids	mg/L	4200	N/A	25	1200	N/A	10	B974284
Elements								
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	0.020	<0.020	N/A	0.020	B973411
Misc. Inorganics								
Conductivity	uS/cm	5100	+/- 130	2.0	1900	+/- 50	2.0	B975871
pH	pH	7.94	+/- 0.0787	N/A	7.93	+/- 0.0786	N/A	B975870
Anions								
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	1.0	<1.0	N/A	1.0	B975866
Alkalinity (Total as CaCO3)	mg/L	770	+/- 57	1.0	530	+/- 40	1.0	B975866
Bicarbonate (HCO3)	mg/L	940	+/- 14	1.0	650	+/- 9.9	1.0	B975866
Carbonate (CO3)	mg/L	<1.0	N/A	1.0	<1.0	N/A	1.0	B975866
Hydroxide (OH)	mg/L	<1.0	N/A	1.0	<1.0	N/A	1.0	B975866
Chloride (Cl)	mg/L	4.6	+/- 1.2	1.0	50	+/- 4.1	1.0	B975857
Sulphate (SO4)	mg/L	2500	+/- 160	25	430	+/- 27	5.0	B975857
Nutrients								
Nitrite (N)	mg/L	<0.040	N/A	0.040	<0.040	N/A	0.040	B976515
Nitrate plus Nitrite (N)	mg/L	<0.040	N/A	0.040	0.064	+/- <RDL	0.040	B976515
Elements								
Dissolved Aluminum (Al)	mg/L	<0.0030	N/A	0.0030	<0.0030	N/A	0.0030	B975667
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	0.00060	<0.00060	N/A	0.00060	B975667
Dissolved Arsenic (As)	mg/L	0.0013	+/- 0.00036	0.00020	0.0010	+/- 0.00030	0.00020	B975667
Dissolved Barium (Ba)	mg/L	<0.010	N/A	0.010	0.015	+/- <RDL	0.010	B976560
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B975667

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C551030
Report Date: 2025/06/17

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DMJ304			DMJ305			
Sampling Date		2025/06/04 12:01			2025/06/04 12:52			
COC Number		1OF1			1OF1			
	UNITS	RMW16-16-17	MU	RDL	MW21-6-12	MU	RDL	QC Batch
Dissolved Boron (B)	mg/L	0.21	+/- 0.027	0.020	0.25	+/- 0.029	0.020	B976560
Dissolved Calcium (Ca)	mg/L	280	+/- 23	0.30	120	+/- 9.7	0.30	B976560
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B975667
Dissolved Cobalt (Co)	mg/L	0.0017	+/- 0.00033	0.00030	0.00051	+/- <RDL	0.00030	B975667
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B975667
Dissolved Iron (Fe)	mg/L	2.4	+/- 0.27	0.060	0.37	+/- <RDL	0.060	B976560
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	0.00020	<0.00020	N/A	0.00020	B975667
Dissolved Lithium (Li)	mg/L	0.23	+/- 0.022	0.020	0.056	+/- <RDL	0.020	B976560
Dissolved Magnesium (Mg)	mg/L	150	+/- 7.0	0.20	37	+/- 1.7	0.20	B976560
Dissolved Manganese (Mn)	mg/L	0.40	+/- 0.025	0.0040	0.11	+/- 0.0069	0.0040	B976560
Dissolved Molybdenum (Mo)	mg/L	0.00033	+/- <RDL	0.00020	0.0014	+/- <RDL	0.00020	B975667
Dissolved Nickel (Ni)	mg/L	0.0021	+/- <RDL	0.00050	0.0022	+/- <RDL	0.00050	B975667
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	0.10	<0.10	N/A	0.10	B976560
Dissolved Potassium (K)	mg/L	7.3	+/- 0.37	0.30	4.8	+/- <RDL	0.30	B976560
Dissolved Selenium (Se)	mg/L	<0.00020	N/A	0.00020	<0.00020	N/A	0.00020	B975667
Dissolved Silicon (Si)	mg/L	5.0	+/- 0.84	0.50	4.2	+/- 0.72	0.50	B976560
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	0.00010	<0.00010	N/A	0.00010	B975667
Dissolved Sodium (Na)	mg/L	840	+/- 80	2.5	280	+/- 27	0.50	B976560
Dissolved Strontium (Sr)	mg/L	7.3	+/- 0.66	0.10	2.2	+/- 0.20	0.020	B976560
Dissolved Sulphur (S)	mg/L	850	+/- 72	1.0	150	+/- 13	0.20	B976560
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	0.00020	<0.00020	N/A	0.00020	B975667
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B975667
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B975667
Dissolved Uranium (U)	mg/L	0.00024	+/- 0.00020	0.00010	0.0065	+/- 0.0010	0.00010	B975667
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B975667
Dissolved Zinc (Zn)	mg/L	<0.0030	N/A	0.0030	<0.0030	N/A	0.0030	B975667

RDL = Reportable Detection Limit
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N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DMJ306			DMJ307			
Sampling Date		2025/06/04 15:35			2025/06/04 13:43			
COC Number		1OF1			1OF1			
	UNITS	RMW16-15-39	MU	RDL	SW35-R4-01	MU	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	9.8	N/A	N/A	16	N/A	N/A	B974136
Cation Sum	meq/L	8.7	N/A	N/A	15	N/A	N/A	B974136
Hardness (CaCO3)	mg/L	15	N/A	0.50	69	N/A	0.50	B974134
Ion Balance (% Difference)	%	5.9	N/A	N/A	2.4	N/A	N/A	B973844
Nitrate (N)	mg/L	<0.040	N/A	0.040	0.78	N/A	0.040	B973853
Nitrate (NO3)	mg/L	<0.18	N/A	0.18	3.4	N/A	0.18	B974273
Nitrite (NO2)	mg/L	<0.13	N/A	0.13	<0.13	N/A	0.13	B974273
Calculated Total Dissolved Solids	mg/L	510	N/A	10	900	N/A	10	B974284
Elements								
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	0.020	<0.020	N/A	0.020	B973411
Misc. Inorganics								
Conductivity	uS/cm	840	+/- 22	2.0	1500	+/- 39	2.0	B975871
pH	pH	8.56	+/- 0.0848	N/A	8.40	+/- 0.0833	N/A	B975870
Anions								
Alkalinity (PP as CaCO3)	mg/L	8.5	+/- <RDL	1.0	6.1	+/- <RDL	1.0	B975866
Alkalinity (Total as CaCO3)	mg/L	440	+/- 32	1.0	620	+/- 46	1.0	B975866
Bicarbonate (HCO3)	mg/L	510	+/- 7.9	1.0	740	+/- 11	1.0	B975866
Carbonate (CO3)	mg/L	10	N/A	1.0	7.3	N/A	1.0	B975866
Hydroxide (OH)	mg/L	<1.0	N/A	1.0	<1.0	N/A	1.0	B975866
Chloride (Cl)	mg/L	<1.0	N/A	1.0	5.3	+/- 1.2	1.0	B975857
Sulphate (SO4)	mg/L	51	+/- 3.6	1.0	170	+/- 11	5.0	B975857
Nutrients								
Nitrite (N)	mg/L	<0.040	N/A	0.040	<0.040	N/A	0.040	B976515
Nitrate plus Nitrite (N)	mg/L	<0.040	N/A	0.040	0.78	+/- 0.071	0.040	B976515
Elements								
Dissolved Aluminum (Al)	mg/L	0.12	+/- 0.021	0.0030	<0.0030	N/A	0.0030	B975667
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	0.00060	<0.00060	N/A	0.00060	B975667
Dissolved Arsenic (As)	mg/L	0.00040	+/- <RDL	0.00020	0.00067	+/- 0.00023	0.00020	B975667
Dissolved Barium (Ba)	mg/L	0.028	+/- <RDL	0.010	0.024	+/- <RDL	0.010	B976560
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B975667

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Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C551030
Report Date: 2025/06/17

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DMJ306			DMJ307			
Sampling Date		2025/06/04 15:35			2025/06/04 13:43			
COC Number		1OF1			1OF1			
	UNITS	RMW16-15-39	MU	RDL	SW35-R4-01	MU	RDL	QC Batch
Dissolved Boron (B)	mg/L	0.050	+/- <RDL	0.020	0.084	+/- 0.020	0.020	B976560
Dissolved Calcium (Ca)	mg/L	4.2	+/- 0.37	0.30	18	+/- 1.5	0.30	B976560
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B975667
Dissolved Cobalt (Co)	mg/L	<0.00030	N/A	0.00030	<0.00030	N/A	0.00030	B975667
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	0.0010	0.0034	+/- <RDL	0.0010	B975667
Dissolved Iron (Fe)	mg/L	0.13	+/- <RDL	0.060	<0.060	N/A	0.060	B976560
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	0.00020	<0.00020	N/A	0.00020	B975667
Dissolved Lithium (Li)	mg/L	0.041	+/- <RDL	0.020	0.069	+/- <RDL	0.020	B976560
Dissolved Magnesium (Mg)	mg/L	1.0	+/- <RDL	0.20	5.8	+/- 0.28	0.20	B976560
Dissolved Manganese (Mn)	mg/L	0.019	+/- <RDL	0.0040	0.017	+/- <RDL	0.0040	B976560
Dissolved Molybdenum (Mo)	mg/L	0.0076	+/- 0.00054	0.00020	0.0043	+/- 0.00031	0.00020	B975667
Dissolved Nickel (Ni)	mg/L	<0.00050	N/A	0.00050	<0.00050	N/A	0.00050	B975667
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	0.10	<0.10	N/A	0.10	B976560
Dissolved Potassium (K)	mg/L	1.4	+/- <RDL	0.30	2.6	+/- <RDL	0.30	B976560
Dissolved Selenium (Se)	mg/L	<0.00020	N/A	0.00020	0.00058	+/- 0.00023	0.00020	B975667
Dissolved Silicon (Si)	mg/L	3.3	+/- 0.57	0.50	3.0	+/- 0.51	0.50	B976560
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	0.00010	<0.00010	N/A	0.00010	B975667
Dissolved Sodium (Na)	mg/L	190	+/- 18	0.50	320	+/- 31	0.50	B976560
Dissolved Strontium (Sr)	mg/L	0.072	+/- <RDL	0.020	0.32	+/- 0.029	0.020	B976560
Dissolved Sulphur (S)	mg/L	17	+/- 1.5	0.20	59	+/- 5.0	0.20	B976560
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	0.00020	<0.00020	N/A	0.00020	B975667
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B975667
Dissolved Titanium (Ti)	mg/L	0.0024	+/- <RDL	0.0010	<0.0010	N/A	0.0010	B975667
Dissolved Uranium (U)	mg/L	0.00026	+/- 0.00020	0.00010	0.00048	+/- 0.00021	0.00010	B975667
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B975667
Dissolved Zinc (Zn)	mg/L	<0.0030	N/A	0.0030	0.011	+/- <RDL	0.0030	B975667

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DMJ307			DMJ308			
Sampling Date		2025/06/04 13:43			2025/06/04 10:30			
COC Number		1OF1			1OF1			
	UNITS	SW35-R4-01 Lab-Dup	MU	RDL	WS81-01	MU	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	N/A	N/A	N/A	14	N/A	N/A	B974136
Cation Sum	meq/L	N/A	N/A	N/A	14	N/A	N/A	B974136
Hardness (CaCO3)	mg/L	N/A	N/A	0.50	220	N/A	0.50	B974134
Ion Balance (% Difference)	%	N/A	N/A	N/A	2.9	N/A	N/A	B973844
Nitrate (N)	mg/L	N/A	N/A	0.040	4.7	N/A	0.20	B973853
Nitrate (NO3)	mg/L	N/A	N/A	0.18	21	N/A	0.89	B974273
Nitrite (NO2)	mg/L	N/A	N/A	0.13	<0.13	N/A	0.13	B974273
Calculated Total Dissolved Solids	mg/L	N/A	N/A	10	800	N/A	10	B974284
Elements								
Dissolved Cadmium (Cd)	ug/L	N/A	N/A	0.020	<0.020	N/A	0.020	B973411
Misc. Inorganics								
Conductivity	uS/cm	N/A	N/A	2.0	1300	+/- 34	2.0	B975871
pH	pH	N/A	N/A	N/A	8.36	+/- 0.0828	N/A	B975870
Anions								
Alkalinity (PP as CaCO3)	mg/L	N/A	N/A	1.0	3.0	+/- <RDL	1.0	B975866
Alkalinity (Total as CaCO3)	mg/L	N/A	N/A	1.0	470	+/- 35	1.0	B975866
Bicarbonate (HCO3)	mg/L	N/A	N/A	1.0	560	+/- 8.6	1.0	B975866
Carbonate (CO3)	mg/L	N/A	N/A	1.0	3.6	N/A	1.0	B975866
Hydroxide (OH)	mg/L	N/A	N/A	1.0	<1.0	N/A	1.0	B975866
Chloride (Cl)	mg/L	N/A	N/A	1.0	36	+/- 3.0	1.0	B975857
Sulphate (SO4)	mg/L	N/A	N/A	5.0	180	+/- 11	5.0	B975857
Nutrients								
Nitrite (N)	mg/L	N/A	N/A	0.040	<0.040	N/A	0.040	B976515
Nitrate plus Nitrite (N)	mg/L	N/A	N/A	0.040	4.7	+/- 0.40	0.20	B976515
Elements								
Dissolved Aluminum (Al)	mg/L	N/A	N/A	0.0030	<0.0030	N/A	0.0030	B975667
Dissolved Antimony (Sb)	mg/L	N/A	N/A	0.00060	<0.00060	N/A	0.00060	B975667
Dissolved Arsenic (As)	mg/L	N/A	N/A	0.00020	<0.00020	N/A	0.00020	B975667
Dissolved Barium (Ba)	mg/L	0.020	+/- <RDL	0.010	0.015	+/- <RDL	0.010	B976560

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DMJ307			DMJ308			
Sampling Date		2025/06/04 13:43			2025/06/04 10:30			
COC Number		1OF1			1OF1			
	UNITS	SW35-R4-01 Lab-Dup	MU	RDL	WS81-01	MU	RDL	QC Batch
Dissolved Beryllium (Be)	mg/L	N/A	N/A	0.0010	<0.0010	N/A	0.0010	B975667
Dissolved Boron (B)	mg/L	0.082	+/- 0.020	0.020	0.20	+/- 0.026	0.020	B976560
Dissolved Calcium (Ca)	mg/L	18	+/- 1.5	0.30	47	+/- 3.9	0.30	B976560
Dissolved Chromium (Cr)	mg/L	N/A	N/A	0.0010	<0.0010	N/A	0.0010	B975667
Dissolved Cobalt (Co)	mg/L	N/A	N/A	0.00030	<0.00030	N/A	0.00030	B975667
Dissolved Copper (Cu)	mg/L	N/A	N/A	0.0010	0.0030	+/- <RDL	0.0010	B975667
Dissolved Iron (Fe)	mg/L	<0.060	N/A	0.060	<0.060	N/A	0.060	B976560
Dissolved Lead (Pb)	mg/L	N/A	N/A	0.00020	<0.00020	N/A	0.00020	B975667
Dissolved Lithium (Li)	mg/L	0.068	+/- <RDL	0.020	0.038	+/- <RDL	0.020	B976560
Dissolved Magnesium (Mg)	mg/L	5.8	+/- 0.28	0.20	25	+/- 1.2	0.20	B976560
Dissolved Manganese (Mn)	mg/L	0.017	+/- <RDL	0.0040	<0.0040	N/A	0.0040	B976560
Dissolved Molybdenum (Mo)	mg/L	N/A	N/A	0.00020	0.0098	+/- 0.00069	0.00020	B975667
Dissolved Nickel (Ni)	mg/L	N/A	N/A	0.00050	<0.00050	N/A	0.00050	B975667
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	0.10	<0.10	N/A	0.10	B976560
Dissolved Potassium (K)	mg/L	2.6	+/- <RDL	0.30	1.4	+/- <RDL	0.30	B976560
Dissolved Selenium (Se)	mg/L	N/A	N/A	0.00020	0.0027	+/- 0.00070	0.00020	B975667
Dissolved Silicon (Si)	mg/L	3.0	+/- 0.50	0.50	3.2	+/- 0.54	0.50	B976560
Dissolved Silver (Ag)	mg/L	N/A	N/A	0.00010	<0.00010	N/A	0.00010	B975667
Dissolved Sodium (Na)	mg/L	320	+/- 31	0.50	210	+/- 20	0.50	B976560
Dissolved Strontium (Sr)	mg/L	0.32	+/- 0.028	0.020	0.72	+/- 0.065	0.020	B976560
Dissolved Sulphur (S)	mg/L	59	+/- 5.0	0.20	58	+/- 5.0	0.20	B976560
Dissolved Thallium (Tl)	mg/L	N/A	N/A	0.00020	<0.00020	N/A	0.00020	B975667
Dissolved Tin (Sn)	mg/L	N/A	N/A	0.0010	<0.0010	N/A	0.0010	B975667
Dissolved Titanium (Ti)	mg/L	N/A	N/A	0.0010	<0.0010	N/A	0.0010	B975667
Dissolved Uranium (U)	mg/L	N/A	N/A	0.00010	0.0025	+/- 0.00044	0.00010	B975667
Dissolved Vanadium (V)	mg/L	N/A	N/A	0.0010	<0.0010	N/A	0.0010	B975667
Dissolved Zinc (Zn)	mg/L	N/A	N/A	0.0030	<0.0030	N/A	0.0030	B975667

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DMJ309			
Sampling Date		2025/06/04			
COC Number		1OF1			
	UNITS	SR25-02	MU	RDL	QC Batch
Calculated Parameters					
Anion Sum	meq/L	63	N/A	N/A	B974136
Cation Sum	meq/L	63	N/A	N/A	B974136
Hardness (CaCO3)	mg/L	1300	N/A	0.50	B974134
Ion Balance (% Difference)	%	0.054	N/A	N/A	B973844
Nitrate (N)	mg/L	<0.040	N/A	0.040	B973853
Nitrate (NO3)	mg/L	<0.18	N/A	0.18	B974273
Nitrite (NO2)	mg/L	<0.13	N/A	0.13	B974273
Calculated Total Dissolved Solids	mg/L	4100	N/A	25	B974284
Elements					
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	0.020	B973411
Misc. Inorganics					
Conductivity	uS/cm	5100	+/- 130	2.0	B975882
pH	pH	8.00	+/- 0.0793	N/A	B975881
Anions					
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	1.0	B975880
Alkalinity (Total as CaCO3)	mg/L	720	+/- 54	1.0	B975880
Bicarbonate (HCO3)	mg/L	880	+/- 13	1.0	B975880
Carbonate (CO3)	mg/L	<1.0	N/A	1.0	B975880
Hydroxide (OH)	mg/L	<1.0	N/A	1.0	B975880
Chloride (Cl)	mg/L	4.5	+/- 1.2	1.0	B975857
Sulphate (SO4)	mg/L	2300	+/- 150	25	B975857
Nutrients					
Nitrite (N)	mg/L	<0.040	N/A	0.040	B976515
Nitrate plus Nitrite (N)	mg/L	<0.040	N/A	0.040	B976515
Elements					
Dissolved Aluminum (Al)	mg/L	<0.0030	N/A	0.0030	B975667
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	0.00060	B975667
Dissolved Arsenic (As)	mg/L	0.0014	+/- 0.00038	0.00020	B975667
Dissolved Barium (Ba)	mg/L	<0.010	N/A	0.010	B976560
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	0.0010	B975667

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DMJ309			
Sampling Date		2025/06/04			
COC Number		1OF1			
	UNITS	SR25-02	MU	RDL	QC Batch
Dissolved Boron (B)	mg/L	0.21	+/- 0.027	0.020	B976560
Dissolved Calcium (Ca)	mg/L	280	+/- 22	0.30	B976560
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	0.0010	B975667
Dissolved Cobalt (Co)	mg/L	0.0016	+/- 0.00032	0.00030	B975667
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	0.0010	B975667
Dissolved Iron (Fe)	mg/L	2.4	+/- 0.27	0.060	B976560
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	0.00020	B975667
Dissolved Lithium (Li)	mg/L	0.23	+/- 0.022	0.020	B976560
Dissolved Magnesium (Mg)	mg/L	150	+/- 7.0	0.20	B976560
Dissolved Manganese (Mn)	mg/L	0.40	+/- 0.025	0.0040	B976560
Dissolved Molybdenum (Mo)	mg/L	0.00029	+/- <RDL	0.00020	B975667
Dissolved Nickel (Ni)	mg/L	0.0019	+/- <RDL	0.00050	B975667
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	0.10	B976560
Dissolved Potassium (K)	mg/L	7.3	+/- 0.37	0.30	B976560
Dissolved Selenium (Se)	mg/L	<0.00020	N/A	0.00020	B975667
Dissolved Silicon (Si)	mg/L	4.9	+/- 0.84	0.50	B976560
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	0.00010	B975667
Dissolved Sodium (Na)	mg/L	850	+/- 81	2.5	B976560
Dissolved Strontium (Sr)	mg/L	7.2	+/- 0.64	0.10	B976560
Dissolved Sulphur (S)	mg/L	860	+/- 73	1.0	B976560
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	0.00020	B975667
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	0.0010	B975667
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	0.0010	B975667
Dissolved Uranium (U)	mg/L	0.00031	+/- 0.00021	0.00010	B975667
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	0.0010	B975667
Dissolved Zinc (Zn)	mg/L	<0.0030	N/A	0.0030	B975667

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

TOTAL KJELDAHL NITROGEN (TOTAL)

Bureau Veritas ID		DMJ304			DMJ305		DMJ306			
Sampling Date		2025/06/04 12:01			2025/06/04 12:52		2025/06/04 15:35			
COC Number		1OF1			1OF1		1OF1			
	UNITS	RMW16-16-17	MU	RDL	MW21-6-12	MU	RMW16-15-39	MU	RDL	QC Batch
Calculated Parameters										
Total Kjeldahl Nitrogen (Calc)	mg/L	1.9	N/A	0.040	0.88	N/A	0.90	N/A	0.20	B974083
Nutrients										
Total Nitrogen (N)	mg/L	1.9	+/- 0.23	0.020	0.95 (1)	+/- <RDL	0.90 (1)	+/- <RDL	0.20	B976507

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Bureau Veritas ID		DMJ307			DMJ308			DMJ309			
Sampling Date		2025/06/04 13:43			2025/06/04 10:30			2025/06/04			
COC Number		1OF1			1OF1			1OF1			
	UNITS	SW35-R4-01	MU	RDL	WS81-01	MU	RDL	SR25-02	MU	RDL	QC Batch
Calculated Parameters											
Total Kjeldahl Nitrogen (Calc)	mg/L	0.18	N/A	0.040	<0.20	N/A	0.20	2.1	N/A	0.10	B974083
Nutrients											
Total Nitrogen (N)	mg/L	0.96	+/- 0.12	0.020	4.5 (1)	+/- 0.56	0.10	2.1	+/- 0.27	0.10	B976507

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Nitrogen < Nitrate: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C551030
Report Date: 2025/06/17

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DMJ304		DMJ304			
Sampling Date		2025/06/04 12:01		2025/06/04 12:01			
COC Number		1OF1		1OF1			
	UNITS	RMW16-16-17	MU	RMW16-16-17 Lab-Dup	MU	RDL	QC Batch
Misc. Inorganics							
Dissolved Organic Carbon (C)	mg/L	2.1	+/- <RDL	N/A	N/A	0.50	B984088
Microbiological Param.							
E.Coli DST	MPN/100mL	<1.0	N/A	N/A	N/A	1.0	B975107
Fecal Coliforms	MPN/100mL	<1.0	N/A	<1.0	N/A	1.0	B975366
Heterotrophic DST	MPN/100mL	>2400	N/A	N/A	N/A	1.0	B975098
Total Coliforms DST	MPN/100mL	<1.0	N/A	N/A	N/A	1.0	B975107
Nutrients							
Total Ammonia (N)	mg/L	1.7	+/- 0.18	N/A	N/A	0.015	B980863
Dissolved Phosphorus (P)	mg/L	<0.0030	N/A	N/A	N/A	0.0030	B976705
Total Phosphorus (P)	mg/L	0.0082	+/- 0.0038	N/A	N/A	0.0030	B976711

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas ID		DMJ305			DMJ306			
Sampling Date		2025/06/04 12:52			2025/06/04 15:35			
COC Number		1OF1			1OF1			
	UNITS	MW21-6-12	MU	QC Batch	RMW16-15-39	MU	RDL	QC Batch
Misc. Inorganics								
Dissolved Organic Carbon (C)	mg/L	2.8	+/- <RDL	B980942	1.4	+/- <RDL	0.50	B984088
Microbiological Param.								
E.Coli DST	MPN/100mL	<20 (1)	N/A	B975107	<20 (1)	N/A	20	B975107
Fecal Coliforms	MPN/100mL	<20 (1)	N/A	B975366	<20 (1)	N/A	20	B975366
Heterotrophic DST	MPN/100mL	31000 (1)	N/A	B975098	>48000 (1)	N/A	20	B975098
Total Coliforms DST	MPN/100mL	<20 (1)	N/A	B975107	<20 (1)	N/A	20	B975107
Nutrients								
Total Ammonia (N)	mg/L	0.30	+/- 0.035	B980863	0.69	+/- 0.076	0.015	B980863
Dissolved Phosphorus (P)	mg/L	<0.0030	N/A	B976705	0.038	+/- 0.0058	0.0030	B976705
Total Phosphorus (P)	mg/L	2.0	+/- 0.25	B976711	1.3	+/- 0.17	0.030	B976711

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Detection limit raised due to matrix interference.

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C551030
Report Date: 2025/06/17

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DMJ307			DMJ308		DMJ308			
Sampling Date		2025/06/04 13:43			2025/06/04 10:30		2025/06/04 10:30			
COC Number		1OF1			1OF1		1OF1			
	UNITS	SW35-R4-01	MU	QC Batch	WS81-01	MU	WS81-01 Lab-Dup	MU	RDL	QC Batch
Misc. Inorganics										
Dissolved Organic Carbon (C)	mg/L	1.2	+/- <RDL	B980942	1.6	+/- <RDL	N/A	N/A	0.50	B984088
Microbiological Param.										
E.Coli DST	MPN/100mL	<1.0	N/A	B975107	<1.0	N/A	N/A	N/A	1.0	B975107
Fecal Coliforms	MPN/100mL	<1.0	N/A	B975366	<1.0	N/A	N/A	N/A	1.0	B975366
Heterotrophic DST	MPN/100mL	1700	N/A	B975098	2400	N/A	N/A	N/A	1.0	B975098
Total Coliforms DST	MPN/100mL	<1.0	N/A	B975107	<1.0	N/A	N/A	N/A	1.0	B975107
Nutrients										
Total Ammonia (N)	mg/L	0.24	+/- 0.028	B981332	<0.015	N/A	N/A	N/A	0.015	B981325
Dissolved Phosphorus (P)	mg/L	0.0056	+/- 0.0048	B976705	<0.0030	N/A	N/A	N/A	0.0030	B976705
Total Phosphorus (P)	mg/L	0.032	+/- 0.0061	B976711	<0.0030	N/A	<0.0030	N/A	0.0030	B976711

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas ID		DMJ309		DMJ309			
Sampling Date		2025/06/04		2025/06/04			
COC Number		1OF1		1OF1			
	UNITS	SR25-02	MU	SR25-02 Lab-Dup	MU	RDL	QC Batch
Misc. Inorganics							
Dissolved Organic Carbon (C)	mg/L	2.2	+/- <RDL	N/A	N/A	0.50	B980942
Microbiological Param.							
E.Coli DST	MPN/100mL	<1.0	N/A	N/A	N/A	1.0	B975107
Fecal Coliforms	MPN/100mL	<1.0	N/A	N/A	N/A	1.0	B975366
Heterotrophic DST	MPN/100mL	290	N/A	N/A	N/A	1.0	B975098
Total Coliforms DST	MPN/100mL	<1.0	N/A	N/A	N/A	1.0	B975107
Nutrients							
Total Ammonia (N)	mg/L	1.7	+/- 0.18	1.7	+/- 0.18	0.015	B981332
Dissolved Phosphorus (P)	mg/L	<0.0030	N/A	N/A	N/A	0.0030	B976705
Total Phosphorus (P)	mg/L	0.011	+/- 0.0040	N/A	N/A	0.0030	B976711

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C551030
Report Date: 2025/06/17

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		DMJ304			DMJ305			DMJ306			
Sampling Date		2025/06/04 12:01			2025/06/04 12:52			2025/06/04 15:35			
COC Number		1OF1			1OF1			1OF1			
	UNITS	RMW16-16-17	MU	RDL	MW21-6-12	MU	RDL	RMW16-15-39	MU	RDL	QC Batch
Elements											
Dissolved Mercury (Hg)	ug/L	<0.0019	N/A	0.0019	<0.0019	N/A	0.0019	<0.0019	N/A	0.0019	B983033
Total Mercury (Hg)	ug/L	<0.0019	N/A	0.0019	0.162 (1)	+/- 0.028	0.019	0.0568 (1)	+/- 0.0099	0.0038	B983055

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Bureau Veritas ID		DMJ307		DMJ307		DMJ308		DMJ309			
Sampling Date		2025/06/04 13:43		2025/06/04 13:43		2025/06/04 10:30		2025/06/04			
COC Number		1OF1		1OF1		1OF1		1OF1			
	UNITS	SW35-R4-01	MU	SW35-R4-01 Lab-Dup	MU	WS81-01	MU	SR25-02	MU	RDL	QC Batch
Elements											
Dissolved Mercury (Hg)	ug/L	<0.0019	N/A	N/A	N/A	<0.0019	N/A	<0.0019	N/A	0.0019	B983033
Total Mercury (Hg)	ug/L	<0.0019	N/A	<0.0019	N/A	<0.0019	N/A	<0.0019	N/A	0.0019	B983055

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	8.7°C
Package 2	4.7°C

The following changes were requested by Wesley Tsen on 2025/06/16.
Sample DMJ309 Sample ID SR24-02 changed to SR25-02

The estimate of uncertainty has been reported as an expanded uncertainty and calculated using a coverage factor of 2, which gives a level of confidence of 95%.

Results relate only to the items tested.

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B975098	R4S	Method Blank	Heterotrophic DST	2025/06/07	<1.0		mpn/100mL	
B975098	R4S	RPD	Heterotrophic DST	2025/06/07	NC		%	N/A
B975107	R4S	Method Blank	E.Coli DST	2025/06/06	<1.0		mpn/100mL	
			Total Coliforms DST	2025/06/06	<1.0		mpn/100mL	
B975107	R4S	RPD	E.Coli DST	2025/06/06	NC		%	N/A
			Total Coliforms DST	2025/06/06	NC		%	N/A
B975138	ZWW	Matrix Spike	1,4-Difluorobenzene (sur.)	2025/06/10		100	%	50 - 140
			4-Bromofluorobenzene (sur.)	2025/06/10		113	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2025/06/10		100	%	50 - 140
			Benzene	2025/06/10		99	%	50 - 140
			Toluene	2025/06/10		96	%	50 - 140
			Ethylbenzene	2025/06/10		97	%	50 - 140
			m & p-Xylene	2025/06/10		95	%	50 - 140
			o-Xylene	2025/06/10		95	%	50 - 140
			F1 (C6-C10)	2025/06/10		101	%	60 - 140
B975138	ZWW	Spiked Blank	1,4-Difluorobenzene (sur.)	2025/06/10		102	%	50 - 140
			4-Bromofluorobenzene (sur.)	2025/06/10		108	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2025/06/10		100	%	50 - 140
			Benzene	2025/06/10		100	%	60 - 130
			Toluene	2025/06/10		97	%	60 - 130
			Ethylbenzene	2025/06/10		96	%	60 - 130
			m & p-Xylene	2025/06/10		96	%	60 - 130
			o-Xylene	2025/06/10		96	%	60 - 130
			F1 (C6-C10)	2025/06/10		118	%	60 - 140
B975138	ZWW	Method Blank	1,4-Difluorobenzene (sur.)	2025/06/10		106	%	50 - 140
			4-Bromofluorobenzene (sur.)	2025/06/10		109	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2025/06/10		99	%	50 - 140
			Benzene	2025/06/10	<0.00040		mg/L	
			Toluene	2025/06/10	<0.00040		mg/L	
			Ethylbenzene	2025/06/10	<0.00040		mg/L	
			m & p-Xylene	2025/06/10	<0.00080		mg/L	
			o-Xylene	2025/06/10	<0.00040		mg/L	
			F1 (C6-C10)	2025/06/10	<0.10		mg/L	
B975138	ZWW	RPD	Benzene	2025/06/10	NC		%	30
			Toluene	2025/06/10	NC		%	30
			Ethylbenzene	2025/06/10	NC		%	30
			m & p-Xylene	2025/06/10	NC		%	30
			o-Xylene	2025/06/10	NC		%	30
			F1 (C6-C10)	2025/06/10	NC		%	30
B975366	R4S	Method Blank	Fecal Coliforms	2025/06/06	<1.0		MPN/100mL	
B975366	R4S	RPD [DMJ304-05]	Fecal Coliforms	2025/06/06	NC		%	N/A
B975667	JAB	Matrix Spike	Dissolved Aluminum (Al)	2025/06/05		97	%	80 - 120
			Dissolved Antimony (Sb)	2025/06/05		102	%	80 - 120
			Dissolved Arsenic (As)	2025/06/05		105	%	80 - 120
			Dissolved Beryllium (Be)	2025/06/05		102	%	80 - 120
			Dissolved Chromium (Cr)	2025/06/05		94	%	80 - 120
			Dissolved Cobalt (Co)	2025/06/05		94	%	80 - 120
			Dissolved Copper (Cu)	2025/06/05		92	%	80 - 120
			Dissolved Lead (Pb)	2025/06/05		95	%	80 - 120
			Dissolved Molybdenum (Mo)	2025/06/05		107	%	80 - 120
			Dissolved Nickel (Ni)	2025/06/05		94	%	80 - 120
			Dissolved Selenium (Se)	2025/06/05		104	%	80 - 120
			Dissolved Silver (Ag)	2025/06/05		97	%	80 - 120

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Thallium (Tl)	2025/06/05		101	%	80 - 120
			Dissolved Tin (Sn)	2025/06/05		103	%	80 - 120
			Dissolved Titanium (Ti)	2025/06/05		101	%	80 - 120
			Dissolved Uranium (U)	2025/06/05		92	%	80 - 120
			Dissolved Vanadium (V)	2025/06/05		97	%	80 - 120
			Dissolved Zinc (Zn)	2025/06/05		96	%	80 - 120
B975667	JAB	Spiked Blank	Dissolved Aluminum (Al)	2025/06/05		92	%	80 - 120
			Dissolved Antimony (Sb)	2025/06/05		100	%	80 - 120
			Dissolved Arsenic (As)	2025/06/05		100	%	80 - 120
			Dissolved Beryllium (Be)	2025/06/05		97	%	80 - 120
			Dissolved Chromium (Cr)	2025/06/05		92	%	80 - 120
			Dissolved Cobalt (Co)	2025/06/05		92	%	80 - 120
			Dissolved Copper (Cu)	2025/06/05		92	%	80 - 120
			Dissolved Lead (Pb)	2025/06/05		94	%	80 - 120
			Dissolved Molybdenum (Mo)	2025/06/05		99	%	80 - 120
			Dissolved Nickel (Ni)	2025/06/05		92	%	80 - 120
			Dissolved Selenium (Se)	2025/06/05		102	%	80 - 120
			Dissolved Silver (Ag)	2025/06/05		94	%	80 - 120
			Dissolved Thallium (Tl)	2025/06/05		99	%	80 - 120
			Dissolved Tin (Sn)	2025/06/05		98	%	80 - 120
			Dissolved Titanium (Ti)	2025/06/05		97	%	80 - 120
			Dissolved Uranium (U)	2025/06/05		89	%	80 - 120
			Dissolved Vanadium (V)	2025/06/05		93	%	80 - 120
			Dissolved Zinc (Zn)	2025/06/05		91	%	80 - 120
B975667	JAB	Method Blank	Dissolved Aluminum (Al)	2025/06/06	<0.0030		mg/L	
			Dissolved Antimony (Sb)	2025/06/06	<0.00060		mg/L	
			Dissolved Arsenic (As)	2025/06/06	<0.00020		mg/L	
			Dissolved Beryllium (Be)	2025/06/06	<0.0010		mg/L	
			Dissolved Chromium (Cr)	2025/06/06	<0.0010		mg/L	
			Dissolved Cobalt (Co)	2025/06/06	<0.00030		mg/L	
			Dissolved Copper (Cu)	2025/06/06	<0.0010		mg/L	
			Dissolved Lead (Pb)	2025/06/06	<0.00020		mg/L	
			Dissolved Molybdenum (Mo)	2025/06/06	<0.00020		mg/L	
			Dissolved Nickel (Ni)	2025/06/06	<0.00050		mg/L	
			Dissolved Selenium (Se)	2025/06/06	<0.00020		mg/L	
			Dissolved Silver (Ag)	2025/06/06	<0.00010		mg/L	
			Dissolved Thallium (Tl)	2025/06/06	<0.00020		mg/L	
			Dissolved Tin (Sn)	2025/06/06	<0.0010		mg/L	
			Dissolved Titanium (Ti)	2025/06/06	<0.0010		mg/L	
			Dissolved Uranium (U)	2025/06/06	<0.00010		mg/L	
			Dissolved Vanadium (V)	2025/06/06	<0.0010		mg/L	
			Dissolved Zinc (Zn)	2025/06/06	<0.0030		mg/L	
B975667	JAB	RPD	Dissolved Arsenic (As)	2025/06/05	0.15		%	20
			Dissolved Chromium (Cr)	2025/06/05	NC		%	20
			Dissolved Copper (Cu)	2025/06/05	NC		%	20
			Dissolved Lead (Pb)	2025/06/05	3.5		%	20
			Dissolved Zinc (Zn)	2025/06/05	NC		%	20
B975857	TOR	Matrix Spike	Chloride (Cl)	2025/06/05		95	%	80 - 120
			Sulphate (SO4)	2025/06/05		92	%	80 - 120
B975857	TOR	Spiked Blank	Chloride (Cl)	2025/06/05		99	%	80 - 120
			Sulphate (SO4)	2025/06/05		100	%	80 - 120
B975857	TOR	Method Blank	Chloride (Cl)	2025/06/05	<1.0		mg/L	
			Sulphate (SO4)	2025/06/05	<1.0		mg/L	

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B975857	TOR	RPD	Chloride (Cl)	2025/06/05	4.0		%	20
			Sulphate (SO4)	2025/06/05	0.76		%	20
B975866	JVM	Spiked Blank	Alkalinity (Total as CaCO3)	2025/06/07		100	%	80 - 120
B975866	JVM	Method Blank	Alkalinity (PP as CaCO3)	2025/06/07	<1.0		mg/L	
			Alkalinity (Total as CaCO3)	2025/06/07	<1.0		mg/L	
			Bicarbonate (HCO3)	2025/06/07	<1.0		mg/L	
			Carbonate (CO3)	2025/06/07	<1.0		mg/L	
			Hydroxide (OH)	2025/06/07	<1.0		mg/L	
B975866	JVM	RPD	Alkalinity (PP as CaCO3)	2025/06/07	NC		%	20
			Alkalinity (Total as CaCO3)	2025/06/07	1.8		%	20
			Bicarbonate (HCO3)	2025/06/07	1.8		%	20
			Carbonate (CO3)	2025/06/07	NC		%	20
			Hydroxide (OH)	2025/06/07	NC		%	20
B975870	JVM	Spiked Blank	pH	2025/06/07		100	%	97 - 103
B975870	JVM	RPD	pH	2025/06/07	0.11		%	N/A
B975871	JVM	Spiked Blank	Conductivity	2025/06/07		102	%	90 - 110
B975871	JVM	Method Blank	Conductivity	2025/06/07	<2.0		uS/cm	
B975871	JVM	RPD	Conductivity	2025/06/07	2.3		%	10
B975880	JVM	Spiked Blank	Alkalinity (Total as CaCO3)	2025/06/06		98	%	80 - 120
B975880	JVM	Method Blank	Alkalinity (PP as CaCO3)	2025/06/06	<1.0		mg/L	
			Alkalinity (Total as CaCO3)	2025/06/06	<1.0		mg/L	
			Bicarbonate (HCO3)	2025/06/06	<1.0		mg/L	
			Carbonate (CO3)	2025/06/06	<1.0		mg/L	
			Hydroxide (OH)	2025/06/06	<1.0		mg/L	
B975880	JVM	RPD	Alkalinity (PP as CaCO3)	2025/06/06	NC		%	20
			Alkalinity (Total as CaCO3)	2025/06/06	0.49		%	20
			Bicarbonate (HCO3)	2025/06/06	0.49		%	20
			Carbonate (CO3)	2025/06/06	NC		%	20
			Hydroxide (OH)	2025/06/06	NC		%	20
B975881	JVM	Spiked Blank	pH	2025/06/06		101	%	97 - 103
B975881	JVM	RPD	pH	2025/06/06	0.39		%	N/A
B975882	JVM	Spiked Blank	Conductivity	2025/06/06		101	%	90 - 110
B975882	JVM	Method Blank	Conductivity	2025/06/06	<2.0		uS/cm	
B975882	JVM	RPD	Conductivity	2025/06/06	0.92		%	10
B976045	VP4	Spiked Blank	O-TERPHENYL (sur.)	2025/06/06		98	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2025/06/06		102	%	60 - 140
B976045	VP4	Method Blank	O-TERPHENYL (sur.)	2025/06/06		95	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2025/06/06	<0.10		mg/L	
B976507	YL7	Matrix Spike	Total Nitrogen (N)	2025/06/06		100	%	80 - 120
B976507	YL7	QC Standard	Total Nitrogen (N)	2025/06/06		106	%	80 - 120
B976507	YL7	Spiked Blank	Total Nitrogen (N)	2025/06/06		102	%	80 - 120
B976507	YL7	Method Blank	Total Nitrogen (N)	2025/06/06	<0.020		mg/L	
B976507	YL7	RPD	Total Nitrogen (N)	2025/06/06	2.1		%	20
B976515	ISW	Matrix Spike	Nitrite (N)	2025/06/06		98	%	80 - 120
			Nitrate plus Nitrite (N)	2025/06/06		120	%	80 - 120
B976515	ISW	Spiked Blank	Nitrite (N)	2025/06/06		103	%	80 - 120
			Nitrate plus Nitrite (N)	2025/06/06		108	%	80 - 120
B976515	ISW	Method Blank	Nitrite (N)	2025/06/06	<0.040		mg/L	
			Nitrate plus Nitrite (N)	2025/06/06	<0.040		mg/L	
B976515	ISW	RPD	Nitrite (N)	2025/06/06	NC		%	20
			Nitrate plus Nitrite (N)	2025/06/06	NC		%	20
B976560	KHU	Matrix Spike [DMJ307-02]	Dissolved Barium (Ba)	2025/06/06		99	%	80 - 120
			Dissolved Boron (B)	2025/06/06		96	%	80 - 120

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Calcium (Ca)	2025/06/06		96	%	80 - 120
			Dissolved Iron (Fe)	2025/06/06		103	%	80 - 120
			Dissolved Lithium (Li)	2025/06/06		93	%	80 - 120
			Dissolved Magnesium (Mg)	2025/06/06		102	%	80 - 120
			Dissolved Manganese (Mn)	2025/06/06		102	%	80 - 120
			Dissolved Phosphorus (P)	2025/06/06		104	%	80 - 120
			Dissolved Potassium (K)	2025/06/06		95	%	80 - 120
			Dissolved Silicon (Si)	2025/06/06		97	%	80 - 120
			Dissolved Sodium (Na)	2025/06/06		NC	%	80 - 120
			Dissolved Strontium (Sr)	2025/06/06		97	%	80 - 120
			Dissolved Sulphur (S)	2025/06/06		NC	%	80 - 120
B976560	KHU	Spiked Blank	Dissolved Barium (Ba)	2025/06/06		102	%	80 - 120
			Dissolved Boron (B)	2025/06/06		98	%	80 - 120
			Dissolved Calcium (Ca)	2025/06/06		97	%	80 - 120
			Dissolved Iron (Fe)	2025/06/06		102	%	80 - 120
			Dissolved Lithium (Li)	2025/06/06		96	%	80 - 120
			Dissolved Magnesium (Mg)	2025/06/06		102	%	80 - 120
			Dissolved Manganese (Mn)	2025/06/06		99	%	80 - 120
			Dissolved Phosphorus (P)	2025/06/06		102	%	80 - 120
			Dissolved Potassium (K)	2025/06/06		98	%	80 - 120
			Dissolved Silicon (Si)	2025/06/06		99	%	80 - 120
			Dissolved Sodium (Na)	2025/06/06		97	%	80 - 120
			Dissolved Strontium (Sr)	2025/06/06		101	%	80 - 120
			Dissolved Sulphur (S)	2025/06/06		100	%	80 - 120
B976560	KHU	Method Blank	Dissolved Barium (Ba)	2025/06/06	<0.010		mg/L	
			Dissolved Boron (B)	2025/06/06	<0.020		mg/L	
			Dissolved Calcium (Ca)	2025/06/06	<0.30		mg/L	
			Dissolved Iron (Fe)	2025/06/06	<0.060		mg/L	
			Dissolved Lithium (Li)	2025/06/06	<0.020		mg/L	
			Dissolved Magnesium (Mg)	2025/06/06	<0.20		mg/L	
			Dissolved Manganese (Mn)	2025/06/06	<0.0040		mg/L	
			Dissolved Phosphorus (P)	2025/06/06	<0.10		mg/L	
			Dissolved Potassium (K)	2025/06/06	<0.30		mg/L	
			Dissolved Silicon (Si)	2025/06/06	<0.50		mg/L	
			Dissolved Sodium (Na)	2025/06/06	<0.50		mg/L	
			Dissolved Strontium (Sr)	2025/06/06	<0.020		mg/L	
			Dissolved Sulphur (S)	2025/06/06	<0.20		mg/L	
B976560	KHU	RPD [DMJ307-02]	Dissolved Barium (Ba)	2025/06/06	18		%	20
			Dissolved Boron (B)	2025/06/06	2.3		%	20
			Dissolved Calcium (Ca)	2025/06/06	0.44		%	20
			Dissolved Iron (Fe)	2025/06/06	NC		%	20
			Dissolved Lithium (Li)	2025/06/06	1.2		%	20
			Dissolved Magnesium (Mg)	2025/06/06	0.68		%	20
			Dissolved Manganese (Mn)	2025/06/06	0.23		%	20
			Dissolved Phosphorus (P)	2025/06/06	NC		%	20
			Dissolved Potassium (K)	2025/06/06	0.12		%	20
			Dissolved Silicon (Si)	2025/06/06	0.85		%	20
			Dissolved Sodium (Na)	2025/06/06	0.69		%	20
			Dissolved Strontium (Sr)	2025/06/06	0.17		%	20
			Dissolved Sulphur (S)	2025/06/06	0.44		%	20
B976705	HAP	Matrix Spike	Dissolved Phosphorus (P)	2025/06/06		103	%	80 - 120
B976705	HAP	QC Standard	Dissolved Phosphorus (P)	2025/06/06		91	%	80 - 120
B976705	HAP	Spiked Blank	Dissolved Phosphorus (P)	2025/06/06		103	%	80 - 120

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B976705	HAP	Method Blank	Dissolved Phosphorus (P)	2025/06/06	<0.0030		mg/L	
B976705	HAP	RPD	Dissolved Phosphorus (P)	2025/06/06	7.0		%	20
B976711	HAP	Matrix Spike [DMJ308-04]	Total Phosphorus (P)	2025/06/06		102	%	80 - 120
B976711	HAP	QC Standard	Total Phosphorus (P)	2025/06/06		89	%	80 - 120
B976711	HAP	Spiked Blank	Total Phosphorus (P)	2025/06/06		98	%	80 - 120
B976711	HAP	Method Blank	Total Phosphorus (P)	2025/06/06	<0.0030		mg/L	
B976711	HAP	RPD [DMJ308-04]	Total Phosphorus (P)	2025/06/06	NC		%	20
B980863	KKC	Matrix Spike	Total Ammonia (N)	2025/06/10		NC	%	80 - 120
B980863	KKC	Spiked Blank	Total Ammonia (N)	2025/06/10		105	%	80 - 120
B980863	KKC	Method Blank	Total Ammonia (N)	2025/06/10	<0.015		mg/L	
B980863	KKC	RPD	Total Ammonia (N)	2025/06/10	0.41		%	20
B980942	TJ4	Matrix Spike	Dissolved Organic Carbon (C)	2025/06/11		104	%	75 - 125
B980942	TJ4	Spiked Blank	Dissolved Organic Carbon (C)	2025/06/11		97	%	80 - 120
B980942	TJ4	Method Blank	Dissolved Organic Carbon (C)	2025/06/11	<0.50		mg/L	
B980942	TJ4	RPD	Dissolved Organic Carbon (C)	2025/06/11	4.7		%	20
B981325	KKC	Matrix Spike	Total Ammonia (N)	2025/06/10		106	%	80 - 120
B981325	KKC	Spiked Blank	Total Ammonia (N)	2025/06/10		106	%	80 - 120
B981325	KKC	Method Blank	Total Ammonia (N)	2025/06/10	<0.015		mg/L	
B981325	KKC	RPD	Total Ammonia (N)	2025/06/10	NC		%	20
B981332	KKC	Matrix Spike [DMJ309-10]	Total Ammonia (N)	2025/06/10		NC	%	80 - 120
B981332	KKC	Spiked Blank	Total Ammonia (N)	2025/06/10		105	%	80 - 120
B981332	KKC	Method Blank	Total Ammonia (N)	2025/06/10	<0.015		mg/L	
B981332	KKC	RPD [DMJ309-10]	Total Ammonia (N)	2025/06/10	0.081		%	20
B983033	KKM	Matrix Spike	Dissolved Mercury (Hg)	2025/06/11		89	%	80 - 120
B983033	KKM	Spiked Blank	Dissolved Mercury (Hg)	2025/06/11		94	%	80 - 120
B983033	KKM	Method Blank	Dissolved Mercury (Hg)	2025/06/11	<0.0019		ug/L	
B983033	KKM	RPD	Dissolved Mercury (Hg)	2025/06/11	NC		%	20
B983055	KKM	Matrix Spike [DMJ308-09]	Total Mercury (Hg)	2025/06/11		91	%	80 - 120
B983055	KKM	Spiked Blank	Total Mercury (Hg)	2025/06/11		95	%	80 - 120
B983055	KKM	Method Blank	Total Mercury (Hg)	2025/06/11	<0.0019		ug/L	
B983055	KKM	RPD [DMJ307-09]	Total Mercury (Hg)	2025/06/11	NC		%	20
B984088	JYU	Matrix Spike	Dissolved Organic Carbon (C)	2025/06/13		107	%	75 - 125
B984088	JYU	Spiked Blank	Dissolved Organic Carbon (C)	2025/06/12		100	%	80 - 120
B984088	JYU	Method Blank	Dissolved Organic Carbon (C)	2025/06/12	<0.50		mg/L	
B984088	JYU	RPD	Dissolved Organic Carbon (C)	2025/06/13	4.7		%	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

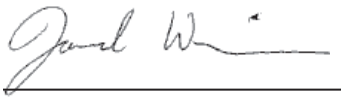
NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

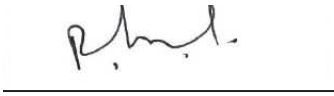
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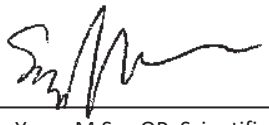
The analytical data and all QC contained in this report were reviewed and validated by:



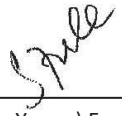
Jared Wiseman, B.Sc., P.Chem., QP, Senior Analyst, Organics



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Sandy Yuan, M.Sc., QP, Scientific Specialist



Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist



Bureau Veritas Certified by Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

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Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

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CHAIN OF CUSTODY RECORD

ENV COC - 00013v5

MCAL-2025-06-232

Invoice Information	Invoice to (requires report) ☐	Report Information (if differs from invoice)		Project Information	
Company:	Stantec	Company:		Quotation #:	
Contact Name:	Dylan King	Contact Name:		P.O. #/ AFE#:	
Street Address:	#500, 10220 103 Ave NW	Street Address:		Project #:	110773396
City:	Edmonton	Prov: AB	Postal Code: T5J 0K4	City:	Prov:	Postal Code:	Site #:	
Phone:	780 969 2223	Phone:		Site Location:	SR1
Email:	dylan.king@stantec.com	Email:	EDOC@stantec.com	Site Location Province:	AB
Copies:		Copies:	Wesley.Isen@Stantec.com	Sampled By:	TH / DB

Regulatory Criteria

☑ AT1 ☐ CCME ☐ Drinking Water - Canada ☐ Drinking Water - Manitoba ☐ Saskatchewan ☐ Drinking Water - Alberta ☐ Other _____

SAMPLES MUST BE KEPT COOL (<10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

Regular Turnaround Time (TAT)
☑ 5 to 7 Day ☐ 10 Day

Rush Turnaround Time (TAT) Surcharges apply
☐ Same Day ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ 4 Day

Date Required: YY MM DD

	Sample Identification	Date Sampled YY	MM	DD	Time (24hr) HH	MM	Matrix	1 FIELD FILTERED	2 FIELD PRESERVED	3 LAB FILTRATION REQUIRED	4 BTEX F1	5 VOCs	6 BTEX F1+F2	7 BTEX F1-F4	8 Routine water	9 Regulated metals - total	10 Regulated metals - dissolved	11 Mercury - total	12 Mercury - dissolved	13 Summary DOC	14 Summary TKN	15 Texture (% sand, silt, clay)	16 Basic class II landfill	17 dissolved phosphorous	18 phosphate	19 ammonia	20 bacteriological	21 # OF CONTAINERS SUBMITTED	22 HOLD - DO NOT ANALYZE	Comments
1	RMW16-16-17	25	06	04	12	01	W	X	X				X		X		X	X	X	X	X			X	X	X	X	11		
2	MW21-6-12	↓	↓	↓	12	52	↓	X	X				X		X		X	X	X	X	X			X	X	X	X	11		
3	RMW16-15-39				15	35		X	X				X		X		X	X	X	X	X			X	X	X	X	11		
4	SW35-RL-01				13	43		X	X				X		X		X	X	X	X	X			X	X	X	X	11		
5	WS81-01				10	31		X	X				X		X		X	X	X	X	X			X	X	X	X	11		
6	SR24-02	↓	↓	↓	-	-	↓	X	X				X		X		X	X	X	X	X			X	X	X	X	11		QC sample.
7																														
8																														
9																														
10																														
11																														
12																														

*UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS AND CONDITIONS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS OR BY CALLING THE LABORATORY LISTED ABOVE TO OBTAIN A COPY

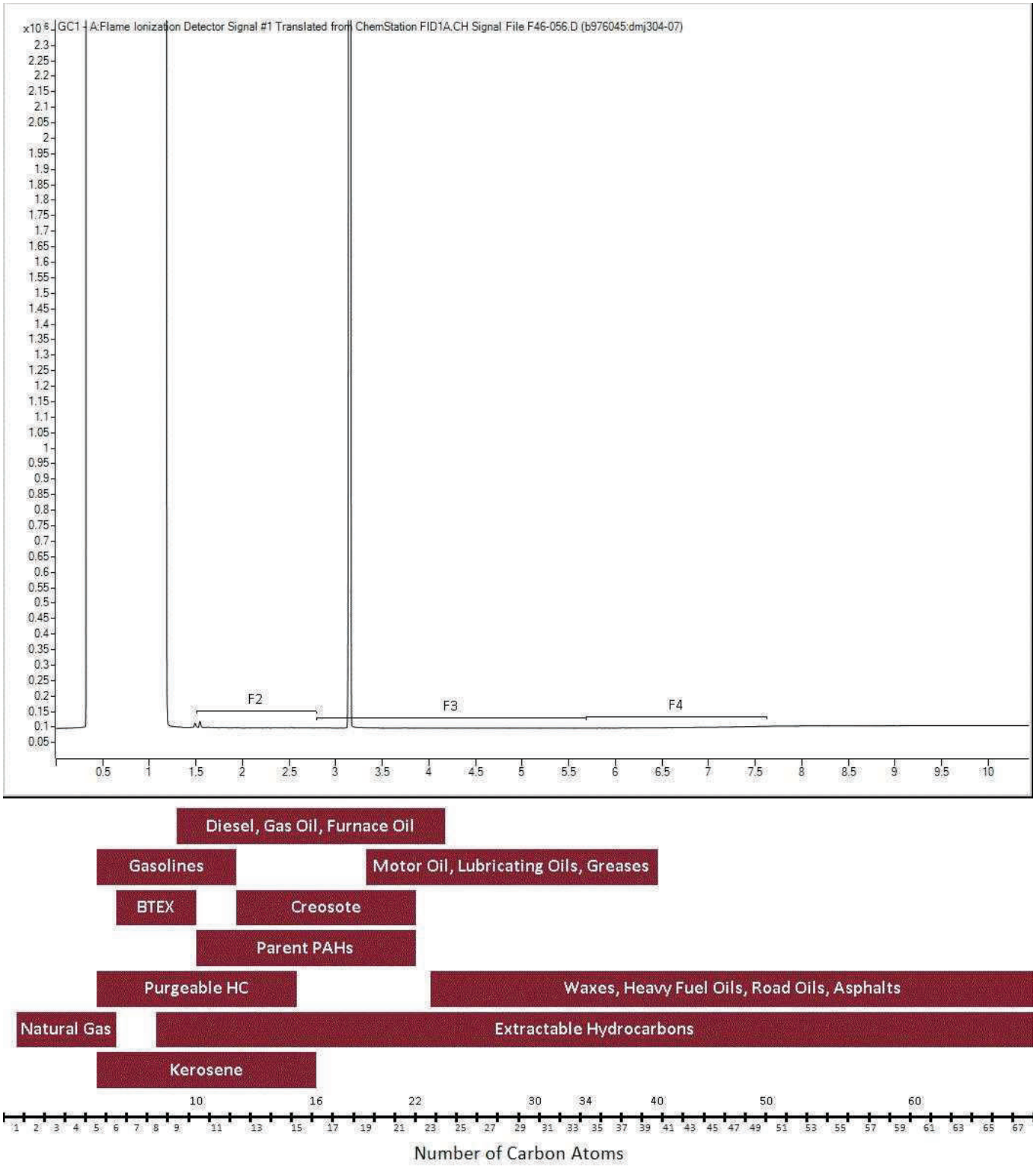
LAB USE ONLY	Yes	No	°C	1	2	3
Seal present		✓				
Seal intact						
Cooling media present	✓					
				9	8	9

LAB USE ONLY	Yes	No	°C	1	2	3
Seal present		✓				
Seal intact						
Cooling media present	✓					
				5	5	4

LAB USE ONLY	Yes	No	°C	1	2	3	Temperature reading by:
Seal present							
Seal intact							
Cooling media present							

	Relinquished by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM	Received by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM	Special instructions
1	Taylor Harris	2025	06	04	16	45	1 [illegible]	2025	06	04	10	50	Fecal and total coliforms, e. coli, heterotrophic plate count.
2							2						

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

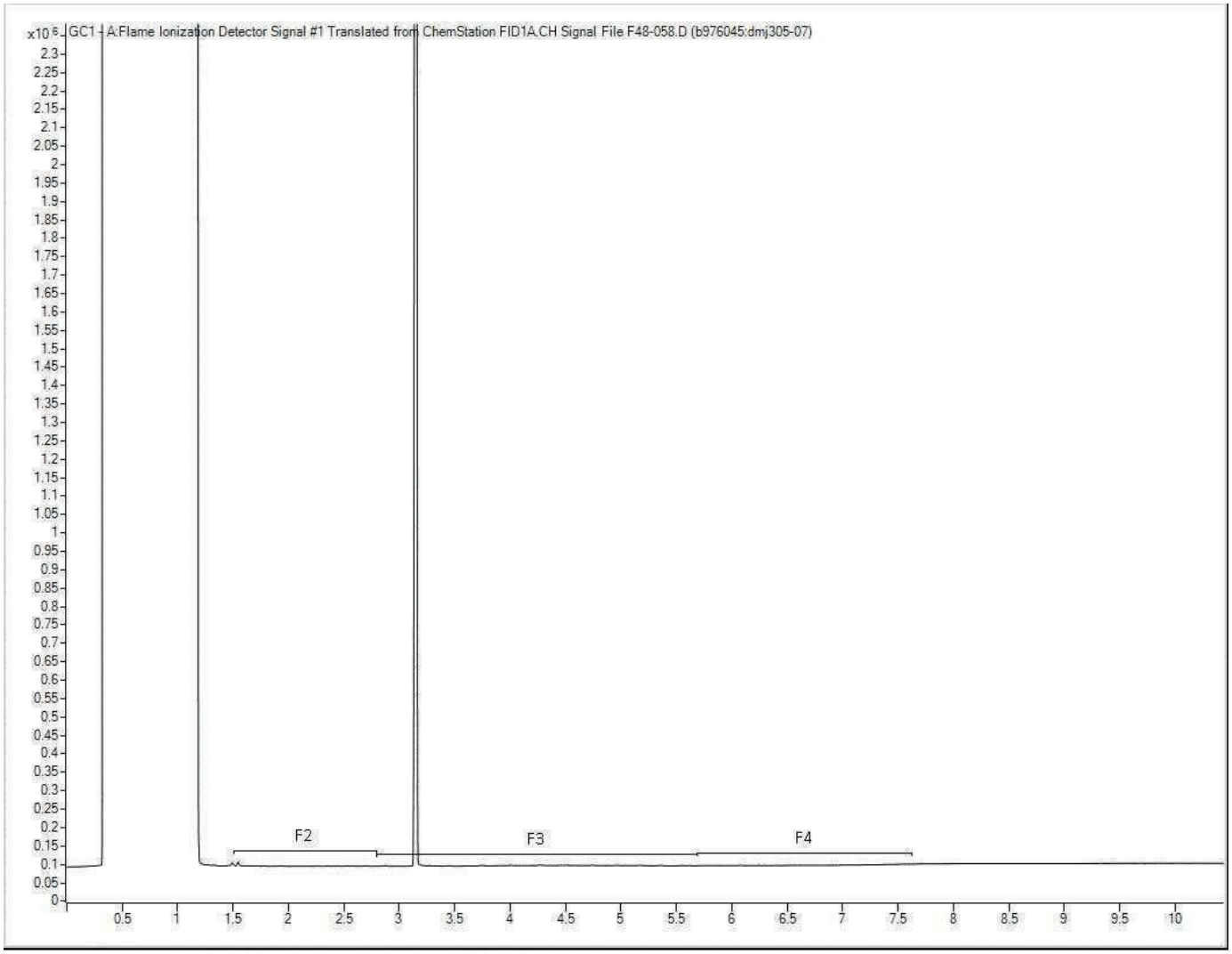


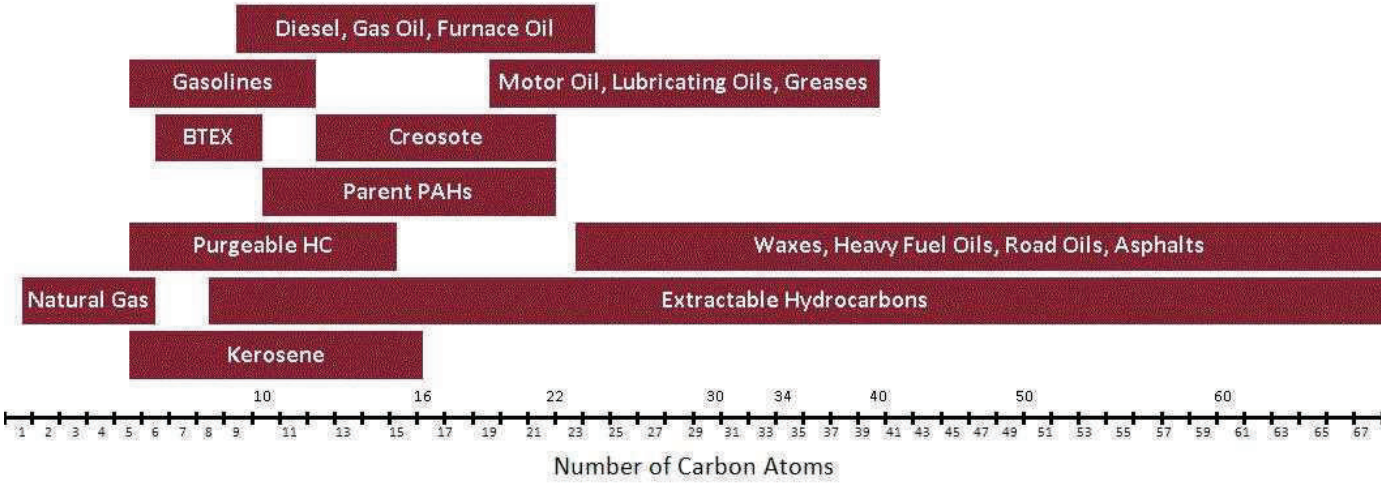
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C551030
Report Date: 2025/06/17
Bureau Veritas Sample: DMJ305

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Reference: SRI
Client ID: MW21-6-12

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

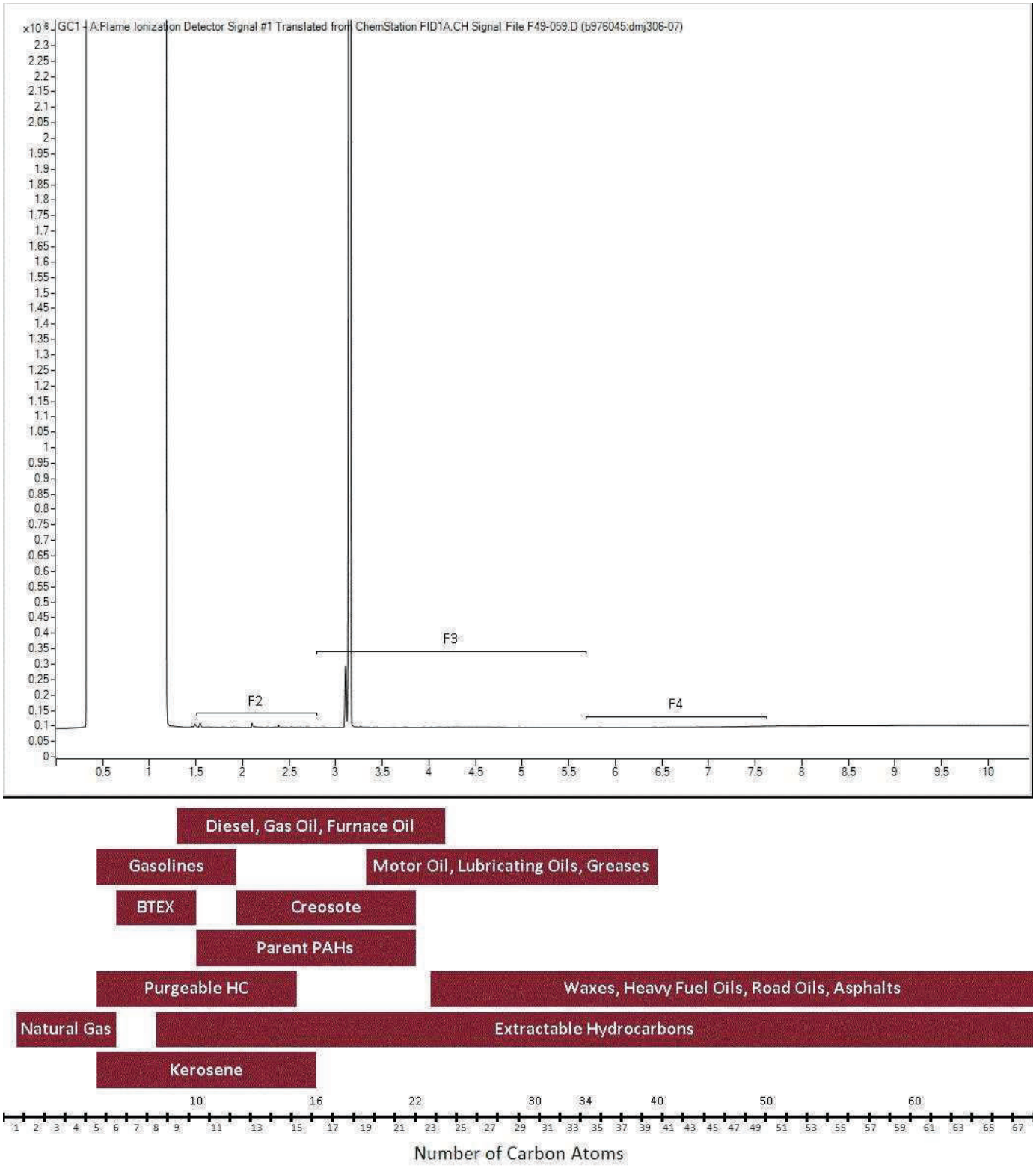




hpchem23\HPchem\1\DATA\2025\06\0606

Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

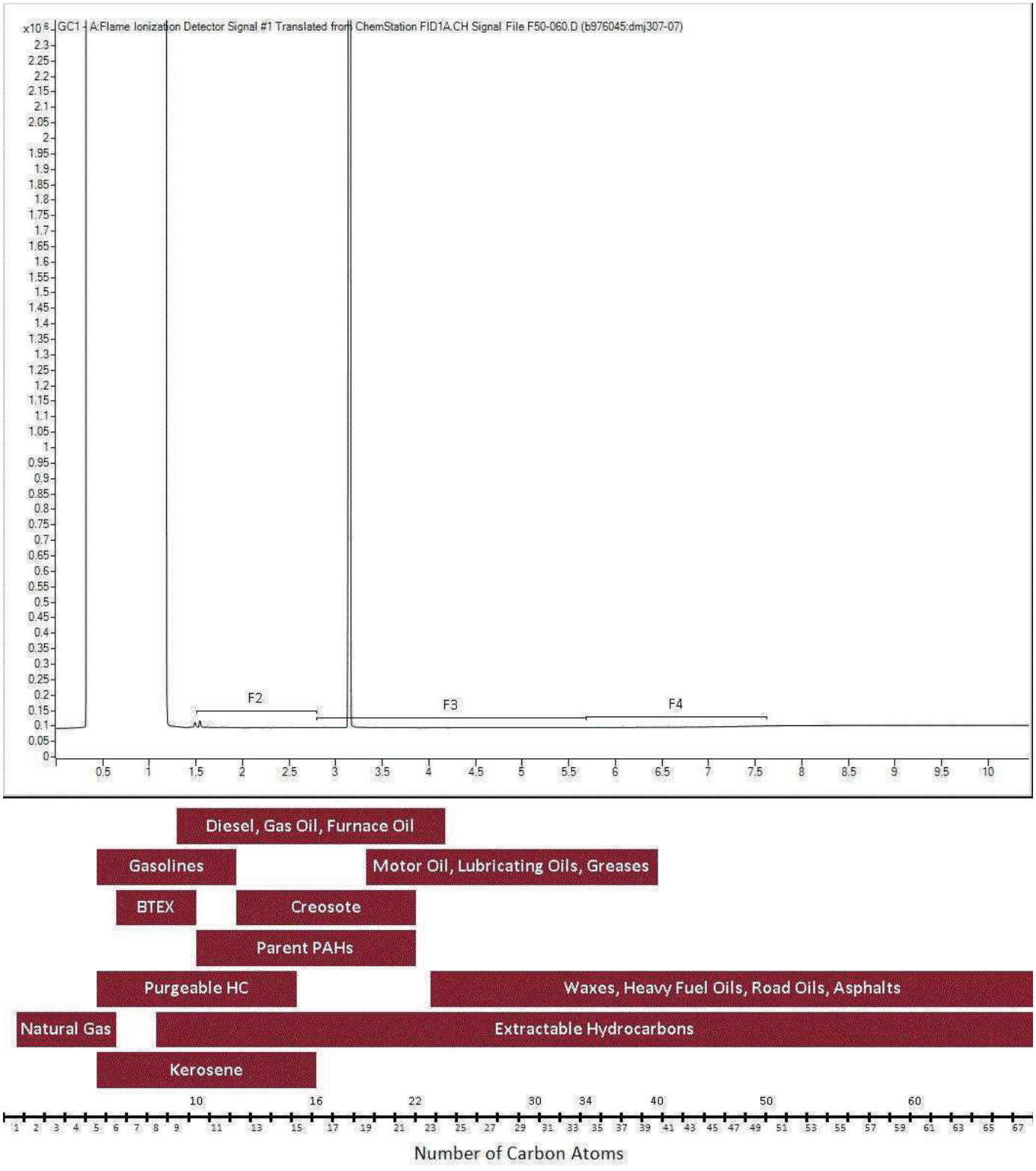


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C551030
Report Date: 2025/06/17
Bureau Veritas Sample: DMJ307

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Reference: SRI
Client ID: SW35-R4-01

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

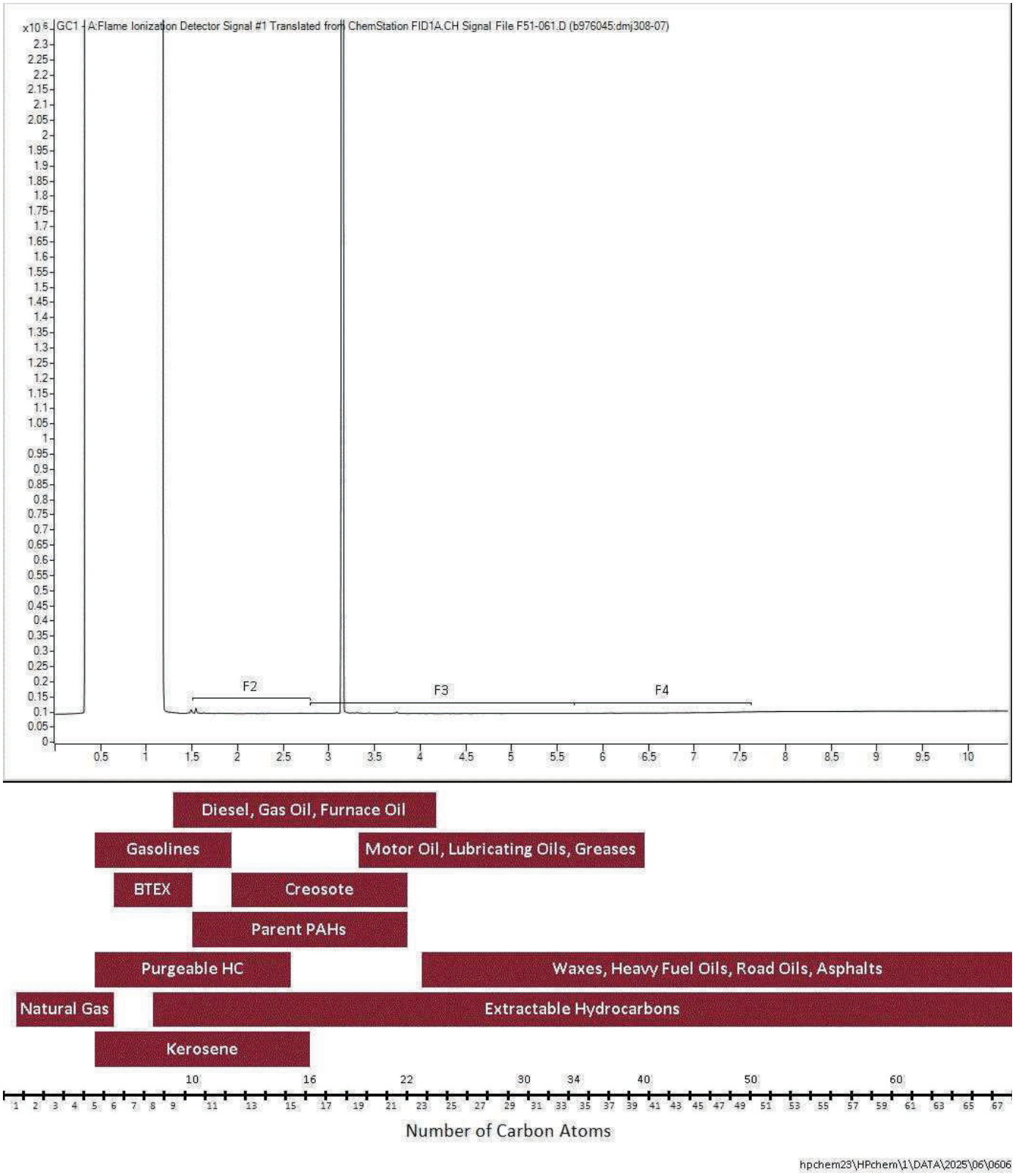


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C551030
Report Date: 2025/06/17
Bureau Veritas Sample: DMJ308

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Reference: SRI
Client ID: WS81-01

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

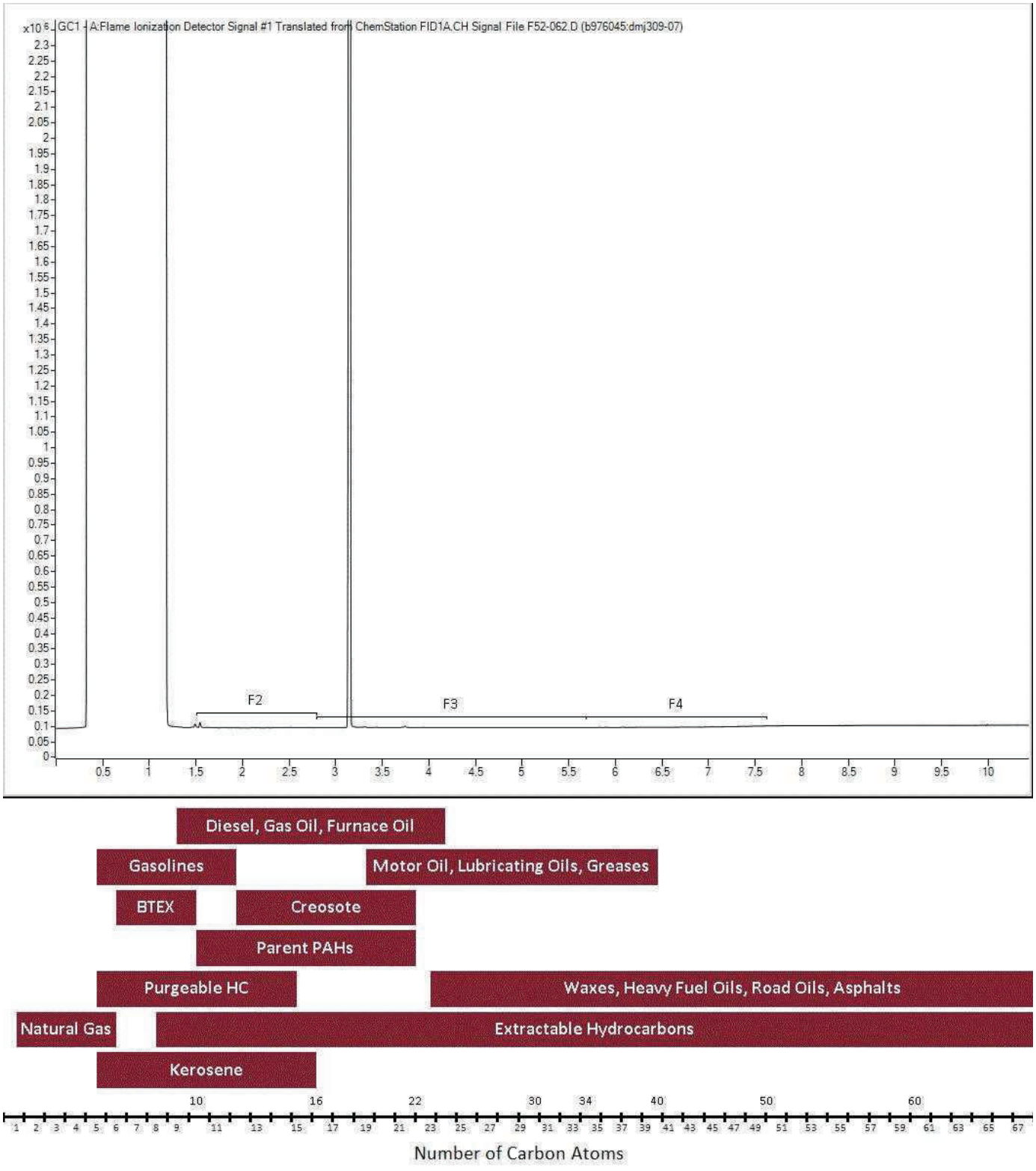


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C551030
Report Date: 2025/06/17
Bureau Veritas Sample: DMJ309

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Reference: SRI
Client ID: SR25-02

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your Project #: 110773396
Site Location: SRI
Your C.O.C. #: 1OF1

Attention: DYLAN KING

STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
EDMONTON, AB
CANADA T5J 0K4

Report Date: 2025/06/13
Report #: R3674218
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C551520
Received: 2025/06/05, 17:55

Sample Matrix: Water
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH	6	N/A	2025/06/11	AB SOP-00005	SM 24 2320 B m
BTEX/F1 in Water by HS GC/MS/FID	6	N/A	2025/06/11	AB SOP-00039	CCME CWS/EPA 8260d m
F1-BTEX	6	N/A	2025/06/12		Auto Calc
Cadmium - low level CCME - Dissolved	6	N/A	2025/06/12		Auto Calc
Chloride/Sulphate by Auto Colourimetry	4	N/A	2025/06/10	AB SOP-00020	SM24-4500-Cl/SO4-E m
Chloride/Sulphate by Auto Colourimetry	2	N/A	2025/06/09	AB SOP-00020	SM24-4500-Cl/SO4-E m
Fecal Coliforms (MPN/100mL)	6	2025/06/06	2025/06/07	AB SOP-00089	SM 24 9223 A,B m
Heterotrophic Plate Count Quant	6	2025/06/06	2025/06/08	CAL SOP-00012	SM 24 9215 A, E m
Total Coliforms and E.Coli	6	2025/06/06	2025/06/07	AB SOP-00089	SM 24 9223 A,B m
Carbon (DOC) (1)	6	N/A	2025/06/13	AB SOP-00087	MMCW 119 1996 m
Conductivity @25C	6	N/A	2025/06/11	AB SOP-00005	SM 24 2510 B m
CCME Hydrocarbons in Water (F2; C10-C16) (2)	6	2025/06/09	2025/06/10	AB SOP-00037 AB SOP-00040	CCME PHC-CWS m
Hardness	4	N/A	2025/06/11		Auto Calc
Hardness	2	N/A	2025/06/12		Auto Calc
Mercury (Dissolved) by CV (3)	4	2025/06/12	2025/06/12	AB SOP-00084	BCMOE BCLM Oct2013 m
Mercury (Dissolved) by CV (3)	2	2025/06/12	2025/06/13	AB SOP-00084	BCMOE BCLM Oct2013 m
Mercury (Total) by CV	6	2025/06/12	2025/06/12	AB SOP-00084	BCMOE BCLM Oct2013 m
Elements by ICP - Dissolved (3)	2	N/A	2025/06/10	AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Dissolved (3)	4	N/A	2025/06/11	AB SOP-00042	EPA 6010d R5 m
Elements by ICPMS - Dissolved (3)	2	N/A	2025/06/10	AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Dissolved (3)	4	N/A	2025/06/11	AB SOP-00043	EPA 6020b R2 m
Ion Balance	6	N/A	2025/06/12		Auto Calc
Sum of cations, anions	4	N/A	2025/06/11		Auto Calc
Sum of cations, anions	2	N/A	2025/06/12		Auto Calc
Ammonia-N (Total)	6	N/A	2025/06/10	AB SOP-00007	SM 24 4500 NH3 A G m
Nitrate and Nitrite	6	N/A	2025/06/10		Auto Calc
NO2 (N); NO2 (N) + NO3 (N) in Water	6	N/A	2025/06/09	AB SOP-00091	SM 24 4500 NO3m
Nitrate (as N)	6	2025/06/05	2025/06/10		Auto Calc
pH @25°C (4)	6	N/A	2025/06/11	AB SOP-00005	SM 24 4500-H+B m
Total Dissolved Solids (Calculated)	6	N/A	2025/06/12		Auto Calc
Total Kjeldahl Nitrogen (Total)	6	N/A	2025/06/11		Auto Calc

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Your Project #: 110773396
Site Location: SRI
Your C.O.C. #: 1OF1

Attention: DYLAN KING

STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
EDMONTON, AB
CANADA T5J 0K4

Report Date: 2025/06/13
Report #: R3674218
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C551520
Received: 2025/06/05, 17:55

Sample Matrix: Water
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Nitrogen (Total)	6	2025/06/10	2025/06/11	AB SOP-00093	SM 24 4500-N C m
Total Phosphorus Dissolved client FF/FP (5)	3	2025/06/10	2025/06/12	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Dissolved client FF/FP (5)	3	2025/06/11	2025/06/12	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus	4	2025/06/11	2025/06/11	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus	2	2025/06/11	2025/06/12	AB SOP-00024	SM 24 4500-P A,B,F m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) DOC present in the sample should be considered as non-purgeable DOC. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(2) Silica gel clean up employed.
(3) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(4) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.
(5) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.

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Your Project #: 110773396
Site Location: SRI
Your C.O.C. #: 1OF1

Attention: DYLAN KING

STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
EDMONTON, AB
CANADA T5J 0K4

Report Date: 2025/06/13
Report #: R3674218
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C551520
Received: 2025/06/05, 17:55

Encryption Key



Bureau Veritas
13 Jun 2025 18:54:30

Please direct all questions regarding this Certificate of Analysis to:
Geraldlyn Gouthro, Key Account Specialist
Email: geraldlyn.gouthro@bureauveritas.com
Phone# (403) 291-3077

==========

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Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C551520
Report Date: 2025/06/13

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

AT1 BTEX AND F1-F2 IN WATER (WATER)

Bureau Veritas ID		DML530			DML531		DML532		DML533			
Sampling Date		2025/06/05 10:08			2025/06/05 13:40		2025/06/05 14:56		2025/06/05 16:20			
COC Number		1OF1			1OF1		1OF1		1OF1			
	UNITS	RMW16-13-37	MU	RDL	MW16-11-15	MU	MW16-10-15	MU	MW16-22-26	MU	RDL	QC Batch
Ext. Pet. Hydrocarbon												
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	N/A	0.10	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B977619
Volatiles												
Benzene	mg/L	<0.00050 (1)	N/A	0.00050	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B977331
Toluene	mg/L	<0.00040	N/A	0.00040	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B977331
Ethylbenzene	mg/L	<0.00040	N/A	0.00040	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B977331
m & p-Xylene	mg/L	<0.00080	N/A	0.00080	<0.00080	N/A	<0.00080	N/A	<0.00080	N/A	0.00080	B977331
o-Xylene	mg/L	<0.00040	N/A	0.00040	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B977331
Xylenes (Total)	mg/L	<0.00089	N/A	0.00089	<0.00089	N/A	<0.00089	N/A	<0.00089	N/A	0.00089	B976106
F1 (C6-C10) - BTEX	mg/L	<0.10	N/A	0.10	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B976106
F1 (C6-C10)	mg/L	<0.10	N/A	0.10	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B977331
Surrogate Recovery (%)												
1,4-Difluorobenzene (sur.)	%	106	N/A	N/A	107	N/A	109	N/A	107	N/A	N/A	B977331
4-Bromofluorobenzene (sur.)	%	103	N/A	N/A	103	N/A	103	N/A	100	N/A	N/A	B977331
D4-1,2-Dichloroethane (sur.)	%	117	N/A	N/A	116	N/A	119	N/A	114	N/A	N/A	B977331
O-TERPHENYL (sur.)	%	88	N/A	N/A	93	N/A	90	N/A	91	N/A	N/A	B977619

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Detection limit raised due to interferent.

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AT1 BTEX AND F1-F2 IN WATER (WATER)

Bureau Veritas ID		DML534			DML535			
Sampling Date		2025/06/05 10:56			2025/06/05 11:44			
COC Number		1OF1			1OF1			
	UNITS	NE7-R3-01	MU	QC Batch	WS62-01	MU	RDL	QC Batch
Ext. Pet. Hydrocarbon								
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	N/A	B977619	<0.10	N/A	0.10	B976084
Volatiles								
Benzene	mg/L	<0.00040	N/A	B977331	<0.00040	N/A	0.00040	B977331
Toluene	mg/L	<0.00040	N/A	B977331	<0.00040	N/A	0.00040	B977331
Ethylbenzene	mg/L	<0.00040	N/A	B977331	<0.00040	N/A	0.00040	B977331
m & p-Xylene	mg/L	<0.00080	N/A	B977331	<0.00080	N/A	0.00080	B977331
o-Xylene	mg/L	<0.00040	N/A	B977331	<0.00040	N/A	0.00040	B977331
Xylenes (Total)	mg/L	<0.00089	N/A	B976207	<0.00089	N/A	0.00089	B976207
F1 (C6-C10) - BTEX	mg/L	<0.10	N/A	B976207	<0.10	N/A	0.10	B976207
F1 (C6-C10)	mg/L	<0.10	N/A	B977331	<0.10	N/A	0.10	B977331
Surrogate Recovery (%)								
1,4-Difluorobenzene (sur.)	%	108	N/A	B977331	107	N/A	N/A	B977331
4-Bromofluorobenzene (sur.)	%	103	N/A	B977331	103	N/A	N/A	B977331
D4-1,2-Dichloroethane (sur.)	%	116	N/A	B977331	117	N/A	N/A	B977331
O-TERPHENYL (sur.)	%	91	N/A	B977619	88	N/A	N/A	B976084

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DML530			DML531			
Sampling Date		2025/06/05 10:08			2025/06/05 13:40			
COC Number		1OF1			1OF1			
	UNITS	RMW16-13-37	MU	RDL	MW16-11-15	MU	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	17	N/A	N/A	41	N/A	N/A	B976199
Cation Sum	meq/L	17	N/A	N/A	42	N/A	N/A	B976199
Hardness (CaCO3)	mg/L	29	N/A	0.50	1400	N/A	0.50	B976196
Ion Balance (% Difference)	%	1.1	N/A	N/A	1.5	N/A	N/A	B976161
Nitrate (N)	mg/L	0.13	N/A	0.040	<0.040	N/A	0.040	B976206
Nitrate (NO3)	mg/L	0.57	N/A	0.18	<0.18	N/A	0.18	B976200
Nitrite (NO2)	mg/L	0.21	N/A	0.13	<0.13	N/A	0.13	B976200
Calculated Total Dissolved Solids	mg/L	950	N/A	10	2600	N/A	25	B976209
Elements								
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	0.020	0.027	+/- 0.020	0.020	B976108
Misc. Inorganics								
Conductivity	uS/cm	1600	+/- 43	2.0	3100	+/- 82	2.0	B981672
pH	pH	8.37	+/- 0.0829	N/A	7.69	+/- 0.0762	N/A	B981671
Anions								
Alkalinity (PP as CaCO3)	mg/L	5.3	+/- <RDL	1.0	<1.0	N/A	1.0	B981667
Alkalinity (Total as CaCO3)	mg/L	620	+/- 46	1.0	440	+/- 32	1.0	B981667
Bicarbonate (HCO3)	mg/L	740	+/- 11	1.0	530	+/- 8.2	1.0	B981667
Carbonate (CO3)	mg/L	6.4	N/A	1.0	<1.0	N/A	1.0	B981667
Hydroxide (OH)	mg/L	<1.0	N/A	1.0	<1.0	N/A	1.0	B981667
Chloride (Cl)	mg/L	130	+/- 9.9	5.0	<1.0	N/A	1.0	B981182
Sulphate (SO4)	mg/L	51	+/- 3.6	1.0	1500	+/- 98	25	B981182
Nutrients								
Nitrite (N)	mg/L	0.063	+/- <RDL	0.040	<0.040	N/A	0.040	B979596
Nitrate plus Nitrite (N)	mg/L	0.19	+/- <RDL	0.040	<0.040	N/A	0.040	B979596
Elements								
Dissolved Aluminum (Al)	mg/L	0.0099	+/- <RDL	0.0030	<0.0030	N/A	0.0030	B980544
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	0.00060	<0.00060	N/A	0.00060	B980544
Dissolved Arsenic (As)	mg/L	0.0013	+/- 0.00035	0.00020	0.0010	+/- 0.00030	0.00020	B980544
Dissolved Barium (Ba)	mg/L	0.15	+/- 0.014	0.010	<0.010	N/A	0.010	B980928
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B980544

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

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ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DML530			DML531			
Sampling Date		2025/06/05 10:08			2025/06/05 13:40			
COC Number		1OF1			1OF1			
	UNITS	RMW16-13-37	MU	RDL	MW16-11-15	MU	RDL	QC Batch
Dissolved Boron (B)	mg/L	0.12	+/- 0.022	0.020	0.11	+/- 0.021	0.020	B980928
Dissolved Calcium (Ca)	mg/L	8.5	+/- 0.72	0.30	320	+/- 26	0.30	B980928
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B980544
Dissolved Cobalt (Co)	mg/L	<0.00030	N/A	0.00030	0.0014	+/- <RDL	0.00030	B980544
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B980544
Dissolved Iron (Fe)	mg/L	<0.060	N/A	0.060	0.69	+/- 0.077	0.060	B980928
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	0.00020	<0.00020	N/A	0.00020	B980544
Dissolved Lithium (Li)	mg/L	0.14	+/- <RDL	0.020	0.13	+/- <RDL	0.020	B980928
Dissolved Magnesium (Mg)	mg/L	1.8	+/- <RDL	0.20	140	+/- 6.4	0.20	B980928
Dissolved Manganese (Mn)	mg/L	0.040	+/- <RDL	0.0040	1.1	+/- 0.066	0.0040	B980928
Dissolved Molybdenum (Mo)	mg/L	0.022	+/- 0.0016	0.00020	0.00058	+/- <RDL	0.00020	B980544
Dissolved Nickel (Ni)	mg/L	<0.00050	N/A	0.00050	0.0021	+/- <RDL	0.00050	B980544
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	0.10	<0.10	N/A	0.10	B980928
Dissolved Potassium (K)	mg/L	2.4	+/- <RDL	0.30	5.9	+/- 0.31	0.30	B980928
Dissolved Selenium (Se)	mg/L	<0.00020	N/A	0.00020	<0.00020	N/A	0.00020	B980544
Dissolved Silicon (Si)	mg/L	2.8	+/- <RDL	0.50	4.8	+/- 0.81	0.50	B980928
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	0.00010	<0.00010	N/A	0.00010	B980544
Dissolved Sodium (Na)	mg/L	390	+/- 37	0.50	340	+/- 32	0.50	B980928
Dissolved Strontium (Sr)	mg/L	0.17	+/- <RDL	0.020	3.0	+/- 0.27	0.020	B980928
Dissolved Sulphur (S)	mg/L	20	+/- 1.7	0.20	560	+/- 47	1.0	B980928
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	0.00020	<0.00020	N/A	0.00020	B980544
Dissolved Tin (Sn)	mg/L	0.0029	+/- <RDL	0.0010	<0.0010	N/A	0.0010	B980544
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B980544
Dissolved Uranium (U)	mg/L	0.0035	+/- 0.00057	0.00010	0.0049	+/- 0.00079	0.00010	B980544
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B980544
Dissolved Zinc (Zn)	mg/L	<0.0030	N/A	0.0030	<0.0030	N/A	0.0030	B980544

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

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ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DML531				DML532			
Sampling Date		2025/06/05 13:40				2025/06/05 14:56			
COC Number		1OF1				1OF1			
	UNITS	MW16-11-15 Lab-Dup	MU	RDL	QC Batch	MW16-10-15	MU	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	N/A	N/A	N/A	B976199	68	N/A	N/A	B976199
Cation Sum	meq/L	N/A	N/A	N/A	B976199	69	N/A	N/A	B976199
Hardness (CaCO3)	mg/L	N/A	N/A	0.50	B976196	2500	N/A	0.50	B976196
Ion Balance (% Difference)	%	N/A	N/A	N/A	B976161	0.73	N/A	N/A	B976161
Nitrate (N)	mg/L	N/A	N/A	0.040	B976206	<0.20	N/A	0.20	B976206
Nitrate (NO3)	mg/L	N/A	N/A	0.18	B976200	<0.89	N/A	0.89	B976200
Nitrite (NO2)	mg/L	N/A	N/A	0.13	B976200	<0.13	N/A	0.13	B976200
Calculated Total Dissolved Solids	mg/L	N/A	N/A	25	B976209	4300	N/A	25	B976209
Elements									
Dissolved Cadmium (Cd)	ug/L	N/A	N/A	0.020	B976108	0.071	+/- 0.033	0.020	B976208
Misc. Inorganics									
Conductivity	uS/cm	3000	+/- 80	2.0	B981672	4700	+/- 120	2.0	B981672
pH	pH	7.74	+/- 0.0767	N/A	B981671	7.88	+/- 0.0781	N/A	B981671
Anions									
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	1.0	B981667	<1.0	N/A	1.0	B981667
Alkalinity (Total as CaCO3)	mg/L	460	+/- 34	1.0	B981667	550	+/- 41	1.0	B981667
Bicarbonate (HCO3)	mg/L	560	+/- 8.6	1.0	B981667	670	+/- 10	1.0	B981667
Carbonate (CO3)	mg/L	<1.0	N/A	1.0	B981667	<1.0	N/A	1.0	B981667
Hydroxide (OH)	mg/L	<1.0	N/A	1.0	B981667	<1.0	N/A	1.0	B981667
Chloride (Cl)	mg/L	N/A	N/A	1.0	B981182	3.0	+/- 1.2	1.0	B979593
Sulphate (SO4)	mg/L	N/A	N/A	25	B981182	2700	+/- 170	25	B979593
Nutrients									
Nitrite (N)	mg/L	N/A	N/A	0.040	B979596	<0.040	N/A	0.040	B979596
Nitrate plus Nitrite (N)	mg/L	N/A	N/A	0.040	B979596	<0.20 (1)	N/A	0.20	B979596
Elements									
Dissolved Aluminum (Al)	mg/L	N/A	N/A	0.0030	B980544	0.0064	+/- <RDL	0.0030	B980544
Dissolved Antimony (Sb)	mg/L	N/A	N/A	0.00060	B980544	<0.00060	N/A	0.00060	B980544
Dissolved Arsenic (As)	mg/L	N/A	N/A	0.00020	B980544	0.00026	+/- <RDL	0.00020	B980544

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
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N/A = Not Applicable
(1) Detection limits raised due to matrix interference.

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C551520
Report Date: 2025/06/13

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DML531				DML532			
Sampling Date		2025/06/05 13:40				2025/06/05 14:56			
COC Number		1OF1				1OF1			
	UNITS	MW16-11-15 Lab-Dup	MU	RDL	QC Batch	MW16-10-15	MU	RDL	QC Batch
Dissolved Barium (Ba)	mg/L	N/A	N/A	0.010	B980928	<0.010	N/A	0.010	B980928
Dissolved Beryllium (Be)	mg/L	N/A	N/A	0.0010	B980544	<0.0010	N/A	0.0010	B980544
Dissolved Boron (B)	mg/L	N/A	N/A	0.020	B980928	0.21	+/- 0.027	0.020	B980928
Dissolved Calcium (Ca)	mg/L	N/A	N/A	0.30	B980928	490	+/- 40	0.30	B980928
Dissolved Chromium (Cr)	mg/L	N/A	N/A	0.0010	B980544	<0.0010	N/A	0.0010	B980544
Dissolved Cobalt (Co)	mg/L	N/A	N/A	0.00030	B980544	0.0034	+/- 0.00056	0.00030	B980544
Dissolved Copper (Cu)	mg/L	N/A	N/A	0.0010	B980544	0.0014	+/- <RDL	0.0010	B980544
Dissolved Iron (Fe)	mg/L	N/A	N/A	0.060	B980928	<0.060	N/A	0.060	B980928
Dissolved Lead (Pb)	mg/L	N/A	N/A	0.00020	B980544	<0.00020	N/A	0.00020	B980544
Dissolved Lithium (Li)	mg/L	N/A	N/A	0.020	B980928	0.14	+/- <RDL	0.020	B980928
Dissolved Magnesium (Mg)	mg/L	N/A	N/A	0.20	B980928	310	+/- 14	0.20	B980928
Dissolved Manganese (Mn)	mg/L	N/A	N/A	0.0040	B980928	2.8	+/- 0.17	0.0040	B980928
Dissolved Molybdenum (Mo)	mg/L	N/A	N/A	0.00020	B980544	0.00051	+/- <RDL	0.00020	B980544
Dissolved Nickel (Ni)	mg/L	N/A	N/A	0.00050	B980544	0.0066	+/- 0.00080	0.00050	B980544
Dissolved Phosphorus (P)	mg/L	N/A	N/A	0.10	B980928	<0.10	N/A	0.10	B980928
Dissolved Potassium (K)	mg/L	N/A	N/A	0.30	B980928	11	+/- 0.52	0.30	B980928
Dissolved Selenium (Se)	mg/L	N/A	N/A	0.00020	B980544	<0.00020	N/A	0.00020	B980544
Dissolved Silicon (Si)	mg/L	N/A	N/A	0.50	B980928	5.5	+/- 0.94	0.50	B980928
Dissolved Silver (Ag)	mg/L	N/A	N/A	0.00010	B980544	<0.00010	N/A	0.00010	B980544
Dissolved Sodium (Na)	mg/L	N/A	N/A	0.50	B980928	430	+/- 41	0.50	B980928
Dissolved Strontium (Sr)	mg/L	N/A	N/A	0.020	B980928	7.0	+/- 0.63	0.10	B980928
Dissolved Sulphur (S)	mg/L	N/A	N/A	1.0	B980928	960	+/- 82	1.0	B980928
Dissolved Thallium (Tl)	mg/L	N/A	N/A	0.00020	B980544	<0.00020	N/A	0.00020	B980544
Dissolved Tin (Sn)	mg/L	N/A	N/A	0.0010	B980544	<0.0010	N/A	0.0010	B980544
Dissolved Titanium (Ti)	mg/L	N/A	N/A	0.0010	B980544	<0.0010	N/A	0.0010	B980544
Dissolved Uranium (U)	mg/L	N/A	N/A	0.00010	B980544	0.012	+/- 0.0018	0.00010	B980544
Dissolved Vanadium (V)	mg/L	N/A	N/A	0.0010	B980544	<0.0010	N/A	0.0010	B980544
Dissolved Zinc (Zn)	mg/L	N/A	N/A	0.0030	B980544	0.0031	+/- <RDL	0.0030	B980544

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

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ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DML533		DML533			
Sampling Date		2025/06/05 16:20		2025/06/05 16:20			
COC Number		1OF1		1OF1			
	UNITS	MW16-22-26	MU	MW16-22-26 Lab-Dup	MU	RDL	QC Batch
Calculated Parameters							
Anion Sum	meq/L	24	N/A	N/A	N/A	N/A	B976199
Cation Sum	meq/L	23	N/A	N/A	N/A	N/A	B976199
Hardness (CaCO3)	mg/L	690	N/A	N/A	N/A	0.50	B976196
Ion Balance (% Difference)	%	2.1	N/A	N/A	N/A	N/A	B976161
Nitrate (N)	mg/L	0.045	N/A	N/A	N/A	0.040	B976206
Nitrate (NO3)	mg/L	0.20	N/A	N/A	N/A	0.18	B976200
Nitrite (NO2)	mg/L	<0.13	N/A	N/A	N/A	0.13	B976200
Calculated Total Dissolved Solids	mg/L	1600	N/A	N/A	N/A	25	B976209
Elements							
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	N/A	N/A	0.020	B976208
Misc. Inorganics							
Conductivity	uS/cm	2000	+/- 53	N/A	N/A	2.0	B981672
pH	pH	7.65	+/- 0.0758	N/A	N/A	N/A	B981671
Anions							
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	N/A	N/A	1.0	B981667
Alkalinity (Total as CaCO3)	mg/L	190	+/- 14	N/A	N/A	1.0	B981667
Bicarbonate (HCO3)	mg/L	230	+/- 3.8	N/A	N/A	1.0	B981667
Carbonate (CO3)	mg/L	<1.0	N/A	N/A	N/A	1.0	B981667
Hydroxide (OH)	mg/L	<1.0	N/A	N/A	N/A	1.0	B981667
Chloride (Cl)	mg/L	2.6	+/- 1.2	N/A	N/A	1.0	B981182
Sulphate (SO4)	mg/L	980	+/- 62	N/A	N/A	25	B981182
Nutrients							
Nitrite (N)	mg/L	<0.040	N/A	N/A	N/A	0.040	B979596
Nitrate plus Nitrite (N)	mg/L	0.045	+/- <RDL	N/A	N/A	0.040	B979596
Elements							
Dissolved Aluminum (Al)	mg/L	<0.0030	N/A	N/A	N/A	0.0030	B980510
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	N/A	N/A	0.00060	B980510
Dissolved Arsenic (As)	mg/L	0.00049	+/- <RDL	N/A	N/A	0.00020	B980510
Dissolved Barium (Ba)	mg/L	0.016	+/- <RDL	0.015	+/- <RDL	0.010	B981233

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N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DML533		DML533			
Sampling Date		2025/06/05 16:20		2025/06/05 16:20			
COC Number		1OF1		1OF1			
	UNITS	MW16-22-26	MU	MW16-22-26 Lab-Dup	MU	RDL	QC Batch
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B980510
Dissolved Boron (B)	mg/L	0.14	+/- 0.023	0.14	+/- 0.022	0.020	B981233
Dissolved Calcium (Ca)	mg/L	180	+/- 14	180	+/- 14	0.30	B981233
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B980510
Dissolved Cobalt (Co)	mg/L	0.00035	+/- <RDL	N/A	N/A	0.00030	B980510
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B980510
Dissolved Iron (Fe)	mg/L	0.15	+/- <RDL	0.14	+/- <RDL	0.060	B981233
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B980510
Dissolved Lithium (Li)	mg/L	0.091	+/- <RDL	0.095	+/- <RDL	0.020	B981233
Dissolved Magnesium (Mg)	mg/L	61	+/- 2.8	61	+/- 2.9	0.20	B981233
Dissolved Manganese (Mn)	mg/L	0.43	+/- 0.027	0.43	+/- 0.026	0.0040	B981233
Dissolved Molybdenum (Mo)	mg/L	0.0025	+/- <RDL	N/A	N/A	0.00020	B980510
Dissolved Nickel (Ni)	mg/L	0.0011	+/- <RDL	N/A	N/A	0.00050	B980510
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	<0.10	N/A	0.10	B981233
Dissolved Potassium (K)	mg/L	6.7	+/- 0.35	6.8	+/- 0.35	0.30	B981233
Dissolved Selenium (Se)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B980510
Dissolved Silicon (Si)	mg/L	3.9	+/- 0.66	3.9	+/- 0.66	0.50	B981233
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	N/A	N/A	0.00010	B980510
Dissolved Sodium (Na)	mg/L	210	+/- 21	220	+/- 21	0.50	B981233
Dissolved Strontium (Sr)	mg/L	3.0	+/- 0.27	3.0	+/- 0.27	0.020	B981233
Dissolved Sulphur (S)	mg/L	340	+/- 29	340	+/- 29	0.20	B981233
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B980510
Dissolved Tin (Sn)	mg/L	0.0066	+/- 0.0010	N/A	N/A	0.0010	B980510
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B980510
Dissolved Uranium (U)	mg/L	0.0015	+/- 0.00031	N/A	N/A	0.00010	B980510
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B980510
Dissolved Zinc (Zn)	mg/L	<0.0030	N/A	N/A	N/A	0.0030	B980510

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DML534			DML535			
Sampling Date		2025/06/05 10:56			2025/06/05 11:44			
COC Number		1OF1			1OF1			
	UNITS	NE7-R3-01	MU	QC Batch	WS62-01	MU	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	6.3	N/A	B976199	7.5	N/A	N/A	B976199
Cation Sum	meq/L	5.5	N/A	B976199	6.9	N/A	N/A	B976199
Hardness (CaCO3)	mg/L	260	N/A	B976196	320	N/A	0.50	B976196
Ion Balance (% Difference)	%	6.8	N/A	B976161	4.3	N/A	N/A	B976161
Nitrate (N)	mg/L	0.46	N/A	B976206	0.084	N/A	0.040	B976206
Nitrate (NO3)	mg/L	2.1	N/A	B976200	0.37	N/A	0.18	B976200
Nitrite (NO2)	mg/L	<0.13	N/A	B976200	<0.13	N/A	0.13	B976200
Calculated Total Dissolved Solids	mg/L	320	N/A	B976209	390	N/A	10	B976209
Elements								
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	B976208	<0.020	N/A	0.020	B976208
Misc. Inorganics								
Conductivity	uS/cm	550	+/- 15	B981672	660	+/- 18	2.0	B981672
pH	pH	7.78	+/- 0.0771	B981671	7.75	+/- 0.0768	N/A	B981671
Anions								
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	B981667	<1.0	N/A	1.0	B981667
Alkalinity (Total as CaCO3)	mg/L	230	+/- 17	B981667	260	+/- 20	1.0	B981667
Bicarbonate (HCO3)	mg/L	280	+/- 4.4	B981667	320	+/- 5.1	1.0	B981667
Carbonate (CO3)	mg/L	<1.0	N/A	B981667	<1.0	N/A	1.0	B981667
Hydroxide (OH)	mg/L	<1.0	N/A	B981667	<1.0	N/A	1.0	B981667
Chloride (Cl)	mg/L	7.7	+/- 1.3	B981182	7.6	+/- 1.3	1.0	B979593
Sulphate (SO4)	mg/L	72	+/- 4.9	B981182	95	+/- 6.3	1.0	B979593
Nutrients								
Nitrite (N)	mg/L	<0.040	N/A	B979596	<0.040	N/A	0.040	B979596
Nitrate plus Nitrite (N)	mg/L	0.46	+/- 0.045	B979596	0.084	+/- <RDL	0.040	B979596
Elements								
Dissolved Aluminum (Al)	mg/L	0.0031	+/- <RDL	B980544	<0.0030	N/A	0.0030	B980510
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	B980544	<0.00060	N/A	0.00060	B980510
Dissolved Arsenic (As)	mg/L	<0.00020	N/A	B980544	<0.00020	N/A	0.00020	B980510
Dissolved Barium (Ba)	mg/L	0.11	+/- 0.010	B980955	0.065	+/- <RDL	0.010	B980955
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	B980544	<0.0010	N/A	0.0010	B980510

RDL = Reportable Detection Limit
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N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DML534			DML535			
Sampling Date		2025/06/05 10:56			2025/06/05 11:44			
COC Number		1OF1			1OF1			
	UNITS	NE7-R3-01	MU	QC Batch	WS62-01	MU	RDL	QC Batch
Dissolved Boron (B)	mg/L	<0.020	N/A	B980955	<0.020	N/A	0.020	B980955
Dissolved Calcium (Ca)	mg/L	70	+/- 5.7	B980955	89	+/- 7.2	0.30	B980955
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	B980544	<0.0010	N/A	0.0010	B980510
Dissolved Cobalt (Co)	mg/L	<0.00030	N/A	B980544	<0.00030	N/A	0.00030	B980510
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	B980544	0.012	+/- 0.0019	0.0010	B980510
Dissolved Iron (Fe)	mg/L	<0.060	N/A	B980955	<0.060	N/A	0.060	B980955
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	B980544	<0.00020	N/A	0.00020	B980510
Dissolved Lithium (Li)	mg/L	<0.020	N/A	B980955	<0.020	N/A	0.020	B980955
Dissolved Magnesium (Mg)	mg/L	20	+/- 0.95	B980955	25	+/- 1.2	0.20	B980955
Dissolved Manganese (Mn)	mg/L	<0.0040	N/A	B980955	0.0054	+/- <RDL	0.0040	B980955
Dissolved Molybdenum (Mo)	mg/L	0.00064	+/- <RDL	B980544	0.00035	+/- <RDL	0.00020	B980510
Dissolved Nickel (Ni)	mg/L	<0.00050	N/A	B980544	<0.00050	N/A	0.00050	B980510
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	B980955	<0.10	N/A	0.10	B980955
Dissolved Potassium (K)	mg/L	3.1	+/- <RDL	B980955	1.8	+/- <RDL	0.30	B980955
Dissolved Selenium (Se)	mg/L	0.00076	+/- 0.00027	B980544	0.0012	+/- 0.00035	0.00020	B980510
Dissolved Silicon (Si)	mg/L	2.8	+/- <RDL	B980955	3.0	+/- 0.50	0.50	B980955
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	B980544	<0.00010	N/A	0.00010	B980510
Dissolved Sodium (Na)	mg/L	6.4	+/- 0.68	B980955	7.9	+/- 0.82	0.50	B980955
Dissolved Strontium (Sr)	mg/L	0.37	+/- 0.033	B980955	0.48	+/- 0.043	0.020	B980955
Dissolved Sulphur (S)	mg/L	25	+/- 2.1	B980955	34	+/- 2.9	0.20	B980955
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	B980544	<0.00020	N/A	0.00020	B980510
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	B980544	<0.0010	N/A	0.0010	B980510
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	B980544	<0.0010	N/A	0.0010	B980510
Dissolved Uranium (U)	mg/L	0.00060	+/- 0.00022	B980544	0.00080	+/- 0.00024	0.00010	B980510
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	B980544	<0.0010	N/A	0.0010	B980510
Dissolved Zinc (Zn)	mg/L	0.0055	+/- <RDL	B980544	0.0095	+/- <RDL	0.0030	B980510

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C551520
Report Date: 2025/06/13

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

TOTAL KJELDAHL NITROGEN (TOTAL)

Bureau Veritas ID		DML530				DML531				DML532			
Sampling Date		2025/06/05 10:08				2025/06/05 13:40				2025/06/05 14:56			
COC Number		1OF1				1OF1				1OF1			
	UNITS	RMW16-13-37	MU	RDL	QC Batch	MW16-11-15	MU	RDL	QC Batch	MW16-10-15	MU	RDL	QC Batch
Calculated Parameters													
Total Kjeldahl Nitrogen (Calc)	mg/L	<2.0	N/A	2.0	B976098	0.91	N/A	0.20	B976098	<2.0	N/A	2.0	B976098
Nutrients													
Total Nitrogen (N)	mg/L	<2.0 (1)	N/A	2.0	B981509	0.91 (2)	+/- <RDL	0.20	B980878	<2.0 (3)	N/A	2.0	B981509

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly. Nitrogen < Ammonia: Both values fall within the method uncertainty for duplicates and are likely equivalent. Nitrogen < Nitrate: Both values fall within the method uncertainty for duplicates and are likely equivalent.
(2) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.
(3) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly. Nitrogen < Ammonia: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Bureau Veritas ID		DML533			DML534		DML535			
Sampling Date		2025/06/05 16:20			2025/06/05 10:56		2025/06/05 11:44			
COC Number		1OF1			1OF1		1OF1			
	UNITS	MW16-22-26	MU	RDL	NE7-R3-01	MU	WS62-01	MU	RDL	QC Batch
Calculated Parameters										
Total Kjeldahl Nitrogen (Calc)	mg/L	0.74	N/A	0.20	0.052	N/A	0.069	N/A	0.040	B976098
Nutrients										
Total Nitrogen (N)	mg/L	0.78 (1)	+/- <RDL	0.20	0.52	+/- 0.067	0.15	+/- 0.027	0.020	B980878

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Bureau Veritas ID		DML535			
Sampling Date		2025/06/05 11:44			
COC Number		1OF1			
	UNITS	WS62-01 Lab-Dup	MU	RDL	QC Batch
Nutrients					
Total Nitrogen (N)	mg/L	0.15	+/- 0.027	0.020	B980878

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C551520
Report Date: 2025/06/13

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DML530		DML530			
Sampling Date		2025/06/05 10:08		2025/06/05 10:08			
COC Number		1OF1		1OF1			
	UNITS	RMW16-13-37	MU	RMW16-13-37 Lab-Dup	MU	RDL	QC Batch
Misc. Inorganics							
Dissolved Organic Carbon (C)	mg/L	3.5	+/- 0.50	N/A	N/A	0.50	B986049
Microbiological Param.							
E.Coli DST	MPN/100mL	<20 (1)	N/A	N/A	N/A	20	B976677
Fecal Coliforms	MPN/100mL	<20 (1)	N/A	20	N/A	20	B976921
Heterotrophic DST	MPN/100mL	>48000 (2)	N/A	>48000	N/A	20	B976676
Total Coliforms DST	MPN/100mL	330 (1)	N/A	N/A	N/A	20	B976677
Nutrients							
Total Ammonia (N)	mg/L	0.98	+/- 0.11	N/A	N/A	0.015	B981933
Dissolved Phosphorus (P)	mg/L	0.030	+/- 0.0055	N/A	N/A	0.0030	B980906
Total Phosphorus (P)	mg/L	2.4	+/- 0.31	N/A	N/A	0.060	B982744

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Detection limit raised due to matrix interference.
(2) Detection limits raised due to matrix interference.

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C551520
Report Date: 2025/06/13

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DML531				DML532			
Sampling Date		2025/06/05 13:40				2025/06/05 14:56			
COC Number		1OF1				1OF1			
	UNITS	MW16-11-15	MU	RDL	QC Batch	MW16-10-15	MU	RDL	QC Batch
Misc. Inorganics									
Dissolved Organic Carbon (C)	mg/L	2.9	+/- <RDL	0.50	B986049	1.8	+/- <RDL	0.50	B986049
Microbiological Param.									
E.Coli DST	MPN/100mL	<20 (1)	N/A	20	B976677	<20 (1)	N/A	20	B976677
Fecal Coliforms	MPN/100mL	<20 (1)	N/A	20	B976921	<20 (1)	N/A	20	B976921
Heterotrophic DST	MPN/100mL	48000 (1)	N/A	20	B976676	>48000 (2)	N/A	20	B976676
Total Coliforms DST	MPN/100mL	<20 (1)	N/A	20	B976677	<20 (1)	N/A	20	B976677
Nutrients									
Total Ammonia (N)	mg/L	0.49	+/- 0.055	0.015	B981943	0.41	+/- 0.046	0.015	B981933
Dissolved Phosphorus (P)	mg/L	<0.0030	N/A	0.0030	B980906	<0.0030	N/A	0.0030	B980906
Total Phosphorus (P)	mg/L	1.8	+/- 0.23	0.030	B982302	2.7	+/- 0.34	0.30	B982304

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Detection limit raised due to matrix interference.
(2) Detection limits raised due to matrix interference.

Bureau Veritas ID		DML533		DML534		DML534			
Sampling Date		2025/06/05 16:20		2025/06/05 10:56		2025/06/05 10:56			
COC Number		1OF1		1OF1		1OF1			
	UNITS	MW16-22-26	MU	NE7-R3-01	MU	NE7-R3-01 Lab-Dup	MU	RDL	QC Batch
Misc. Inorganics									
Dissolved Organic Carbon (C)	mg/L	1.9	+/- <RDL	0.69	+/- <RDL	N/A	N/A	0.50	B986049
Microbiological Param.									
E.Coli DST	MPN/100mL	<1.0	N/A	<1.0	N/A	N/A	N/A	1.0	B976677
Fecal Coliforms	MPN/100mL	<1.0	N/A	<1.0	N/A	N/A	N/A	1.0	B976921
Heterotrophic DST	MPN/100mL	>2400	N/A	730	N/A	N/A	N/A	1.0	B976676
Total Coliforms DST	MPN/100mL	<1.0	N/A	1.0	N/A	N/A	N/A	1.0	B976677
Nutrients									
Total Ammonia (N)	mg/L	0.57	+/- 0.063	<0.015	N/A	<0.015	N/A	0.015	B981943
Dissolved Phosphorus (P)	mg/L	0.0052	+/- 0.0048	<0.0030	N/A	N/A	N/A	0.0030	B982299
Total Phosphorus (P)	mg/L	0.12	+/- 0.017	0.0050	+/- 0.0037	N/A	N/A	0.0030	B982302

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

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Bureau Veritas Job #: C551520
Report Date: 2025/06/13

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DML535		DML535			
Sampling Date		2025/06/05 11:44		2025/06/05 11:44			
COC Number		1OF1		1OF1			
	UNITS	WS62-01	MU	WS62-01 Lab-Dup	MU	RDL	QC Batch
Misc. Inorganics							
Dissolved Organic Carbon (C)	mg/L	1.0	+/- <RDL	N/A	N/A	0.50	B986049
Microbiological Param.							
E.Coli DST	MPN/100mL	<1.0	N/A	N/A	N/A	1.0	B976677
Fecal Coliforms	MPN/100mL	1.0	N/A	N/A	N/A	1.0	B976921
Heterotrophic DST	MPN/100mL	1600	N/A	N/A	N/A	1.0	B976676
Total Coliforms DST	MPN/100mL	<1.0	N/A	N/A	N/A	1.0	B976677
Nutrients							
Total Ammonia (N)	mg/L	<0.015	N/A	<0.015	N/A	0.015	B981933
Dissolved Phosphorus (P)	mg/L	<0.0030	N/A	N/A	N/A	0.0030	B982299
Total Phosphorus (P)	mg/L	<0.0030	N/A	N/A	N/A	0.0030	B982302

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

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Bureau Veritas Job #: C551520
Report Date: 2025/06/13

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		DML530		DML531			DML532			
Sampling Date		2025/06/05 10:08		2025/06/05 13:40			2025/06/05 14:56			
COC Number		1OF1		1OF1			1OF1			
	UNITS	RMW16-13-37	MU	MW16-11-15	MU	RDL	MW16-10-15	MU	RDL	QC Batch
Elements										
Dissolved Mercury (Hg)	ug/L	<0.0019	N/A	<0.0019	N/A	0.0019	<0.0019	N/A	0.0019	B985193
Total Mercury (Hg)	ug/L	0.224 (1)	+/- 0.038	0.233 (1)	+/- 0.040	0.019	0.210 (1)	+/- 0.0359	0.0095	B985290

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Bureau Veritas ID		DML533			DML534		DML534		DML535			
Sampling Date		2025/06/05 16:20			2025/06/05 10:56		2025/06/05 10:56		2025/06/05 11:44			
COC Number		1OF1			1OF1		1OF1		1OF1			
	UNITS	MW16-22-26	MU	QC Batch	NE7-R3-01	MU	NE7-R3-01 Lab-Dup	MU	WS62-01	MU	RDL	QC Batch
Elements												
Dissolved Mercury (Hg)	ug/L	<0.0019	N/A	B985193	<0.0019	N/A	N/A	N/A	<0.0019	N/A	0.0019	B985293
Total Mercury (Hg)	ug/L	0.0050	+/- 0.0020	B985290	<0.0019	N/A	<0.0019	N/A	<0.0019	N/A	0.0019	B985290

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas ID		DML535			
Sampling Date		2025/06/05 11:44			
COC Number		1OF1			
	UNITS	WS62-01 Lab-Dup	MU	RDL	QC Batch
Elements					
Dissolved Mercury (Hg)	ug/L	<0.0019	N/A	0.0019	B985293

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	9.3°C

Sample DML530 [RMW16-13-37] : NO2 (N); NO2 (N) + NO3 (N) in Water completed within five days of sampling. Data is satisfactory for compliance purposes.

Sample DML531 [MW16-11-15] : NO2 (N); NO2 (N) + NO3 (N) in Water completed within five days of sampling. Data is satisfactory for compliance purposes.

Sample DML532 [MW16-10-15] : NO2 (N); NO2 (N) + NO3 (N) in Water completed within five days of sampling. Data is satisfactory for compliance purposes.

Sample DML533 [MW16-22-26] : NO2 (N); NO2 (N) + NO3 (N) in Water completed within five days of sampling. Data is satisfactory for compliance purposes.

Sample DML534 [NE7-R3-01] : NO2 (N); NO2 (N) + NO3 (N) in Water completed within five days of sampling. Data is satisfactory for compliance purposes.

Sample DML535 [WS62-01] : NO2 (N); NO2 (N) + NO3 (N) in Water completed within five days of sampling. Data is satisfactory for compliance purposes.

The estimate of uncertainty has been reported as an expanded uncertainty and calculated using a coverage factor of 2, which gives a level of confidence of 95%.

Results relate only to the items tested.

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B976084	RRA	Spiked Blank	O-TERPHENYL (sur.)	2025/06/09		84	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2025/06/09		94	%	60 - 140
B976084	RRA	Method Blank	O-TERPHENYL (sur.)	2025/06/09		87	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2025/06/09	<0.10		mg/L	
B976676	R4S	Method Blank	Heterotrophic DST	2025/06/08	<1.0		mpn/100mL	
B976676	R4S	RPD [DML530-07]	Heterotrophic DST	2025/06/08	NC		%	N/A
B976677	R4S	Method Blank	E.Coli DST	2025/06/07	<1.0		mpn/100mL	
			Total Coliforms DST	2025/06/07	<1.0		mpn/100mL	
B976677	R4S	RPD	E.Coli DST	2025/06/07	46		%	N/A
			Total Coliforms DST	2025/06/07	29		%	N/A
B976921	R4S	Method Blank	Fecal Coliforms	2025/06/07	<1.0		MPN/100mL	
B976921	R4S	RPD [DML530-07]	Fecal Coliforms	2025/06/07	0		%	N/A
B977331	RIL	Matrix Spike	1,4-Difluorobenzene (sur.)	2025/06/11		98	%	50 - 140
			4-Bromofluorobenzene (sur.)	2025/06/11		100	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2025/06/11		134	%	50 - 140
			Benzene	2025/06/11		117	%	50 - 140
			Toluene	2025/06/11		97	%	50 - 140
			Ethylbenzene	2025/06/11		100	%	50 - 140
			m & p-Xylene	2025/06/11		89	%	50 - 140
			o-Xylene	2025/06/11		98	%	50 - 140
			F1 (C6-C10)	2025/06/11		110	%	60 - 140
B977331	RIL	Spiked Blank	1,4-Difluorobenzene (sur.)	2025/06/11		97	%	50 - 140
			4-Bromofluorobenzene (sur.)	2025/06/11		103	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2025/06/11		115	%	50 - 140
			Benzene	2025/06/11		114	%	60 - 130
			Toluene	2025/06/11		100	%	60 - 130
			Ethylbenzene	2025/06/11		107	%	60 - 130
			m & p-Xylene	2025/06/11		97	%	60 - 130
			o-Xylene	2025/06/11		103	%	60 - 130
			F1 (C6-C10)	2025/06/11		118	%	60 - 140
B977331	RIL	Method Blank	1,4-Difluorobenzene (sur.)	2025/06/11		108	%	50 - 140
			4-Bromofluorobenzene (sur.)	2025/06/11		103	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2025/06/11		119	%	50 - 140
			Benzene	2025/06/11	<0.00040		mg/L	
			Toluene	2025/06/11	<0.00040		mg/L	
			Ethylbenzene	2025/06/11	<0.00040		mg/L	
			m & p-Xylene	2025/06/11	<0.00080		mg/L	
			o-Xylene	2025/06/11	<0.00040		mg/L	
			F1 (C6-C10)	2025/06/11	<0.10		mg/L	
B977331	RIL	RPD	Benzene	2025/06/11	NC		%	30
			Toluene	2025/06/11	NC		%	30
			Ethylbenzene	2025/06/11	NC		%	30
			m & p-Xylene	2025/06/11	NC		%	30
			o-Xylene	2025/06/11	NC		%	30
			F1 (C6-C10)	2025/06/11	NC		%	30
B977619	RRA	Spiked Blank	O-TERPHENYL (sur.)	2025/06/09		97	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2025/06/09		101	%	60 - 140
B977619	RRA	Method Blank	O-TERPHENYL (sur.)	2025/06/10		91	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2025/06/10	<0.10		mg/L	
B979593	TOR	Matrix Spike	Chloride (Cl)	2025/06/09		102	%	80 - 120
			Sulphate (SO4)	2025/06/09		NC	%	80 - 120
B979593	TOR	Spiked Blank	Chloride (Cl)	2025/06/09		102	%	80 - 120
			Sulphate (SO4)	2025/06/09		102	%	80 - 120

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B979593	TOR	Method Blank	Chloride (Cl)	2025/06/09	<1.0		mg/L	
			Sulphate (SO4)	2025/06/09	<1.0		mg/L	
B979593	TOR	RPD	Chloride (Cl)	2025/06/09	0.86		%	20
			Sulphate (SO4)	2025/06/09	0.34		%	20
B979596	AFI	Matrix Spike	Nitrite (N)	2025/06/09		97	%	80 - 120
			Nitrate plus Nitrite (N)	2025/06/09		85	%	80 - 120
B979596	AFI	Spiked Blank	Nitrite (N)	2025/06/09		105	%	80 - 120
			Nitrate plus Nitrite (N)	2025/06/09		98	%	80 - 120
B979596	AFI	Method Blank	Nitrite (N)	2025/06/09	<0.040		mg/L	
			Nitrate plus Nitrite (N)	2025/06/09	<0.040		mg/L	
B979596	AFI	RPD	Nitrite (N)	2025/06/09	NC		%	20
			Nitrate plus Nitrite (N)	2025/06/09	NC		%	20
B980510	KH2	Matrix Spike	Dissolved Aluminum (Al)	2025/06/10		101	%	80 - 120
			Dissolved Antimony (Sb)	2025/06/10		106	%	80 - 120
			Dissolved Arsenic (As)	2025/06/10		105	%	80 - 120
			Dissolved Beryllium (Be)	2025/06/10		105	%	80 - 120
			Dissolved Chromium (Cr)	2025/06/10		NC	%	80 - 120
			Dissolved Cobalt (Co)	2025/06/10		97	%	80 - 120
			Dissolved Copper (Cu)	2025/06/10		94	%	80 - 120
			Dissolved Lead (Pb)	2025/06/10		97	%	80 - 120
			Dissolved Molybdenum (Mo)	2025/06/10		114	%	80 - 120
			Dissolved Nickel (Ni)	2025/06/10		94	%	80 - 120
			Dissolved Selenium (Se)	2025/06/10		103	%	80 - 120
			Dissolved Silver (Ag)	2025/06/10		97	%	80 - 120
			Dissolved Thallium (Tl)	2025/06/10		101	%	80 - 120
			Dissolved Tin (Sn)	2025/06/10		104	%	80 - 120
			Dissolved Titanium (Ti)	2025/06/10		103	%	80 - 120
			Dissolved Uranium (U)	2025/06/10		91	%	80 - 120
			Dissolved Vanadium (V)	2025/06/10		104	%	80 - 120
			Dissolved Zinc (Zn)	2025/06/10		94	%	80 - 120
B980510	KH2	Spiked Blank	Dissolved Aluminum (Al)	2025/06/10		101	%	80 - 120
			Dissolved Antimony (Sb)	2025/06/10		104	%	80 - 120
			Dissolved Arsenic (As)	2025/06/10		104	%	80 - 120
			Dissolved Beryllium (Be)	2025/06/10		105	%	80 - 120
			Dissolved Chromium (Cr)	2025/06/10		99	%	80 - 120
			Dissolved Cobalt (Co)	2025/06/10		99	%	80 - 120
			Dissolved Copper (Cu)	2025/06/10		99	%	80 - 120
			Dissolved Lead (Pb)	2025/06/10		96	%	80 - 120
			Dissolved Molybdenum (Mo)	2025/06/10		102	%	80 - 120
			Dissolved Nickel (Ni)	2025/06/10		98	%	80 - 120
			Dissolved Selenium (Se)	2025/06/10		108	%	80 - 120
			Dissolved Silver (Ag)	2025/06/10		97	%	80 - 120
			Dissolved Thallium (Tl)	2025/06/10		100	%	80 - 120
			Dissolved Tin (Sn)	2025/06/10		103	%	80 - 120
			Dissolved Titanium (Ti)	2025/06/10		99	%	80 - 120
			Dissolved Uranium (U)	2025/06/10		87	%	80 - 120
			Dissolved Vanadium (V)	2025/06/10		100	%	80 - 120
			Dissolved Zinc (Zn)	2025/06/10		98	%	80 - 120
B980510	KH2	Method Blank	Dissolved Aluminum (Al)	2025/06/10	<0.0030		mg/L	
			Dissolved Antimony (Sb)	2025/06/10	<0.00060		mg/L	
			Dissolved Arsenic (As)	2025/06/10	<0.00020		mg/L	
			Dissolved Beryllium (Be)	2025/06/10	<0.0010		mg/L	
			Dissolved Chromium (Cr)	2025/06/10	<0.0010		mg/L	

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			Dissolved Cobalt (Co)	2025/06/10	<0.00030		mg/L	
			Dissolved Copper (Cu)	2025/06/10	<0.0010		mg/L	
			Dissolved Lead (Pb)	2025/06/10	<0.00020		mg/L	
			Dissolved Molybdenum (Mo)	2025/06/10	<0.00020		mg/L	
			Dissolved Nickel (Ni)	2025/06/10	<0.00050		mg/L	
			Dissolved Selenium (Se)	2025/06/10	<0.00020		mg/L	
			Dissolved Silver (Ag)	2025/06/10	<0.00010		mg/L	
			Dissolved Thallium (Tl)	2025/06/10	<0.00020		mg/L	
			Dissolved Tin (Sn)	2025/06/10	<0.0010		mg/L	
			Dissolved Titanium (Ti)	2025/06/10	<0.0010		mg/L	
			Dissolved Uranium (U)	2025/06/10	<0.00010		mg/L	
			Dissolved Vanadium (V)	2025/06/10	<0.0010		mg/L	
			Dissolved Zinc (Zn)	2025/06/10	<0.0030		mg/L	
B980510	KH2	RPD	Dissolved Aluminum (Al)	2025/06/10	NC		%	20
			Dissolved Antimony (Sb)	2025/06/10	NC		%	20
			Dissolved Arsenic (As)	2025/06/10	2.5		%	20
			Dissolved Beryllium (Be)	2025/06/10	NC		%	20
			Dissolved Chromium (Cr)	2025/06/10	0.85		%	20
			Dissolved Cobalt (Co)	2025/06/10	NC		%	20
			Dissolved Copper (Cu)	2025/06/10	1.6		%	20
			Dissolved Lead (Pb)	2025/06/10	NC		%	20
			Dissolved Molybdenum (Mo)	2025/06/10	1.8		%	20
			Dissolved Nickel (Ni)	2025/06/10	5.5		%	20
			Dissolved Selenium (Se)	2025/06/10	1.4		%	20
			Dissolved Silver (Ag)	2025/06/10	NC		%	20
			Dissolved Thallium (Tl)	2025/06/10	NC		%	20
			Dissolved Tin (Sn)	2025/06/10	1.1		%	20
			Dissolved Titanium (Ti)	2025/06/10	NC		%	20
			Dissolved Uranium (U)	2025/06/10	1.2		%	20
			Dissolved Vanadium (V)	2025/06/10	3.4		%	20
			Dissolved Zinc (Zn)	2025/06/10	NC		%	20
B980544	YHK	Matrix Spike	Dissolved Aluminum (Al)	2025/06/11		91	%	80 - 120
			Dissolved Antimony (Sb)	2025/06/11		100	%	80 - 120
			Dissolved Arsenic (As)	2025/06/11		100	%	80 - 120
			Dissolved Beryllium (Be)	2025/06/11		91	%	80 - 120
			Dissolved Chromium (Cr)	2025/06/11		92	%	80 - 120
			Dissolved Cobalt (Co)	2025/06/11		92	%	80 - 120
			Dissolved Copper (Cu)	2025/06/11		92	%	80 - 120
			Dissolved Lead (Pb)	2025/06/11		92	%	80 - 120
			Dissolved Molybdenum (Mo)	2025/06/11		100	%	80 - 120
			Dissolved Nickel (Ni)	2025/06/11		92	%	80 - 120
			Dissolved Selenium (Se)	2025/06/11		102	%	80 - 120
			Dissolved Silver (Ag)	2025/06/11		96	%	80 - 120
			Dissolved Thallium (Tl)	2025/06/11		97	%	80 - 120
			Dissolved Tin (Sn)	2025/06/11		98	%	80 - 120
			Dissolved Titanium (Ti)	2025/06/11		98	%	80 - 120
			Dissolved Uranium (U)	2025/06/11		85	%	80 - 120
			Dissolved Vanadium (V)	2025/06/11		93	%	80 - 120
			Dissolved Zinc (Zn)	2025/06/11		94	%	80 - 120
B980544	YHK	Spiked Blank	Dissolved Aluminum (Al)	2025/06/11		91	%	80 - 120
			Dissolved Antimony (Sb)	2025/06/11		100	%	80 - 120
			Dissolved Arsenic (As)	2025/06/11		99	%	80 - 120
			Dissolved Beryllium (Be)	2025/06/11		87	%	80 - 120

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			Dissolved Chromium (Cr)	2025/06/11		91	%	80 - 120
			Dissolved Cobalt (Co)	2025/06/11		92	%	80 - 120
			Dissolved Copper (Cu)	2025/06/11		93	%	80 - 120
			Dissolved Lead (Pb)	2025/06/11		92	%	80 - 120
			Dissolved Molybdenum (Mo)	2025/06/11		97	%	80 - 120
			Dissolved Nickel (Ni)	2025/06/11		93	%	80 - 120
			Dissolved Selenium (Se)	2025/06/11		101	%	80 - 120
			Dissolved Silver (Ag)	2025/06/11		96	%	80 - 120
			Dissolved Thallium (Tl)	2025/06/11		96	%	80 - 120
			Dissolved Tin (Sn)	2025/06/11		98	%	80 - 120
			Dissolved Titanium (Ti)	2025/06/11		93	%	80 - 120
			Dissolved Uranium (U)	2025/06/11		84	%	80 - 120
			Dissolved Vanadium (V)	2025/06/11		91	%	80 - 120
			Dissolved Zinc (Zn)	2025/06/11		94	%	80 - 120
B980544	YHK	Method Blank	Dissolved Aluminum (Al)	2025/06/11	<0.0030		mg/L	
			Dissolved Antimony (Sb)	2025/06/11	<0.00060		mg/L	
			Dissolved Arsenic (As)	2025/06/11	<0.00020		mg/L	
			Dissolved Beryllium (Be)	2025/06/11	<0.0010		mg/L	
			Dissolved Chromium (Cr)	2025/06/11	<0.0010		mg/L	
			Dissolved Cobalt (Co)	2025/06/11	<0.00030		mg/L	
			Dissolved Copper (Cu)	2025/06/11	<0.0010		mg/L	
			Dissolved Lead (Pb)	2025/06/11	<0.00020		mg/L	
			Dissolved Molybdenum (Mo)	2025/06/11	<0.00020		mg/L	
			Dissolved Nickel (Ni)	2025/06/11	<0.00050		mg/L	
			Dissolved Selenium (Se)	2025/06/11	<0.00020		mg/L	
			Dissolved Silver (Ag)	2025/06/11	<0.00010		mg/L	
			Dissolved Thallium (Tl)	2025/06/11	<0.00020		mg/L	
			Dissolved Tin (Sn)	2025/06/11	<0.0010		mg/L	
			Dissolved Titanium (Ti)	2025/06/11	<0.0010		mg/L	
			Dissolved Uranium (U)	2025/06/11	<0.00010		mg/L	
			Dissolved Vanadium (V)	2025/06/11	<0.0010		mg/L	
			Dissolved Zinc (Zn)	2025/06/11	<0.0030		mg/L	
B980544	YHK	RPD	Dissolved Arsenic (As)	2025/06/11	NC		%	20
			Dissolved Chromium (Cr)	2025/06/11	NC		%	20
			Dissolved Copper (Cu)	2025/06/11	NC		%	20
B980878	YL7	Matrix Spike [DML535-06]	Total Nitrogen (N)	2025/06/11		114	%	80 - 120
B980878	YL7	QC Standard	Total Nitrogen (N)	2025/06/11		110	%	80 - 120
B980878	YL7	Spiked Blank	Total Nitrogen (N)	2025/06/11		104	%	80 - 120
B980878	YL7	Method Blank	Total Nitrogen (N)	2025/06/11	<0.020		mg/L	
B980878	YL7	RPD [DML535-06]	Total Nitrogen (N)	2025/06/11	3.6		%	20
B980906	YL7	Matrix Spike	Dissolved Phosphorus (P)	2025/06/12		103	%	80 - 120
B980906	YL7	QC Standard	Dissolved Phosphorus (P)	2025/06/12		87	%	80 - 120
B980906	YL7	Spiked Blank	Dissolved Phosphorus (P)	2025/06/12		103	%	80 - 120
B980906	YL7	Method Blank	Dissolved Phosphorus (P)	2025/06/12	<0.0030		mg/L	
B980906	YL7	RPD	Dissolved Phosphorus (P)	2025/06/12	NC		%	20
B980928	BYM	Matrix Spike	Dissolved Barium (Ba)	2025/06/10		49 (1)	%	80 - 120
			Dissolved Boron (B)	2025/06/10		96	%	80 - 120
			Dissolved Calcium (Ca)	2025/06/10		NC	%	80 - 120
			Dissolved Iron (Fe)	2025/06/10		110	%	80 - 120
			Dissolved Lithium (Li)	2025/06/10		96	%	80 - 120
			Dissolved Magnesium (Mg)	2025/06/10		99	%	80 - 120
			Dissolved Manganese (Mn)	2025/06/10		106	%	80 - 120

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			Dissolved Phosphorus (P)	2025/06/10		111	%	80 - 120
			Dissolved Potassium (K)	2025/06/10		102	%	80 - 120
			Dissolved Silicon (Si)	2025/06/10		100	%	80 - 120
			Dissolved Sodium (Na)	2025/06/10		NC	%	80 - 120
			Dissolved Strontium (Sr)	2025/06/10		87	%	80 - 120
B980928	BYM	Spiked Blank	Dissolved Barium (Ba)	2025/06/10		105	%	80 - 120
			Dissolved Boron (B)	2025/06/10		100	%	80 - 120
			Dissolved Calcium (Ca)	2025/06/10		105	%	80 - 120
			Dissolved Iron (Fe)	2025/06/10		106	%	80 - 120
			Dissolved Lithium (Li)	2025/06/10		104	%	80 - 120
			Dissolved Magnesium (Mg)	2025/06/10		107	%	80 - 120
			Dissolved Manganese (Mn)	2025/06/10		101	%	80 - 120
			Dissolved Phosphorus (P)	2025/06/10		105	%	80 - 120
			Dissolved Potassium (K)	2025/06/10		104	%	80 - 120
			Dissolved Silicon (Si)	2025/06/10		99	%	80 - 120
			Dissolved Sodium (Na)	2025/06/10		105	%	80 - 120
			Dissolved Strontium (Sr)	2025/06/10		101	%	80 - 120
			Dissolved Sulphur (S)	2025/06/10		103	%	80 - 120
B980928	BYM	Method Blank	Dissolved Barium (Ba)	2025/06/10	<0.010		mg/L	
			Dissolved Boron (B)	2025/06/10	<0.020		mg/L	
			Dissolved Calcium (Ca)	2025/06/10	<0.30		mg/L	
			Dissolved Iron (Fe)	2025/06/10	<0.060		mg/L	
			Dissolved Lithium (Li)	2025/06/10	<0.020		mg/L	
			Dissolved Magnesium (Mg)	2025/06/10	<0.20		mg/L	
			Dissolved Manganese (Mn)	2025/06/10	<0.0040		mg/L	
			Dissolved Phosphorus (P)	2025/06/10	<0.10		mg/L	
			Dissolved Potassium (K)	2025/06/10	<0.30		mg/L	
			Dissolved Silicon (Si)	2025/06/10	<0.50		mg/L	
			Dissolved Sodium (Na)	2025/06/10	<0.50		mg/L	
			Dissolved Strontium (Sr)	2025/06/10	<0.020		mg/L	
			Dissolved Sulphur (S)	2025/06/10	<0.20		mg/L	
B980928	BYM	RPD	Dissolved Calcium (Ca)	2025/06/11	0.23		%	20
			Dissolved Iron (Fe)	2025/06/11	NC		%	20
			Dissolved Magnesium (Mg)	2025/06/11	1.1		%	20
			Dissolved Manganese (Mn)	2025/06/11	2.0		%	20
			Dissolved Potassium (K)	2025/06/11	0.048		%	20
			Dissolved Sodium (Na)	2025/06/11	0.75		%	20
B980955	BYM	Matrix Spike	Dissolved Barium (Ba)	2025/06/12		97	%	80 - 120
			Dissolved Boron (B)	2025/06/12		98	%	80 - 120
			Dissolved Calcium (Ca)	2025/06/12		NC	%	80 - 120
			Dissolved Iron (Fe)	2025/06/12		112	%	80 - 120
			Dissolved Lithium (Li)	2025/06/12		92	%	80 - 120
			Dissolved Magnesium (Mg)	2025/06/12		NC	%	80 - 120
			Dissolved Manganese (Mn)	2025/06/12		110	%	80 - 120
			Dissolved Phosphorus (P)	2025/06/12		105	%	80 - 120
			Dissolved Potassium (K)	2025/06/12		96	%	80 - 120
			Dissolved Silicon (Si)	2025/06/12		100	%	80 - 120
			Dissolved Sodium (Na)	2025/06/12		NC	%	80 - 120
			Dissolved Strontium (Sr)	2025/06/12		89	%	80 - 120
			Dissolved Sulphur (S)	2025/06/12		NC	%	80 - 120
B980955	BYM	Spiked Blank	Dissolved Barium (Ba)	2025/06/11		103	%	80 - 120
			Dissolved Boron (B)	2025/06/11		98	%	80 - 120
			Dissolved Calcium (Ca)	2025/06/11		95	%	80 - 120

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			Dissolved Iron (Fe)	2025/06/11		113	%	80 - 120
			Dissolved Lithium (Li)	2025/06/11		93	%	80 - 120
			Dissolved Magnesium (Mg)	2025/06/11		103	%	80 - 120
			Dissolved Manganese (Mn)	2025/06/11		110	%	80 - 120
			Dissolved Phosphorus (P)	2025/06/11		105	%	80 - 120
			Dissolved Potassium (K)	2025/06/11		99	%	80 - 120
			Dissolved Silicon (Si)	2025/06/11		101	%	80 - 120
			Dissolved Sodium (Na)	2025/06/11		96	%	80 - 120
			Dissolved Strontium (Sr)	2025/06/11		100	%	80 - 120
			Dissolved Sulphur (S)	2025/06/11		103	%	80 - 120
B980955	BYM	Method Blank	Dissolved Barium (Ba)	2025/06/11	<0.010		mg/L	
			Dissolved Boron (B)	2025/06/11	<0.020		mg/L	
			Dissolved Calcium (Ca)	2025/06/11	<0.30		mg/L	
			Dissolved Iron (Fe)	2025/06/11	<0.060		mg/L	
			Dissolved Lithium (Li)	2025/06/11	<0.020		mg/L	
			Dissolved Magnesium (Mg)	2025/06/11	<0.20		mg/L	
			Dissolved Manganese (Mn)	2025/06/11	<0.0040		mg/L	
			Dissolved Phosphorus (P)	2025/06/11	<0.10		mg/L	
			Dissolved Potassium (K)	2025/06/11	<0.30		mg/L	
			Dissolved Silicon (Si)	2025/06/11	<0.50		mg/L	
			Dissolved Sodium (Na)	2025/06/11	<0.50		mg/L	
			Dissolved Strontium (Sr)	2025/06/11	<0.020		mg/L	
			Dissolved Sulphur (S)	2025/06/11	<0.20		mg/L	
B980955	BYM	RPD	Dissolved Calcium (Ca)	2025/06/11	1.1		%	20
			Dissolved Iron (Fe)	2025/06/11	3.2		%	20
			Dissolved Magnesium (Mg)	2025/06/11	0.21		%	20
			Dissolved Manganese (Mn)	2025/06/11	0.73		%	20
			Dissolved Potassium (K)	2025/06/11	0.56		%	20
			Dissolved Sodium (Na)	2025/06/11	1.2		%	20
B981182	TOR	Matrix Spike	Chloride (Cl)	2025/06/10		104	%	80 - 120
			Sulphate (SO4)	2025/06/10		98	%	80 - 120
B981182	TOR	Spiked Blank	Chloride (Cl)	2025/06/10		101	%	80 - 120
			Sulphate (SO4)	2025/06/10		101	%	80 - 120
B981182	TOR	Method Blank	Chloride (Cl)	2025/06/10	<1.0		mg/L	
			Sulphate (SO4)	2025/06/10	<1.0		mg/L	
B981182	TOR	RPD	Chloride (Cl)	2025/06/10	0.075		%	20
			Sulphate (SO4)	2025/06/10	0.49		%	20
B981233	VSC	Matrix Spike [DML533-04]	Dissolved Barium (Ba)	2025/06/10		92	%	80 - 120
			Dissolved Boron (B)	2025/06/10		102	%	80 - 120
			Dissolved Calcium (Ca)	2025/06/10		NC	%	80 - 120
			Dissolved Iron (Fe)	2025/06/10		109	%	80 - 120
			Dissolved Lithium (Li)	2025/06/10		97	%	80 - 120
			Dissolved Magnesium (Mg)	2025/06/10		96	%	80 - 120
			Dissolved Manganese (Mn)	2025/06/10		106	%	80 - 120
			Dissolved Phosphorus (P)	2025/06/10		113	%	80 - 120
			Dissolved Potassium (K)	2025/06/10		99	%	80 - 120
			Dissolved Silicon (Si)	2025/06/10		102	%	80 - 120
			Dissolved Sodium (Na)	2025/06/10		NC	%	80 - 120
			Dissolved Strontium (Sr)	2025/06/10		NC	%	80 - 120
			Dissolved Sulphur (S)	2025/06/10		NC	%	80 - 120
B981233	VSC	Spiked Blank	Dissolved Barium (Ba)	2025/06/10		104	%	80 - 120
			Dissolved Boron (B)	2025/06/10		102	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Calcium (Ca)	2025/06/10		104	%	80 - 120
			Dissolved Iron (Fe)	2025/06/10		106	%	80 - 120
			Dissolved Lithium (Li)	2025/06/10		101	%	80 - 120
			Dissolved Magnesium (Mg)	2025/06/10		103	%	80 - 120
			Dissolved Manganese (Mn)	2025/06/10		101	%	80 - 120
			Dissolved Phosphorus (P)	2025/06/10		109	%	80 - 120
			Dissolved Potassium (K)	2025/06/10		102	%	80 - 120
			Dissolved Silicon (Si)	2025/06/10		100	%	80 - 120
			Dissolved Sodium (Na)	2025/06/10		103	%	80 - 120
			Dissolved Strontium (Sr)	2025/06/10		101	%	80 - 120
			Dissolved Sulphur (S)	2025/06/10		106	%	80 - 120
B981233	VSC	Method Blank	Dissolved Barium (Ba)	2025/06/10	<0.010		mg/L	
			Dissolved Boron (B)	2025/06/10	<0.020		mg/L	
			Dissolved Calcium (Ca)	2025/06/10	<0.30		mg/L	
			Dissolved Iron (Fe)	2025/06/10	<0.060		mg/L	
			Dissolved Lithium (Li)	2025/06/10	<0.020		mg/L	
			Dissolved Magnesium (Mg)	2025/06/10	<0.20		mg/L	
			Dissolved Manganese (Mn)	2025/06/10	<0.0040		mg/L	
			Dissolved Phosphorus (P)	2025/06/10	<0.10		mg/L	
			Dissolved Potassium (K)	2025/06/10	<0.30		mg/L	
			Dissolved Silicon (Si)	2025/06/10	<0.50		mg/L	
			Dissolved Sodium (Na)	2025/06/10	<0.50		mg/L	
			Dissolved Strontium (Sr)	2025/06/10	<0.020		mg/L	
			Dissolved Sulphur (S)	2025/06/10	<0.20		mg/L	
B981233	VSC	RPD [DML533-04]	Dissolved Barium (Ba)	2025/06/10	7.2		%	20
			Dissolved Boron (B)	2025/06/10	2.4		%	20
			Dissolved Calcium (Ca)	2025/06/10	1.2		%	20
			Dissolved Iron (Fe)	2025/06/10	8.1		%	20
			Dissolved Lithium (Li)	2025/06/10	4.4		%	20
			Dissolved Magnesium (Mg)	2025/06/10	0.54		%	20
			Dissolved Manganese (Mn)	2025/06/10	0.98		%	20
			Dissolved Phosphorus (P)	2025/06/10	NC		%	20
			Dissolved Potassium (K)	2025/06/10	0.62		%	20
			Dissolved Silicon (Si)	2025/06/10	0.35		%	20
			Dissolved Sodium (Na)	2025/06/10	1.1		%	20
			Dissolved Strontium (Sr)	2025/06/10	0.21		%	20
			Dissolved Sulphur (S)	2025/06/10	0.21		%	20
B981509	YL7	Matrix Spike	Total Nitrogen (N)	2025/06/11		113	%	80 - 120
B981509	YL7	QC Standard	Total Nitrogen (N)	2025/06/11		109	%	80 - 120
B981509	YL7	Spiked Blank	Total Nitrogen (N)	2025/06/11		103	%	80 - 120
B981509	YL7	Method Blank	Total Nitrogen (N)	2025/06/11	<0.020		mg/L	
B981509	YL7	RPD	Total Nitrogen (N)	2025/06/11	14		%	20
B981667	JVM	Spiked Blank	Alkalinity (Total as CaCO3)	2025/06/11		103	%	80 - 120
B981667	JVM	Method Blank	Alkalinity (PP as CaCO3)	2025/06/11	<1.0		mg/L	
			Alkalinity (Total as CaCO3)	2025/06/11	<1.0		mg/L	
			Bicarbonate (HCO3)	2025/06/11	<1.0		mg/L	
			Carbonate (CO3)	2025/06/11	<1.0		mg/L	
			Hydroxide (OH)	2025/06/11	<1.0		mg/L	
B981667	JVM	RPD [DML531-01]	Alkalinity (PP as CaCO3)	2025/06/11	NC		%	20
			Alkalinity (Total as CaCO3)	2025/06/11	5.1		%	20
			Bicarbonate (HCO3)	2025/06/11	5.1		%	20
			Carbonate (CO3)	2025/06/11	NC		%	20
			Hydroxide (OH)	2025/06/11	NC		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B981671	JVM	Spiked Blank	pH	2025/06/11		100	%	97 - 103
B981671	JVM	RPD [DML531-01]	pH	2025/06/11	0.68		%	N/A
B981672	JVM	Spiked Blank	Conductivity	2025/06/11		103	%	90 - 110
B981672	JVM	Method Blank	Conductivity	2025/06/11	<2.0		uS/cm	
B981672	JVM	RPD [DML531-01]	Conductivity	2025/06/11	3.2		%	10
B981933	AFI	Matrix Spike [DML535-10]	Total Ammonia (N)	2025/06/10		106	%	80 - 120
B981933	AFI	Spiked Blank	Total Ammonia (N)	2025/06/10		106	%	80 - 120
B981933	AFI	Method Blank	Total Ammonia (N)	2025/06/10	<0.015		mg/L	
B981933	AFI	RPD [DML535-10]	Total Ammonia (N)	2025/06/10	NC		%	20
B981943	AFI	Matrix Spike [DML534-10]	Total Ammonia (N)	2025/06/10		106	%	80 - 120
B981943	AFI	Spiked Blank	Total Ammonia (N)	2025/06/10		105	%	80 - 120
B981943	AFI	Method Blank	Total Ammonia (N)	2025/06/10	<0.015		mg/L	
B981943	AFI	RPD [DML534-10]	Total Ammonia (N)	2025/06/10	NC		%	20
B982299	YL7	Matrix Spike	Dissolved Phosphorus (P)	2025/06/12		109	%	80 - 120
B982299	YL7	QC Standard	Dissolved Phosphorus (P)	2025/06/12		90	%	80 - 120
B982299	YL7	Spiked Blank	Dissolved Phosphorus (P)	2025/06/12		101	%	80 - 120
B982299	YL7	Method Blank	Dissolved Phosphorus (P)	2025/06/12	<0.0030		mg/L	
B982299	YL7	RPD	Dissolved Phosphorus (P)	2025/06/12	NC		%	20
B982302	HAP	Matrix Spike	Total Phosphorus (P)	2025/06/11		109	%	80 - 120
B982302	HAP	QC Standard	Total Phosphorus (P)	2025/06/11		88	%	80 - 120
B982302	HAP	Spiked Blank	Total Phosphorus (P)	2025/06/11		97	%	80 - 120
B982302	HAP	Method Blank	Total Phosphorus (P)	2025/06/11	<0.0030		mg/L	
B982302	HAP	RPD	Total Phosphorus (P)	2025/06/11	4.8		%	20
B982304	YL7	Matrix Spike	Total Phosphorus (P)	2025/06/12		107	%	80 - 120
B982304	YL7	QC Standard	Total Phosphorus (P)	2025/06/12		88	%	80 - 120
B982304	YL7	Spiked Blank	Total Phosphorus (P)	2025/06/12		100	%	80 - 120
B982304	YL7	Method Blank	Total Phosphorus (P)	2025/06/12	-0.00016		mg/L	
B982304	YL7	RPD	Total Phosphorus (P)	2025/06/12	NC		%	20
B982744	HAP	Matrix Spike	Total Phosphorus (P)	2025/06/12		NC	%	80 - 120
B982744	HAP	QC Standard	Total Phosphorus (P)	2025/06/12		88	%	80 - 120
B982744	HAP	Spiked Blank	Total Phosphorus (P)	2025/06/12		97	%	80 - 120
B982744	HAP	Method Blank	Total Phosphorus (P)	2025/06/12	<0.0030		mg/L	
B982744	HAP	RPD	Total Phosphorus (P)	2025/06/12	11		%	20
B985193	KKM	Matrix Spike	Dissolved Mercury (Hg)	2025/06/12		95	%	80 - 120
B985193	KKM	Spiked Blank	Dissolved Mercury (Hg)	2025/06/12		102	%	80 - 120
B985193	KKM	Method Blank	Dissolved Mercury (Hg)	2025/06/12	<0.0019		ug/L	
B985193	KKM	RPD	Dissolved Mercury (Hg)	2025/06/12	NC		%	20
B985290	KKM	Matrix Spike [DML535-09]	Total Mercury (Hg)	2025/06/12		93	%	80 - 120
B985290	KKM	Spiked Blank	Total Mercury (Hg)	2025/06/12		101	%	80 - 120
B985290	KKM	Method Blank	Total Mercury (Hg)	2025/06/12	<0.0019		ug/L	
B985290	KKM	RPD [DML534-09]	Total Mercury (Hg)	2025/06/12	NC		%	20
B985293	KKM	Matrix Spike [DML534-08]	Dissolved Mercury (Hg)	2025/06/13		93	%	80 - 120
B985293	KKM	Spiked Blank	Dissolved Mercury (Hg)	2025/06/13		100	%	80 - 120
B985293	KKM	Method Blank	Dissolved Mercury (Hg)	2025/06/13	<0.0019		ug/L	
B985293	KKM	RPD [DML535-08]	Dissolved Mercury (Hg)	2025/06/13	NC		%	20
B986049	TJ4	Matrix Spike	Dissolved Organic Carbon (C)	2025/06/13		NC	%	75 - 125
B986049	TJ4	Spiked Blank	Dissolved Organic Carbon (C)	2025/06/13		104	%	80 - 120
B986049	TJ4	Method Blank	Dissolved Organic Carbon (C)	2025/06/13	<0.50		mg/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B986049	TJ4	RPD	Dissolved Organic Carbon (C)	2025/06/13	2.4		%	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Luba Shymushovska, B.Sc., QP, Senior Analyst, Organics

Rahul Suryawanshi, Senior Analyst

Sandy Yuan, M.Sc., QP, Scientific Specialist

Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist

Bureau Veritas Certified by Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

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C551520
2025/06/05 17:55

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CHAIN OF CUSTODY RECORD

ENV COC - 00013v5

Page 1 of 1

MCAL-2025-06-339

Invoice Information	Invoice to (requires report) ☐	Report Information (if differs from invoice)		Project Information	
Company:	Stantec	Company:		Quotation #:	
Contact Name:	Dylan King	Contact Name:		P.O. #/ AFE#:	
Street Address:	#300, 10220 103Ave NW	Street Address:		Project #:	110773396
City:	Edmonton	Prov: AB	Postal Code: T5J0K4	City:	Prov:	Postal Code:	Site #:	
Phone:	780 969 2223	Phone:		Site Location:	SR1
Email:	dylan.king@stantec.com	Email:	EDD@stantec.com	Site Location Province:	AB
Copies:		Copies:	wesley.tsen@stantec.com	Sampled By:	TH/DB

Regulatory Criteria

☑ AT1 ☐ CCME ☐ Drinking Water - Canada ☐ Drinking Water - Manitoba
☐ Saskatchewan ☐ Drinking Water - Alberta ☐ Other _____

SAMPLES MUST BE KEPT COOL (<10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

Regular Turnaround Time (TAT)
☑ 5 to 7 Day ☐ 10 Day

Rush Turnaround Time (TAT) Surcharges apply
☐ Same Day ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ 4 Day
Date Required: YY MM DD

Comments

	Sample Identification	Date Sampled YY	MM	DD	Time (24hr) HH	MM	Matrix	1 FIELD FILTERED	2 FIELD PRESERVED	3 LAB FILTRATION REQUIRED	4 BTEX F1	5 VOCs	6 BTEX F1-F2	7 BTEX F1-F4	8 Routine water	9 Regulated metals - total	10 Regulated metals - dissolved	11 Mercury - total	12 Mercury - dissolved	13 DOC	14 TKN	15 Texture (% sand, silt, clay)	16 Basic class II landfill	17 dis. phosphate	18 ammonia	19 Bacteriological	20 # OF CONTAINERS SUBMITTED	21 HOLD - DO NOT ANALYZE	22
1	RMW16-13-37	25	06	05	10	08	W	X	X				X		X		X	X	X	X	X			X	X	X	11		
2	MW16-11-15				13	40		X	X				X		X		X	X	X	X	X			X	X	X	11		
3	MW16-10-15				14	56		X	X				X		X		X	X	X	X	X			X	X	X	11		
4	MW16-22-26				16	20		X	X				X		X		X	X	X	X	X			X	X	X	11		
5	NE7-R3-01				10	56		X	X				X		X		X	X	X	X	X			X	X	X	11		
6	WS62-01	↓	↓	↓	10	44	↓	X	X				X		X		X	X	X	X	X			X	X	X	11		
7																													
8																													
9																													
10																													
11																													
12																													

*UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS AND CONDITIONS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS OR BY CALLING THE LABORATORY LISTED ABOVE TO OBTAIN A COPY

LAB USE ONLY	Yes	No	°C	1	2	3
Seal present		/				
Seal intact		/				
Cooling media present	/			9	9	10

LAB USE ONLY	Yes	No	°C	1	2	3
Seal present						
Seal intact						
Cooling media present						

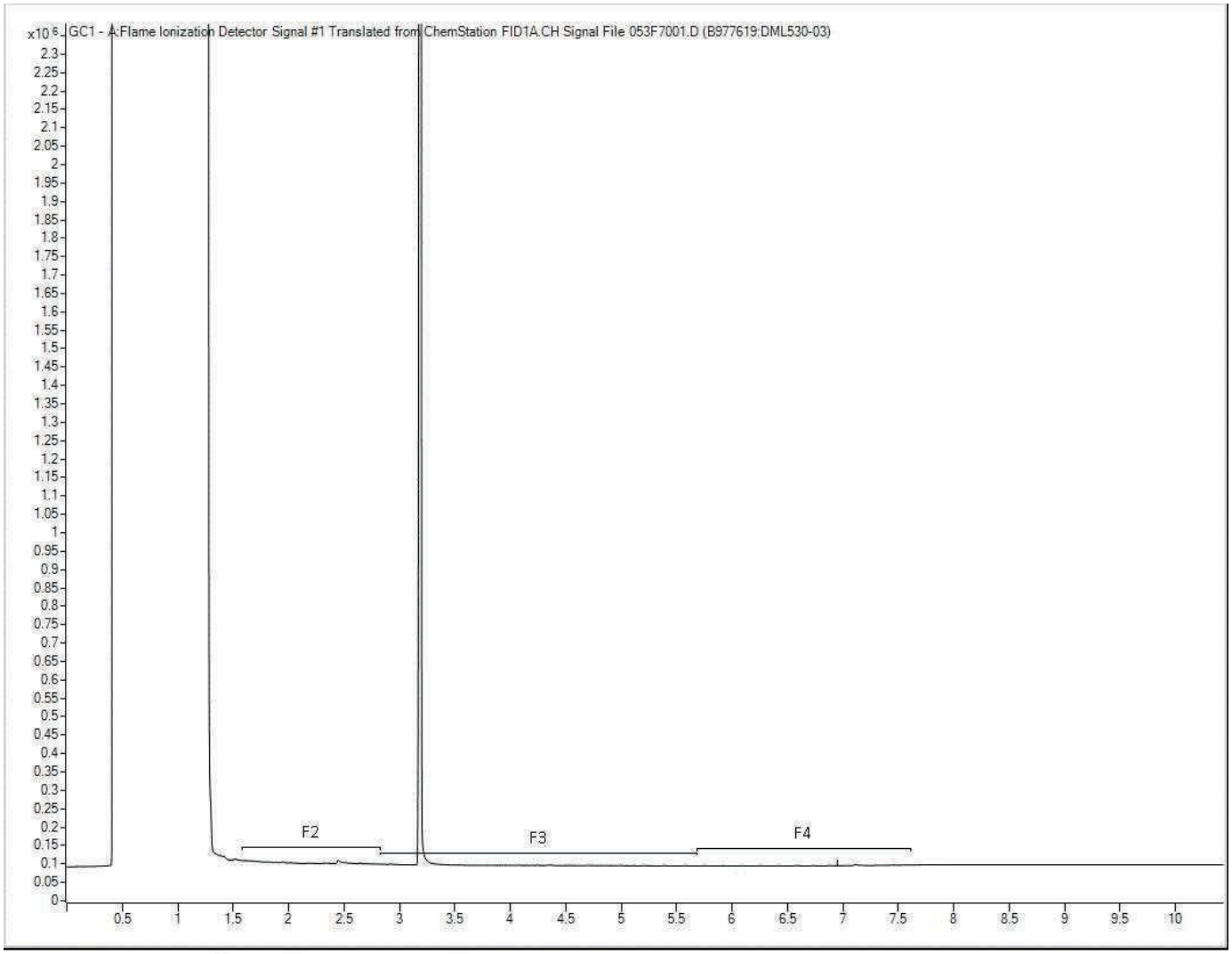
LAB USE ONLY	Yes	No	°C	1	2	3	Temperature reading by:
Seal present							
Seal intact							
Cooling media present							

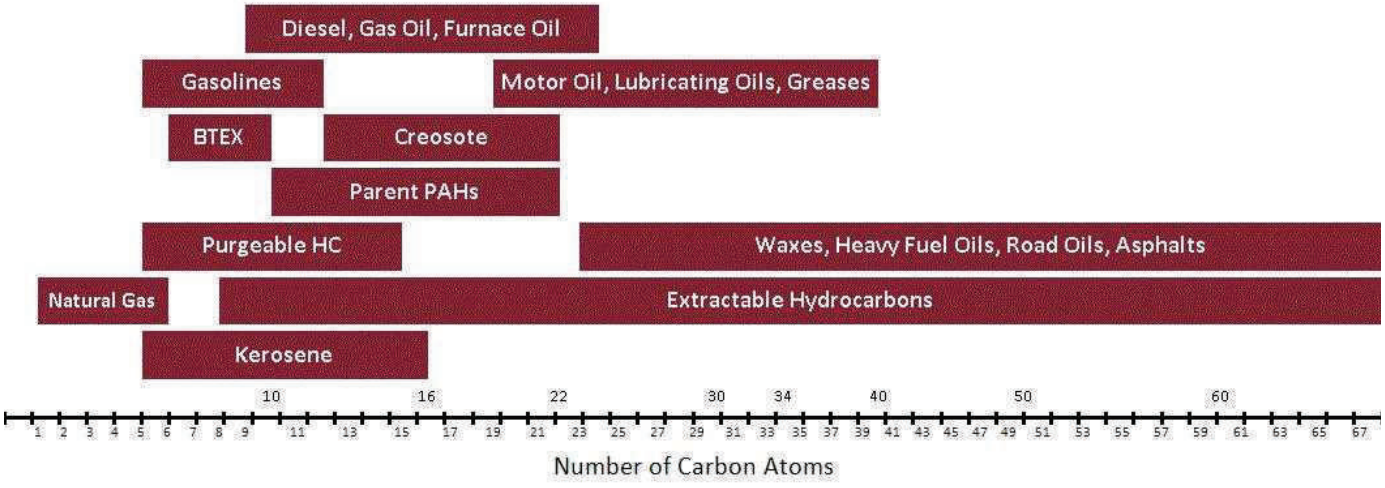
Relinquished by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM	Received by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM	Special instructions
1 Taylor Harms	2025	06	05	17	55	1 Jaskirat Begal JB	2025	06	05	17	55	
2						2						

Bureau Veritas Job #: C551520
Report Date: 2025/06/13
Bureau Veritas Sample: DML530

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Reference: SRI
Client ID: RMW16-13-37

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





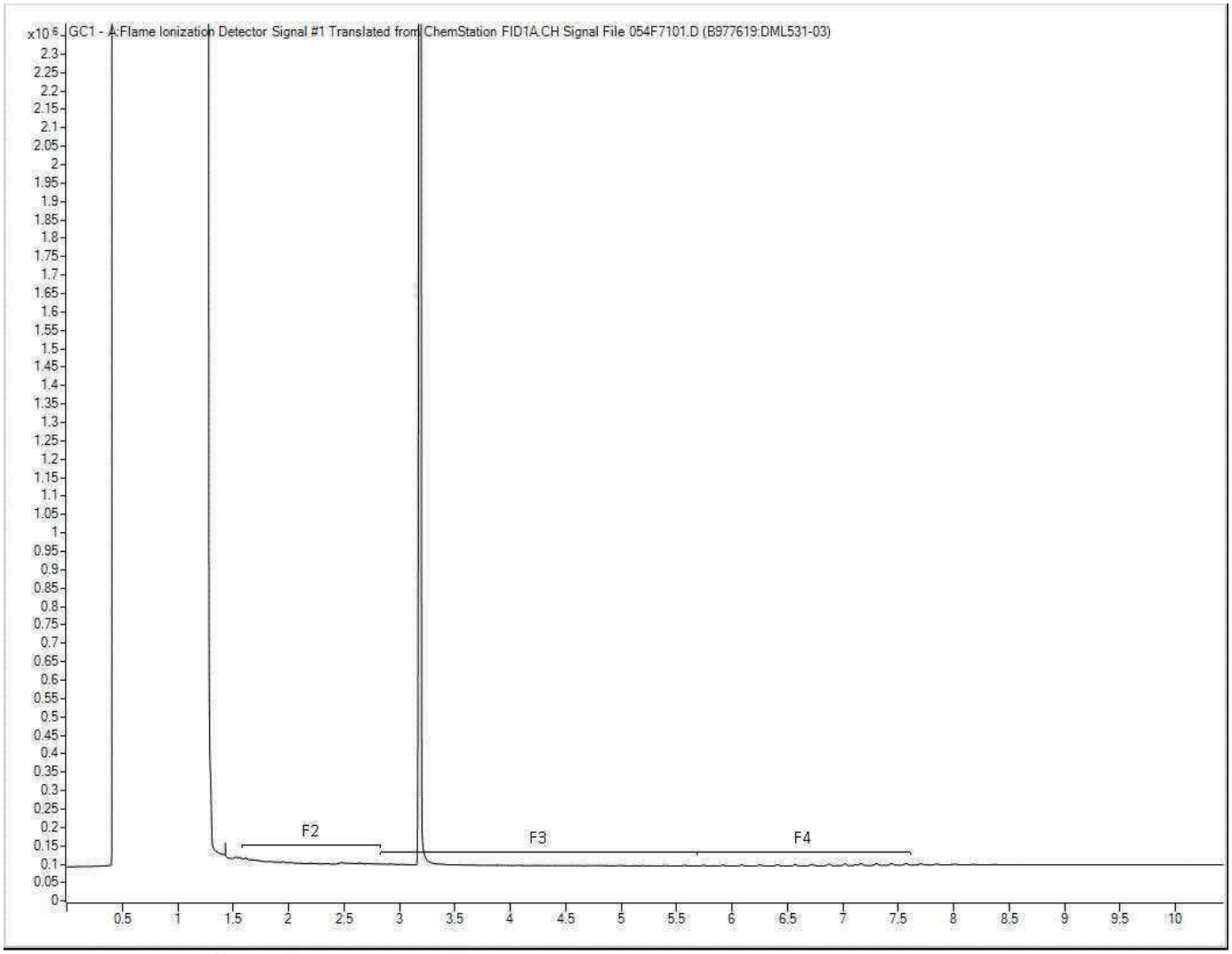
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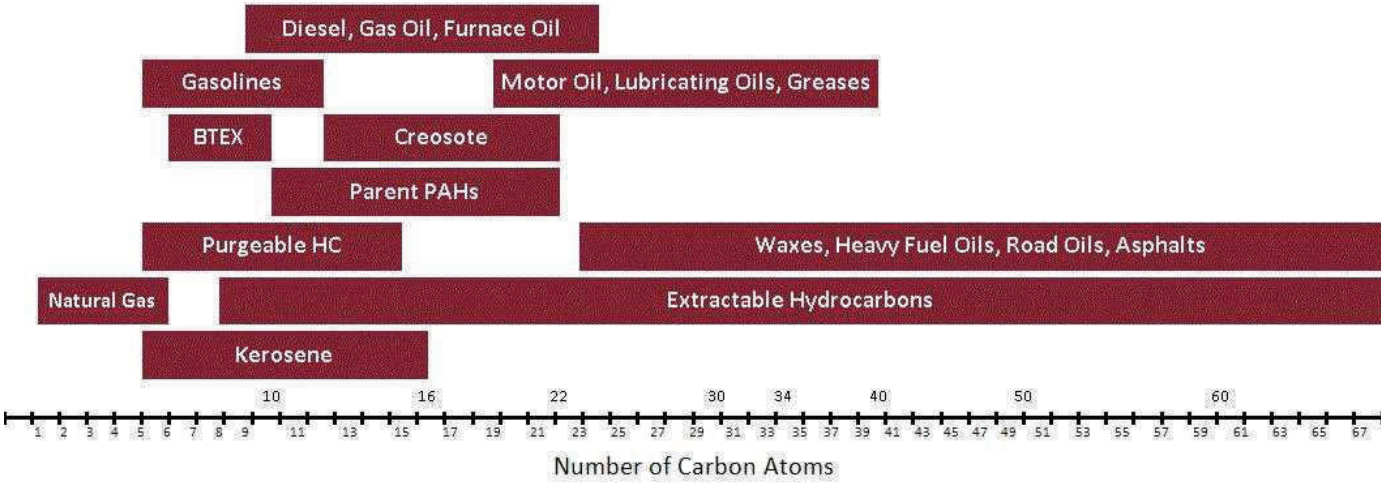
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C551520
Report Date: 2025/06/13
Bureau Veritas Sample: DML531

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Reference: SRI
Client ID: MW16-11-15

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





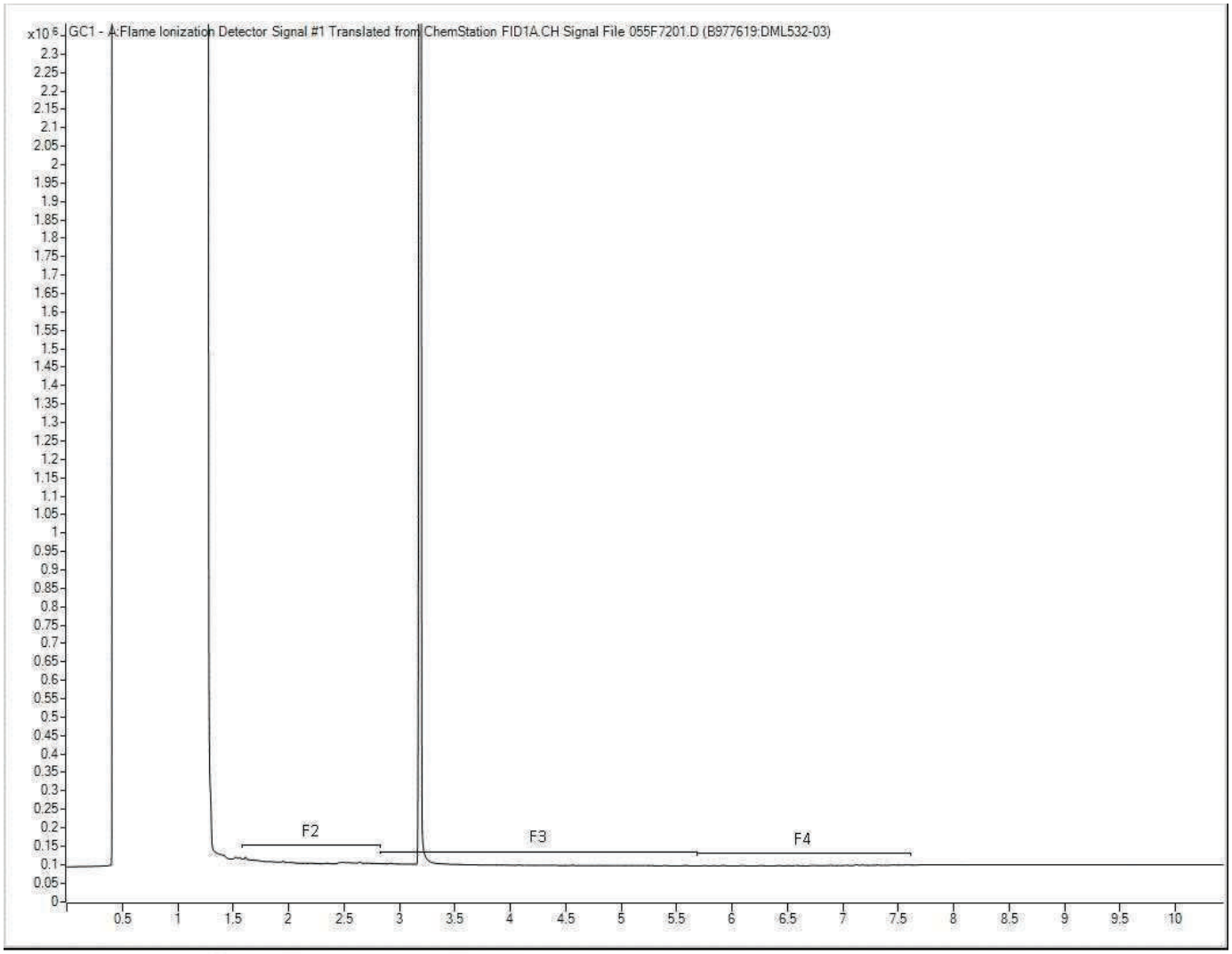
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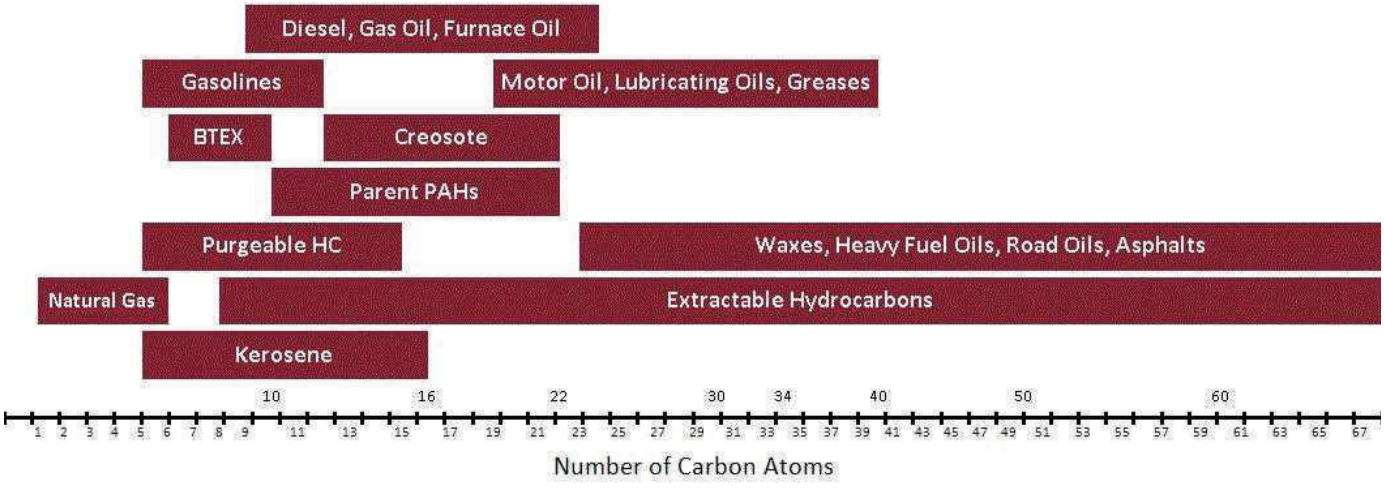
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Bureau Veritas Job #: C551520
Report Date: 2025/06/13
Bureau Veritas Sample: DML532

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Reference: SRI
Client ID: MW16-10-15

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





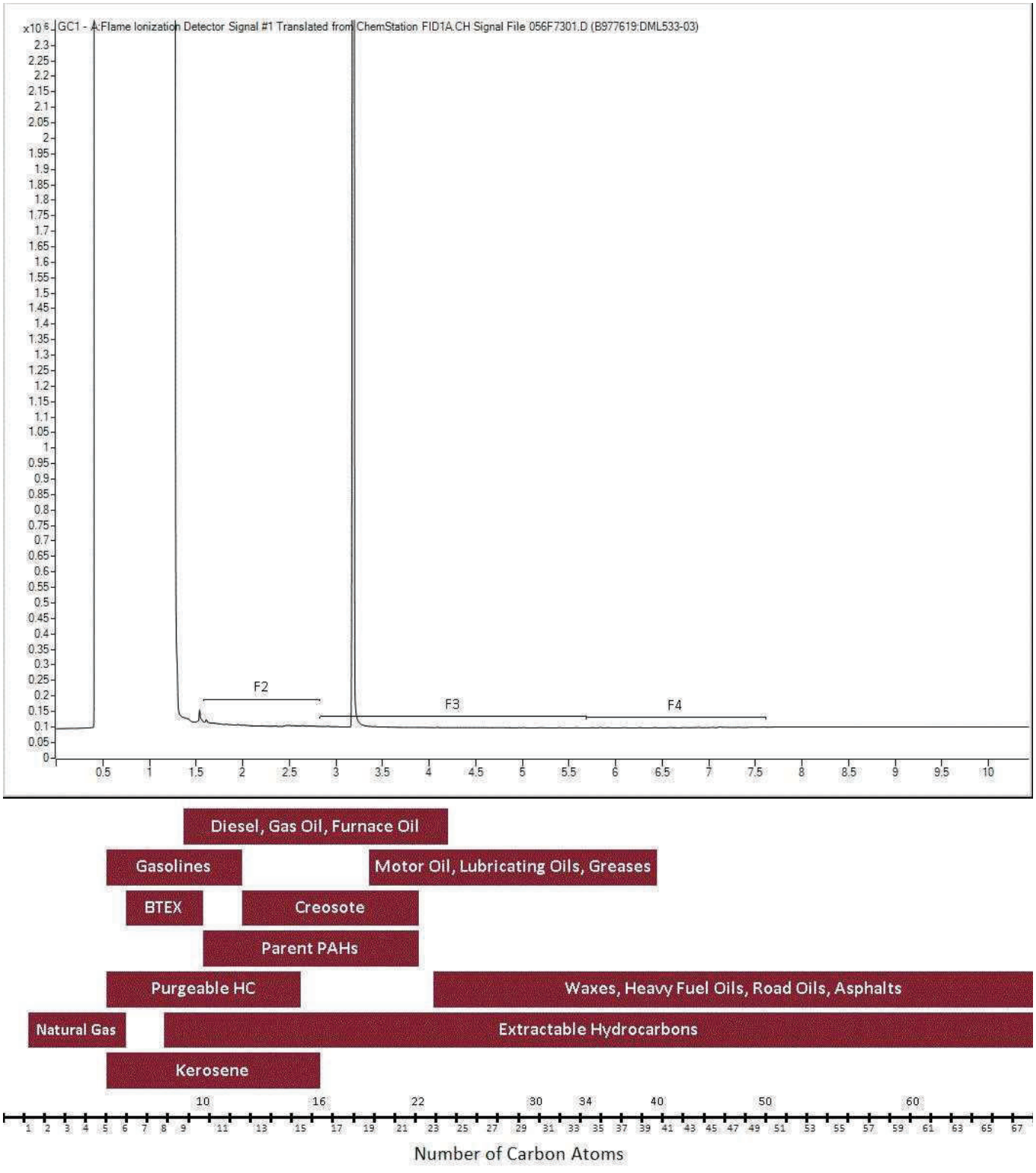
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Bureau Veritas Job #: C551520
Report Date: 2025/06/13
Bureau Veritas Sample: DML533

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Reference: SRI
Client ID: MW16-22-26

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

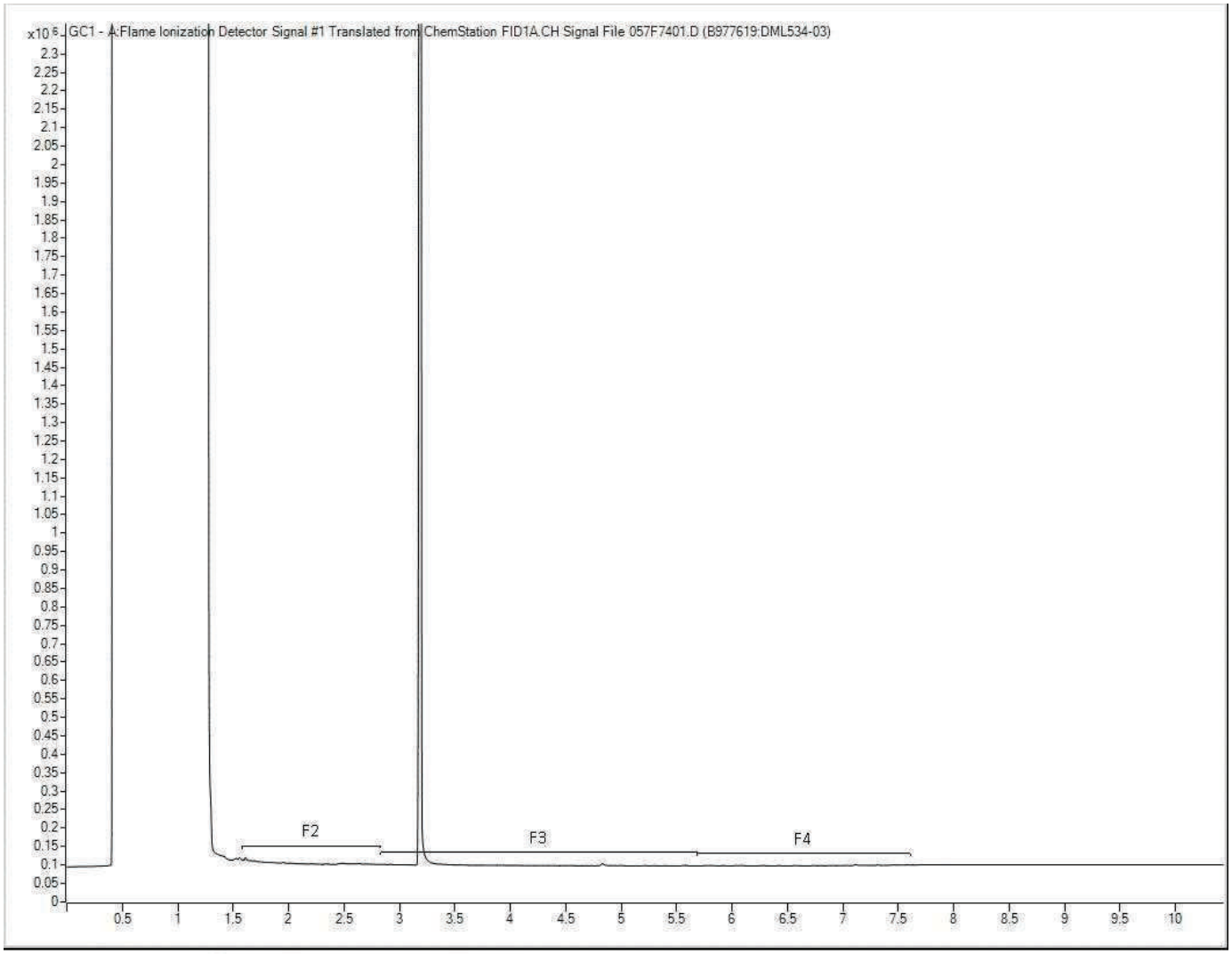


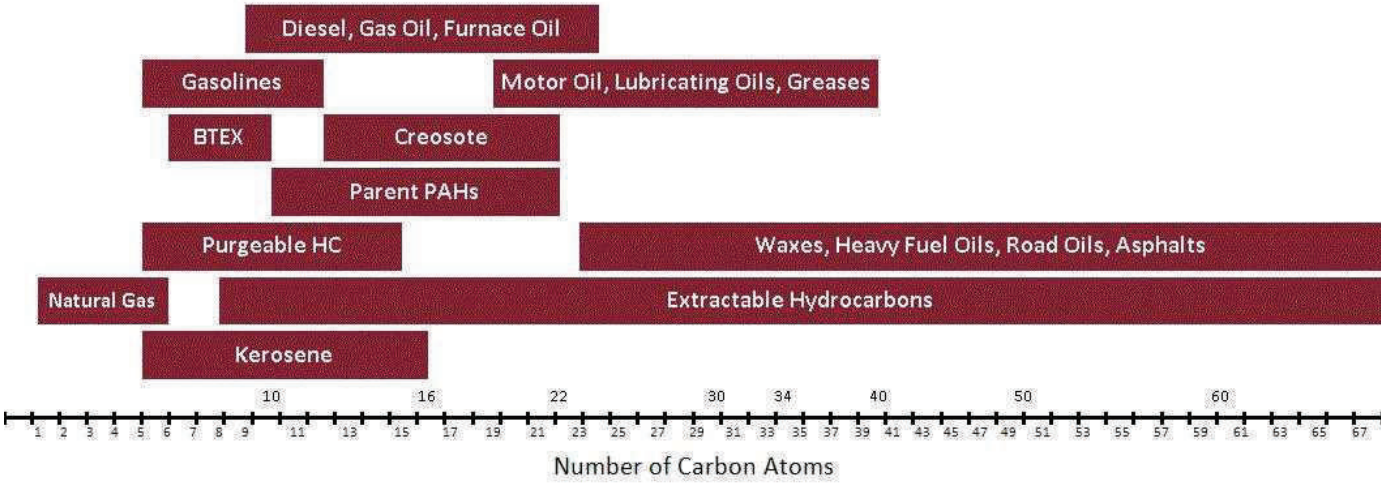
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C551520
Report Date: 2025/06/13
Bureau Veritas Sample: DML534

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Reference: SRI
Client ID: NE7-R3-01

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





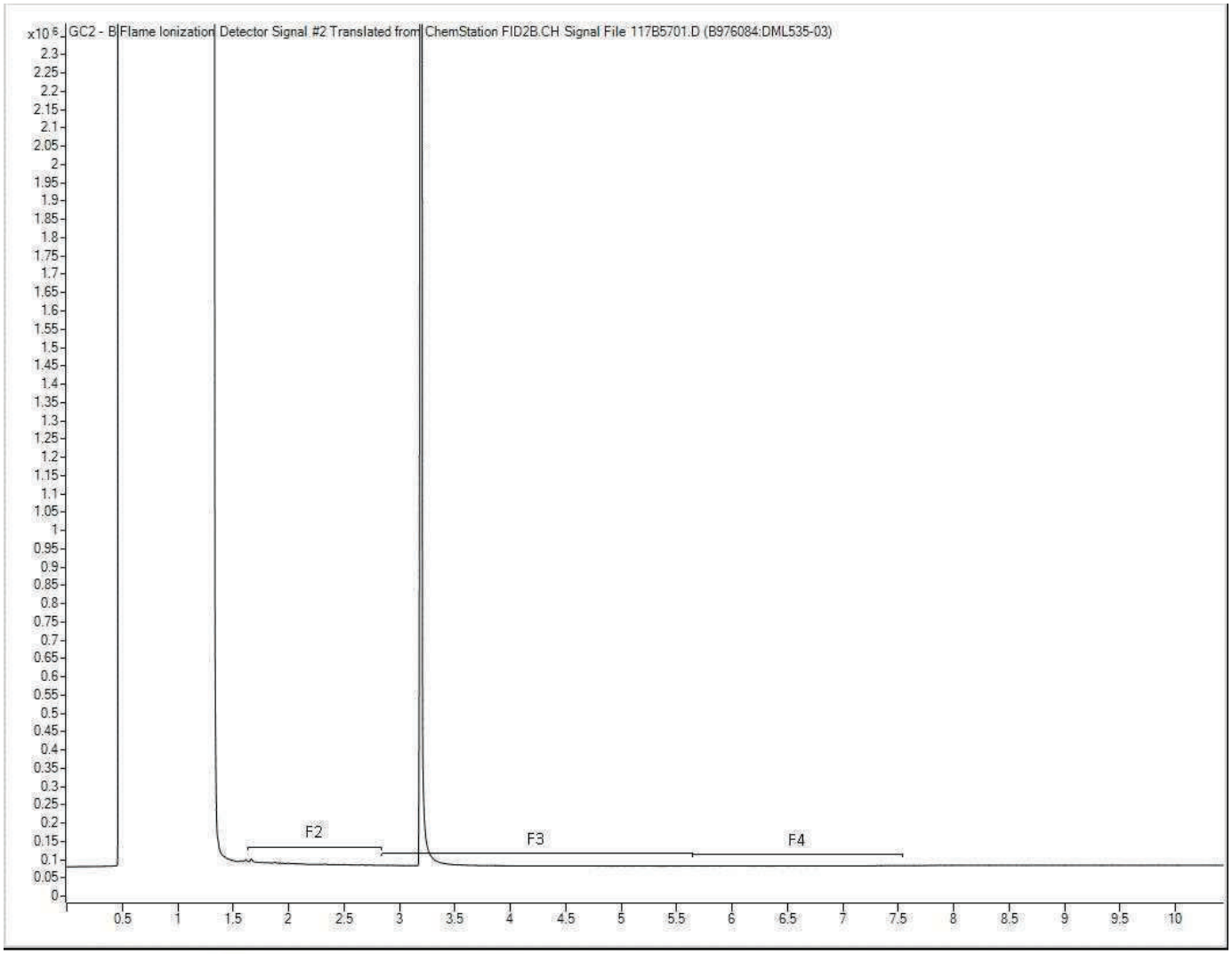
hpchem21\HPchem\1\DATA\2025\06\RUN0609

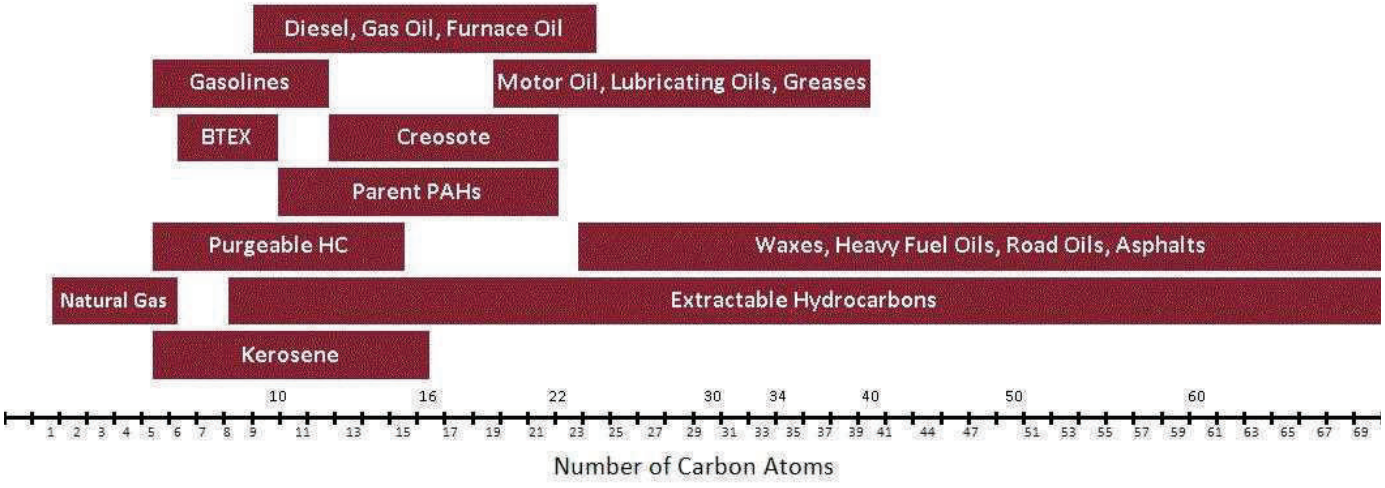
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C551520
Report Date: 2025/06/13
Bureau Veritas Sample: DML535

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Reference: SRI
Client ID: WS62-01

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





hpchem21\HPchem\1\DATA\2025\06\RUN0609

Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your Project #: 110773396
Site Location: SRI
Your C.O.C. #: 1 OF 1

Attention: DYLAN KING

STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
EDMONTON, AB
CANADA T5J 0K4

Report Date: 2025/06/17
Report #: R3675271
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C551949
Received: 2025/06/06, 16:55

Sample Matrix: Water
Samples Received: 12

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH	12	N/A	2025/06/12	AB SOP-00005	SM 24 2320 B m
BTEX/F1 in Water by HS GC/MS/FID	12	N/A	2025/06/14	AB SOP-00039	CCME CWS/EPA 8260d m
F1-BTEX	12	N/A	2025/06/14		Auto Calc
Cadmium - low level CCME - Dissolved	1	N/A	2025/06/10		Auto Calc
Cadmium - low level CCME - Dissolved	11	N/A	2025/06/12		Auto Calc
Chloride/Sulphate by Auto Colourimetry	12	N/A	2025/06/09	AB SOP-00020	SM24-4500-Cl/SO4-E m
Fecal Coliforms (MPN/100mL)	12	2025/06/07	2025/06/08	AB SOP-00089	SM 24 9223 A,B m
Heterotrophic Plate Count Quant	12	2025/06/07	2025/06/09	CAL SOP-00012	SM 24 9215 A, E m
Total Coliforms and E.Coli	12	2025/06/07	2025/06/08	AB SOP-00089	SM 24 9223 A,B m
Carbon (DOC) -Lab Filtered (1)	1	N/A	2025/06/15	AB SOP-00087	MMCW 119 1996 m
Carbon (DOC) (1)	11	N/A	2025/06/15	AB SOP-00087	MMCW 119 1996 m
Conductivity @25C	12	N/A	2025/06/12	AB SOP-00005	SM 24 2510 B m
CCME Hydrocarbons in Water (F2; C10-C16) (2)	12	2025/06/10	2025/06/11	AB SOP-00037 AB SOP-00040	CCME PHC-CWS m
Hardness	1	N/A	2025/06/10		Auto Calc
Hardness	7	N/A	2025/06/11		Auto Calc
Hardness	4	N/A	2025/06/13		Auto Calc
Mercury (Dissolved) by CV (3)	7	2025/06/13	2025/06/13	AB SOP-00084	BCMOE BCLM Oct2013 m
Mercury (Dissolved) by CV (3)	4	2025/06/16	2025/06/16	AB SOP-00084	BCMOE BCLM Oct2013 m
Mercury (Dissolved) by CV-Lab Filtered	1	2025/06/10	2025/06/10	AB SOP-00084	BCMOE BCLM Oct2013 m
Mercury (Total) by CV	1	2025/06/13	2025/06/13	AB SOP-00084	BCMOE BCLM Oct2013 m
Mercury (Total) by CV	11	2025/06/16	2025/06/16	AB SOP-00084	BCMOE BCLM Oct2013 m
Elements by ICP - Dissolved (3)	7	N/A	2025/06/10	AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Dissolved (3)	4	N/A	2025/06/11	AB SOP-00042	EPA 6010d R5 m
Elements by ICP-Dissolved-Lab Filtered (3)	1	N/A	2025/06/10	AB SOP-00042	EPA 6010d R5 m
Elements by ICPMS - Dissolved (3)	4	N/A	2025/06/10	AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Dissolved (3)	7	N/A	2025/06/11	AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS-Dissolved-Lab Filtered (4)	1	N/A	2025/06/09	AB SOP-00043	EPA 6020b R2 m
Ion Balance	12	N/A	2025/06/13		Auto Calc
Sum of cations, anions	1	N/A	2025/06/10		Auto Calc
Sum of cations, anions	7	N/A	2025/06/11		Auto Calc
Sum of cations, anions	4	N/A	2025/06/13		Auto Calc

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Your Project #: 110773396
Site Location: SRI
Your C.O.C. #: 1 OF 1

Attention: DYLAN KING

STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
EDMONTON, AB
CANADA T5J 0K4

Report Date: 2025/06/17
Report #: R3675271
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C551949
Received: 2025/06/06, 16:55

Sample Matrix: Water
Samples Received: 12

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Ammonia-N (Total)	11	N/A	2025/06/12	AB SOP-00007	SM 24 4500 NH3 A G m
Ammonia-N (Total)	1	N/A	2025/06/13	AB SOP-00007	SM 24 4500 NH3 A G m
Nitrate and Nitrite	12	N/A	2025/06/09		Auto Calc
NO2 (N); NO2 (N) + NO3 (N) in Water	11	N/A	2025/06/08	AB SOP-00091	SM 24 4500 NO3m
NO2 (N); NO2 (N) + NO3 (N) in Water	1	N/A	2025/06/09	AB SOP-00091	SM 24 4500 NO3m
Nitrate (as N)	12	2025/06/06	2025/06/09		Auto Calc
pH @25°C (5)	12	N/A	2025/06/12	AB SOP-00005	SM 24 4500-H+B m
Total Dissolved Solids (Calculated)	12	N/A	2025/06/13		Auto Calc
Total Kjeldahl Nitrogen (Total)	12	N/A	2025/06/12		Auto Calc
Nitrogen (Total)	12	2025/06/11	2025/06/12	AB SOP-00093	SM 24 4500-N C m
Total Phosphorus-Dissolved-Lab Filtered (6)	1	2025/06/11	2025/06/11	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Dissolved client FF/FP (6)	1	2025/06/10	2025/06/12	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Dissolved client FF/FP (6)	9	2025/06/12	2025/06/12	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus Dissolved client FF/FP (6)	1	2025/06/16	2025/06/16	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus	9	2025/06/12	2025/06/12	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus	2	2025/06/12	2025/06/13	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus	1	2025/06/16	2025/06/16	AB SOP-00024	SM 24 4500-P A,B,F m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Your Project #: 110773396
Site Location: SRI
Your C.O.C. #: 1 OF 1

Attention: DYLAN KING

STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
EDMONTON, AB
CANADA T5J 0K4

Report Date: 2025/06/17
Report #: R3675271
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C551949

Received: 2025/06/06, 16:55

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

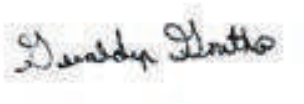
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Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(2) Silica gel clean up employed.
(3) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(4) Samples were filtered and preserved at the lab. Values may not reflect concentrations at the time of sampling. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(5) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.
(6) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.

Encryption Key



Geraldlyn Gouthro
Key Account Specialist
17 Jun 2025 09:52:22

Please direct all questions regarding this Certificate of Analysis to:
Geraldlyn Gouthro, Key Account Specialist
Email: geraldlyn.gouthro@bureauveritas.com
Phone# (403) 291-3077

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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C551949
Report Date: 2025/06/17

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

AT1 BTEX AND F1-F2 IN WATER (WATER)

Bureau Veritas ID		DMO150		DMO151		DMO152		DMO153			
Sampling Date		2025/06/06 10:32		2025/06/06 09:30		2025/06/06 09:50		2025/06/06 12:01			
COC Number		1 OF 1		1 OF 1		1 OF 1		1 OF 1			
	UNITS	RMW16-23-32	MU	RMW16-23-14	MU	RMW16-23-7	MU	RMW16-19-19	MU	RDL	QC Batch
Ext. Pet. Hydrocarbon											
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B979314
Volatiles											
Benzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B977904
Toluene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B977904
Ethylbenzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B977904
m & p-Xylene	mg/L	<0.00080	N/A	<0.00080	N/A	<0.00080	N/A	<0.00080	N/A	0.00080	B977904
o-Xylene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B977904
Xylenes (Total)	mg/L	<0.00089	N/A	<0.00089	N/A	<0.00089	N/A	<0.00089	N/A	0.00089	B977723
F1 (C6-C10) - BTEX	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B977723
F1 (C6-C10)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B977904
Surrogate Recovery (%)											
1,4-Difluorobenzene (sur.)	%	112	N/A	112	N/A	112	N/A	112	N/A	N/A	B977904
4-Bromofluorobenzene (sur.)	%	90	N/A	90	N/A	90	N/A	90	N/A	N/A	B977904
D4-1,2-Dichloroethane (sur.)	%	104	N/A	104	N/A	104	N/A	103	N/A	N/A	B977904
O-TERPHENYL (sur.)	%	107	N/A	105	N/A	103	N/A	106	N/A	N/A	B979314

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C551949
Report Date: 2025/06/17

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

AT1 BTEX AND F1-F2 IN WATER (WATER)

Bureau Veritas ID		DMO154		DMO155		DMO156		DMO157			
Sampling Date		2025/06/06 11:40		2025/06/06 12:50		2025/06/06 13:56		2025/06/06 14:02			
COC Number		1 OF 1		1 OF 1		1 OF 1		1 OF 1			
	UNITS	RMW16-19-10	MU	RMW16-18-13	MU	MW16-8-8	MU	MW16-8-19	MU	RDL	QC Batch
Ext. Pet. Hydrocarbon											
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B979314
Volatiles											
Benzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B977904
Toluene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B977904
Ethylbenzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B977904
m & p-Xylene	mg/L	<0.00080	N/A	<0.00080	N/A	<0.00080	N/A	<0.00080	N/A	0.00080	B977904
o-Xylene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B977904
Xylenes (Total)	mg/L	<0.00089	N/A	<0.00089	N/A	<0.00089	N/A	<0.00089	N/A	0.00089	B977723
F1 (C6-C10) - BTEX	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B977723
F1 (C6-C10)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B977904
Surrogate Recovery (%)											
1,4-Difluorobenzene (sur.)	%	112	N/A	113	N/A	113	N/A	112	N/A	N/A	B977904
4-Bromofluorobenzene (sur.)	%	89	N/A	89	N/A	89	N/A	89	N/A	N/A	B977904
D4-1,2-Dichloroethane (sur.)	%	104	N/A	105	N/A	104	N/A	104	N/A	N/A	B977904
O-TERPHENYL (sur.)	%	108	N/A	106	N/A	107	N/A	108	N/A	N/A	B979314

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C551949
Report Date: 2025/06/17

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

AT1 BTEX AND F1-F2 IN WATER (WATER)

Bureau Veritas ID		DMO158		DMO159		DMO160		DMO161			
Sampling Date		2025/06/06 14:50		2025/06/06 14:55		2025/06/06 15:00		2025/06/06			
COC Number		1 OF 1		1 OF 1		1 OF 1		1 OF 1			
	UNITS	MW16-25-9	MU	SR25-03	MU	SR25-04	MU	SR25-05	MU	RDL	QC Batch
Ext. Pet. Hydrocarbon											
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B979314
Volatiles											
Benzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B977904
Toluene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B977904
Ethylbenzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B977904
m & p-Xylene	mg/L	<0.00080	N/A	<0.00080	N/A	<0.00080	N/A	<0.00080	N/A	0.00080	B977904
o-Xylene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B977904
Xylenes (Total)	mg/L	<0.00089	N/A	<0.00089	N/A	<0.00089	N/A	<0.00089	N/A	0.00089	B977723
F1 (C6-C10) - BTEX	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B977723
F1 (C6-C10)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B977904
Surrogate Recovery (%)											
1,4-Difluorobenzene (sur.)	%	113	N/A	113	N/A	112	N/A	112	N/A	N/A	B977904
4-Bromofluorobenzene (sur.)	%	90	N/A	89	N/A	90	N/A	89	N/A	N/A	B977904
D4-1,2-Dichloroethane (sur.)	%	106	N/A	105	N/A	103	N/A	104	N/A	N/A	B977904
O-TERPHENYL (sur.)	%	106	N/A	108	N/A	108	N/A	107	N/A	N/A	B979314

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C551949
Report Date: 2025/06/17

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DMO150				DMO151			
Sampling Date		2025/06/06 10:32				2025/06/06 09:30			
COC Number		1 OF 1				1 OF 1			
	UNITS	RMW16-23-32	MU	RDL	QC Batch	RMW16-23-14	MU	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	13	N/A	N/A	B977696	13	N/A	N/A	B977696
Cation Sum	meq/L	14	N/A	N/A	B977696	13	N/A	N/A	B977696
Hardness (CaCO3)	mg/L	70	N/A	0.50	B977793	400	N/A	0.50	B977793
Ion Balance (% Difference)	%	1.1	N/A	N/A	B977797	1.0	N/A	N/A	B977797
Nitrate (N)	mg/L	<0.040	N/A	0.040	B977703	<0.040	N/A	0.040	B977703
Nitrate (NO3)	mg/L	<0.18	N/A	0.18	B977701	<0.18	N/A	0.18	B977701
Nitrite (NO2)	mg/L	<0.13	N/A	0.13	B977701	<0.13	N/A	0.13	B977701
Calculated Total Dissolved Solids	mg/L	750	N/A	10	B977709	740	N/A	10	B977709
Elements									
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	0.020	B977420	<0.020	N/A	0.020	B977420
Misc. Inorganics									
Conductivity	uS/cm	1200	+/- 31	2.0	B982832	1200	+/- 31	2.0	B982832
pH	pH	8.34	+/- 0.0826	N/A	B982827	8.03	+/- 0.0796	N/A	B982827
Anions									
Alkalinity (PP as CaCO3)	mg/L	1.2	+/- <RDL	1.0	B982825	<1.0	N/A	1.0	B982825
Alkalinity (Total as CaCO3)	mg/L	540	+/- 40	1.0	B982825	390	+/- 29	1.0	B982825
Bicarbonate (HCO3)	mg/L	660	+/- 10	1.0	B982825	470	+/- 7.3	1.0	B982825
Carbonate (CO3)	mg/L	1.4	N/A	1.0	B982825	<1.0	N/A	1.0	B982825
Hydroxide (OH)	mg/L	<1.0	N/A	1.0	B982825	<1.0	N/A	1.0	B982825
Chloride (Cl)	mg/L	<1.0	N/A	1.0	B979396	29	+/- 2.6	1.0	B979396
Sulphate (SO4)	mg/L	120	+/- 7.7	1.0	B979396	230	+/- 15	5.0	B979396
Nutrients									
Nitrite (N)	mg/L	<0.040	N/A	0.040	B978606	<0.040	N/A	0.040	B978606
Nitrate plus Nitrite (N)	mg/L	<0.040	N/A	0.040	B978606	<0.040	N/A	0.040	B978606
Elements									
Dissolved Aluminum (Al)	mg/L	<0.0030	N/A	0.0030	B980544	0.0033	+/- <RDL	0.0030	B980483
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	0.00060	B980544	<0.00060	N/A	0.00060	B980483
Dissolved Arsenic (As)	mg/L	0.00053	+/- 0.00020	0.00020	B980544	<0.00020	N/A	0.00020	B980483
Dissolved Barium (Ba)	mg/L	0.017	+/- <RDL	0.010	B980928	0.013	+/- <RDL	0.010	B980930
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	0.0010	B980544	<0.0010	N/A	0.0010	B980483

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C551949
Report Date: 2025/06/17

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DMO150				DMO151			
Sampling Date		2025/06/06 10:32				2025/06/06 09:30			
COC Number		1 OF 1				1 OF 1			
	UNITS	RMW16-23-32	MU	RDL	QC Batch	RMW16-23-14	MU	RDL	QC Batch
Dissolved Boron (B)	mg/L	0.085	+/- 0.020	0.020	B980928	0.059	+/- <RDL	0.020	B980930
Dissolved Calcium (Ca)	mg/L	18	+/- 1.5	0.30	B980928	96	+/- 7.8	0.30	B980930
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	0.0010	B980544	<0.0010	N/A	0.0010	B980483
Dissolved Cobalt (Co)	mg/L	<0.00030	N/A	0.00030	B980544	<0.00030	N/A	0.00030	B980483
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	0.0010	B980544	<0.0010	N/A	0.0010	B980483
Dissolved Iron (Fe)	mg/L	0.16	+/- <RDL	0.060	B980928	0.54	+/- 0.061	0.060	B980930
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	0.00020	B980544	<0.00020	N/A	0.00020	B980483
Dissolved Lithium (Li)	mg/L	0.13	+/- <RDL	0.020	B980928	0.025	+/- <RDL	0.020	B980930
Dissolved Magnesium (Mg)	mg/L	5.8	+/- 0.28	0.20	B980928	38	+/- 1.8	0.20	B980930
Dissolved Manganese (Mn)	mg/L	0.022	+/- <RDL	0.0040	B980928	0.13	+/- 0.0083	0.0040	B980930
Dissolved Molybdenum (Mo)	mg/L	0.0018	+/- <RDL	0.00020	B980544	0.0011	+/- <RDL	0.00020	B980483
Dissolved Nickel (Ni)	mg/L	<0.00050	N/A	0.00050	B980544	<0.00050	N/A	0.00050	B980483
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	0.10	B980928	<0.10	N/A	0.10	B980930
Dissolved Potassium (K)	mg/L	2.7	+/- <RDL	0.30	B980928	4.4	+/- <RDL	0.30	B980930
Dissolved Selenium (Se)	mg/L	<0.00020	N/A	0.00020	B980544	<0.00020	N/A	0.00020	B980483
Dissolved Silicon (Si)	mg/L	3.6	+/- 0.61	0.50	B980928	4.4	+/- 0.75	0.50	B980930
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	0.00010	B980544	<0.00010	N/A	0.00010	B980483
Dissolved Sodium (Na)	mg/L	280	+/- 26	0.50	B980928	110	+/- 11	0.50	B980930
Dissolved Strontium (Sr)	mg/L	0.32	+/- 0.029	0.020	B980928	0.91	+/- 0.082	0.020	B980930
Dissolved Sulphur (S)	mg/L	41	+/- 3.5	0.20	B980928	77	+/- 6.6	0.20	B980930
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	0.00020	B980544	<0.00020	N/A	0.00020	B980483
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	0.0010	B980544	<0.0010	N/A	0.0010	B980483
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	0.0010	B980544	<0.0010	N/A	0.0010	B980483
Dissolved Uranium (U)	mg/L	0.00012	+/- 0.00020	0.00010	B980544	0.00053	+/- 0.00022	0.00010	B980483
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	0.0010	B980544	<0.0010	N/A	0.0010	B980483
Dissolved Zinc (Zn)	mg/L	<0.0030	N/A	0.0030	B980544	<0.0030	N/A	0.0030	B980483

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DMO152				DMO153			
Sampling Date		2025/06/06 09:50				2025/06/06 12:01			
COC Number		1 OF 1				1 OF 1			
	UNITS	RMW16-23-7	MU	RDL	QC Batch	RMW16-19-19	MU	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	11	N/A	N/A	B977696	34	N/A	N/A	B977696
Cation Sum	meq/L	12	N/A	N/A	B977696	32	N/A	N/A	B977696
Hardness (CaCO3)	mg/L	480	N/A	0.50	B977793	510	N/A	0.50	B977793
Ion Balance (% Difference)	%	2.2	N/A	N/A	B977797	3.5	N/A	N/A	B977797
Nitrate (N)	mg/L	0.044	N/A	0.040	B977703	<0.040	N/A	0.040	B977703
Nitrate (NO3)	mg/L	0.19	N/A	0.18	B977701	<0.18	N/A	0.18	B977701
Nitrite (NO2)	mg/L	<0.13	N/A	0.13	B977701	<0.13	N/A	0.13	B977701
Calculated Total Dissolved Solids	mg/L	600	N/A	10	B977709	2100	N/A	25	B977709
Elements									
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	0.020	B977420	<0.020	N/A	0.020	B977420
Misc. Inorganics									
Conductivity	uS/cm	1000	+/- 26	2.0	B982832	2800	+/- 74	2.0	B982832
pH	pH	7.92	+/- 0.0785	N/A	B982827	7.85	+/- 0.0778	N/A	B982827
Anions									
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	1.0	B982825	<1.0	N/A	1.0	B982825
Alkalinity (Total as CaCO3)	mg/L	340	+/- 26	1.0	B982825	600	+/- 45	1.0	B982825
Bicarbonate (HCO3)	mg/L	420	+/- 6.5	1.0	B982825	740	+/- 11	1.0	B982825
Carbonate (CO3)	mg/L	<1.0	N/A	1.0	B982825	<1.0	N/A	1.0	B982825
Hydroxide (OH)	mg/L	<1.0	N/A	1.0	B982825	<1.0	N/A	1.0	B982825
Chloride (Cl)	mg/L	50	+/- 4.0	1.0	B979396	<1.0	N/A	1.0	B979396
Sulphate (SO4)	mg/L	140	+/- 8.9	5.0	B979396	1100	+/- 67	25	B979396
Nutrients									
Nitrite (N)	mg/L	<0.040	N/A	0.040	B978606	<0.040	N/A	0.040	B978606
Nitrate plus Nitrite (N)	mg/L	0.044	+/- <RDL	0.040	B978606	<0.040	N/A	0.040	B978606
Elements									
Dissolved Aluminum (Al)	mg/L	0.0050	+/- <RDL	0.0030	B980544	<0.0030	N/A	0.0030	B980483
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	0.00060	B980544	<0.00060	N/A	0.00060	B980483
Dissolved Arsenic (As)	mg/L	0.00025	+/- <RDL	0.00020	B980544	0.00026	+/- <RDL	0.00020	B980483
Dissolved Barium (Ba)	mg/L	0.047	+/- <RDL	0.010	B980928	<0.010	N/A	0.010	B980930
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	0.0010	B980544	<0.0010	N/A	0.0010	B980483

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DMO152				DMO153			
Sampling Date		2025/06/06 09:50				2025/06/06 12:01			
COC Number		1 OF 1				1 OF 1			
	UNITS	RMW16-23-7	MU	RDL	QC Batch	RMW16-19-19	MU	RDL	QC Batch
Dissolved Boron (B)	mg/L	0.027	+/- <RDL	0.020	B980928	0.15	+/- 0.023	0.020	B980930
Dissolved Calcium (Ca)	mg/L	110	+/- 9.4	0.30	B980928	120	+/- 9.9	0.30	B980930
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	0.0010	B980544	<0.0010	N/A	0.0010	B980483
Dissolved Cobalt (Co)	mg/L	0.00060	+/- <RDL	0.00030	B980544	<0.00030	N/A	0.00030	B980483
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	0.0010	B980544	<0.0010	N/A	0.0010	B980483
Dissolved Iron (Fe)	mg/L	0.30	+/- <RDL	0.060	B980928	2.5	+/- 0.27	0.060	B980930
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	0.00020	B980544	<0.00020	N/A	0.00020	B980483
Dissolved Lithium (Li)	mg/L	0.020	+/- <RDL	0.020	B980928	0.034	+/- <RDL	0.020	B980930
Dissolved Magnesium (Mg)	mg/L	46	+/- 2.2	0.20	B980928	51	+/- 2.4	0.20	B980930
Dissolved Manganese (Mn)	mg/L	0.45	+/- 0.028	0.0040	B980928	0.33	+/- 0.021	0.0040	B980930
Dissolved Molybdenum (Mo)	mg/L	0.0010	+/- <RDL	0.00020	B980544	0.0012	+/- <RDL	0.00020	B980483
Dissolved Nickel (Ni)	mg/L	0.00091	+/- <RDL	0.00050	B980544	<0.00050	N/A	0.00050	B980483
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	0.10	B980928	<0.10	N/A	0.10	B980930
Dissolved Potassium (K)	mg/L	4.6	+/- <RDL	0.30	B980928	5.1	+/- <RDL	0.30	B980930
Dissolved Selenium (Se)	mg/L	<0.00020	N/A	0.00020	B980544	<0.00020	N/A	0.00020	B980483
Dissolved Silicon (Si)	mg/L	3.8	+/- 0.64	0.50	B980928	3.6	+/- 0.61	0.50	B980930
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	0.00010	B980544	<0.00010	N/A	0.00010	B980483
Dissolved Sodium (Na)	mg/L	45	+/- 4.4	0.50	B980928	490	+/- 47	0.50	B980930
Dissolved Strontium (Sr)	mg/L	0.67	+/- 0.061	0.020	B980928	1.9	+/- 0.17	0.020	B980930
Dissolved Sulphur (S)	mg/L	50	+/- 4.3	0.20	B980928	360	+/- 31	0.20	B980930
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	0.00020	B980544	<0.00020	N/A	0.00020	B980483
Dissolved Tin (Sn)	mg/L	0.0024	+/- <RDL	0.0010	B980544	0.0018	+/- <RDL	0.0010	B980483
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	0.0010	B980544	<0.0010	N/A	0.0010	B980483
Dissolved Uranium (U)	mg/L	0.0017	+/- 0.00033	0.00010	B980544	0.00082	+/- 0.00024	0.00010	B980483
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	0.0010	B980544	<0.0010	N/A	0.0010	B980483
Dissolved Zinc (Zn)	mg/L	<0.0030	N/A	0.0030	B980544	<0.0030	N/A	0.0030	B980483

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DMO154			DMO155			
Sampling Date		2025/06/06 11:40			2025/06/06 12:50			
COC Number		1 OF 1			1 OF 1			
	UNITS	RMW16-19-10	MU	RDL	RMW16-18-13	MU	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	35	N/A	N/A	12	N/A	N/A	B977696
Cation Sum	meq/L	34	N/A	N/A	12	N/A	N/A	B977696
Hardness (CaCO3)	mg/L	900	N/A	0.50	150	N/A	0.50	B977793
Ion Balance (% Difference)	%	0.42	N/A	N/A	0.34	N/A	N/A	B977797
Nitrate (N)	mg/L	<0.040	N/A	0.040	0.34	N/A	0.040	B977703
Nitrate (NO3)	mg/L	<0.18	N/A	0.18	1.5	N/A	0.18	B977701
Nitrite (NO2)	mg/L	<0.13	N/A	0.13	<0.13	N/A	0.13	B977701
Calculated Total Dissolved Solids	mg/L	2200	N/A	25	670	N/A	10	B977709
Elements								
Dissolved Cadmium (Cd)	ug/L	0.090	+/- 0.040	0.020	<0.020	N/A	0.020	B977420
Misc. Inorganics								
Conductivity	uS/cm	2700	+/- 70	2.0	1100	+/- 30	2.0	B982832
pH	pH	7.82	+/- 0.0775	N/A	8.22	+/- 0.0815	N/A	B982827
Anions								
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	1.0	<1.0	N/A	1.0	B982825
Alkalinity (Total as CaCO3)	mg/L	530	+/- 39	1.0	400	+/- 30	1.0	B982825
Bicarbonate (HCO3)	mg/L	640	+/- 9.8	1.0	490	+/- 7.6	1.0	B982825
Carbonate (CO3)	mg/L	<1.0	N/A	1.0	<1.0	N/A	1.0	B982825
Hydroxide (OH)	mg/L	<1.0	N/A	1.0	<1.0	N/A	1.0	B982825
Chloride (Cl)	mg/L	1.4	+/- 1.2	1.0	96	+/- 7.3	1.0	B979396
Sulphate (SO4)	mg/L	1200	+/- 73	25	70	+/- 4.8	1.0	B979396
Nutrients								
Nitrite (N)	mg/L	<0.040	N/A	0.040	<0.040	N/A	0.040	B978606
Nitrate plus Nitrite (N)	mg/L	<0.040	N/A	0.040	0.34 (1)	+/- <RDL	0.040	B978606
Elements								
Dissolved Aluminum (Al)	mg/L	0.0040	+/- <RDL	0.0030	0.0032	+/- <RDL	0.0030	B980483
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	0.00060	<0.00060	N/A	0.00060	B980483
Dissolved Arsenic (As)	mg/L	<0.00020	N/A	0.00020	<0.00020	N/A	0.00020	B980483
Dissolved Barium (Ba)	mg/L	0.011	+/- <RDL	0.010	0.032	+/- <RDL	0.010	B980930

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Detection limits raised due to matrix interference.

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DMO154			DMO155			
Sampling Date		2025/06/06 11:40			2025/06/06 12:50			
COC Number		1 OF 1			1 OF 1			
	UNITS	RMW16-19-10	MU	RDL	RMW16-18-13	MU	RDL	QC Batch
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B980483
Dissolved Boron (B)	mg/L	0.14	+/- 0.023	0.020	0.14	+/- 0.023	0.020	B980930
Dissolved Calcium (Ca)	mg/L	220	+/- 18	0.30	33	+/- 2.7	0.30	B980930
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B980483
Dissolved Cobalt (Co)	mg/L	0.00061	+/- <RDL	0.00030	<0.00030	N/A	0.00030	B980483
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B980483
Dissolved Iron (Fe)	mg/L	<0.060	N/A	0.060	<0.060	N/A	0.060	B980930
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	0.00020	<0.00020	N/A	0.00020	B980483
Dissolved Lithium (Li)	mg/L	<0.020	N/A	0.020	<0.020	N/A	0.020	B980930
Dissolved Magnesium (Mg)	mg/L	83	+/- 3.9	0.20	16	+/- 0.78	0.20	B980930
Dissolved Manganese (Mn)	mg/L	0.72	+/- 0.044	0.0040	0.081	+/- 0.0053	0.0040	B980930
Dissolved Molybdenum (Mo)	mg/L	0.00071	+/- <RDL	0.00020	0.0027	+/- 0.00021	0.00020	B980483
Dissolved Nickel (Ni)	mg/L	0.0014	+/- <RDL	0.00050	<0.00050	N/A	0.00050	B980483
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	0.10	<0.10	N/A	0.10	B980930
Dissolved Potassium (K)	mg/L	6.4	+/- 0.33	0.30	1.2	+/- <RDL	0.30	B980930
Dissolved Selenium (Se)	mg/L	0.00091	+/- 0.00030	0.00020	0.0019	+/- 0.00052	0.00020	B980483
Dissolved Silicon (Si)	mg/L	4.1	+/- 0.69	0.50	3.2	+/- 0.54	0.50	B980930
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	0.00010	<0.00010	N/A	0.00010	B980483
Dissolved Sodium (Na)	mg/L	370	+/- 35	0.50	210	+/- 20	0.50	B980930
Dissolved Strontium (Sr)	mg/L	1.6	+/- 0.15	0.020	0.21	+/- <RDL	0.020	B980930
Dissolved Sulphur (S)	mg/L	380	+/- 32	0.20	24	+/- 2.1	0.20	B980930
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	0.00020	<0.00020	N/A	0.00020	B980483
Dissolved Tin (Sn)	mg/L	0.0012	+/- <RDL	0.0010	<0.0010	N/A	0.0010	B980483
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B980483
Dissolved Uranium (U)	mg/L	0.010	+/- 0.0016	0.00010	0.0053	+/- 0.00085	0.00010	B980483
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B980483
Dissolved Zinc (Zn)	mg/L	<0.0030	N/A	0.0030	<0.0030	N/A	0.0030	B980483

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DMO155				DMO156			
Sampling Date		2025/06/06 12:50				2025/06/06 13:56			
COC Number		1 OF 1				1 OF 1			
	UNITS	RMW16-18-13 Lab-Dup	MU	RDL	QC Batch	MW16-8-8	MU	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	N/A	N/A	N/A	B977696	14	N/A	N/A	B977696
Cation Sum	meq/L	N/A	N/A	N/A	B977696	15	N/A	N/A	B977696
Hardness (CaCO3)	mg/L	N/A	N/A	0.50	B977793	670	N/A	0.50	B977793
Ion Balance (% Difference)	%	N/A	N/A	N/A	B977797	2.0	N/A	N/A	B977797
Nitrate (N)	mg/L	N/A	N/A	0.040	B977703	0.53	N/A	0.040	B977703
Nitrate (NO3)	mg/L	N/A	N/A	0.18	B977701	2.3	N/A	0.18	B977701
Nitrite (NO2)	mg/L	N/A	N/A	0.13	B977701	<0.13	N/A	0.13	B977701
Calculated Total Dissolved Solids	mg/L	N/A	N/A	10	B977709	760	N/A	10	B977709
Elements									
Dissolved Cadmium (Cd)	ug/L	N/A	N/A	0.020	B977420	<0.020	N/A	0.020	B977420
Misc. Inorganics									
Conductivity	uS/cm	N/A	N/A	2.0	B982832	1200	+/- 31	2.0	B982832
pH	pH	N/A	N/A	N/A	B982827	7.84	+/- 0.0777	N/A	B982827
Anions									
Alkalinity (PP as CaCO3)	mg/L	N/A	N/A	1.0	B982825	<1.0	N/A	1.0	B982825
Alkalinity (Total as CaCO3)	mg/L	N/A	N/A	1.0	B982825	430	+/- 32	1.0	B982825
Bicarbonate (HCO3)	mg/L	N/A	N/A	1.0	B982825	530	+/- 8.1	1.0	B982825
Carbonate (CO3)	mg/L	N/A	N/A	1.0	B982825	<1.0	N/A	1.0	B982825
Hydroxide (OH)	mg/L	N/A	N/A	1.0	B982825	<1.0	N/A	1.0	B982825
Chloride (Cl)	mg/L	N/A	N/A	1.0	B979396	28	+/- 2.5	1.0	B979396
Sulphate (SO4)	mg/L	N/A	N/A	1.0	B979396	220	+/- 14	5.0	B979396
Nutrients									
Nitrite (N)	mg/L	<0.040	N/A	0.040	B978606	<0.040	N/A	0.040	B978606
Nitrate plus Nitrite (N)	mg/L	0.33	+/- <RDL	0.040	B978606	0.53	+/- 0.050	0.040	B978606
Elements									
Dissolved Aluminum (Al)	mg/L	N/A	N/A	0.0030	B980483	<0.0030	N/A	0.0030	B980483
Dissolved Antimony (Sb)	mg/L	N/A	N/A	0.00060	B980483	<0.00060	N/A	0.00060	B980483
Dissolved Arsenic (As)	mg/L	N/A	N/A	0.00020	B980483	<0.00020	N/A	0.00020	B980483
Dissolved Barium (Ba)	mg/L	N/A	N/A	0.010	B980930	0.039	+/- <RDL	0.010	B980928

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

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ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DMO155				DMO156			
Sampling Date		2025/06/06 12:50				2025/06/06 13:56			
COC Number		1 OF 1				1 OF 1			
	UNITS	RMW16-18-13 Lab-Dup	MU	RDL	QC Batch	MW16-8-8	MU	RDL	QC Batch
Dissolved Beryllium (Be)	mg/L	N/A	N/A	0.0010	B980483	<0.0010	N/A	0.0010	B980483
Dissolved Boron (B)	mg/L	N/A	N/A	0.020	B980930	0.041	+/- <RDL	0.020	B980928
Dissolved Calcium (Ca)	mg/L	N/A	N/A	0.30	B980930	140	+/- 12	0.30	B980928
Dissolved Chromium (Cr)	mg/L	N/A	N/A	0.0010	B980483	<0.0010	N/A	0.0010	B980483
Dissolved Cobalt (Co)	mg/L	N/A	N/A	0.00030	B980483	<0.00030	N/A	0.00030	B980483
Dissolved Copper (Cu)	mg/L	N/A	N/A	0.0010	B980483	0.0011	+/- <RDL	0.0010	B980483
Dissolved Iron (Fe)	mg/L	N/A	N/A	0.060	B980930	<0.060	N/A	0.060	B980928
Dissolved Lead (Pb)	mg/L	N/A	N/A	0.00020	B980483	<0.00020	N/A	0.00020	B980483
Dissolved Lithium (Li)	mg/L	N/A	N/A	0.020	B980930	<0.020	N/A	0.020	B980928
Dissolved Magnesium (Mg)	mg/L	N/A	N/A	0.20	B980930	75	+/- 3.5	0.20	B980928
Dissolved Manganese (Mn)	mg/L	N/A	N/A	0.0040	B980930	0.0043	+/- <RDL	0.0040	B980928
Dissolved Molybdenum (Mo)	mg/L	N/A	N/A	0.00020	B980483	0.00079	+/- <RDL	0.00020	B980483
Dissolved Nickel (Ni)	mg/L	N/A	N/A	0.00050	B980483	0.00068	+/- <RDL	0.00050	B980483
Dissolved Phosphorus (P)	mg/L	N/A	N/A	0.10	B980930	<0.10	N/A	0.10	B980928
Dissolved Potassium (K)	mg/L	N/A	N/A	0.30	B980930	5.9	+/- 0.31	0.30	B980928
Dissolved Selenium (Se)	mg/L	N/A	N/A	0.00020	B980483	0.0030	+/- 0.00078	0.00020	B980483
Dissolved Silicon (Si)	mg/L	N/A	N/A	0.50	B980930	4.5	+/- 0.76	0.50	B980928
Dissolved Silver (Ag)	mg/L	N/A	N/A	0.00010	B980483	<0.00010	N/A	0.00010	B980483
Dissolved Sodium (Na)	mg/L	N/A	N/A	0.50	B980930	26	+/- 2.5	0.50	B980928
Dissolved Strontium (Sr)	mg/L	N/A	N/A	0.020	B980930	1.1	+/- 0.10	0.020	B980928
Dissolved Sulphur (S)	mg/L	N/A	N/A	0.20	B980930	77	+/- 6.5	0.20	B980928
Dissolved Thallium (Tl)	mg/L	N/A	N/A	0.00020	B980483	<0.00020	N/A	0.00020	B980483
Dissolved Tin (Sn)	mg/L	N/A	N/A	0.0010	B980483	0.0040	+/- <RDL	0.0010	B980483
Dissolved Titanium (Ti)	mg/L	N/A	N/A	0.0010	B980483	<0.0010	N/A	0.0010	B980483
Dissolved Uranium (U)	mg/L	N/A	N/A	0.00010	B980483	0.010	+/- 0.0016	0.00010	B980483
Dissolved Vanadium (V)	mg/L	N/A	N/A	0.0010	B980483	<0.0010	N/A	0.0010	B980483
Dissolved Zinc (Zn)	mg/L	N/A	N/A	0.0030	B980483	<0.0030	N/A	0.0030	B980483

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

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ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DMO157			DMO158			
Sampling Date		2025/06/06 14:02			2025/06/06 14:50			
COC Number		1 OF 1			1 OF 1			
	UNITS	MW16-8-19	MU	RDL	MW16-25-9	MU	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	15	N/A	N/A	16	N/A	N/A	B977696
Cation Sum	meq/L	16	N/A	N/A	16	N/A	N/A	B977696
Hardness (CaCO3)	mg/L	650	N/A	0.50	670	N/A	0.50	B977793
Ion Balance (% Difference)	%	1.2	N/A	N/A	1.1	N/A	N/A	B977797
Nitrate (N)	mg/L	0.47	N/A	0.040	<0.040	N/A	0.040	B977703
Nitrate (NO3)	mg/L	2.1	N/A	0.18	<0.18	N/A	0.18	B977701
Nitrite (NO2)	mg/L	<0.13	N/A	0.13	<0.13	N/A	0.13	B977701
Calculated Total Dissolved Solids	mg/L	790	N/A	10	820	N/A	10	B977709
Elements								
Dissolved Cadmium (Cd)	ug/L	0.025	+/- <RDL	0.020	0.045	+/- 0.025	0.020	B977420
Misc. Inorganics								
Conductivity	uS/cm	1300	+/- 35	2.0	1300	+/- 33	2.0	B982832
pH	pH	7.77	+/- 0.0770	N/A	7.92	+/- 0.0784	N/A	B982827
Anions								
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	1.0	<1.0	N/A	1.0	B982825
Alkalinity (Total as CaCO3)	mg/L	480	+/- 36	1.0	560	+/- 42	1.0	B982825
Bicarbonate (HCO3)	mg/L	590	+/- 9.0	1.0	690	+/- 10	1.0	B982825
Carbonate (CO3)	mg/L	<1.0	N/A	1.0	<1.0	N/A	1.0	B982825
Hydroxide (OH)	mg/L	<1.0	N/A	1.0	<1.0	N/A	1.0	B982825
Chloride (Cl)	mg/L	120	+/- 8.8	1.0	<1.0	N/A	1.0	B979396
Sulphate (SO4)	mg/L	100	+/- 6.8	1.0	210	+/- 13	5.0	B979396
Nutrients								
Nitrite (N)	mg/L	<0.040	N/A	0.040	<0.040	N/A	0.040	B978606
Nitrate plus Nitrite (N)	mg/L	0.47	+/- 0.045	0.040	<0.040	N/A	0.040	B978606
Elements								
Dissolved Aluminum (Al)	mg/L	<0.0030	N/A	0.0030	0.0033	+/- <RDL	0.0030	B980544
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	0.00060	<0.00060	N/A	0.00060	B980544
Dissolved Arsenic (As)	mg/L	<0.00020	N/A	0.00020	0.00039	+/- <RDL	0.00020	B980544
Dissolved Barium (Ba)	mg/L	0.060	+/- <RDL	0.010	0.047	+/- <RDL	0.010	B980928
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B980544

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

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ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DMO157			DMO158			
Sampling Date		2025/06/06 14:02			2025/06/06 14:50			
COC Number		1 OF 1			1 OF 1			
	UNITS	MW16-8-19	MU	RDL	MW16-25-9	MU	RDL	QC Batch
Dissolved Boron (B)	mg/L	0.047	+/- <RDL	0.020	0.063	+/- <RDL	0.020	B980928
Dissolved Calcium (Ca)	mg/L	150	+/- 12	0.30	130	+/- 11	0.30	B980928
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B980544
Dissolved Cobalt (Co)	mg/L	<0.00030	N/A	0.00030	<0.00030	N/A	0.00030	B980544
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	0.0010	0.0015	+/- <RDL	0.0010	B980544
Dissolved Iron (Fe)	mg/L	<0.060	N/A	0.060	<0.060	N/A	0.060	B980928
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	0.00020	<0.00020	N/A	0.00020	B980544
Dissolved Lithium (Li)	mg/L	0.079	+/- <RDL	0.020	0.11	+/- <RDL	0.020	B980928
Dissolved Magnesium (Mg)	mg/L	68	+/- 3.2	0.20	83	+/- 3.9	0.20	B980928
Dissolved Manganese (Mn)	mg/L	<0.0040	N/A	0.0040	0.062	+/- 0.0042	0.0040	B980928
Dissolved Molybdenum (Mo)	mg/L	0.00048	+/- <RDL	0.00020	0.0012	+/- <RDL	0.00020	B980544
Dissolved Nickel (Ni)	mg/L	<0.00050	N/A	0.00050	0.0029	+/- <RDL	0.00050	B980544
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	0.10	<0.10	N/A	0.10	B980928
Dissolved Potassium (K)	mg/L	6.1	+/- 0.32	0.30	5.7	+/- 0.30	0.30	B980928
Dissolved Selenium (Se)	mg/L	0.0049	+/- 0.0012	0.00020	0.0014	+/- 0.00041	0.00020	B980544
Dissolved Silicon (Si)	mg/L	4.3	+/- 0.73	0.50	5.3	+/- 0.90	0.50	B980928
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	0.00010	<0.00010	N/A	0.00010	B980544
Dissolved Sodium (Na)	mg/L	54	+/- 5.2	0.50	56	+/- 5.4	0.50	B980928
Dissolved Strontium (Sr)	mg/L	1.4	+/- 0.13	0.020	1.2	+/- 0.11	0.020	B980928
Dissolved Sulphur (S)	mg/L	36	+/- 3.1	0.20	72	+/- 6.1	0.20	B980928
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	0.00020	<0.00020	N/A	0.00020	B980544
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	0.0010	0.0033	+/- <RDL	0.0010	B980544
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B980544
Dissolved Uranium (U)	mg/L	0.0049	+/- 0.00078	0.00010	0.022	+/- 0.0033	0.00010	B980544
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B980544
Dissolved Zinc (Zn)	mg/L	<0.0030	N/A	0.0030	<0.0030	N/A	0.0030	B980544

RDL = Reportable Detection Limit
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N/A = Not Applicable

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ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DMO159		DMO159		DMO161			
Sampling Date		2025/06/06 14:55		2025/06/06 14:55		2025/06/06			
COC Number		1 OF 1		1 OF 1		1 OF 1			
	UNITS	SR25-03	MU	SR25-03 Lab-Dup	MU	SR25-05	MU	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	13	N/A	N/A	N/A	0.0000	N/A	N/A	B977696
Cation Sum	meq/L	13	N/A	N/A	N/A	0.0040	N/A	N/A	B977696
Hardness (CaCO3)	mg/L	68	N/A	N/A	N/A	<0.50	N/A	0.50	B977793
Ion Balance (% Difference)	%	0.73	N/A	N/A	N/A	NC	N/A	N/A	B977797
Nitrate (N)	mg/L	<0.040	N/A	N/A	N/A	<0.040	N/A	0.040	B977703
Nitrate (NO3)	mg/L	<0.18	N/A	N/A	N/A	<0.18	N/A	0.18	B977701
Nitrite (NO2)	mg/L	<0.13	N/A	N/A	N/A	<0.13	N/A	0.13	B977701
Calculated Total Dissolved Solids	mg/L	740	N/A	N/A	N/A	<10	N/A	10	B977709
Elements									
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	N/A	N/A	<0.020	N/A	0.020	B977420
Misc. Inorganics									
Conductivity	uS/cm	1200	+/- 31	1200	+/- 31	<2.0	N/A	2.0	B982832
pH	pH	8.39	+/- 0.0832	8.39	+/- 0.0832	5.38	+/- 0.0533	N/A	B982827
Anions									
Alkalinity (PP as CaCO3)	mg/L	4.8	+/- <RDL	4.1	+/- <RDL	<1.0	N/A	1.0	B982825
Alkalinity (Total as CaCO3)	mg/L	540	+/- 40	540	+/- 40	<1.0	N/A	1.0	B982825
Bicarbonate (HCO3)	mg/L	650	+/- 9.9	650	+/- 9.9	<1.0	N/A	1.0	B982825
Carbonate (CO3)	mg/L	5.8	N/A	5.0	N/A	<1.0	N/A	1.0	B982825
Hydroxide (OH)	mg/L	<1.0	N/A	<1.0	N/A	<1.0	N/A	1.0	B982825
Chloride (Cl)	mg/L	<1.0	N/A	<1.0	N/A	<1.0	N/A	1.0	B979396
Sulphate (SO4)	mg/L	120	+/- 8.0	120	+/- 7.7	<1.0	N/A	1.0	B979396
Nutrients									
Nitrite (N)	mg/L	<0.040	N/A	N/A	N/A	<0.040	N/A	0.040	B978606
Nitrate plus Nitrite (N)	mg/L	<0.040	N/A	N/A	N/A	<0.040	N/A	0.040	B978606
Elements									
Dissolved Aluminum (Al)	mg/L	<0.0030	N/A	N/A	N/A	<0.0030	N/A	0.0030	B980544
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	N/A	N/A	<0.00060	N/A	0.00060	B980544
Dissolved Arsenic (As)	mg/L	0.00060	+/- 0.00021	N/A	N/A	<0.00020	N/A	0.00020	B980544
Dissolved Barium (Ba)	mg/L	0.016	+/- <RDL	N/A	N/A	<0.010	N/A	0.010	B980928

RDL = Reportable Detection Limit
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MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C551949
Report Date: 2025/06/17

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

ROUTINE WATER & DISS. REGULATED METALS (WATER)

Bureau Veritas ID		DMO159		DMO159		DMO161			
Sampling Date		2025/06/06 14:55		2025/06/06 14:55		2025/06/06			
COC Number		1 OF 1		1 OF 1		1 OF 1			
	UNITS	SR25-03	MU	SR25-03 Lab-Dup	MU	SR25-05	MU	RDL	QC Batch
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	N/A	N/A	<0.0010	N/A	0.0010	B980544
Dissolved Boron (B)	mg/L	0.086	+/- 0.020	N/A	N/A	<0.020	N/A	0.020	B980928
Dissolved Calcium (Ca)	mg/L	18	+/- 1.5	N/A	N/A	<0.30	N/A	0.30	B980928
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	N/A	N/A	<0.0010	N/A	0.0010	B980544
Dissolved Cobalt (Co)	mg/L	<0.00030	N/A	N/A	N/A	<0.00030	N/A	0.00030	B980544
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	N/A	N/A	<0.0010	N/A	0.0010	B980544
Dissolved Iron (Fe)	mg/L	0.16	+/- <RDL	N/A	N/A	<0.060	N/A	0.060	B980928
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	N/A	N/A	<0.00020	N/A	0.00020	B980544
Dissolved Lithium (Li)	mg/L	0.13	+/- <RDL	N/A	N/A	<0.020	N/A	0.020	B980928
Dissolved Magnesium (Mg)	mg/L	5.6	+/- 0.27	N/A	N/A	<0.20	N/A	0.20	B980928
Dissolved Manganese (Mn)	mg/L	0.021	+/- <RDL	N/A	N/A	<0.0040	N/A	0.0040	B980928
Dissolved Molybdenum (Mo)	mg/L	0.0018	+/- <RDL	N/A	N/A	<0.00020	N/A	0.00020	B980544
Dissolved Nickel (Ni)	mg/L	<0.00050	N/A	N/A	N/A	<0.00050	N/A	0.00050	B980544
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	N/A	N/A	<0.10	N/A	0.10	B980928
Dissolved Potassium (K)	mg/L	2.7	+/- <RDL	N/A	N/A	<0.30	N/A	0.30	B980928
Dissolved Selenium (Se)	mg/L	<0.00020	N/A	N/A	N/A	<0.00020	N/A	0.00020	B980544
Dissolved Silicon (Si)	mg/L	3.6	+/- 0.61	N/A	N/A	<0.50	N/A	0.50	B980928
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	N/A	N/A	<0.00010	N/A	0.00010	B980544
Dissolved Sodium (Na)	mg/L	270	+/- 26	N/A	N/A	<0.50	N/A	0.50	B980928
Dissolved Strontium (Sr)	mg/L	0.32	+/- 0.028	N/A	N/A	<0.020	N/A	0.020	B980928
Dissolved Sulphur (S)	mg/L	41	+/- 3.5	N/A	N/A	<0.20	N/A	0.20	B980928
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	N/A	N/A	<0.00020	N/A	0.00020	B980544
Dissolved Tin (Sn)	mg/L	0.0019	+/- <RDL	N/A	N/A	<0.0010	N/A	0.0010	B980544
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	N/A	N/A	<0.0010	N/A	0.0010	B980544
Dissolved Uranium (U)	mg/L	0.00011	+/- 0.00020	N/A	N/A	<0.00010	N/A	0.00010	B980544
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	N/A	N/A	<0.0010	N/A	0.0010	B980544
Dissolved Zinc (Zn)	mg/L	<0.0030	N/A	N/A	N/A	<0.0030	N/A	0.0030	B980544

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		DMO160		DMO160			
Sampling Date		2025/06/06 15:00		2025/06/06 15:00			
COC Number		1 OF 1		1 OF 1			
	UNITS	SR25-04	MU	SR25-04 Lab-Dup	MU	RDL	QC Batch
Calculated Parameters							
Anion Sum	meq/L	0.0000	N/A	N/A	N/A	N/A	B977696
Cation Sum	meq/L	0.0040	N/A	N/A	N/A	N/A	B977696
Hardness (CaCO3)	mg/L	<0.50	N/A	N/A	N/A	0.50	B977793
Ion Balance (% Difference)	%	NC	N/A	N/A	N/A	N/A	B977797
Nitrate (N)	mg/L	<0.040	N/A	N/A	N/A	0.040	B977703
Nitrate (NO3)	mg/L	<0.18	N/A	N/A	N/A	0.18	B977701
Nitrite (NO2)	mg/L	<0.13	N/A	N/A	N/A	0.13	B977701
Calculated Total Dissolved Solids	mg/L	<10	N/A	N/A	N/A	10	B977709
Elements							
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	N/A	N/A	0.020	B977420
Misc. Inorganics							
Conductivity	uS/cm	<2.0	N/A	N/A	N/A	2.0	B982832
pH	pH	5.40	+/- 0.0535	N/A	N/A	N/A	B982827
Anions							
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	N/A	N/A	1.0	B982825
Alkalinity (Total as CaCO3)	mg/L	<1.0	N/A	N/A	N/A	1.0	B982825
Bicarbonate (HCO3)	mg/L	<1.0	N/A	N/A	N/A	1.0	B982825
Carbonate (CO3)	mg/L	<1.0	N/A	N/A	N/A	1.0	B982825
Hydroxide (OH)	mg/L	<1.0	N/A	N/A	N/A	1.0	B982825
Chloride (Cl)	mg/L	<1.0	N/A	N/A	N/A	1.0	B979396
Sulphate (SO4)	mg/L	<1.0	N/A	N/A	N/A	1.0	B979396
Nutrients							
Nitrite (N)	mg/L	<0.040	N/A	N/A	N/A	0.040	B978606
Nitrate plus Nitrite (N)	mg/L	<0.040	N/A	N/A	N/A	0.040	B978606
Lab Filtered Elements							
Dissolved Aluminum (Al)	mg/L	<0.0030	N/A	<0.0030	N/A	0.0030	B980027
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	<0.00060	N/A	0.00060	B980027
Dissolved Arsenic (As)	mg/L	<0.00020	N/A	<0.00020	N/A	0.00020	B980027
Dissolved Barium (Ba)	mg/L	<0.010	N/A	<0.010	N/A	0.010	B981077

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N/A = Not Applicable

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		DMO160		DMO160			
Sampling Date		2025/06/06 15:00		2025/06/06 15:00			
COC Number		1 OF 1		1 OF 1			
	UNITS	SR25-04	MU	SR25-04 Lab-Dup	MU	RDL	QC Batch
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	<0.0010	N/A	0.0010	B980027
Dissolved Boron (B)	mg/L	<0.020	N/A	<0.020	N/A	0.020	B981077
Dissolved Calcium (Ca)	mg/L	<0.30	N/A	<0.30	N/A	0.30	B981077
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	<0.0010	N/A	0.0010	B980027
Dissolved Cobalt (Co)	mg/L	<0.00030	N/A	<0.00030	N/A	0.00030	B980027
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	<0.0010	N/A	0.0010	B980027
Dissolved Iron (Fe)	mg/L	<0.060	N/A	<0.060	N/A	0.060	B981077
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	<0.00020	N/A	0.00020	B980027
Dissolved Lithium (Li)	mg/L	<0.020	N/A	<0.020	N/A	0.020	B981077
Dissolved Magnesium (Mg)	mg/L	<0.20	N/A	<0.20	N/A	0.20	B981077
Dissolved Manganese (Mn)	mg/L	<0.0040	N/A	<0.0040	N/A	0.0040	B981077
Dissolved Molybdenum (Mo)	mg/L	<0.00020	N/A	<0.00020	N/A	0.00020	B980027
Dissolved Nickel (Ni)	mg/L	<0.00050	N/A	<0.00050	N/A	0.00050	B980027
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	<0.10	N/A	0.10	B981077
Dissolved Potassium (K)	mg/L	<0.30	N/A	<0.30	N/A	0.30	B981077
Dissolved Selenium (Se)	mg/L	<0.00020	N/A	<0.00020	N/A	0.00020	B980027
Dissolved Silicon (Si)	mg/L	<0.50	N/A	<0.50	N/A	0.50	B981077
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	<0.00010	N/A	0.00010	B980027
Dissolved Sodium (Na)	mg/L	<0.50	N/A	<0.50	N/A	0.50	B981077
Dissolved Strontium (Sr)	mg/L	<0.020	N/A	<0.020	N/A	0.020	B981077
Dissolved Sulphur (S)	mg/L	0.34	+/- <RDL	0.38	+/- <RDL	0.20	B981077
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	<0.00020	N/A	0.00020	B980027
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	<0.0010	N/A	0.0010	B980027
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	<0.0010	N/A	0.0010	B980027
Dissolved Uranium (U)	mg/L	<0.00010	N/A	<0.00010	N/A	0.00010	B980027
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	<0.0010	N/A	0.0010	B980027
Dissolved Zinc (Zn)	mg/L	<0.0030	N/A	<0.0030	N/A	0.0030	B980027

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
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N/A = Not Applicable

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TOTAL KJELDAHL NITROGEN (TOTAL)

Bureau Veritas ID		DMO150		DMO151			DMO152			
Sampling Date		2025/06/06 10:32		2025/06/06 09:30			2025/06/06 09:50			
COC Number		1 OF 1		1 OF 1			1 OF 1			
	UNITS	RMW16-23-32	MU	RMW16-23-14	MU	RDL	RMW16-23-7	MU	RDL	QC Batch
Calculated Parameters										
Total Kjeldahl Nitrogen (Calc)	mg/L	0.93	N/A	0.66	N/A	0.040	0.30	N/A	0.20	B977472
Nutrients										
Total Nitrogen (N)	mg/L	0.93	+/- 0.12	0.66	+/- 0.084	0.020	0.34 (1)	+/- <RDL	0.20	B982591

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Bureau Veritas ID		DMO153				DMO154			DMO155			
Sampling Date		2025/06/06 12:01				2025/06/06 11:40			2025/06/06 12:50			
COC Number		1 OF 1				1 OF 1			1 OF 1			
	UNITS	RMW16-19-19	MU	RDL	QC Batch	RMW16-19-10	MU	RDL	RMW16-18-13	MU	RDL	QC Batch
Calculated Parameters												
Total Kjeldahl Nitrogen (Calc)	mg/L	1.4	N/A	0.040	B977472	<2.0	N/A	2.0	0.52	N/A	0.20	B977472
Nutrients												
Total Nitrogen (N)	mg/L	1.4	+/- 0.18	0.020	B982596	<2.0 (1)	N/A	2.0	0.86 (2)	+/- <RDL	0.20	B982591

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly. Nitrogen < Ammonia: Both values fall within the method uncertainty for duplicates and are likely equivalent.
(2) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Bureau Veritas ID		DMO156				DMO157			
Sampling Date		2025/06/06 13:56				2025/06/06 14:02			
COC Number		1 OF 1				1 OF 1			
	UNITS	MW16-8-8	MU	RDL	QC Batch	MW16-8-19	MU	RDL	QC Batch
Calculated Parameters									
Total Kjeldahl Nitrogen (Calc)	mg/L	0.53	N/A	0.20	B977472	0.12	N/A	0.040	B977472
Nutrients									
Total Nitrogen (N)	mg/L	1.1 (1)	+/- <RDL	0.20	B982591	0.59	+/- 0.076	0.020	B982575

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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TOTAL KJELDAHL NITROGEN (TOTAL)

Bureau Veritas ID		DMO158		DMO158				DMO159			
Sampling Date		2025/06/06 14:50		2025/06/06 14:50				2025/06/06 14:55			
COC Number		1 OF 1		1 OF 1				1 OF 1			
	UNITS	MW16-25-9	MU	MW16-25-9 Lab-Dup	MU	RDL	QC Batch	SR25-03	MU	RDL	QC Batch
Calculated Parameters											
Total Kjeldahl Nitrogen (Calc)	mg/L	0.40	N/A	N/A	N/A	0.20	B977472	0.94	N/A	0.040	B977472
Nutrients											
Total Nitrogen (N)	mg/L	0.40 (1)	+/- <RDL	0.34	+/- <RDL	0.20	B982591	0.94	+/- 0.12	0.020	B982575

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Bureau Veritas ID		DMO160			DMO161			
Sampling Date		2025/06/06 15:00			2025/06/06			
COC Number		1 OF 1			1 OF 1			
	UNITS	SR25-04	MU	QC Batch	SR25-05	MU	RDL	QC Batch
Calculated Parameters								
Total Kjeldahl Nitrogen (Calc)	mg/L	<0.040	N/A	B977472	<0.040	N/A	0.040	B977472
Nutrients								
Total Nitrogen (N)	mg/L	<0.020	N/A	B982591	<0.020	N/A	0.020	B982596

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

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Bureau Veritas Job #: C551949
Report Date: 2025/06/17

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DMO150		DMO150		DMO151			
Sampling Date		2025/06/06 10:32		2025/06/06 10:32		2025/06/06 09:30			
COC Number		1 OF 1		1 OF 1		1 OF 1			
	UNITS	RMW16-23-32	MU	RMW16-23-32 Lab-Dup	MU	RMW16-23-14	MU	RDL	QC Batch
Misc. Inorganics									
Dissolved Organic Carbon (C)	mg/L	1.2	+/- <RDL	N/A	N/A	1.7	+/- <RDL	0.50	B987216
Microbiological Param.									
E.Coli DST	MPN/100mL	<1.0	N/A	N/A	N/A	<1.0	N/A	1.0	B977854
Fecal Coliforms	MPN/100mL	<1.0	N/A	N/A	N/A	<1.0	N/A	1.0	B977948
Heterotrophic DST	MPN/100mL	1000	N/A	1100	N/A	440	N/A	1.0	B977857
Total Coliforms DST	MPN/100mL	<1.0	N/A	N/A	N/A	2.0	N/A	1.0	B977854
Nutrients									
Total Ammonia (N)	mg/L	0.80	+/- 0.088	N/A	N/A	0.44	+/- 0.050	0.015	B984179
Dissolved Phosphorus (P)	mg/L	0.0074	+/- 0.0048	N/A	N/A	<0.0030	N/A	0.0030	B983969
Total Phosphorus (P)	mg/L	0.0081	+/- 0.0038	0.0083	+/- 0.0038	0.0046	+/- 0.0037	0.0030	B983961

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

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Bureau Veritas Job #: C551949
Report Date: 2025/06/17

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DMO151			DMO152			
Sampling Date		2025/06/06 09:30			2025/06/06 09:50			
COC Number		1 OF 1			1 OF 1			
	UNITS	RMW16-23-14 Lab-Dup	MU	QC Batch	RMW16-23-7	MU	RDL	QC Batch
Misc. Inorganics								
Dissolved Organic Carbon (C)	mg/L	N/A	N/A	B987216	1.5	+/- <RDL	0.50	B987216
Microbiological Param.								
E.Coli DST	MPN/100mL	<1.0	N/A	B977854	<1.0	N/A	1.0	B977854
Fecal Coliforms	MPN/100mL	N/A	N/A	B977948	<1.0	N/A	1.0	B977948
Heterotrophic DST	MPN/100mL	N/A	N/A	B977857	>2400	N/A	1.0	B977857
Total Coliforms DST	MPN/100mL	3.1	N/A	B977854	98	N/A	1.0	B977854
Nutrients								
Total Ammonia (N)	mg/L	0.43	+/- 0.049	B984179	0.042	+/- <RDL	0.015	B984173
Dissolved Phosphorus (P)	mg/L	N/A	N/A	B983969	<0.0030	N/A	0.0030	B983969
Total Phosphorus (P)	mg/L	N/A	N/A	B983961	0.21	+/- 0.028	0.0030	B983961

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Bureau Veritas Job #: C551949
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STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DMO153		DMO153			
Sampling Date		2025/06/06 12:01		2025/06/06 12:01			
COC Number		1 OF 1		1 OF 1			
	UNITS	RMW16-19-19	MU	RMW16-19-19 Lab-Dup	MU	RDL	QC Batch
Misc. Inorganics							
Dissolved Organic Carbon (C)	mg/L	3.9	+/- 0.53	N/A	N/A	0.50	B987216
Microbiological Param.							
E.Coli DST	MPN/100mL	<1.0	N/A	N/A	N/A	1.0	B977854
Fecal Coliforms	MPN/100mL	<1.0	N/A	<1.0	N/A	1.0	B977948
Heterotrophic DST	MPN/100mL	>2400	N/A	N/A	N/A	1.0	B977857
Total Coliforms DST	MPN/100mL	1.0	N/A	N/A	N/A	1.0	B977854
Nutrients							
Total Ammonia (N)	mg/L	1.1	+/- 0.12	N/A	N/A	0.015	B984173
Dissolved Phosphorus (P)	mg/L	<0.0030	N/A	N/A	N/A	0.0030	B989161
Total Phosphorus (P)	mg/L	0.013	+/- 0.0041	N/A	N/A	0.0030	B989164

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Lab-Dup = Laboratory Initiated Duplicate
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N/A = Not Applicable

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STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DMO154				DMO155			
Sampling Date		2025/06/06 11:40				2025/06/06 12:50			
COC Number		1 OF 1				1 OF 1			
	UNITS	RMW16-19-10	MU	RDL	QC Batch	RMW16-18-13	MU	RDL	QC Batch
Misc. Inorganics									
Dissolved Organic Carbon (C)	mg/L	4.0	+/- 0.54	0.50	B987216	1.9	+/- <RDL	0.50	B987216
Microbiological Param.									
E.Coli DST	MPN/100mL	<20 (1)	N/A	20	B977854	<10 (1)	N/A	10	B977854
Fecal Coliforms	MPN/100mL	<20 (1)	N/A	20	B977948	<10 (1)	N/A	10	B977948
Heterotrophic DST	MPN/100mL	>48000 (2)	N/A	20	B977857	>24000 (2)	N/A	10	B977857
Total Coliforms DST	MPN/100mL	<20 (1)	N/A	20	B977854	<10 (1)	N/A	10	B977854
Nutrients									
Total Ammonia (N)	mg/L	0.12	+/- 0.017	0.015	B984173	0.098	+/- 0.015	0.015	B986086
Dissolved Phosphorus (P)	mg/L	<0.0030	N/A	0.0030	B983969	<0.0030	N/A	0.0030	B980906
Total Phosphorus (P)	mg/L	4.4	+/- 0.55	0.12	B986898	0.98	+/- 0.12	0.030	B983961

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Detection limit raised due to matrix interference.
(2) Detection limits raised due to matrix interference.

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Bureau Veritas Job #: C551949
Report Date: 2025/06/17

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DMO156		DMO156			
Sampling Date		2025/06/06 13:56		2025/06/06 13:56			
COC Number		1 OF 1		1 OF 1			
	UNITS	MW16-8-8	MU	MW16-8-8 Lab-Dup	MU	RDL	QC Batch
Misc. Inorganics							
Dissolved Organic Carbon (C)	mg/L	2.0	+/- <RDL	1.8	+/- <RDL	0.50	B987216
Microbiological Param.							
E.Coli DST	MPN/100mL	<10 (1)	N/A	N/A	N/A	10	B977854
Fecal Coliforms	MPN/100mL	<10 (1)	N/A	N/A	N/A	10	B977948
Heterotrophic DST	MPN/100mL	20000 (1)	N/A	N/A	N/A	10	B977857
Total Coliforms DST	MPN/100mL	<10 (1)	N/A	N/A	N/A	10	B977854
Nutrients							
Total Ammonia (N)	mg/L	<0.015	N/A	N/A	N/A	0.015	B984173
Dissolved Phosphorus (P)	mg/L	<0.0030	N/A	N/A	N/A	0.0030	B983969
Total Phosphorus (P)	mg/L	2.4	+/- 0.31	N/A	N/A	0.060	B986898

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N/A = Not Applicable
(1) Detection limit raised due to matrix interference.

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STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DMO157			DMO158			
Sampling Date		2025/06/06 14:02			2025/06/06 14:50			
COC Number		1 OF 1			1 OF 1			
	UNITS	MW16-8-19	MU	RDL	MW16-25-9	MU	RDL	QC Batch
Misc. Inorganics								
Dissolved Organic Carbon (C)	mg/L	1.5	+/- <RDL	0.50	4.4	+/- 0.57	0.50	B987216
Microbiological Param.								
E.Coli DST	MPN/100mL	<1.0	N/A	1.0	<5.0 (1)	N/A	5.0	B977854
Fecal Coliforms	MPN/100mL	<1.0	N/A	1.0	<5.0 (1)	N/A	5.0	B977948
Heterotrophic DST	MPN/100mL	870	N/A	1.0	>12000 (1)	N/A	5.0	B977857
Total Coliforms DST	MPN/100mL	<1.0	N/A	1.0	<5.0 (1)	N/A	5.0	B977854
Nutrients								
Total Ammonia (N)	mg/L	<0.015	N/A	0.015	<0.015	N/A	0.015	B984173
Dissolved Phosphorus (P)	mg/L	<0.0030	N/A	0.0030	0.0075	+/- 0.0048	0.0030	B983969
Total Phosphorus (P)	mg/L	0.0059	+/- 0.0037	0.0030	0.060	+/- 0.0094	0.0030	B983961

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Detection limit raised due to matrix interference.

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C551949
Report Date: 2025/06/17

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Location: SRI
Sampler Initials: TH

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DMO159		DMO160		DMO161		DMO161			
Sampling Date		2025/06/06 14:55		2025/06/06 15:00		2025/06/06		2025/06/06			
COC Number		1 OF 1		1 OF 1		1 OF 1		1 OF 1			
	UNITS	SR25-03	MU	SR25-04	MU	SR25-05	MU	SR25-05 Lab-Dup	MU	RDL	QC Batch
Misc. Inorganics											
Dissolved Organic Carbon (C)	mg/L	1.2	+/- <RDL	N/A	N/A	<0.50	N/A	N/A	N/A	0.50	B987216
Lab Filtered Inorganics											
Dissolved Organic Carbon (C)	mg/L	N/A	N/A	<0.50	N/A	N/A	N/A	N/A	N/A	0.50	B987205
Microbiological Param.											
E.Coli DST	MPN/100mL	<1.0	N/A	<1.0	N/A	<1.0	N/A	N/A	N/A	1.0	B977854
Fecal Coliforms	MPN/100mL	<1.0	N/A	<1.0	N/A	<1.0	N/A	N/A	N/A	1.0	B977948
Heterotrophic DST	MPN/100mL	550	N/A	1.0	N/A	<1.0	N/A	N/A	N/A	1.0	B977857
Total Coliforms DST	MPN/100mL	<1.0	N/A	<1.0	N/A	<1.0	N/A	N/A	N/A	1.0	B977854
Nutrients											
Total Ammonia (N)	mg/L	0.82	+/- 0.089	<0.015	N/A	<0.015	N/A	<0.015	N/A	0.015	B984173
Dissolved Phosphorus (P)	mg/L	0.0071	+/- 0.0048	N/A	N/A	<0.0030	N/A	N/A	N/A	0.0030	B983969
Total Phosphorus (P)	mg/L	0.0079	+/- 0.0038	<0.0030	N/A	<0.0030	N/A	N/A	N/A	0.0030	B983961
Lab Filtered Nutrients											
Dissolved Phosphorus (P)	mg/L	N/A	N/A	<0.0030	N/A	N/A	N/A	N/A	N/A	0.0030	B982298

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

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MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		DMO150			DMO151		DMO152			
Sampling Date		2025/06/06 10:32			2025/06/06 09:30		2025/06/06 09:50			
COC Number		1 OF 1			1 OF 1		1 OF 1			
	UNITS	RMW16-23-32	MU	QC Batch	RMW16-23-14	MU	RMW16-23-7	MU	RDL	QC Batch
Elements										
Dissolved Mercury (Hg)	ug/L	<0.0019	N/A	B989226	<0.0019	N/A	<0.0019	N/A	0.0019	B987235
Total Mercury (Hg)	ug/L	<0.0019	N/A	B987230	<0.0019	N/A	0.0145	+/- 0.0031	0.0019	B989395

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas ID		DMO153		DMO153				DMO154			
Sampling Date		2025/06/06 12:01		2025/06/06 12:01				2025/06/06 11:40			
COC Number		1 OF 1		1 OF 1				1 OF 1			
	UNITS	RMW16-19-19	MU	RMW16-19-19 Lab-Dup	MU	RDL	QC Batch	RMW16-19-10	MU	RDL	QC Batch
Elements											
Dissolved Mercury (Hg)	ug/L	<0.0019	N/A	<0.0019	N/A	0.0019	B989226	<0.0019	N/A	0.0019	B987235
Total Mercury (Hg)	ug/L	<0.0019	N/A	N/A	N/A	0.0019	B989395	0.295 (1)	+/- 0.050	0.019	B989395

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Bureau Veritas ID		DMO155				DMO156			
Sampling Date		2025/06/06 12:50				2025/06/06 13:56			
COC Number		1 OF 1				1 OF 1			
	UNITS	RMW16-18-13	MU	RDL	QC Batch	MW16-8-8	MU	RDL	QC Batch
Elements									
Dissolved Mercury (Hg)	ug/L	<0.0019	N/A	0.0019	B987235	<0.0019	N/A	0.0019	B989226
Total Mercury (Hg)	ug/L	0.117 (1)	+/- 0.0200	0.0038	B989395	0.223 (1)	+/- 0.038	0.019	B989395

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		DMO157		DMO158			DMO159		DMO160			
Sampling Date		2025/06/06 14:02		2025/06/06 14:50			2025/06/06 14:55		2025/06/06 15:00			
COC Number		1 OF 1		1 OF 1			1 OF 1		1 OF 1			
	UNITS	MW16-8-19	MU	MW16-25-9	MU	QC Batch	SR25-03	MU	SR25-04	MU	RDL	QC Batch
Elements												
Dissolved Mercury (Hg)	ug/L	<0.0019	N/A	<0.0019	N/A	B987235	<0.0019	N/A	N/A	N/A	0.0019	B989226
Total Mercury (Hg)	ug/L	<0.0019	N/A	<0.0019	N/A	B989395	<0.0019	N/A	<0.0019	N/A	0.0019	B989395
Lab Filtered Elements												
Dissolved Mercury (Hg)	ug/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<0.0019	N/A	0.0019	B981511

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas ID		DMO160			DMO161			
Sampling Date		2025/06/06 15:00			2025/06/06			
COC Number		1 OF 1			1 OF 1			
	UNITS	SR25-04 Lab-Dup	MU	QC Batch	SR25-05	MU	RDL	QC Batch
Elements								
Dissolved Mercury (Hg)	ug/L	N/A	N/A	B989226	<0.0019	N/A	0.0019	B987235
Total Mercury (Hg)	ug/L	<0.0019	N/A	B989395	<0.0019	N/A	0.0019	B989395

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	5.7°C
Package 2	4.7°C

The following changes were requested by Wesley Tsen on 2025/06/16.
Sample DMO159 Sample ID SR24-03 changed to SR25-03
Sample DMO160 Sample ID SR24-04 changed to SR25-04
Sample DMO161 Sample ID SR24-05 changed to SR25-05

The estimate of uncertainty has been reported as an expanded uncertainty and calculated using a coverage factor of 2, which gives a level of confidence of 95%.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B977854	R4S	Method Blank	E.Coli DST	2025/06/08	<1.0		mpn/100mL	
			Total Coliforms DST	2025/06/08	<1.0		mpn/100mL	
B977854	R4S	RPD [DMO151-02]	E.Coli DST	2025/06/08	NC		%	N/A
			Total Coliforms DST	2025/06/08	43		%	N/A
B977857	R4S	Method Blank	Heterotrophic DST	2025/06/09	<1.0		mpn/100mL	
B977857	R4S	RPD [DMO150-02]	Heterotrophic DST	2025/06/09	6.8		%	N/A
B977904	WPK	Matrix Spike	1,4-Difluorobenzene (sur.)	2025/06/14		109	%	50 - 140
			4-Bromofluorobenzene (sur.)	2025/06/14		93	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2025/06/14		105	%	50 - 140
			Benzene	2025/06/14		101	%	50 - 140
			Toluene	2025/06/14		96	%	50 - 140
			Ethylbenzene	2025/06/14		97	%	50 - 140
			m & p-Xylene	2025/06/14		96	%	50 - 140
			o-Xylene	2025/06/14		97	%	50 - 140
			F1 (C6-C10)	2025/06/14		102	%	60 - 140
B977904	WPK	Spiked Blank	1,4-Difluorobenzene (sur.)	2025/06/14		109	%	50 - 140
			4-Bromofluorobenzene (sur.)	2025/06/14		94	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2025/06/14		105	%	50 - 140
			Benzene	2025/06/14		103	%	60 - 130
			Toluene	2025/06/14		97	%	60 - 130
			Ethylbenzene	2025/06/14		99	%	60 - 130
			m & p-Xylene	2025/06/14		98	%	60 - 130
			o-Xylene	2025/06/14		99	%	60 - 130
			F1 (C6-C10)	2025/06/14		106	%	60 - 140
B977904	WPK	Method Blank	1,4-Difluorobenzene (sur.)	2025/06/14		111	%	50 - 140
			4-Bromofluorobenzene (sur.)	2025/06/14		91	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2025/06/14		104	%	50 - 140
			Benzene	2025/06/14	<0.00040		mg/L	
			Toluene	2025/06/14	<0.00040		mg/L	
			Ethylbenzene	2025/06/14	<0.00040		mg/L	
			m & p-Xylene	2025/06/14	<0.00080		mg/L	
			o-Xylene	2025/06/14	<0.00040		mg/L	
			F1 (C6-C10)	2025/06/14	<0.10		mg/L	
B977904	WPK	RPD	Benzene	2025/06/14	NC		%	30
			Toluene	2025/06/14	NC		%	30
			Ethylbenzene	2025/06/14	NC		%	30
			m & p-Xylene	2025/06/14	NC		%	30
			o-Xylene	2025/06/14	NC		%	30
			F1 (C6-C10)	2025/06/14	NC		%	30
B977948	R4S	Method Blank	Fecal Coliforms	2025/06/08	<1.0		MPN/100mL	
B977948	R4S	RPD [DMO153-02]	Fecal Coliforms	2025/06/08	NC		%	N/A
B978606	AFI	Matrix Spike [DMO155-01]	Nitrite (N)	2025/06/09		87	%	80 - 120
			Nitrate plus Nitrite (N)	2025/06/09		37 (1)	%	80 - 120
B978606	AFI	Spiked Blank	Nitrite (N)	2025/06/08		91	%	80 - 120
			Nitrate plus Nitrite (N)	2025/06/08		100	%	80 - 120
B978606	AFI	Method Blank	Nitrite (N)	2025/06/08	<0.040		mg/L	
			Nitrate plus Nitrite (N)	2025/06/08	<0.040		mg/L	
B978606	AFI	RPD [DMO155-01]	Nitrite (N)	2025/06/09	NC		%	20
			Nitrate plus Nitrite (N)	2025/06/09	0.90		%	20
B979314	VP4	Matrix Spike	O-TERPHENYL (sur.)	2025/06/11		108	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2025/06/11		119	%	60 - 140
B979314	VP4	Spiked Blank	O-TERPHENYL (sur.)	2025/06/10		108	%	60 - 140

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			F2 (C10-C16 Hydrocarbons)	2025/06/10		119	%	60 - 140
B979314	VP4	Method Blank	O-TERPHENYL (sur.)	2025/06/10		103	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2025/06/10	<0.10		mg/L	
B979314	VP4	RPD	F2 (C10-C16 Hydrocarbons)	2025/06/11	NC		%	30
B979396	TOR	Matrix Spike [DMO159-01]	Chloride (Cl)	2025/06/09		109	%	80 - 120
			Sulphate (SO4)	2025/06/09		NC	%	80 - 120
B979396	TOR	Spiked Blank	Chloride (Cl)	2025/06/09		100	%	80 - 120
			Sulphate (SO4)	2025/06/09		102	%	80 - 120
B979396	TOR	Method Blank	Chloride (Cl)	2025/06/09	<1.0		mg/L	
			Sulphate (SO4)	2025/06/09	<1.0		mg/L	
B979396	TOR	RPD [DMO159-01]	Chloride (Cl)	2025/06/09	NC		%	20
			Sulphate (SO4)	2025/06/09	3.9		%	20
B980027	JAB	Matrix Spike [DMO160-01]	Dissolved Aluminum (Al)	2025/06/09		94	%	80 - 120
			Dissolved Antimony (Sb)	2025/06/09		98	%	80 - 120
			Dissolved Arsenic (As)	2025/06/09		97	%	80 - 120
			Dissolved Beryllium (Be)	2025/06/09		96	%	80 - 120
			Dissolved Chromium (Cr)	2025/06/09		92	%	80 - 120
			Dissolved Cobalt (Co)	2025/06/09		92	%	80 - 120
			Dissolved Copper (Cu)	2025/06/09		92	%	80 - 120
			Dissolved Lead (Pb)	2025/06/09		91	%	80 - 120
			Dissolved Molybdenum (Mo)	2025/06/09		95	%	80 - 120
			Dissolved Nickel (Ni)	2025/06/09		93	%	80 - 120
			Dissolved Selenium (Se)	2025/06/09		98	%	80 - 120
			Dissolved Silver (Ag)	2025/06/09		92	%	80 - 120
			Dissolved Thallium (Tl)	2025/06/09		95	%	80 - 120
			Dissolved Tin (Sn)	2025/06/09		96	%	80 - 120
			Dissolved Titanium (Ti)	2025/06/09		98	%	80 - 120
			Dissolved Uranium (U)	2025/06/09		85	%	80 - 120
			Dissolved Vanadium (V)	2025/06/09		91	%	80 - 120
			Dissolved Zinc (Zn)	2025/06/09		95	%	80 - 120
B980027	JAB	Spiked Blank	Dissolved Aluminum (Al)	2025/06/09		96	%	80 - 120
			Dissolved Antimony (Sb)	2025/06/09		97	%	80 - 120
			Dissolved Arsenic (As)	2025/06/09		96	%	80 - 120
			Dissolved Beryllium (Be)	2025/06/09		96	%	80 - 120
			Dissolved Chromium (Cr)	2025/06/09		91	%	80 - 120
			Dissolved Cobalt (Co)	2025/06/09		91	%	80 - 120
			Dissolved Copper (Cu)	2025/06/09		91	%	80 - 120
			Dissolved Lead (Pb)	2025/06/09		92	%	80 - 120
			Dissolved Molybdenum (Mo)	2025/06/09		96	%	80 - 120
			Dissolved Nickel (Ni)	2025/06/09		92	%	80 - 120
			Dissolved Selenium (Se)	2025/06/09		97	%	80 - 120
			Dissolved Silver (Ag)	2025/06/09		94	%	80 - 120
			Dissolved Thallium (Tl)	2025/06/09		96	%	80 - 120
			Dissolved Tin (Sn)	2025/06/09		98	%	80 - 120
			Dissolved Titanium (Ti)	2025/06/09		94	%	80 - 120
			Dissolved Uranium (U)	2025/06/09		86	%	80 - 120
			Dissolved Vanadium (V)	2025/06/09		91	%	80 - 120
			Dissolved Zinc (Zn)	2025/06/09		91	%	80 - 120
B980027	JAB	Method Blank	Dissolved Aluminum (Al)	2025/06/09	<0.0030		mg/L	
			Dissolved Antimony (Sb)	2025/06/09	<0.00060		mg/L	
			Dissolved Arsenic (As)	2025/06/09	<0.00020		mg/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Beryllium (Be)	2025/06/09	<0.0010		mg/L	
			Dissolved Chromium (Cr)	2025/06/09	<0.0010		mg/L	
			Dissolved Cobalt (Co)	2025/06/09	<0.00030		mg/L	
			Dissolved Copper (Cu)	2025/06/09	<0.0010		mg/L	
			Dissolved Lead (Pb)	2025/06/09	<0.00020		mg/L	
			Dissolved Molybdenum (Mo)	2025/06/09	<0.00020		mg/L	
			Dissolved Nickel (Ni)	2025/06/09	<0.00050		mg/L	
			Dissolved Selenium (Se)	2025/06/09	<0.00020		mg/L	
			Dissolved Silver (Ag)	2025/06/09	<0.00010		mg/L	
			Dissolved Thallium (Tl)	2025/06/09	<0.00020		mg/L	
			Dissolved Tin (Sn)	2025/06/09	<0.0010		mg/L	
			Dissolved Titanium (Ti)	2025/06/09	<0.0010		mg/L	
			Dissolved Uranium (U)	2025/06/09	<0.00010		mg/L	
			Dissolved Vanadium (V)	2025/06/09	<0.0010		mg/L	
			Dissolved Zinc (Zn)	2025/06/09	<0.0030		mg/L	
B980027	JAB	RPD [DMO160-01]	Dissolved Aluminum (Al)	2025/06/09	NC		%	20
			Dissolved Antimony (Sb)	2025/06/09	NC		%	20
			Dissolved Arsenic (As)	2025/06/09	NC		%	20
			Dissolved Beryllium (Be)	2025/06/09	NC		%	20
			Dissolved Chromium (Cr)	2025/06/09	NC		%	20
			Dissolved Cobalt (Co)	2025/06/09	NC		%	20
			Dissolved Copper (Cu)	2025/06/09	NC		%	20
			Dissolved Lead (Pb)	2025/06/09	NC		%	20
			Dissolved Molybdenum (Mo)	2025/06/09	NC		%	20
			Dissolved Nickel (Ni)	2025/06/09	NC		%	20
			Dissolved Selenium (Se)	2025/06/09	NC		%	20
			Dissolved Silver (Ag)	2025/06/09	NC		%	20
			Dissolved Thallium (Tl)	2025/06/09	NC		%	20
			Dissolved Tin (Sn)	2025/06/09	NC		%	20
			Dissolved Titanium (Ti)	2025/06/09	NC		%	20
			Dissolved Uranium (U)	2025/06/09	NC		%	20
			Dissolved Vanadium (V)	2025/06/09	NC		%	20
			Dissolved Zinc (Zn)	2025/06/09	NC		%	20
B980483	KH2	Matrix Spike	Dissolved Aluminum (Al)	2025/06/10		NC	%	80 - 120
			Dissolved Antimony (Sb)	2025/06/10		105	%	80 - 120
			Dissolved Arsenic (As)	2025/06/10		98	%	80 - 120
			Dissolved Beryllium (Be)	2025/06/10		105	%	80 - 120
			Dissolved Chromium (Cr)	2025/06/10		95	%	80 - 120
			Dissolved Cobalt (Co)	2025/06/10		NC	%	80 - 120
			Dissolved Copper (Cu)	2025/06/10		95	%	80 - 120
			Dissolved Lead (Pb)	2025/06/10		94	%	80 - 120
			Dissolved Molybdenum (Mo)	2025/06/10		104	%	80 - 120
			Dissolved Nickel (Ni)	2025/06/10		NC	%	80 - 120
			Dissolved Selenium (Se)	2025/06/10		101	%	80 - 120
			Dissolved Silver (Ag)	2025/06/10		97	%	80 - 120
			Dissolved Thallium (Tl)	2025/06/10		100	%	80 - 120
			Dissolved Tin (Sn)	2025/06/10		106	%	80 - 120
			Dissolved Titanium (Ti)	2025/06/10		104	%	80 - 120
			Dissolved Uranium (U)	2025/06/10		91	%	80 - 120
			Dissolved Vanadium (V)	2025/06/10		96	%	80 - 120
			Dissolved Zinc (Zn)	2025/06/10		NC	%	80 - 120
B980483	KH2	Spiked Blank	Dissolved Aluminum (Al)	2025/06/10		99	%	80 - 120
			Dissolved Antimony (Sb)	2025/06/10		102	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Arsenic (As)	2025/06/10		102	%	80 - 120
			Dissolved Beryllium (Be)	2025/06/10		103	%	80 - 120
			Dissolved Chromium (Cr)	2025/06/10		97	%	80 - 120
			Dissolved Cobalt (Co)	2025/06/10		98	%	80 - 120
			Dissolved Copper (Cu)	2025/06/10		97	%	80 - 120
			Dissolved Lead (Pb)	2025/06/10		95	%	80 - 120
			Dissolved Molybdenum (Mo)	2025/06/10		102	%	80 - 120
			Dissolved Nickel (Ni)	2025/06/10		97	%	80 - 120
			Dissolved Selenium (Se)	2025/06/10		102	%	80 - 120
			Dissolved Silver (Ag)	2025/06/10		97	%	80 - 120
			Dissolved Thallium (Tl)	2025/06/10		98	%	80 - 120
			Dissolved Tin (Sn)	2025/06/10		107	%	80 - 120
			Dissolved Titanium (Ti)	2025/06/10		104	%	80 - 120
			Dissolved Uranium (U)	2025/06/10		89	%	80 - 120
			Dissolved Vanadium (V)	2025/06/10		100	%	80 - 120
			Dissolved Zinc (Zn)	2025/06/10		97	%	80 - 120
B980483	KH2	Method Blank	Dissolved Aluminum (Al)	2025/06/10	<0.0030		mg/L	
			Dissolved Antimony (Sb)	2025/06/10	<0.00060		mg/L	
			Dissolved Arsenic (As)	2025/06/10	<0.00020		mg/L	
			Dissolved Beryllium (Be)	2025/06/10	<0.0010		mg/L	
			Dissolved Chromium (Cr)	2025/06/10	<0.0010		mg/L	
			Dissolved Cobalt (Co)	2025/06/10	<0.00030		mg/L	
			Dissolved Copper (Cu)	2025/06/10	<0.0010		mg/L	
			Dissolved Lead (Pb)	2025/06/10	<0.00020		mg/L	
			Dissolved Molybdenum (Mo)	2025/06/10	<0.00020		mg/L	
			Dissolved Nickel (Ni)	2025/06/10	<0.00050		mg/L	
			Dissolved Selenium (Se)	2025/06/10	<0.00020		mg/L	
			Dissolved Silver (Ag)	2025/06/10	<0.00010		mg/L	
			Dissolved Thallium (Tl)	2025/06/10	<0.00020		mg/L	
			Dissolved Tin (Sn)	2025/06/10	<0.0010		mg/L	
			Dissolved Titanium (Ti)	2025/06/10	<0.0010		mg/L	
			Dissolved Uranium (U)	2025/06/10	<0.00010		mg/L	
			Dissolved Vanadium (V)	2025/06/10	<0.0010		mg/L	
			Dissolved Zinc (Zn)	2025/06/10	<0.0030		mg/L	
B980483	KH2	RPD	Dissolved Aluminum (Al)	2025/06/10	1.8		%	20
			Dissolved Antimony (Sb)	2025/06/10	NC		%	20
			Dissolved Arsenic (As)	2025/06/10	NC		%	20
			Dissolved Beryllium (Be)	2025/06/10	2.1		%	20
			Dissolved Chromium (Cr)	2025/06/10	1.8		%	20
			Dissolved Cobalt (Co)	2025/06/10	0.53		%	20
			Dissolved Copper (Cu)	2025/06/10	0.86		%	20
			Dissolved Lead (Pb)	2025/06/10	NC		%	20
			Dissolved Molybdenum (Mo)	2025/06/10	NC		%	20
			Dissolved Nickel (Ni)	2025/06/10	0.55		%	20
			Dissolved Selenium (Se)	2025/06/10	13		%	20
			Dissolved Silver (Ag)	2025/06/10	NC		%	20
			Dissolved Thallium (Tl)	2025/06/10	11		%	20
			Dissolved Tin (Sn)	2025/06/10	1.9		%	20
			Dissolved Titanium (Ti)	2025/06/10	13		%	20
			Dissolved Uranium (U)	2025/06/10	0.93		%	20
			Dissolved Vanadium (V)	2025/06/10	0.74		%	20
			Dissolved Zinc (Zn)	2025/06/10	0.053		%	20
B980544	YHK	Matrix Spike	Dissolved Aluminum (Al)	2025/06/11		91	%	80 - 120

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Antimony (Sb)	2025/06/11		100	%	80 - 120
			Dissolved Arsenic (As)	2025/06/11		100	%	80 - 120
			Dissolved Beryllium (Be)	2025/06/11		91	%	80 - 120
			Dissolved Chromium (Cr)	2025/06/11		92	%	80 - 120
			Dissolved Cobalt (Co)	2025/06/11		92	%	80 - 120
			Dissolved Copper (Cu)	2025/06/11		92	%	80 - 120
			Dissolved Lead (Pb)	2025/06/11		92	%	80 - 120
			Dissolved Molybdenum (Mo)	2025/06/11		100	%	80 - 120
			Dissolved Nickel (Ni)	2025/06/11		92	%	80 - 120
			Dissolved Selenium (Se)	2025/06/11		102	%	80 - 120
			Dissolved Silver (Ag)	2025/06/11		96	%	80 - 120
			Dissolved Thallium (Tl)	2025/06/11		97	%	80 - 120
			Dissolved Tin (Sn)	2025/06/11		98	%	80 - 120
			Dissolved Titanium (Ti)	2025/06/11		98	%	80 - 120
			Dissolved Uranium (U)	2025/06/11		85	%	80 - 120
			Dissolved Vanadium (V)	2025/06/11		93	%	80 - 120
			Dissolved Zinc (Zn)	2025/06/11		94	%	80 - 120
B980544	YHK	Spiked Blank	Dissolved Aluminum (Al)	2025/06/11		91	%	80 - 120
			Dissolved Antimony (Sb)	2025/06/11		100	%	80 - 120
			Dissolved Arsenic (As)	2025/06/11		99	%	80 - 120
			Dissolved Beryllium (Be)	2025/06/11		87	%	80 - 120
			Dissolved Chromium (Cr)	2025/06/11		91	%	80 - 120
			Dissolved Cobalt (Co)	2025/06/11		92	%	80 - 120
			Dissolved Copper (Cu)	2025/06/11		93	%	80 - 120
			Dissolved Lead (Pb)	2025/06/11		92	%	80 - 120
			Dissolved Molybdenum (Mo)	2025/06/11		97	%	80 - 120
			Dissolved Nickel (Ni)	2025/06/11		93	%	80 - 120
			Dissolved Selenium (Se)	2025/06/11		101	%	80 - 120
			Dissolved Silver (Ag)	2025/06/11		96	%	80 - 120
			Dissolved Thallium (Tl)	2025/06/11		96	%	80 - 120
			Dissolved Tin (Sn)	2025/06/11		98	%	80 - 120
			Dissolved Titanium (Ti)	2025/06/11		93	%	80 - 120
			Dissolved Uranium (U)	2025/06/11		84	%	80 - 120
			Dissolved Vanadium (V)	2025/06/11		91	%	80 - 120
			Dissolved Zinc (Zn)	2025/06/11		94	%	80 - 120
B980544	YHK	Method Blank	Dissolved Aluminum (Al)	2025/06/11	<0.0030		mg/L	
			Dissolved Antimony (Sb)	2025/06/11	<0.00060		mg/L	
			Dissolved Arsenic (As)	2025/06/11	<0.00020		mg/L	
			Dissolved Beryllium (Be)	2025/06/11	<0.0010		mg/L	
			Dissolved Chromium (Cr)	2025/06/11	<0.0010		mg/L	
			Dissolved Cobalt (Co)	2025/06/11	<0.00030		mg/L	
			Dissolved Copper (Cu)	2025/06/11	<0.0010		mg/L	
			Dissolved Lead (Pb)	2025/06/11	<0.00020		mg/L	
			Dissolved Molybdenum (Mo)	2025/06/11	<0.00020		mg/L	
			Dissolved Nickel (Ni)	2025/06/11	<0.00050		mg/L	
			Dissolved Selenium (Se)	2025/06/11	<0.00020		mg/L	
			Dissolved Silver (Ag)	2025/06/11	<0.00010		mg/L	
			Dissolved Thallium (Tl)	2025/06/11	<0.00020		mg/L	
			Dissolved Tin (Sn)	2025/06/11	<0.0010		mg/L	
			Dissolved Titanium (Ti)	2025/06/11	<0.0010		mg/L	
			Dissolved Uranium (U)	2025/06/11	<0.00010		mg/L	
			Dissolved Vanadium (V)	2025/06/11	<0.0010		mg/L	
			Dissolved Zinc (Zn)	2025/06/11	<0.0030		mg/L	

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B980544	YHK	RPD	Dissolved Arsenic (As)	2025/06/11	NC		%	20
			Dissolved Chromium (Cr)	2025/06/11	NC		%	20
			Dissolved Copper (Cu)	2025/06/11	NC		%	20
B980906	YL7	Matrix Spike	Dissolved Phosphorus (P)	2025/06/12		103	%	80 - 120
B980906	YL7	QC Standard	Dissolved Phosphorus (P)	2025/06/12		87	%	80 - 120
B980906	YL7	Spiked Blank	Dissolved Phosphorus (P)	2025/06/12		103	%	80 - 120
B980906	YL7	Method Blank	Dissolved Phosphorus (P)	2025/06/12	<0.0030		mg/L	
B980906	YL7	RPD	Dissolved Phosphorus (P)	2025/06/12	NC		%	20
B980928	BYM	Matrix Spike	Dissolved Barium (Ba)	2025/06/10		49 (1)	%	80 - 120
			Dissolved Boron (B)	2025/06/10		96	%	80 - 120
			Dissolved Calcium (Ca)	2025/06/10		NC	%	80 - 120
			Dissolved Iron (Fe)	2025/06/10		110	%	80 - 120
			Dissolved Lithium (Li)	2025/06/10		96	%	80 - 120
			Dissolved Magnesium (Mg)	2025/06/10		99	%	80 - 120
			Dissolved Manganese (Mn)	2025/06/10		106	%	80 - 120
			Dissolved Phosphorus (P)	2025/06/10		111	%	80 - 120
			Dissolved Potassium (K)	2025/06/10		102	%	80 - 120
			Dissolved Silicon (Si)	2025/06/10		100	%	80 - 120
			Dissolved Sodium (Na)	2025/06/10		NC	%	80 - 120
			Dissolved Strontium (Sr)	2025/06/10		87	%	80 - 120
B980928	BYM	Spiked Blank	Dissolved Barium (Ba)	2025/06/10		105	%	80 - 120
			Dissolved Boron (B)	2025/06/10		100	%	80 - 120
			Dissolved Calcium (Ca)	2025/06/10		105	%	80 - 120
			Dissolved Iron (Fe)	2025/06/10		106	%	80 - 120
			Dissolved Lithium (Li)	2025/06/10		104	%	80 - 120
			Dissolved Magnesium (Mg)	2025/06/10		107	%	80 - 120
			Dissolved Manganese (Mn)	2025/06/10		101	%	80 - 120
			Dissolved Phosphorus (P)	2025/06/10		105	%	80 - 120
			Dissolved Potassium (K)	2025/06/10		104	%	80 - 120
			Dissolved Silicon (Si)	2025/06/10		99	%	80 - 120
			Dissolved Sodium (Na)	2025/06/10		105	%	80 - 120
			Dissolved Strontium (Sr)	2025/06/10		101	%	80 - 120
			Dissolved Sulphur (S)	2025/06/10		103	%	80 - 120
B980928	BYM	Method Blank	Dissolved Barium (Ba)	2025/06/10	<0.010		mg/L	
			Dissolved Boron (B)	2025/06/10	<0.020		mg/L	
			Dissolved Calcium (Ca)	2025/06/10	<0.30		mg/L	
			Dissolved Iron (Fe)	2025/06/10	<0.060		mg/L	
			Dissolved Lithium (Li)	2025/06/10	<0.020		mg/L	
			Dissolved Magnesium (Mg)	2025/06/10	<0.20		mg/L	
			Dissolved Manganese (Mn)	2025/06/10	<0.0040		mg/L	
			Dissolved Phosphorus (P)	2025/06/10	<0.10		mg/L	
			Dissolved Potassium (K)	2025/06/10	<0.30		mg/L	
			Dissolved Silicon (Si)	2025/06/10	<0.50		mg/L	
			Dissolved Sodium (Na)	2025/06/10	<0.50		mg/L	
			Dissolved Strontium (Sr)	2025/06/10	<0.020		mg/L	
			Dissolved Sulphur (S)	2025/06/10	<0.20		mg/L	
B980928	BYM	RPD	Dissolved Calcium (Ca)	2025/06/11	0.23		%	20
			Dissolved Iron (Fe)	2025/06/11	NC		%	20
			Dissolved Magnesium (Mg)	2025/06/11	1.1		%	20
			Dissolved Manganese (Mn)	2025/06/11	2.0		%	20
			Dissolved Potassium (K)	2025/06/11	0.048		%	20
			Dissolved Sodium (Na)	2025/06/11	0.75		%	20
B980930	KHU	Matrix Spike	Dissolved Barium (Ba)	2025/06/11		99	%	80 - 120

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Boron (B)	2025/06/11		102	%	80 - 120
			Dissolved Calcium (Ca)	2025/06/11		98	%	80 - 120
			Dissolved Iron (Fe)	2025/06/11		107	%	80 - 120
			Dissolved Lithium (Li)	2025/06/11		97	%	80 - 120
			Dissolved Magnesium (Mg)	2025/06/11		100	%	80 - 120
			Dissolved Manganese (Mn)	2025/06/11		102	%	80 - 120
			Dissolved Phosphorus (P)	2025/06/11		106	%	80 - 120
			Dissolved Potassium (K)	2025/06/11		100	%	80 - 120
			Dissolved Silicon (Si)	2025/06/11		97	%	80 - 120
			Dissolved Sodium (Na)	2025/06/11		96	%	80 - 120
			Dissolved Strontium (Sr)	2025/06/11		95	%	80 - 120
			Dissolved Sulphur (S)	2025/06/11		104	%	80 - 120
B980930	KHU	Spiked Blank	Dissolved Barium (Ba)	2025/06/11		101	%	80 - 120
			Dissolved Boron (B)	2025/06/11		100	%	80 - 120
			Dissolved Calcium (Ca)	2025/06/11		101	%	80 - 120
			Dissolved Iron (Fe)	2025/06/11		102	%	80 - 120
			Dissolved Lithium (Li)	2025/06/11		98	%	80 - 120
			Dissolved Magnesium (Mg)	2025/06/11		101	%	80 - 120
			Dissolved Manganese (Mn)	2025/06/11		98	%	80 - 120
			Dissolved Phosphorus (P)	2025/06/11		101	%	80 - 120
			Dissolved Potassium (K)	2025/06/11		101	%	80 - 120
			Dissolved Silicon (Si)	2025/06/11		98	%	80 - 120
			Dissolved Sodium (Na)	2025/06/11		100	%	80 - 120
			Dissolved Strontium (Sr)	2025/06/11		97	%	80 - 120
			Dissolved Sulphur (S)	2025/06/11		100	%	80 - 120
B980930	KHU	Method Blank	Dissolved Barium (Ba)	2025/06/11	<0.010		mg/L	
			Dissolved Boron (B)	2025/06/11	<0.020		mg/L	
			Dissolved Calcium (Ca)	2025/06/11	<0.30		mg/L	
			Dissolved Iron (Fe)	2025/06/11	<0.060		mg/L	
			Dissolved Lithium (Li)	2025/06/11	<0.020		mg/L	
			Dissolved Magnesium (Mg)	2025/06/11	<0.20		mg/L	
			Dissolved Manganese (Mn)	2025/06/11	<0.0040		mg/L	
			Dissolved Phosphorus (P)	2025/06/11	<0.10		mg/L	
			Dissolved Potassium (K)	2025/06/11	<0.30		mg/L	
			Dissolved Silicon (Si)	2025/06/11	<0.50		mg/L	
			Dissolved Sodium (Na)	2025/06/11	<0.50		mg/L	
			Dissolved Strontium (Sr)	2025/06/11	<0.020		mg/L	
			Dissolved Sulphur (S)	2025/06/11	<0.20		mg/L	
B980930	KHU	RPD	Dissolved Calcium (Ca)	2025/06/11	0.43		%	20
			Dissolved Iron (Fe)	2025/06/11	NC		%	20
			Dissolved Magnesium (Mg)	2025/06/11	0.14		%	20
			Dissolved Manganese (Mn)	2025/06/11	NC		%	20
			Dissolved Potassium (K)	2025/06/11	0.031		%	20
			Dissolved Sodium (Na)	2025/06/11	0.25		%	20
B981077	KHU	Matrix Spike [DMO160-01]	Dissolved Barium (Ba)	2025/06/10		101	%	80 - 120
			Dissolved Boron (B)	2025/06/10		102	%	80 - 120
			Dissolved Calcium (Ca)	2025/06/10		102	%	80 - 120
			Dissolved Iron (Fe)	2025/06/10		111	%	80 - 120
			Dissolved Lithium (Li)	2025/06/10		98	%	80 - 120
			Dissolved Magnesium (Mg)	2025/06/10		103	%	80 - 120
			Dissolved Manganese (Mn)	2025/06/10		107	%	80 - 120
			Dissolved Phosphorus (P)	2025/06/10		107	%	80 - 120

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			Dissolved Potassium (K)	2025/06/10		101	%	80 - 120
			Dissolved Silicon (Si)	2025/06/10		101	%	80 - 120
			Dissolved Sodium (Na)	2025/06/10		102	%	80 - 120
			Dissolved Strontium (Sr)	2025/06/10		95	%	80 - 120
			Dissolved Sulphur (S)	2025/06/10		106	%	80 - 120
B981077	KHU	Spiked Blank	Dissolved Barium (Ba)	2025/06/10		103	%	80 - 120
			Dissolved Boron (B)	2025/06/10		99	%	80 - 120
			Dissolved Calcium (Ca)	2025/06/10		102	%	80 - 120
			Dissolved Iron (Fe)	2025/06/10		106	%	80 - 120
			Dissolved Lithium (Li)	2025/06/10		100	%	80 - 120
			Dissolved Magnesium (Mg)	2025/06/10		103	%	80 - 120
			Dissolved Manganese (Mn)	2025/06/10		102	%	80 - 120
			Dissolved Phosphorus (P)	2025/06/10		103	%	80 - 120
			Dissolved Potassium (K)	2025/06/10		101	%	80 - 120
			Dissolved Silicon (Si)	2025/06/10		99	%	80 - 120
			Dissolved Sodium (Na)	2025/06/10		102	%	80 - 120
			Dissolved Strontium (Sr)	2025/06/10		98	%	80 - 120
			Dissolved Sulphur (S)	2025/06/10		102	%	80 - 120
B981077	KHU	Method Blank	Dissolved Barium (Ba)	2025/06/10	<0.010		mg/L	
			Dissolved Boron (B)	2025/06/10	<0.020		mg/L	
			Dissolved Calcium (Ca)	2025/06/10	<0.30		mg/L	
			Dissolved Iron (Fe)	2025/06/10	<0.060		mg/L	
			Dissolved Lithium (Li)	2025/06/10	<0.020		mg/L	
			Dissolved Magnesium (Mg)	2025/06/10	<0.20		mg/L	
			Dissolved Manganese (Mn)	2025/06/10	<0.0040		mg/L	
			Dissolved Phosphorus (P)	2025/06/10	<0.10		mg/L	
			Dissolved Potassium (K)	2025/06/10	<0.30		mg/L	
			Dissolved Silicon (Si)	2025/06/10	<0.50		mg/L	
			Dissolved Sodium (Na)	2025/06/10	<0.50		mg/L	
			Dissolved Strontium (Sr)	2025/06/10	<0.020		mg/L	
			Dissolved Sulphur (S)	2025/06/10	<0.20		mg/L	
B981077	KHU	RPD [DMO160-01]	Dissolved Barium (Ba)	2025/06/10	NC		%	20
			Dissolved Boron (B)	2025/06/10	NC		%	20
			Dissolved Calcium (Ca)	2025/06/10	NC		%	20
			Dissolved Iron (Fe)	2025/06/10	NC		%	20
			Dissolved Lithium (Li)	2025/06/10	NC		%	20
			Dissolved Magnesium (Mg)	2025/06/10	NC		%	20
			Dissolved Manganese (Mn)	2025/06/10	NC		%	20
			Dissolved Phosphorus (P)	2025/06/10	NC		%	20
			Dissolved Potassium (K)	2025/06/10	NC		%	20
			Dissolved Silicon (Si)	2025/06/10	NC		%	20
			Dissolved Sodium (Na)	2025/06/10	NC		%	20
			Dissolved Strontium (Sr)	2025/06/10	NC		%	20
			Dissolved Sulphur (S)	2025/06/10	10		%	20
B981511	KKM	Matrix Spike	Dissolved Mercury (Hg)	2025/06/10		92	%	80 - 120
B981511	KKM	Spiked Blank	Dissolved Mercury (Hg)	2025/06/10		95	%	80 - 120
B981511	KKM	Method Blank	Dissolved Mercury (Hg)	2025/06/10	<0.0019		ug/L	
B981511	KKM	RPD	Dissolved Mercury (Hg)	2025/06/10	NC		%	20
B982298	HAP	Matrix Spike	Dissolved Phosphorus (P)	2025/06/11		108	%	80 - 120
B982298	HAP	QC Standard	Dissolved Phosphorus (P)	2025/06/11		85	%	80 - 120
B982298	HAP	Spiked Blank	Dissolved Phosphorus (P)	2025/06/11		98	%	80 - 120
B982298	HAP	Method Blank	Dissolved Phosphorus (P)	2025/06/11	<0.0030		mg/L	
B982298	HAP	RPD	Dissolved Phosphorus (P)	2025/06/11	16		%	20

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B982575	YL7	Matrix Spike	Total Nitrogen (N)	2025/06/12		93	%	80 - 120
B982575	YL7	QC Standard	Total Nitrogen (N)	2025/06/12		111	%	80 - 120
B982575	YL7	Spiked Blank	Total Nitrogen (N)	2025/06/12		97	%	80 - 120
B982575	YL7	Method Blank	Total Nitrogen (N)	2025/06/12	<0.020		mg/L	
B982575	YL7	RPD	Total Nitrogen (N)	2025/06/12	0.61		%	20
B982591	YL7	Matrix Spike [DMO158-05]	Total Nitrogen (N)	2025/06/12		108	%	80 - 120
B982591	YL7	QC Standard	Total Nitrogen (N)	2025/06/12		106	%	80 - 120
B982591	YL7	Spiked Blank	Total Nitrogen (N)	2025/06/12		99	%	80 - 120
B982591	YL7	Method Blank	Total Nitrogen (N)	2025/06/12	<0.020		mg/L	
B982591	YL7	RPD [DMO158-05]	Total Nitrogen (N)	2025/06/12	17		%	20
B982596	YL7	Matrix Spike	Total Nitrogen (N)	2025/06/12		NC	%	80 - 120
B982596	YL7	QC Standard	Total Nitrogen (N)	2025/06/12		106	%	80 - 120
B982596	YL7	Spiked Blank	Total Nitrogen (N)	2025/06/12		100	%	80 - 120
B982596	YL7	Method Blank	Total Nitrogen (N)	2025/06/12	<0.020		mg/L	
B982596	YL7	RPD	Total Nitrogen (N)	2025/06/12	3.0		%	20
B982825	JVM	Spiked Blank	Alkalinity (Total as CaCO3)	2025/06/11		100	%	80 - 120
B982825	JVM	Method Blank	Alkalinity (PP as CaCO3)	2025/06/11	<1.0		mg/L	
			Alkalinity (Total as CaCO3)	2025/06/11	<1.0		mg/L	
			Bicarbonate (HCO3)	2025/06/11	<1.0		mg/L	
			Carbonate (CO3)	2025/06/11	<1.0		mg/L	
			Hydroxide (OH)	2025/06/11	<1.0		mg/L	
B982825	JVM	RPD [DMO159-01]	Alkalinity (PP as CaCO3)	2025/06/12	15		%	20
			Alkalinity (Total as CaCO3)	2025/06/12	0.0050		%	20
			Bicarbonate (HCO3)	2025/06/12	0.26		%	20
			Carbonate (CO3)	2025/06/12	15		%	20
			Hydroxide (OH)	2025/06/12	NC		%	20
B982827	JVM	Spiked Blank	pH	2025/06/11		100	%	97 - 103
B982827	JVM	RPD [DMO159-01]	pH	2025/06/12	0		%	N/A
B982832	JVM	Spiked Blank	Conductivity	2025/06/11		102	%	90 - 110
B982832	JVM	Method Blank	Conductivity	2025/06/11	<2.0		uS/cm	
B982832	JVM	RPD [DMO159-01]	Conductivity	2025/06/12	0.25		%	10
B983961	HAP	Matrix Spike [DMO150-05]	Total Phosphorus (P)	2025/06/12		106	%	80 - 120
B983961	HAP	QC Standard	Total Phosphorus (P)	2025/06/12		89	%	80 - 120
B983961	HAP	Spiked Blank	Total Phosphorus (P)	2025/06/12		99	%	80 - 120
B983961	HAP	Method Blank	Total Phosphorus (P)	2025/06/12	<0.0030		mg/L	
B983961	HAP	RPD [DMO150-05]	Total Phosphorus (P)	2025/06/12	2.8		%	20
B983969	HAP	Matrix Spike	Dissolved Phosphorus (P)	2025/06/12		NC	%	80 - 120
B983969	HAP	QC Standard	Dissolved Phosphorus (P)	2025/06/12		86	%	80 - 120
B983969	HAP	Spiked Blank	Dissolved Phosphorus (P)	2025/06/12		88	%	80 - 120
B983969	HAP	Method Blank	Dissolved Phosphorus (P)	2025/06/12	<0.0030		mg/L	
B983969	HAP	RPD	Dissolved Phosphorus (P)	2025/06/12	1.0		%	20
B984173	ISW	Matrix Spike [DMO161-06]	Total Ammonia (N)	2025/06/12		100	%	80 - 120
B984173	ISW	Spiked Blank	Total Ammonia (N)	2025/06/12		100	%	80 - 120
B984173	ISW	Method Blank	Total Ammonia (N)	2025/06/12	<0.015		mg/L	
B984173	ISW	RPD [DMO161-06]	Total Ammonia (N)	2025/06/12	NC		%	20
B984179	ISW	Matrix Spike [DMO151-06]	Total Ammonia (N)	2025/06/12		96	%	80 - 120
B984179	ISW	Spiked Blank	Total Ammonia (N)	2025/06/12		102	%	80 - 120
B984179	ISW	Method Blank	Total Ammonia (N)	2025/06/12	<0.015		mg/L	
B984179	ISW	RPD [DMO151-06]	Total Ammonia (N)	2025/06/12	2.2		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B986086	ISW	Matrix Spike	Total Ammonia (N)	2025/06/13		101	%	80 - 120
B986086	ISW	Spiked Blank	Total Ammonia (N)	2025/06/13		108	%	80 - 120
B986086	ISW	Method Blank	Total Ammonia (N)	2025/06/13	<0.015		mg/L	
B986086	ISW	RPD	Total Ammonia (N)	2025/06/13	0.91		%	20
B986898	HAP	Matrix Spike	Total Phosphorus (P)	2025/06/13		NC	%	80 - 120
B986898	HAP	QC Standard	Total Phosphorus (P)	2025/06/13		90	%	80 - 120
B986898	HAP	Spiked Blank	Total Phosphorus (P)	2025/06/13		98	%	80 - 120
B986898	HAP	Method Blank	Total Phosphorus (P)	2025/06/13	<0.0030		mg/L	
B986898	HAP	RPD	Total Phosphorus (P)	2025/06/13	5.7		%	20
B987205	MDO	Matrix Spike	Dissolved Organic Carbon (C)	2025/06/15		NC	%	75 - 125
B987205	MDO	Spiked Blank	Dissolved Organic Carbon (C)	2025/06/15		100	%	80 - 120
B987205	MDO	Method Blank	Dissolved Organic Carbon (C)	2025/06/15	<0.50		mg/L	
B987205	MDO	RPD	Dissolved Organic Carbon (C)	2025/06/15	6.8		%	20
B987216	MDO	Matrix Spike [DMO156-04]	Dissolved Organic Carbon (C)	2025/06/15		106	%	75 - 125
B987216	MDO	Spiked Blank	Dissolved Organic Carbon (C)	2025/06/15		104	%	80 - 120
B987216	MDO	Method Blank	Dissolved Organic Carbon (C)	2025/06/15	<0.50		mg/L	
B987216	MDO	RPD [DMO156-04]	Dissolved Organic Carbon (C)	2025/06/15	7.6		%	20
B987230	KKM	Matrix Spike	Total Mercury (Hg)	2025/06/13		85	%	80 - 120
B987230	KKM	Spiked Blank	Total Mercury (Hg)	2025/06/13		97	%	80 - 120
B987230	KKM	Method Blank	Total Mercury (Hg)	2025/06/13	<0.0019		ug/L	
B987230	KKM	RPD	Total Mercury (Hg)	2025/06/13	NC		%	20
B987235	KKM	Matrix Spike	Dissolved Mercury (Hg)	2025/06/13		92	%	80 - 120
B987235	KKM	Spiked Blank	Dissolved Mercury (Hg)	2025/06/13		97	%	80 - 120
B987235	KKM	Method Blank	Dissolved Mercury (Hg)	2025/06/13	<0.0019		ug/L	
B987235	KKM	RPD	Dissolved Mercury (Hg)	2025/06/13	NC		%	20
B989161	MAP	Matrix Spike	Dissolved Phosphorus (P)	2025/06/16		103	%	80 - 120
B989161	MAP	QC Standard	Dissolved Phosphorus (P)	2025/06/16		88	%	80 - 120
B989161	MAP	Spiked Blank	Dissolved Phosphorus (P)	2025/06/16		95	%	80 - 120
B989161	MAP	Method Blank	Dissolved Phosphorus (P)	2025/06/16	<0.0030		mg/L	
B989161	MAP	RPD	Dissolved Phosphorus (P)	2025/06/16	6.1		%	20
B989164	MAP	Matrix Spike	Total Phosphorus (P)	2025/06/16		100	%	80 - 120
B989164	MAP	QC Standard	Total Phosphorus (P)	2025/06/16		88	%	80 - 120
B989164	MAP	Spiked Blank	Total Phosphorus (P)	2025/06/16		96	%	80 - 120
B989164	MAP	Method Blank	Total Phosphorus (P)	2025/06/16	<0.0030		mg/L	
B989164	MAP	RPD	Total Phosphorus (P)	2025/06/16	9.5		%	20
B989226	KKM	Matrix Spike [DMO150-07]	Dissolved Mercury (Hg)	2025/06/16		93	%	80 - 120
B989226	KKM	Spiked Blank	Dissolved Mercury (Hg)	2025/06/16		98	%	80 - 120
B989226	KKM	Method Blank	Dissolved Mercury (Hg)	2025/06/16	<0.0019		ug/L	
B989226	KKM	RPD [DMO153-07]	Dissolved Mercury (Hg)	2025/06/16	NC		%	20
B989395	KKM	Matrix Spike [DMO161-08]	Total Mercury (Hg)	2025/06/16		94	%	80 - 120
B989395	KKM	Spiked Blank	Total Mercury (Hg)	2025/06/16		95	%	80 - 120
B989395	KKM	Method Blank	Total Mercury (Hg)	2025/06/16	<0.0019		ug/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B989395	KKM	RPD [DMO160-07]	Total Mercury (Hg)	2025/06/16	NC		%	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

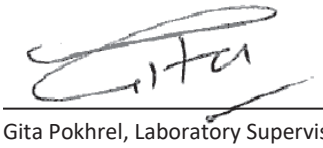
NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

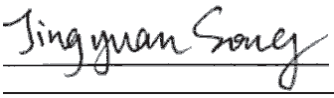
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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:



Gita Pokhrel, Laboratory Supervisor



Jingyuan Song, QP, Organics – Senior Analyst



Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

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C551949
2025/06/06 16:55

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CHAIN OF CUSTODY RECORD

ENV COC - 00013v5

Page 1 of 1

MCAL-2025-06-541

Invoice Information	Invoice to (requires report) ☐	Report Information (if differs from invoice)		Project Information	
Company:	Stantec	Company:		Quotation #:	
Contact Name:	Dylan King	Contact Name:		P.O. #/ AFE#:	
Street Address:	#300, 10220 103Ave NW	Street Address:		Project #:	1077396
City:	Edmonton	Prov: AB	Postal Code: T5J0K4	City:	Prov:	Postal Code:	Site #:	
Phone:	780 961 2223	Phone:		Site Location:	SR1
Email:	dylan.king@stantec.com	Email:	EDD@stantec.com	Site Location Province:	AB
Copies:		Copies:	Wesley.tsang@stantec.com	Sampled By:	TH/DB

Regulatory Criteria

- [x] AT1
- [ ] CCME
- [ ] Drinking Water - Canada
- [ ] Drinking Water - Manitoba
- [ ] Saskatchewan
- [ ] Drinking Water - Alberta
- [ ] Other _____

SAMPLES MUST BE KEPT COOL (<10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

Regular Turnaround Time (TAT)
- [x] 5 to 7 Day
- [ ] 10 Day

Rush Turnaround Time (TAT) Surcharges apply
- [ ] Same Day
- [ ] 1 Day
- [ ] 2 Day
- [ ] 3 Day
- [ ] 4 Day

Date Required: YY MM DD

	Sample Identification	Date Sampled YY	MM	DD	Time (24hr) HH	MM	Matrix	1 FIELD FILTERED	2 FIELD PRESERVED	3 LAB FILTRATION REQUIRED	4 BTEX F1	5 VOCs	6 BTEX F1-F2	7 BTEX F3-F4	8 Routine water	9 Regulated metals - total	10 Regulated metals - dissolved	11 Mercury - total	12 Mercury - dissolved	13 ~~Subtrop~~ DOC	14 Sieve (5 mesh) TKN	15 Texture (% sand, silt, clay)	16 Basic class II landfill	17 Dissolved Phosphorous	18 Phosphate	19 ammonia	20 Bacteria (enzyme)	21 # OF CONTAINERS SUBMITTED	22 HOLD - DO NOT ANALYZE	Comments
1	RMW16-23-32	25	06	06	10	32	W	X	X				X		X	X	X	X	X	X	X			X	X	X	X	11		
2	RMW16-23-14	"	"	"	09	30	"	"	"				"		"	"	"	"	"	"	"			"	"	"	"	11		
3	RMW16-23-7	"	"	"	09	50	"	"	"				"		"	"	"	"	"	"	"			"	"	"	"	11		
4	RMW16-19-19	"	"	"	12	01	"	"	"				"		"	"	"	"	"	"	"			"	"	"	"	11		
5	RMW16-19-10	"	"	"	11	40	"	"	"				"		"	"	"	"	"	"	"			"	"	"	"	11		
6	RMW16-18-13	"	"	"	12	50	"	"	"				"		"	"	"	"	"	"	"			"	"	"	"	11		
7	MW16-8-8	"	"	"	13	56	"	"	"				"		"	"	"	"	"	"	"			"	"	"	"	11		
8	MW16-8-19	"	"	"	14	02	"	"	"				"		"	"	"	"	"	"	"			"	"	"	"	11		
9	MW16-25-9	"	"	"	14	50	"	"	"				"		"	"	"	"	"	"	"			"	"	"	"	11		
10	SR24-03	"	"	"	14	55	"	"	"				"		"	"	"	"	"	"	"			"	"	"	"	11		
11	SR24-04	"	"	"	15	00	"	"	"				"		"	"	"	"	"	"	"			"	"	"	"	11		
12	SR24-05	↓	↓	↓	-	-	↓	↓	↓				↓		↓	↓	↓	↓	↓	↓	↓			↓	↓	↓	↓	11		Trip blank

*UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS AND CONDITIONS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS OR BY CALLING THE LABORATORY LISTED ABOVE TO OBTAIN A COPY

LAB USE ONLY	Yes	No	°C				Temperature reading by:
Seal present		✓					
Seal intact		✓					
Cooling media present	✓		8	4	5		
			1	2	3		

LAB USE ONLY	Yes	No	°C				
Seal present		✓					
Seal intact		✓					
Cooling media present	✓		4	4	6		
			1	2	3		

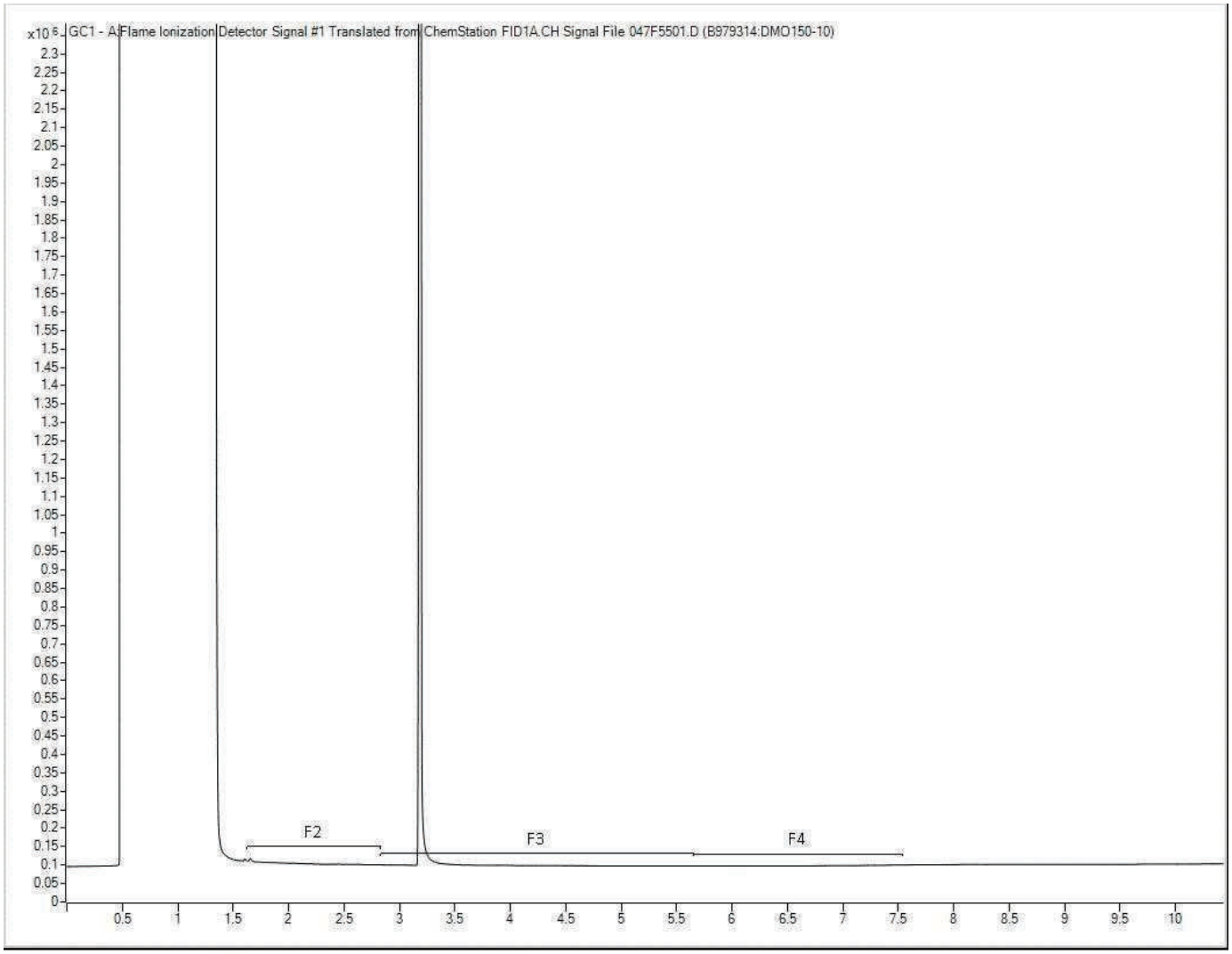
LAB USE ONLY	Yes	No	°C				
Seal present							
Seal intact							
Cooling media present							
			1	2	3		

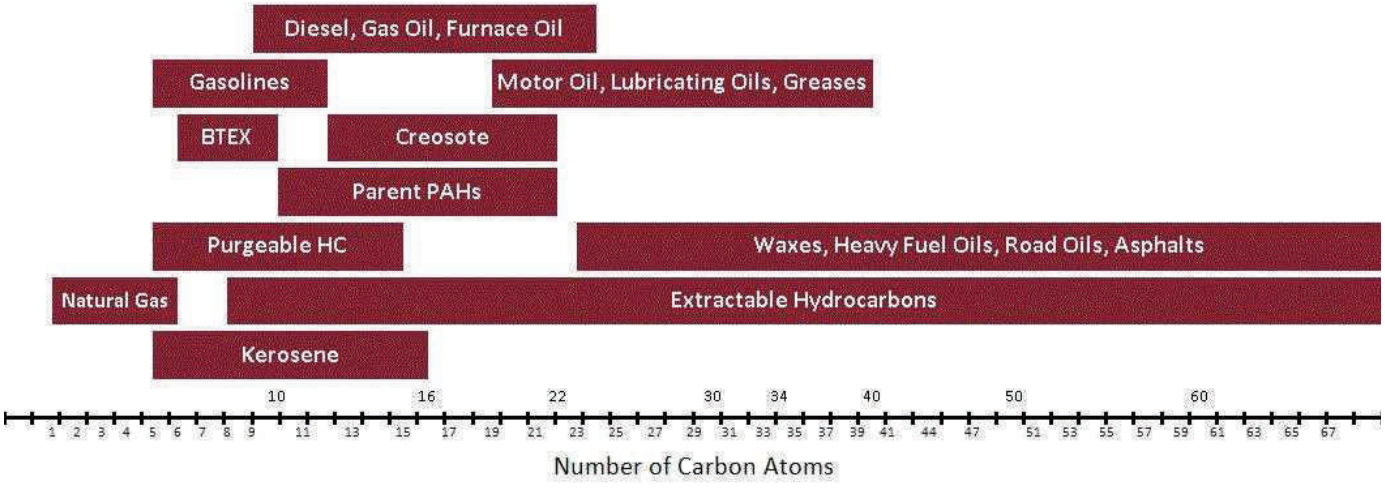
	Relinquished by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM	Received by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM	Special instructions
1	Taylor Harris	2025	06	06	16	50	JASON DL	25	06	06	16	55	* Fecal and total coliforms e.coli, heterotrophic plate count
2													

Bureau Veritas Job #: C551949
Report Date: 2025/06/17
Bureau Veritas Sample: DMO150

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Reference: SRI
Client ID: RMW16-23-32

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





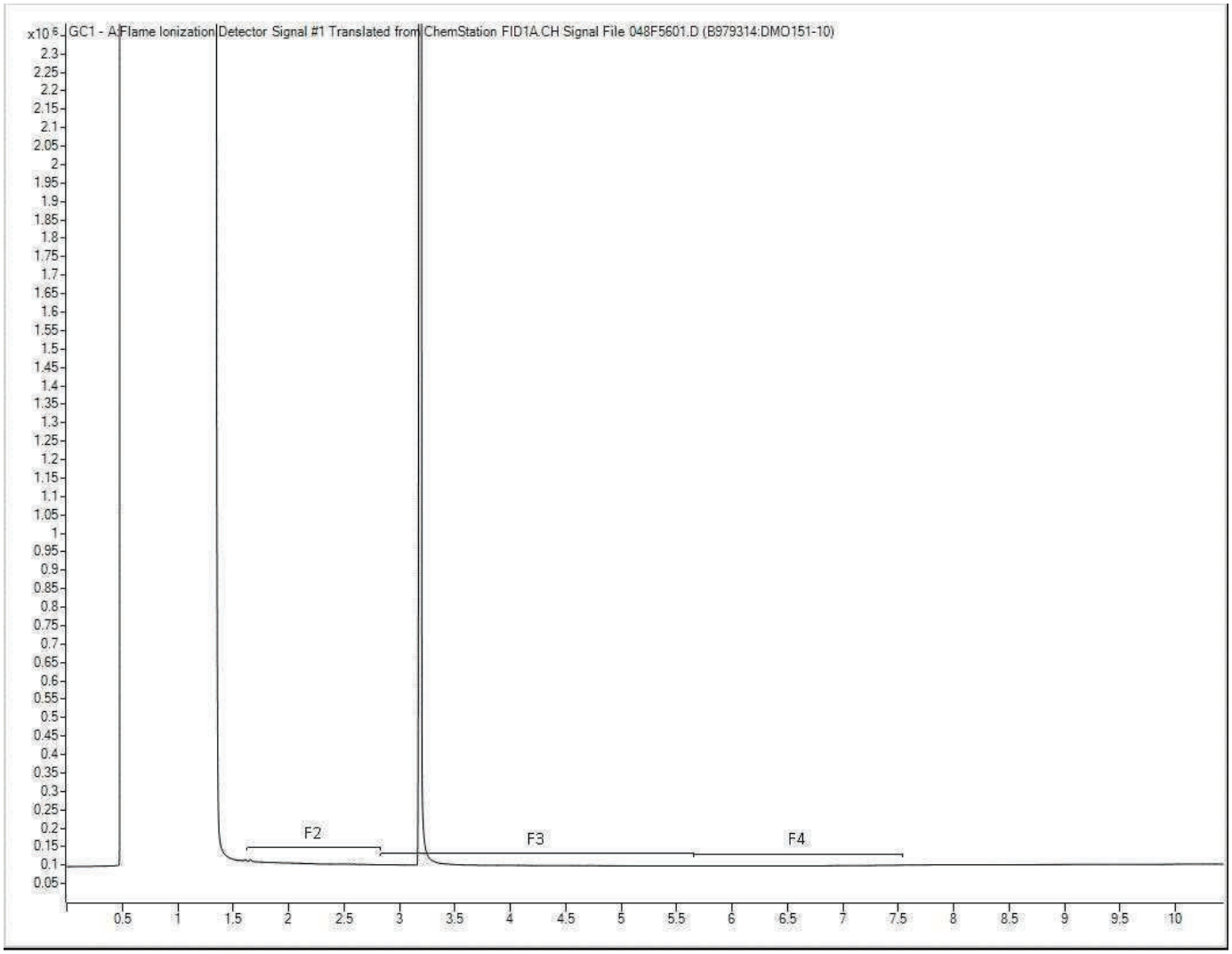
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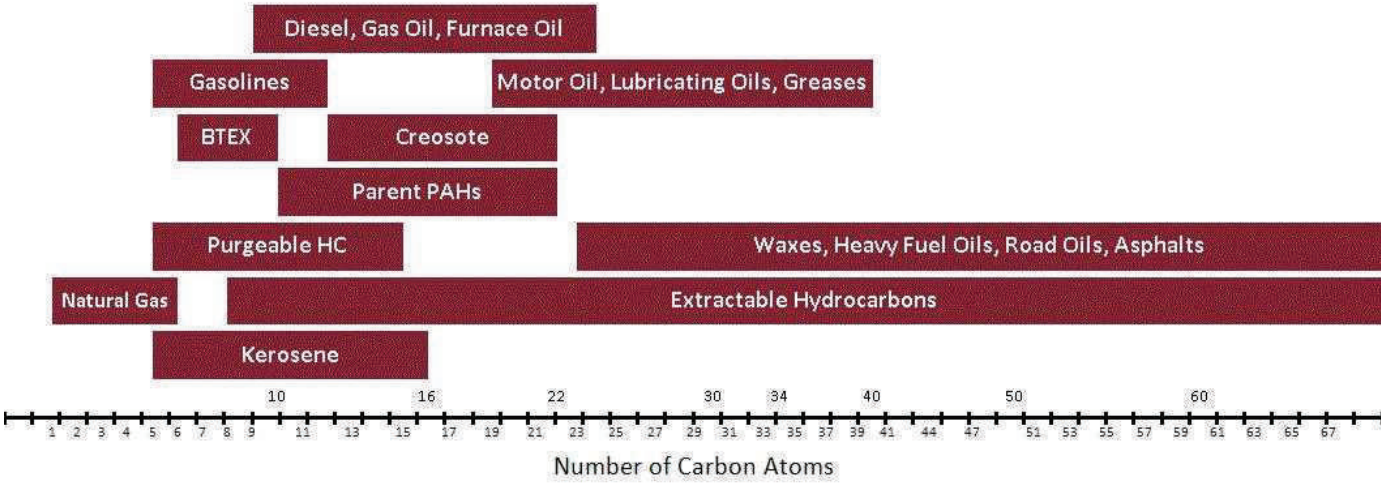
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C551949
Report Date: 2025/06/17
Bureau Veritas Sample: DMO151

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Reference: SRI
Client ID: RMW16-23-14

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





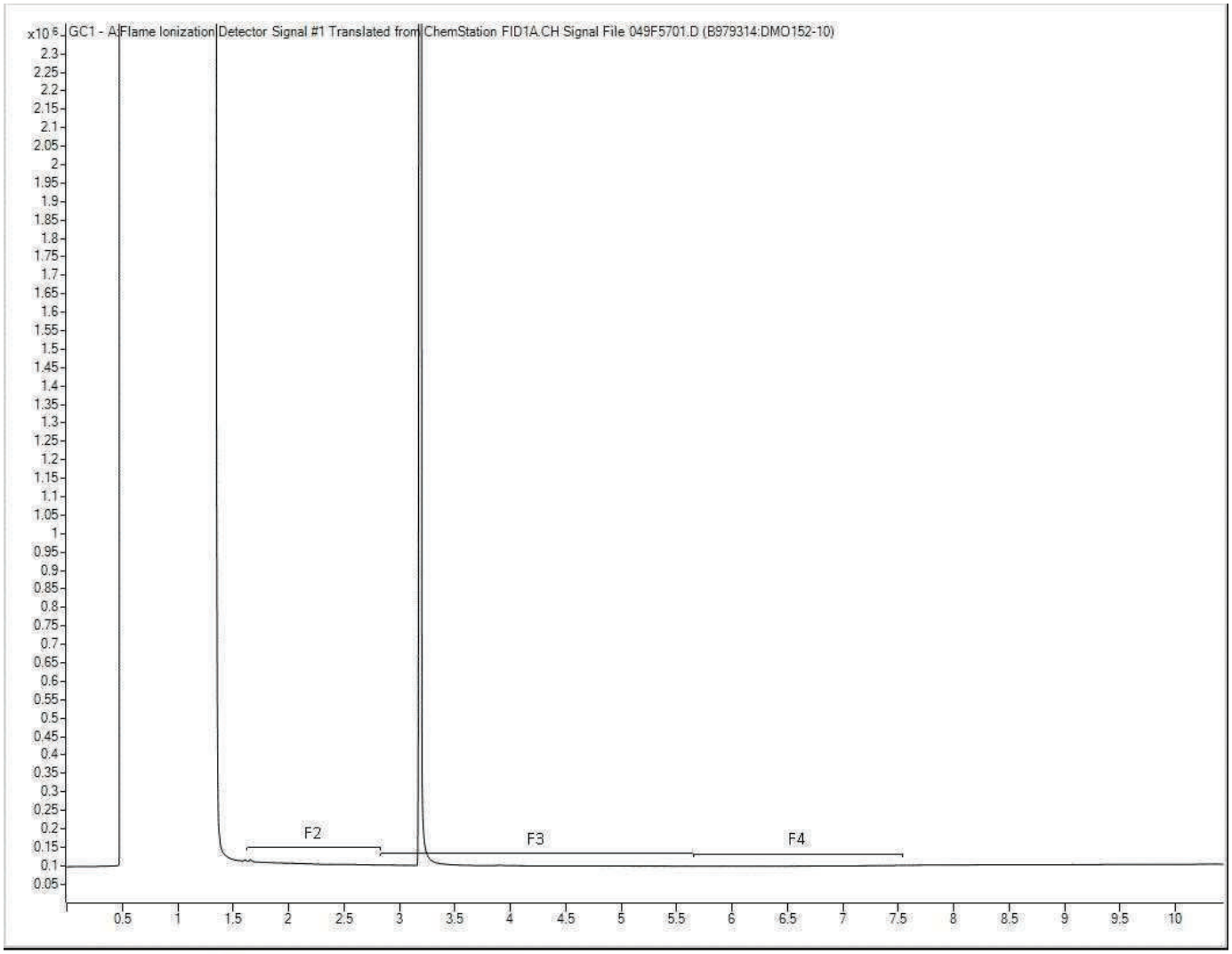
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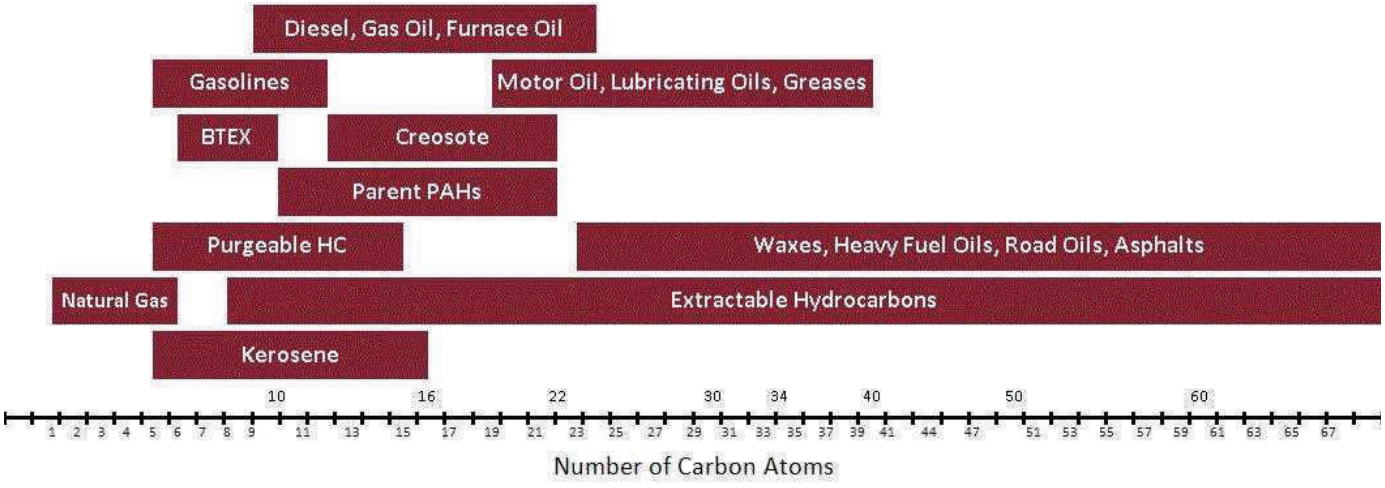
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Bureau Veritas Job #: C551949
Report Date: 2025/06/17
Bureau Veritas Sample: DMO152

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Reference: SRI
Client ID: RMW16-23-7

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





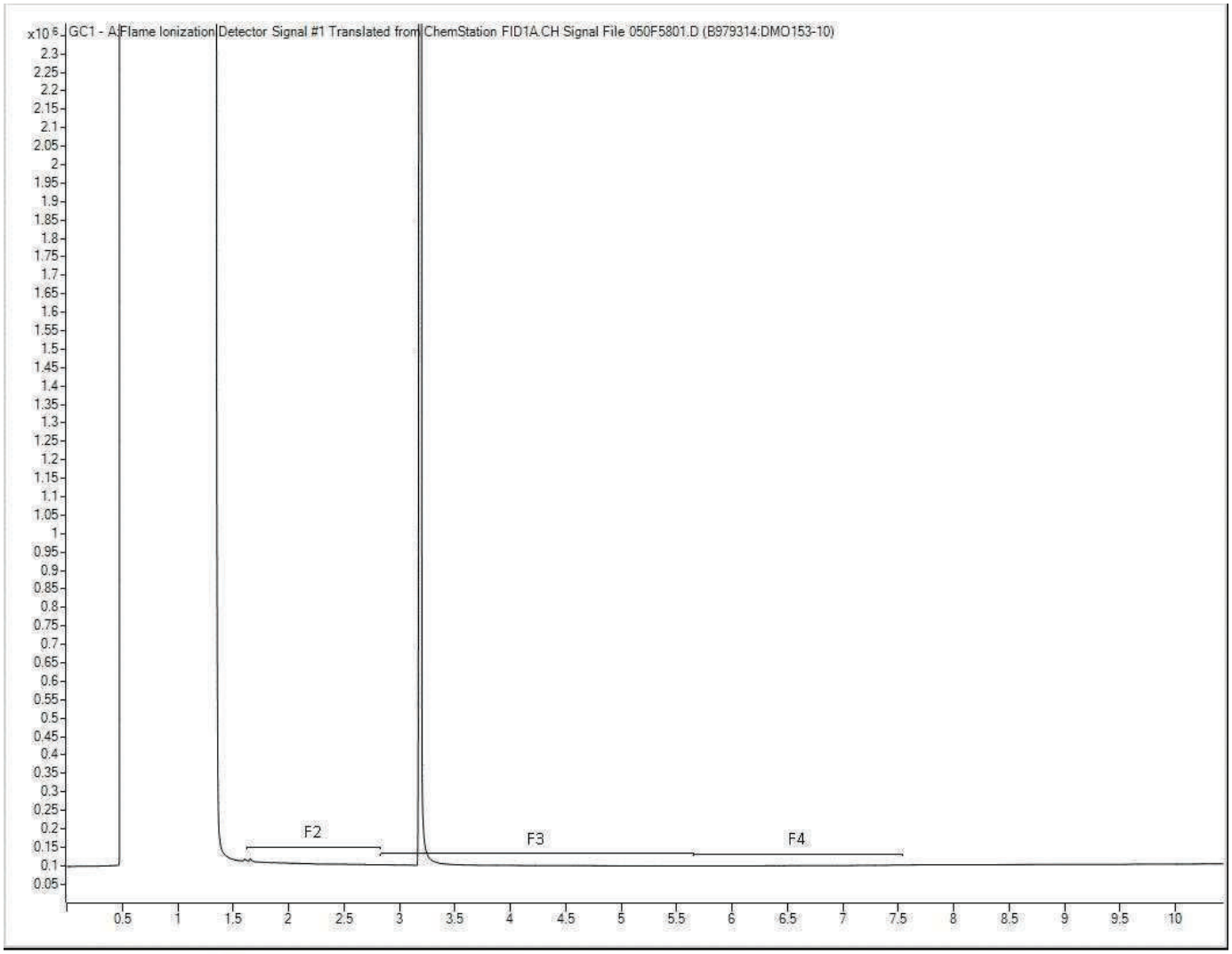
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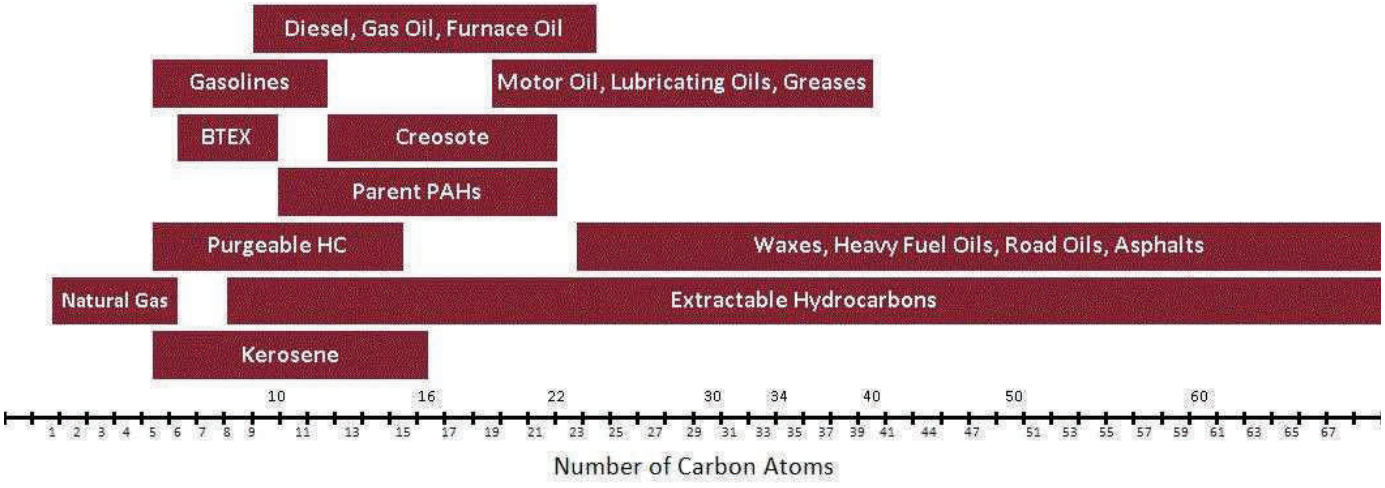
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Bureau Veritas Job #: C551949
Report Date: 2025/06/17
Bureau Veritas Sample: DMO153

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Reference: SRI
Client ID: RMW16-19-19

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





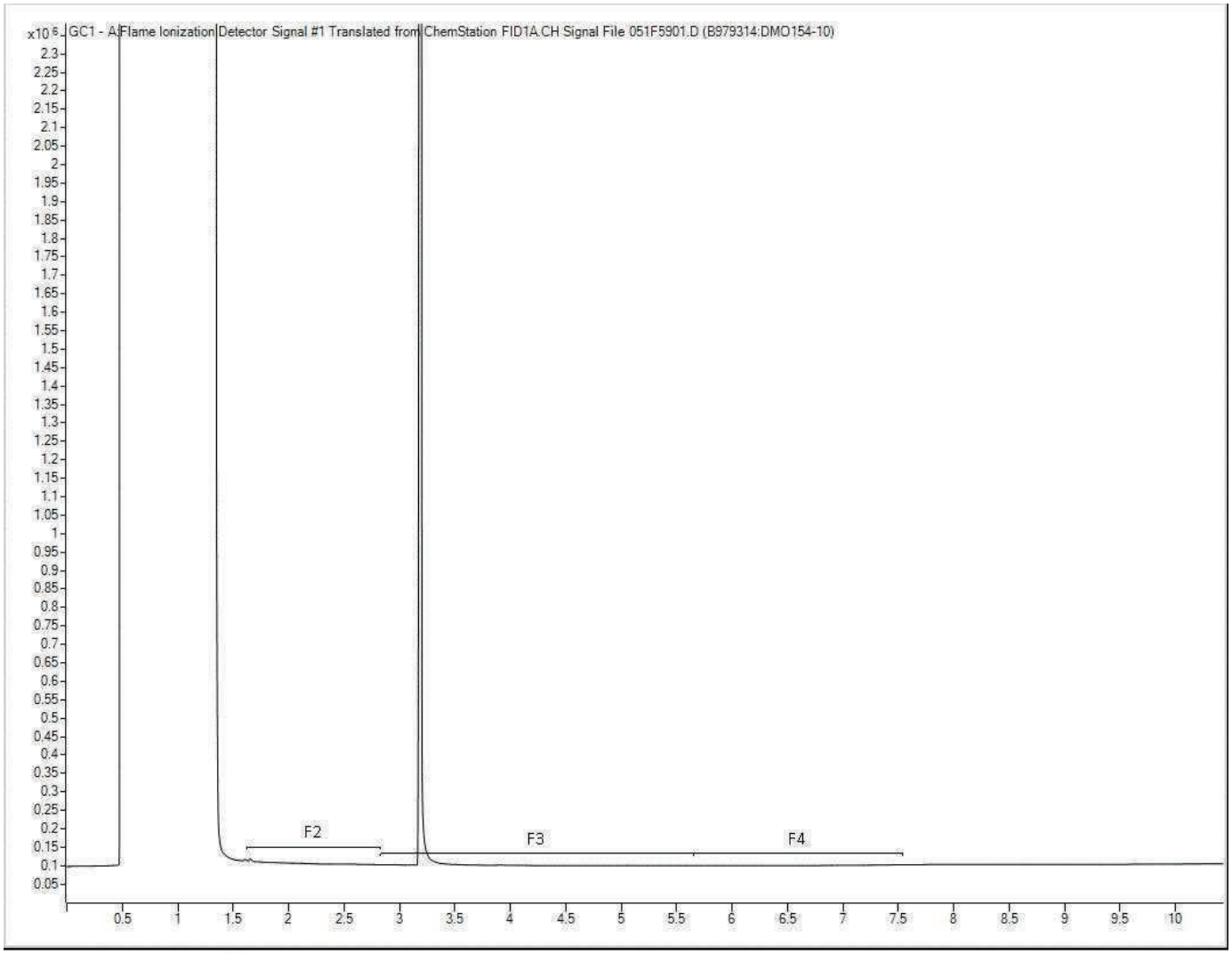
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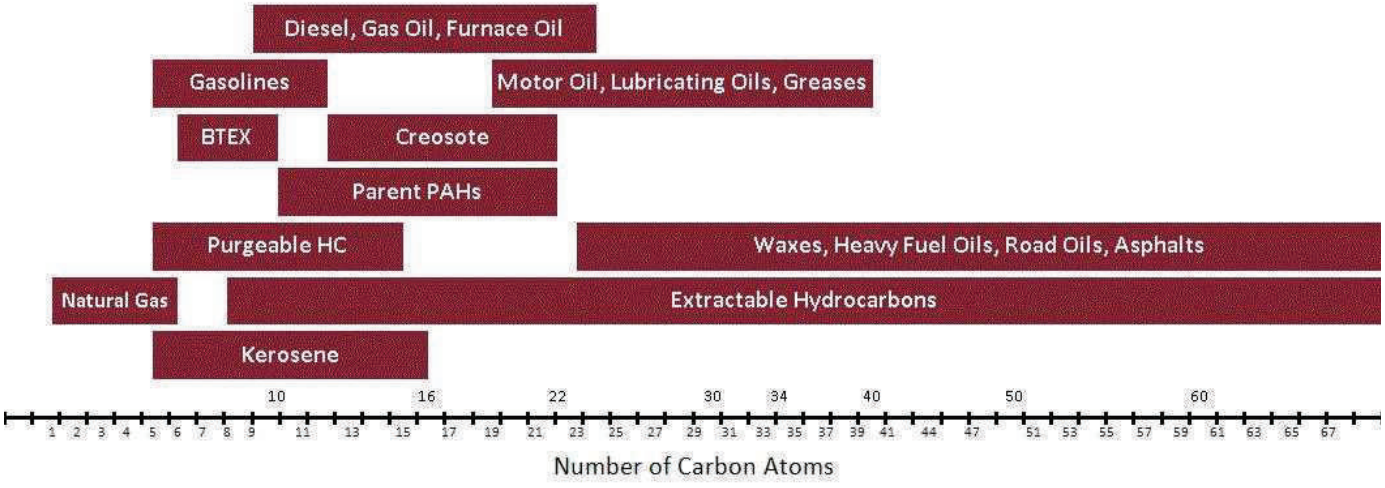
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Bureau Veritas Job #: C551949
Report Date: 2025/06/17
Bureau Veritas Sample: DMO154

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Reference: SRI
Client ID: RMW16-19-10

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





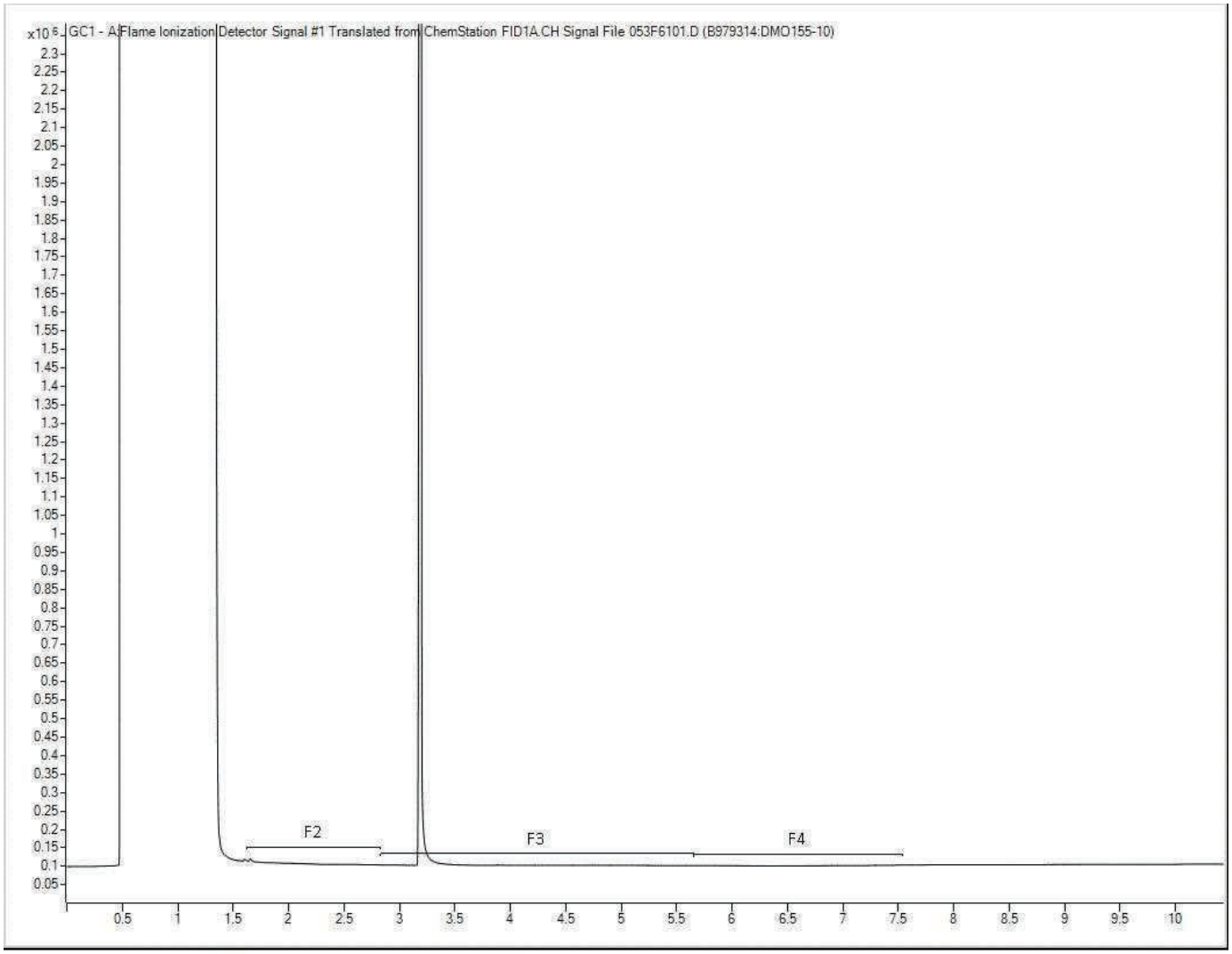
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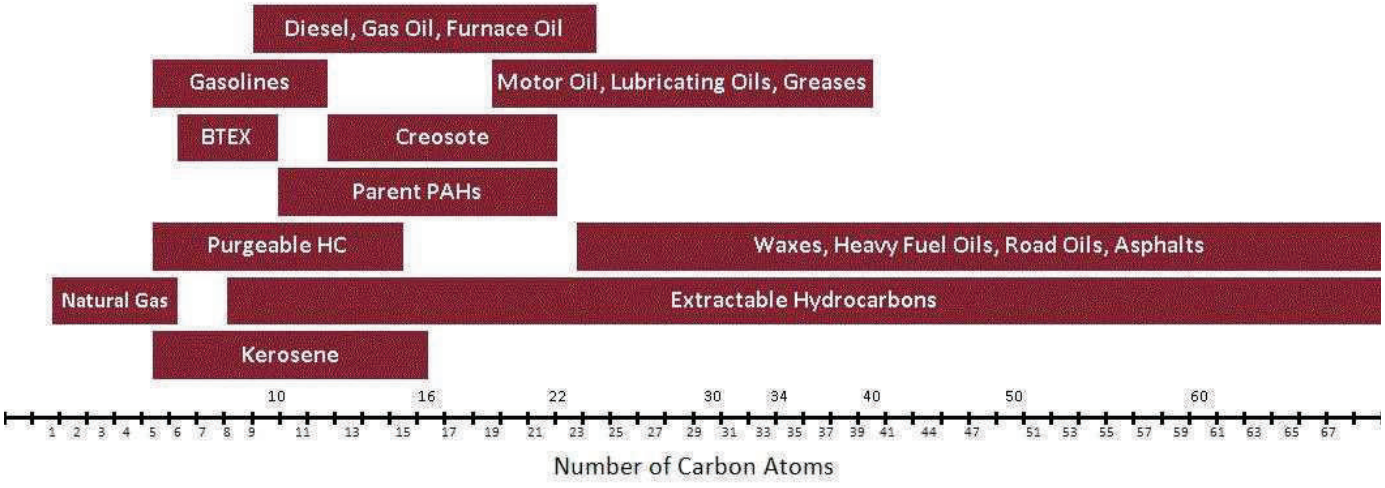
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C551949
Report Date: 2025/06/17
Bureau Veritas Sample: DMO155

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Reference: SRI
Client ID: RMW16-18-13

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





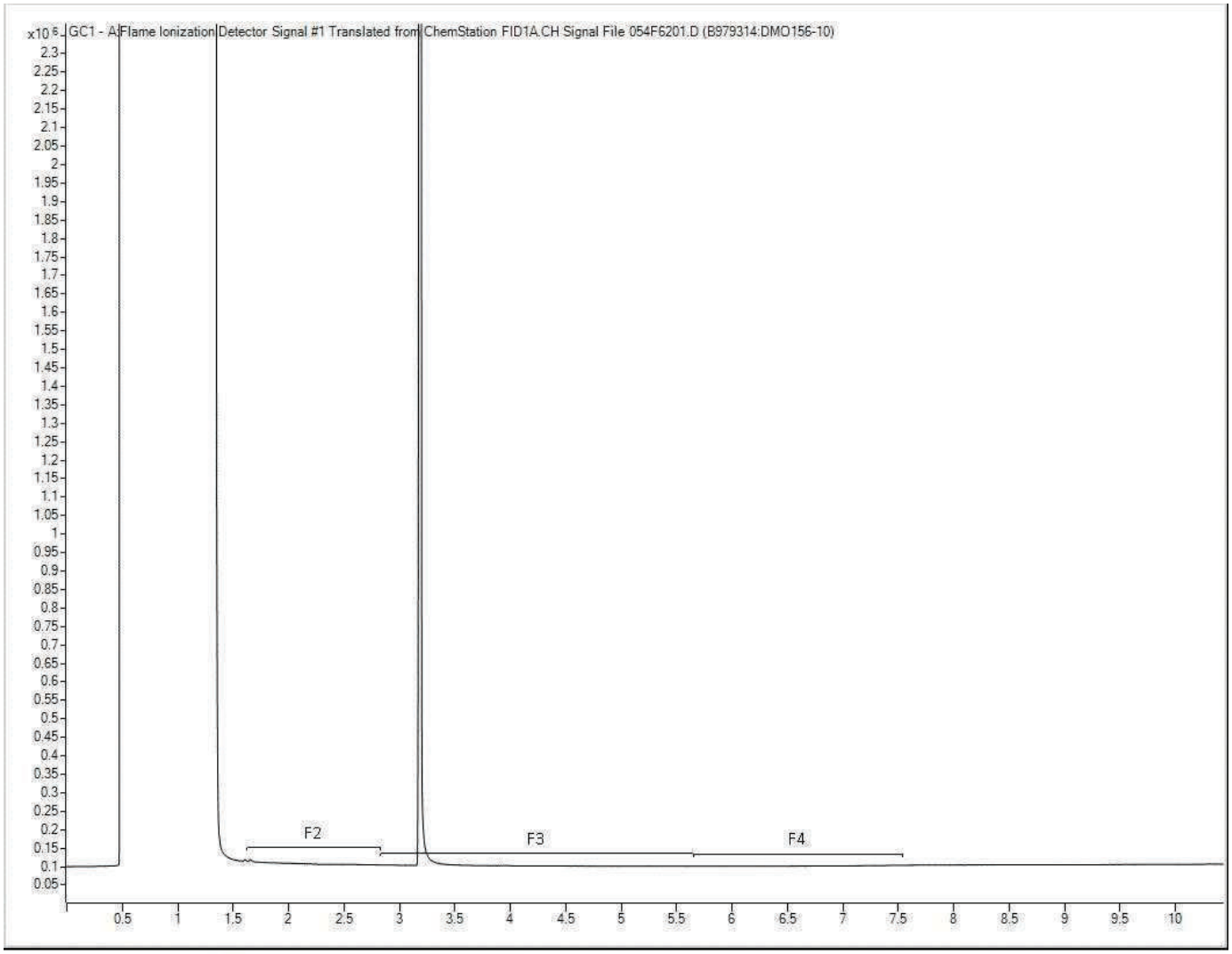
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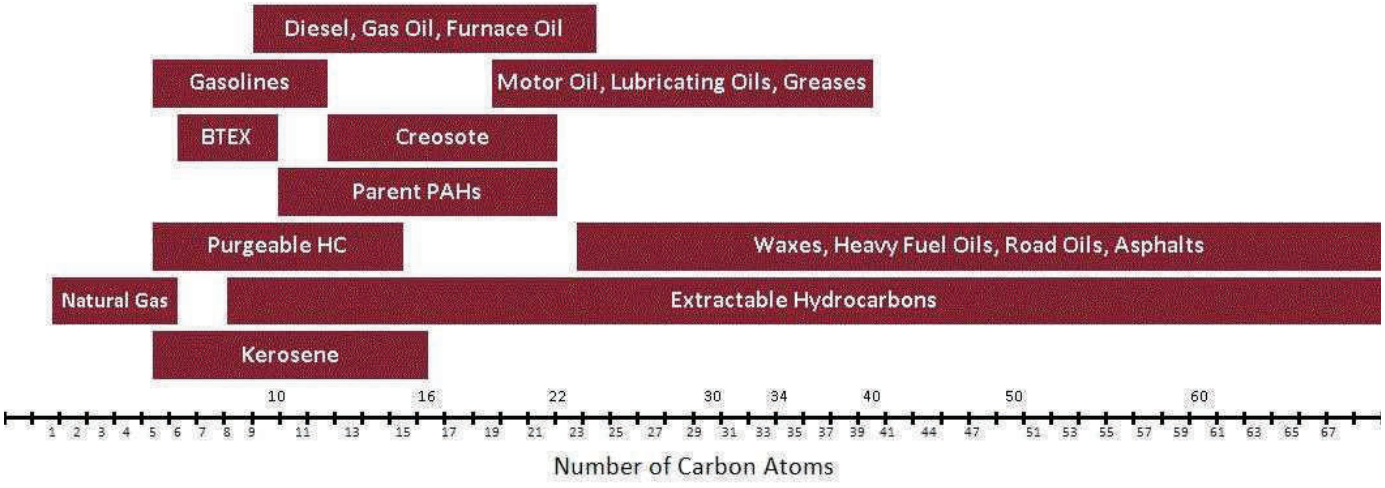
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C551949
Report Date: 2025/06/17
Bureau Veritas Sample: DMO156

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Reference: SRI
Client ID: MW16-8-8

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





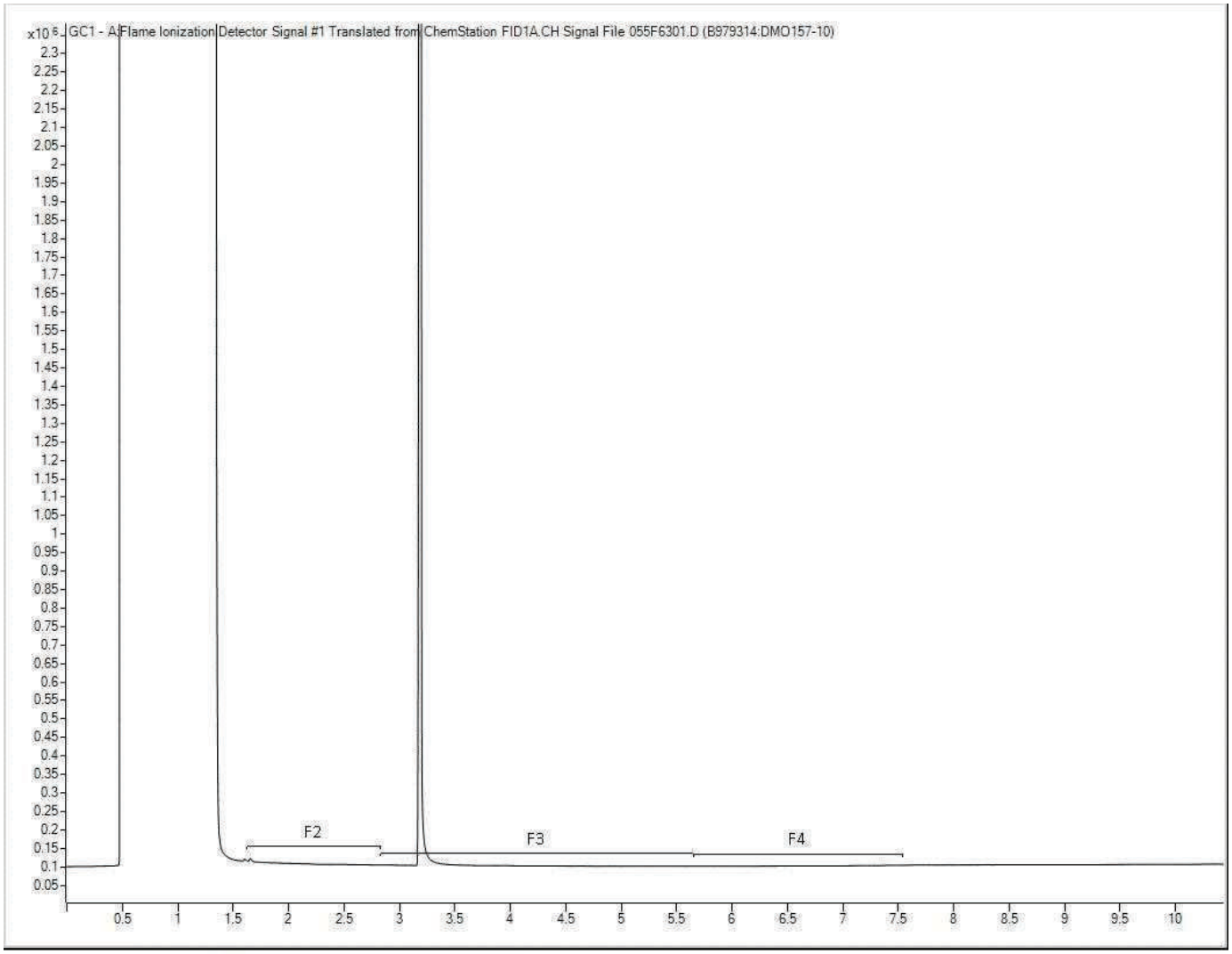
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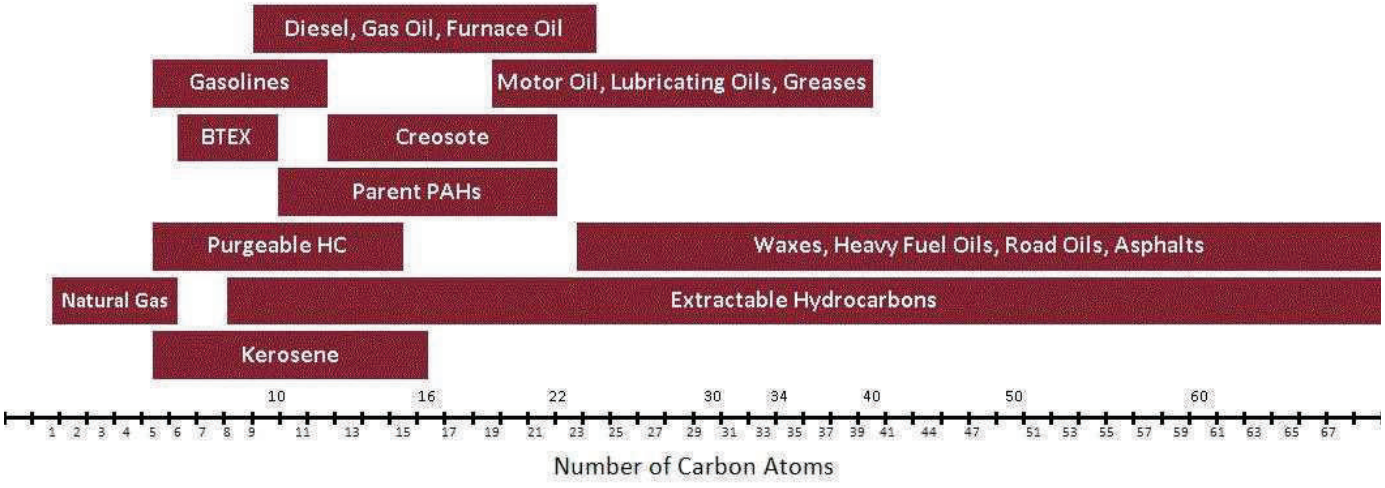
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C551949
Report Date: 2025/06/17
Bureau Veritas Sample: DMO157

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Reference: SRI
Client ID: MW16-8-19

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





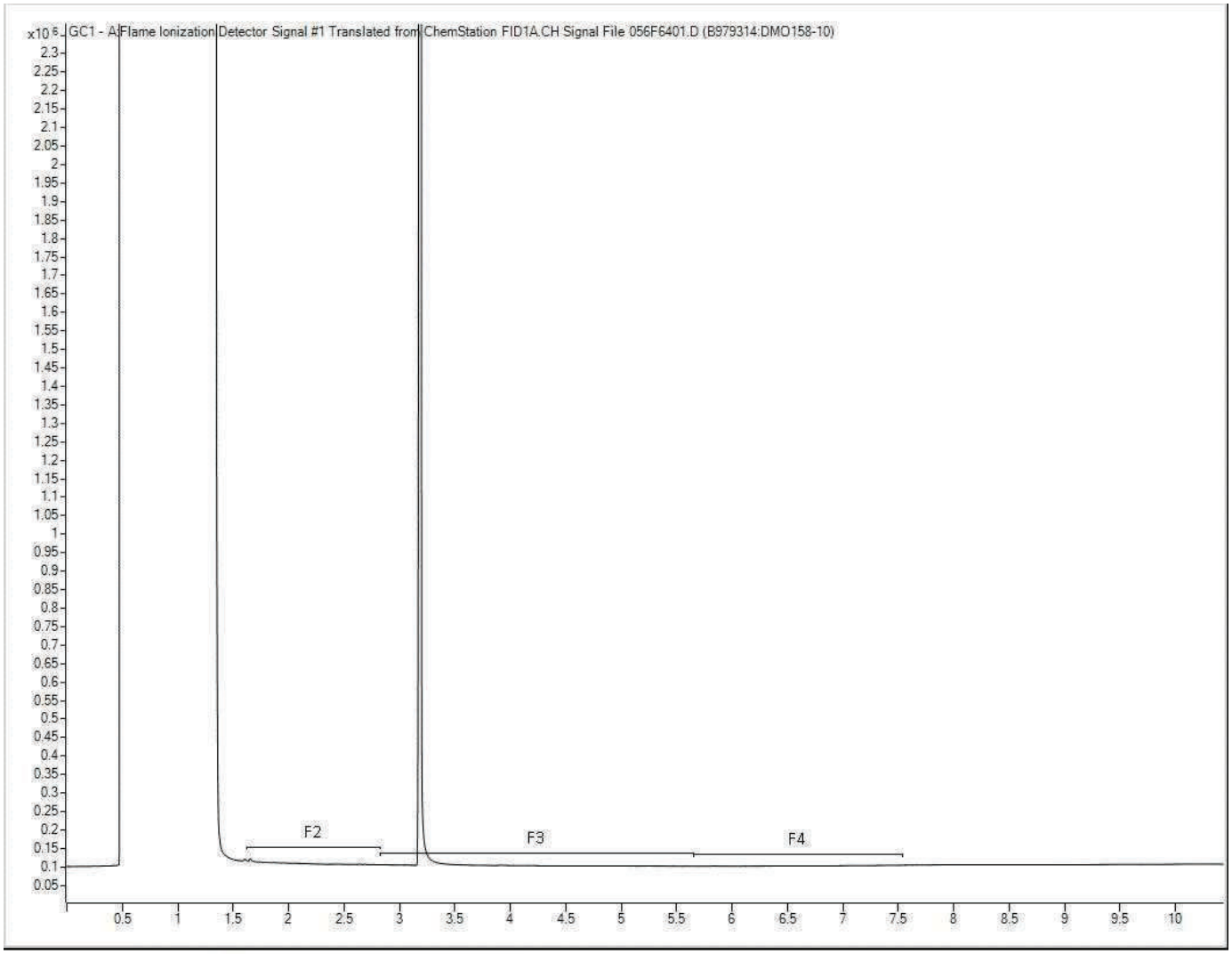
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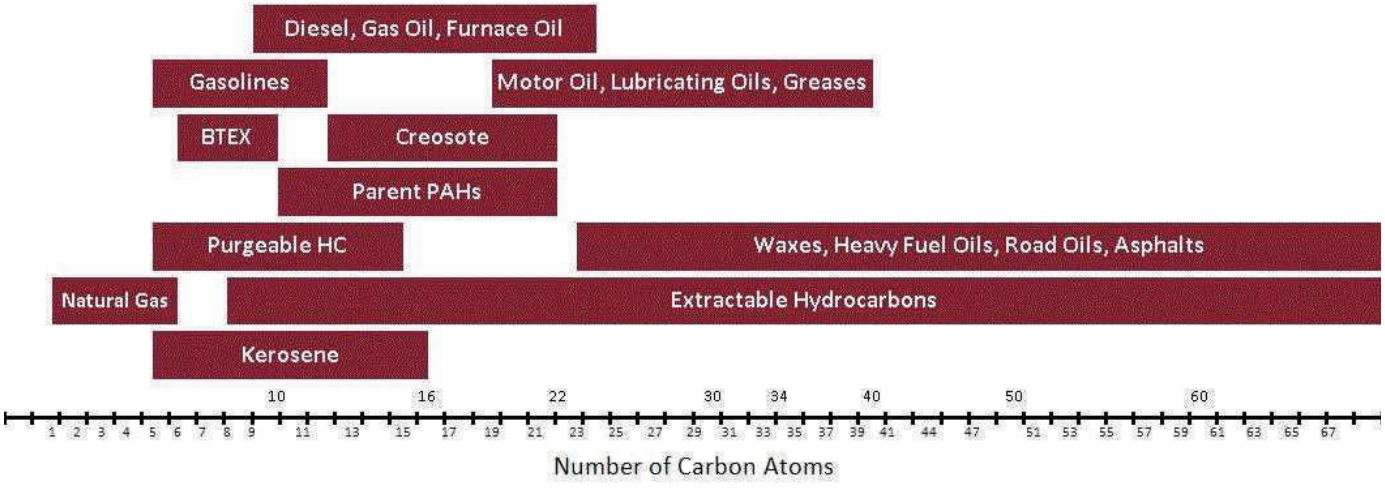
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C551949
Report Date: 2025/06/17
Bureau Veritas Sample: DMO158

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Reference: SRI
Client ID: MW16-25-9

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





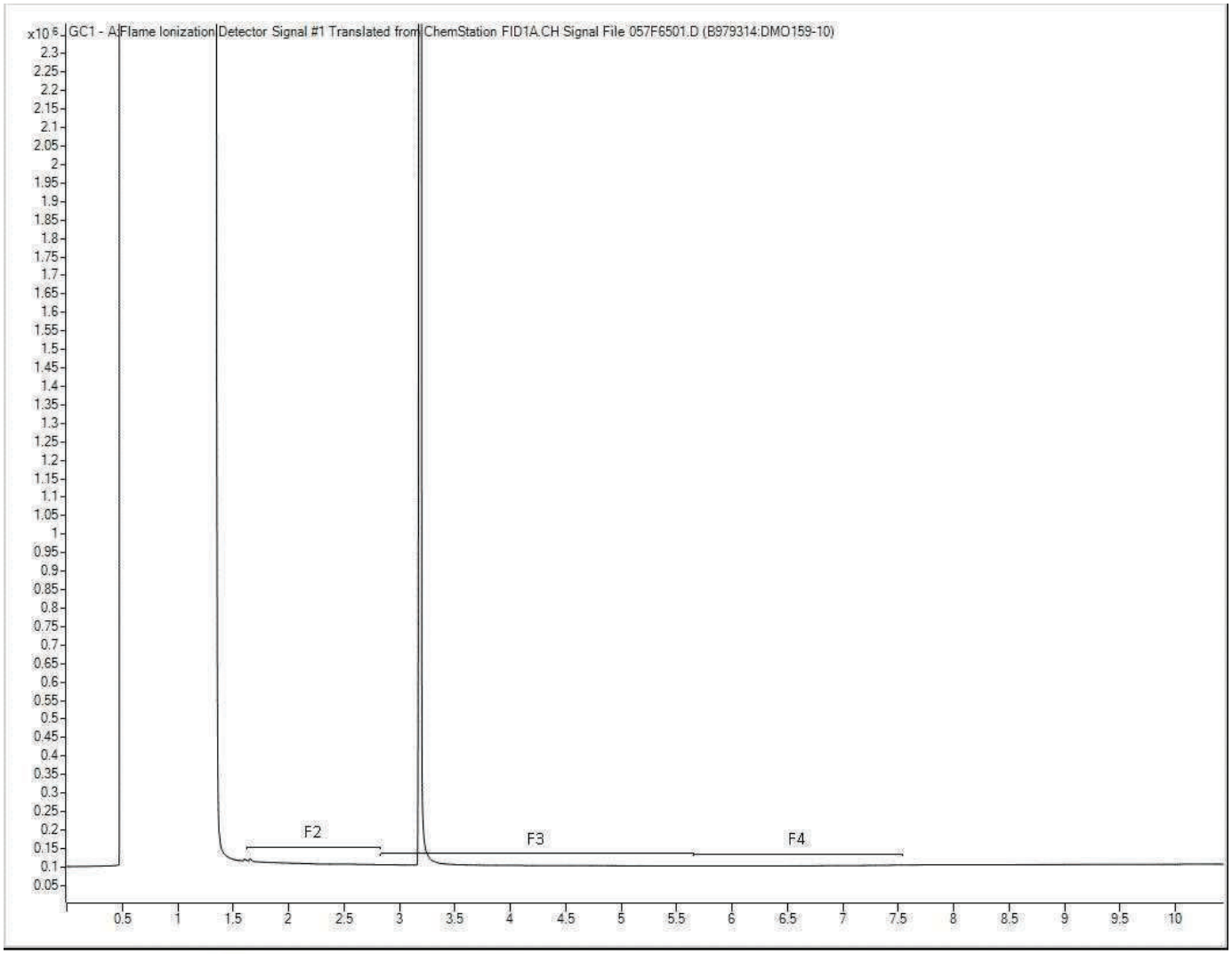
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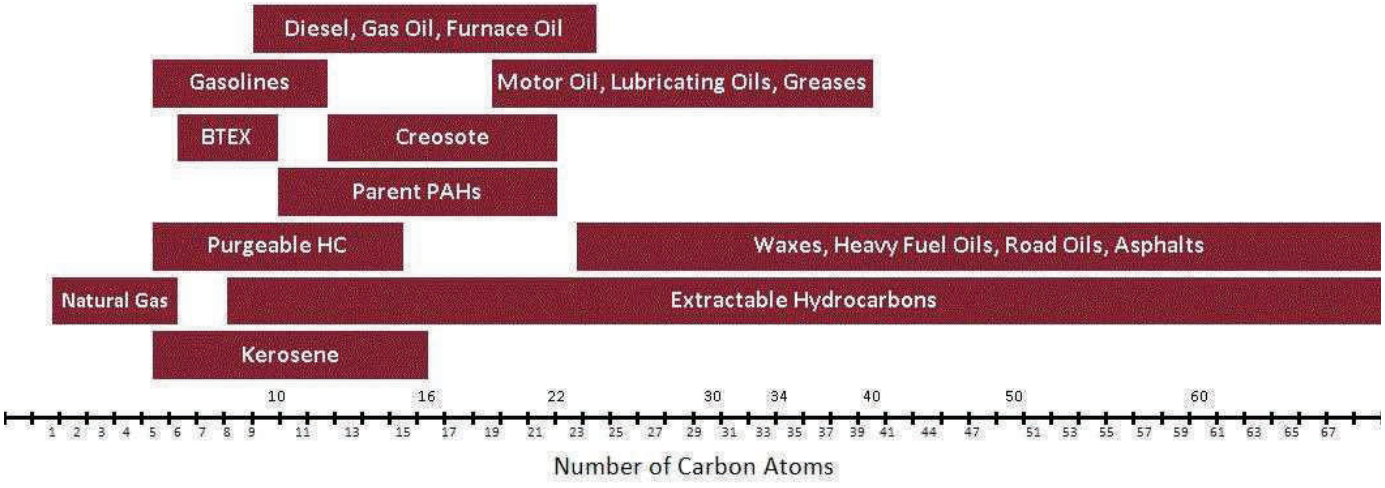
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C551949
Report Date: 2025/06/17
Bureau Veritas Sample: DMO159

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Reference: SRI
Client ID: SR25-03

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





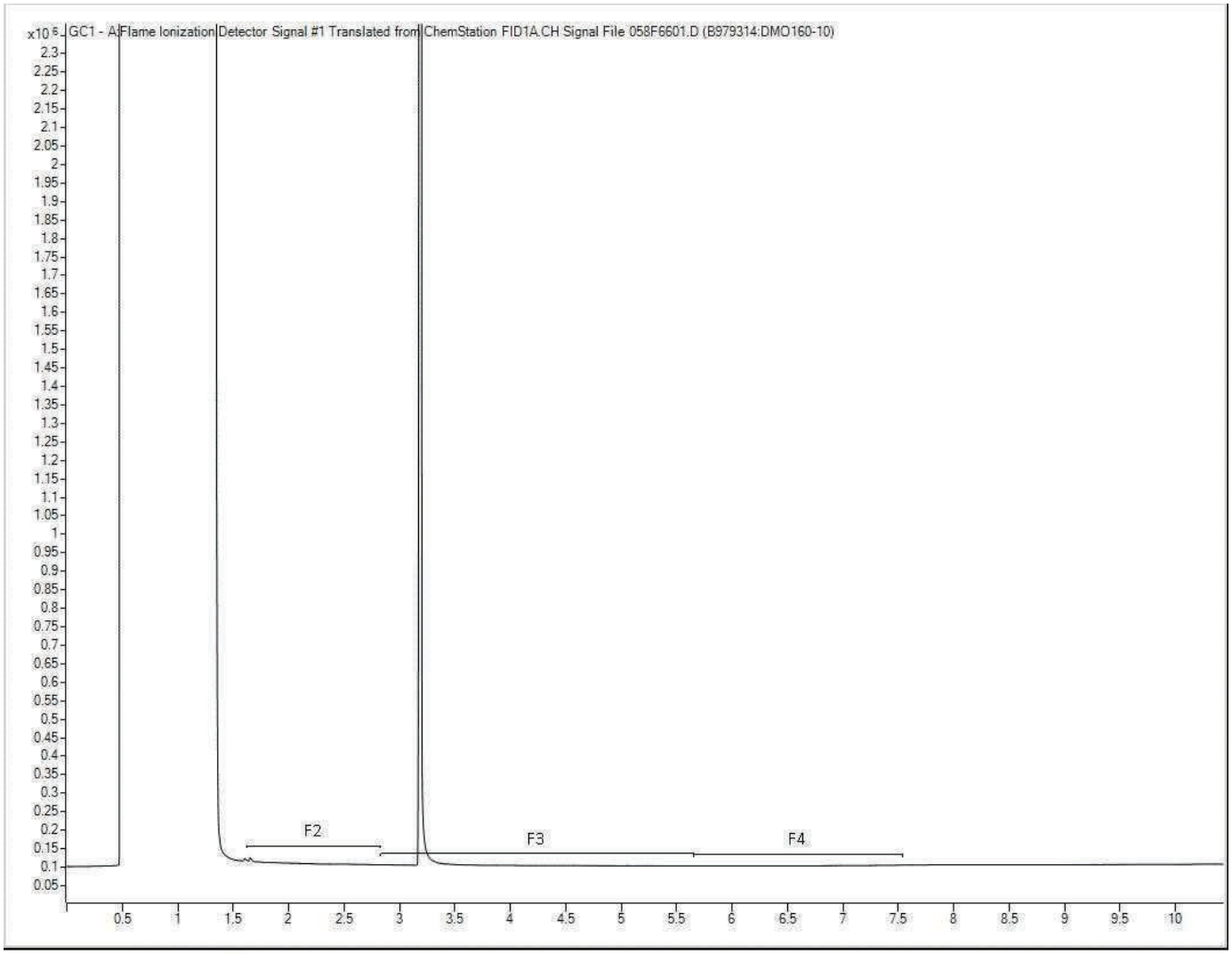
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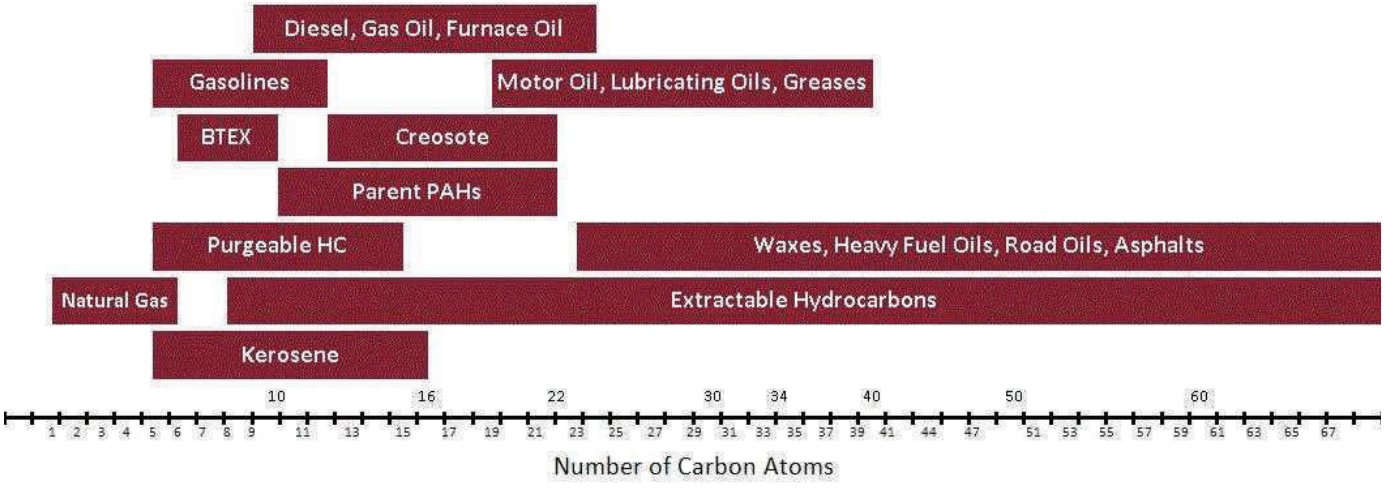
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C551949
Report Date: 2025/06/17
Bureau Veritas Sample: DMO160

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Reference: SRI
Client ID: SR25-04

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





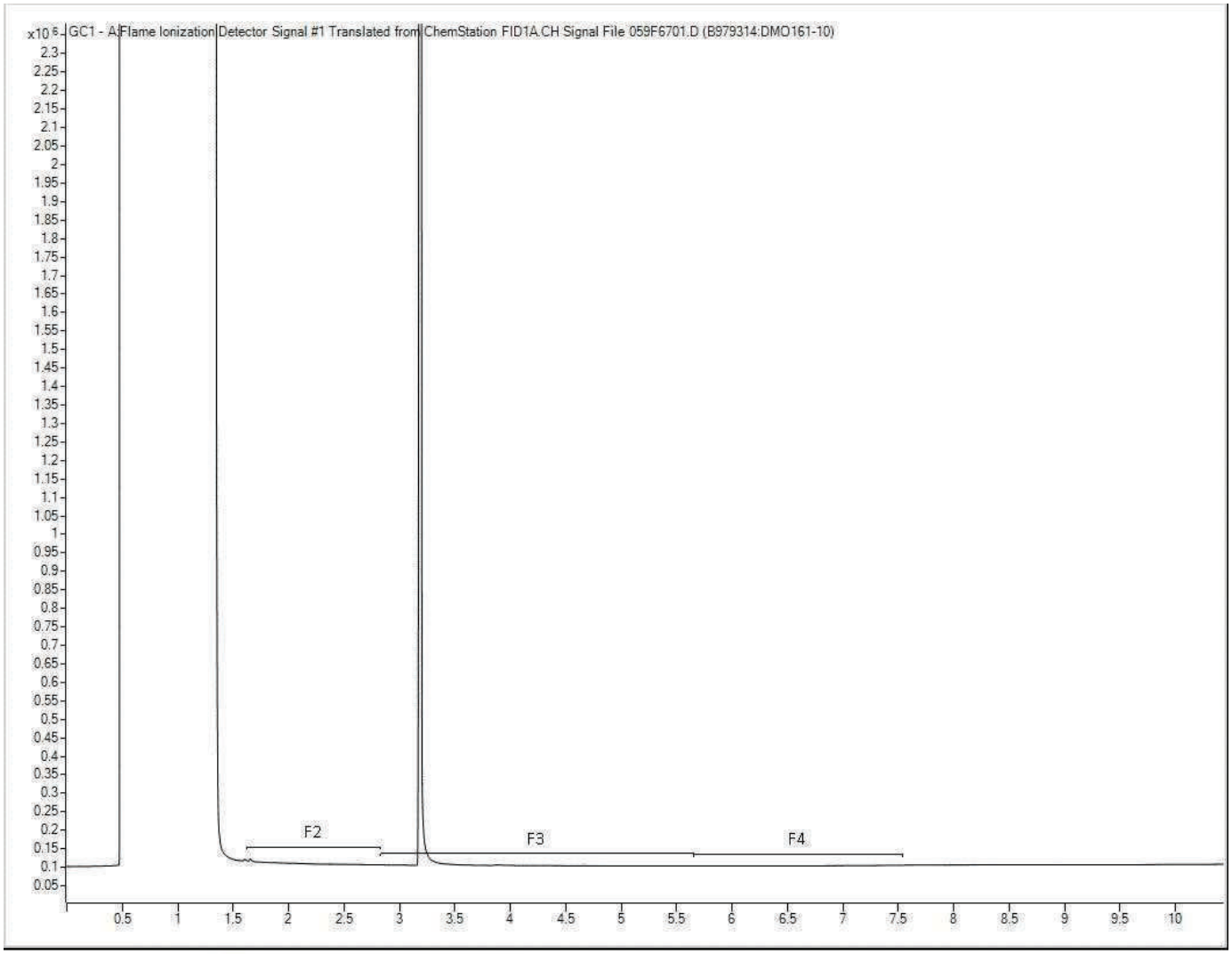
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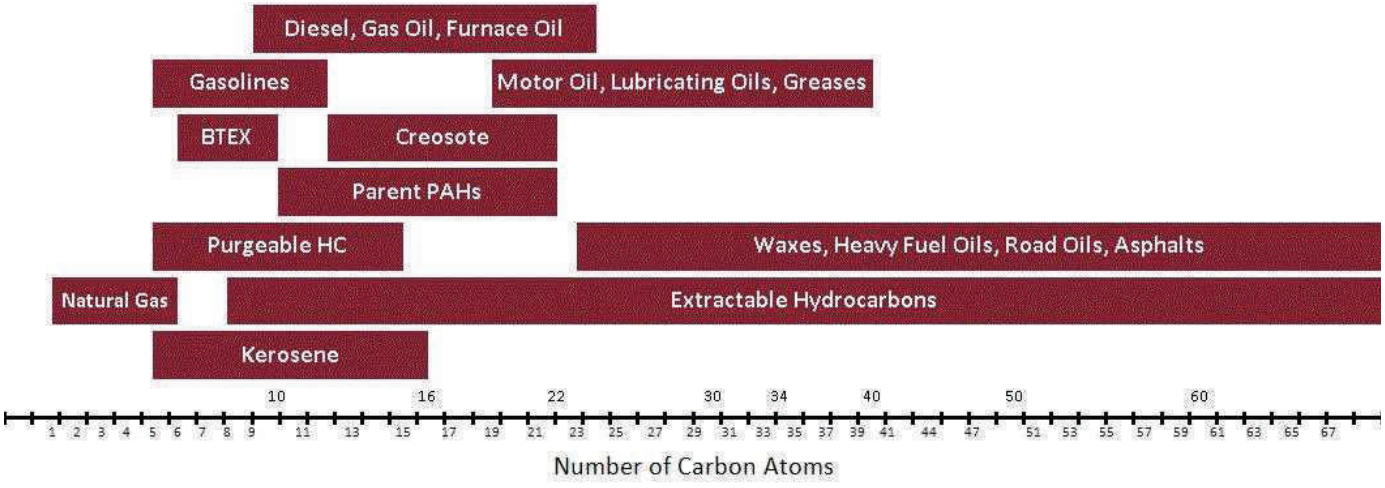
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C551949
Report Date: 2025/06/17
Bureau Veritas Sample: DMO161

STANTEC CONSULTING LTD
Client Project #: 110773396
Site Reference: SRI
Client ID: SR25-05

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





hpchem12\HPchem\1\DATA\2025\06\RUN0610

Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your Project #: 110773396
Your C.O.C. #: 1/1

Attention: DYLAN KING

STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
EDMONTON, AB
CANADA T5J 0K4

Report Date: 2024/09/30
Report #: R3563954
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C474428
Received: 2024/09/19, 17:45

Sample Matrix: Water
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH	4	N/A	2024/09/26	AB SOP-00005	SM 24 2320 B m
BTEX/F1 in Water by HS GC/MS/FID	1	N/A	2024/09/23	AB SOP-00039	CCME CWS/EPA 8260d m
BTEX/F1 in Water by HS GC/MS/FID	3	N/A	2024/09/24	AB SOP-00039	CCME CWS/EPA 8260d m
F1-BTEX	1	N/A	2024/09/23		Auto Calc
F1-BTEX	3	N/A	2024/09/25		Auto Calc
Cadmium - low level CCME - Dissolved	4	N/A	2024/09/27		Auto Calc
Chloride/Sulphate by Auto Colourimetry	1	N/A	2024/09/24	AB SOP-00020	SM24-4500-Cl/SO4-E m
Chloride/Sulphate by Auto Colourimetry	3	N/A	2024/09/25	AB SOP-00020	SM24-4500-Cl/SO4-E m
Fecal Coliforms (MPN/100mL)	4	2024/09/20	2024/09/21	AB SOP-00089	SM 24 9223 A,B m
Heterotrophic Plate Count Quant	4	2024/09/20	2024/09/21	CAL SOP-00012	SM 24 9215 A, E m
Total Coliforms and E.Coli	4	2024/09/20	2024/09/21	AB SOP-00089	SM 24 9223 A,B m
Carbon (DOC) -Lab Filtered (1)	4	N/A	2024/09/25	AB SOP-00087	MMCW 119 1996 m
Conductivity @25C	4	N/A	2024/09/26	AB SOP-00005	SM 24 2510 B m
CCME Hydrocarbons in Water (F2; C10-C16) (2)	3	2024/09/24	2024/09/24	AB SOP-00037 AB SOP-00040	CCME PHC-CWS m
CCME Hydrocarbons in Water (F2; C10-C16) (2)	1	2024/09/24	2024/09/25	AB SOP-00037 AB SOP-00040	CCME PHC-CWS m
Hardness	4	N/A	2024/09/27		Auto Calc
Mercury (Dissolved) by CV-Lab Filtered	4	2024/09/23	2024/09/25	AB SOP-00084	BCMOE BCLM Oct2013 m
Mercury (Total) by CV	4	2024/09/23	2024/09/24	AB SOP-00084	BCMOE BCLM Oct2013 m
Elements by ICP-Dissolved-Lab Filtered (3)	4	N/A	2024/09/27	AB SOP-00042	EPA 6010d R5 m
Elements by ICPMS-Dissolved-Lab Filtered (4)	4	N/A	2024/09/27	AB SOP-00043	EPA 6020b R2 m
Ion Balance	4	N/A	2024/09/27		Auto Calc
Sum of cations, anions	4	N/A	2024/09/27		Auto Calc
Ammonia-N (Total)	4	N/A	2024/09/23	AB SOP-00007	SM 24 4500 NH3 A G m
Nitrate and Nitrite	4	N/A	2024/09/24		Auto Calc
NO2 (N); NO2 (N) + NO3 (N) in Water	4	N/A	2024/09/24	AB SOP-00091	SM 24 4500 NO3m
Nitrate (as N)	4	2024/09/19	2024/09/24		Auto Calc
pH @25°C (5)	4	N/A	2024/09/26	AB SOP-00005	SM 24 4500-H+B m
Orthophosphate by Automated Analyzer (6)	4	N/A	2024/09/23	AB SOP-00025	SM 24 4500-P A,F m
Total Dissolved Solids (Calculated)	4	N/A	2024/09/27		Auto Calc
Total Kjeldahl Nitrogen (Total)	4	N/A	2024/09/24	BBY WI-00033	Auto Calc

Your Project #: 110773396
Your C.O.C. #: 1/1

Attention: DYLAN KING

STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
EDMONTON, AB
CANADA T5J 0K4

Report Date: 2024/09/30
Report #: R3563954
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C474428
Received: 2024/09/19, 17:45

Sample Matrix: Water
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Nitrogen (Total)	4	2024/09/21	2024/09/23	AB SOP-00093	SM 24 4500-N C m
Total Phosphorus-Dissolved-Lab Filtered (7)	4	2024/09/24	2024/09/24	AB SOP-00024	SM 24 4500-P A,B,F m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) DOC present in the sample should be considered as non-purgeable DOC. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(2) Silica gel clean up employed.
(3) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(4) Samples were filtered and preserved at the lab. Values may not reflect concentrations at the time of sampling. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(5) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.
(6) Orthophosphate > Total Phosphorus Imbalance: When applicable, Orthophosphate, Total Phosphorus and dissolved Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
(7) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Your Project #: 110773396
Your C.O.C. #: 1/1

Attention: DYLAN KING

STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
EDMONTON, AB
CANADA T5J 0K4

Report Date: 2024/09/30
Report #: R3563954
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C474428
Received: 2024/09/19, 17:45

Encryption Key



Bureau Veritas
30 Sep 2024 11:45:28

Please direct all questions regarding this Certificate of Analysis to:
Geraldlyn Gouthro, Key Account Specialist
Email: geraldlyn.gouthro@bureauveritas.com
Phone# (403) 291-3077

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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

AT1 BTEX AND F1-F2 IN WATER (WATER)

Bureau Veritas ID		CVW761		CVW762		CVW763			
Sampling Date		2024/09/19 10:00		2024/09/19 11:15		2024/09/19 12:45			
COC Number		1/1		1/1		1/1			
	UNITS	SW11-R4-02	MU	RRMW16-17-8	MU	RMW16-16-17	MU	RDL	QC Batch
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B530888
Volatiles									
Benzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B531231
Toluene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B531231
Ethylbenzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B531231
m & p-Xylene	mg/L	<0.00080	N/A	<0.00080	N/A	<0.00080	N/A	0.00080	B531231
o-Xylene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B531231
Xylenes (Total)	mg/L	<0.00089	N/A	<0.00089	N/A	<0.00089	N/A	0.00089	B528879
F1 (C6-C10) - BTEX	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B528879
F1 (C6-C10)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B531231
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	96	N/A	92	N/A	98	N/A	N/A	B531231
4-Bromofluorobenzene (sur.)	%	99	N/A	100	N/A	97	N/A	N/A	B531231
D4-1,2-Dichloroethane (sur.)	%	95	N/A	105	N/A	96	N/A	N/A	B531231
O-TERPHENYL (sur.)	%	96	N/A	95	N/A	94	N/A	N/A	B530888

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

AT1 BTEX AND F1-F2 IN WATER (WATER)

Bureau Veritas ID		CVW764			
Sampling Date		2024/09/19 16:00			
COC Number		1/1			
	UNITS	MW21-3-15	MU	RDL	QC Batch
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/L	<0.30 (1)	N/A	0.30	B532581
Volatiles					
Benzene	mg/L	<0.00040	N/A	0.00040	B531881
Toluene	mg/L	<0.00040	N/A	0.00040	B531881
Ethylbenzene	mg/L	<0.00040	N/A	0.00040	B531881
m & p-Xylene	mg/L	<0.00080	N/A	0.00080	B531881
o-Xylene	mg/L	<0.00040	N/A	0.00040	B531881
Xylenes (Total)	mg/L	<0.00089	N/A	0.00089	B528879
F1 (C6-C10) - BTEX	mg/L	<0.10	N/A	0.10	B528879
F1 (C6-C10)	mg/L	<0.10	N/A	0.10	B531881
Surrogate Recovery (%)					
1,4-Difluorobenzene (sur.)	%	97	N/A	N/A	B531881
4-Bromofluorobenzene (sur.)	%	101	N/A	N/A	B531881
D4-1,2-Dichloroethane (sur.)	%	92	N/A	N/A	B531881
O-TERPHENYL (sur.)	%	103	N/A	N/A	B532581

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Detection limit raised based on sample volume used for analysis.

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CVW761				CVW762			
Sampling Date		2024/09/19 10:00				2024/09/19 11:15			
COC Number		1/1				1/1			
	UNITS	SW11-R4-02	MU	RDL	QC Batch	RRMW16-17-8	MU	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	5.2	N/A	N/A	B529013	200	N/A	N/A	B529014
Cation Sum	meq/L	5.1	N/A	N/A	B529013	190	N/A	N/A	B529014
Hardness (CaCO3)	mg/L	69	N/A	0.50	B528765	5500	N/A	0.50	B528765
Ion Balance (% Difference)	%	0.77	N/A	N/A	B528962	3.0	N/A	N/A	B528962
Nitrate (N)	mg/L	<0.010	N/A	0.010	B528784	<0.25	N/A	0.25	B528784
Nitrate (NO3)	mg/L	<0.044	N/A	0.044	B528781	<1.1	N/A	1.1	B528781
Nitrite (NO2)	mg/L	<0.033	N/A	0.033	B528781	<0.033	N/A	0.033	B528781
Calculated Total Dissolved Solids	mg/L	290	N/A	10	B528819	13000	N/A	100	B528819
Elements									
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	0.020	B528882	0.14	+/- 0.056	0.020	B528882
Misc. Inorganics									
Conductivity	uS/cm	500	+/- 14	2.0	B534118	12000	+/- 320	2.0	B534118
pH	pH	7.26	+/- 0.0719	N/A	B534116	8.15	+/- 0.0808	N/A	B534116
Anions									
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	1.0	B534112	<1.0	N/A	1.0	B534112
Alkalinity (Total as CaCO3)	mg/L	190	+/- 14	1.0	B534112	950	+/- 71	1.0	B534112
Bicarbonate (HCO3)	mg/L	230	+/- 3.8	1.0	B534112	1200	+/- 18	1.0	B534112
Carbonate (CO3)	mg/L	<1.0	N/A	1.0	B534112	<1.0	N/A	1.0	B534112
Hydroxide (OH)	mg/L	<1.0	N/A	1.0	B534112	<1.0	N/A	1.0	B534112
Chloride (Cl)	mg/L	5.9	+/- 1.3	1.0	B534566	5.2	+/- 1.2	1.0	B534358
Sulphate (SO4)	mg/L	59	+/- 4.1	1.0	B534566	8900	+/- 560	100	B534358
Nutrients									
Nitrite (N)	mg/L	<0.010	N/A	0.010	B533986	<0.010	N/A	0.010	B533986
Nitrate plus Nitrite (N)	mg/L	<0.010	N/A	0.010	B533986	<0.25 (1)	N/A	0.25	B533986
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	<0.0030	N/A	0.0030	B540179	0.014	+/- 0.0034	0.0030	B540179
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	0.00060	B540179	<0.00060	N/A	0.00060	B540179
Dissolved Arsenic (As)	mg/L	<0.00020	N/A	0.00020	B540179	0.00073	+/- <RDL	0.00020	B540179
Dissolved Barium (Ba)	mg/L	0.086	+/- <RDL	0.010	B540116	0.013	+/- <RDL	0.010	B540116
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	0.0010	B540179	<0.0010	N/A	0.0010	B540179

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Detection limits raised due to matrix interference.

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CVW761				CVW762			
Sampling Date		2024/09/19 10:00				2024/09/19 11:15			
COC Number		1/1				1/1			
	UNITS	SW11-R4-02	MU	RDL	QC Batch	RRMW16-17-8	MU	RDL	QC Batch
Dissolved Boron (B)	mg/L	0.034	+/- <RDL	0.020	B540116	0.17	+/- <RDL	0.020	B540116
Dissolved Calcium (Ca)	mg/L	18	+/- 1.9	0.30	B540116	390	+/- 39	0.30	B540116
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	0.0010	B540179	<0.0010	N/A	0.0010	B540179
Dissolved Cobalt (Co)	mg/L	<0.00030	N/A	0.00030	B540179	0.0067	+/- 0.00061	0.00030	B540179
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	0.0010	B540179	0.0026	+/- <RDL	0.0010	B540179
Dissolved Iron (Fe)	mg/L	<0.060	N/A	0.060	B540116	<0.060	N/A	0.060	B540116
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	0.00020	B540179	<0.00020	N/A	0.00020	B540179
Dissolved Lithium (Li)	mg/L	<0.020	N/A	0.020	B540116	0.10	+/- <RDL	0.020	B540116
Dissolved Magnesium (Mg)	mg/L	5.7	+/- 0.37	0.20	B540116	1100	+/- 71	2.0	B540116
Dissolved Manganese (Mn)	mg/L	0.050	+/- <RDL	0.0040	B540116	2.4	+/- 0.16	0.0040	B540116
Dissolved Molybdenum (Mo)	mg/L	0.0018	+/- 0.00051	0.00020	B540179	0.0012	+/- 0.00038	0.00020	B540179
Dissolved Nickel (Ni)	mg/L	<0.00050	N/A	0.00050	B540179	0.0098	+/- 0.00083	0.00050	B540179
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	0.10	B540116	<0.10	N/A	0.10	B540116
Dissolved Potassium (K)	mg/L	0.93	+/- <RDL	0.30	B540116	13	+/- 0.64	0.30	B540116
Dissolved Selenium (Se)	mg/L	<0.00020	N/A	0.00020	B540179	0.00052	+/- <RDL	0.00020	B540179
Dissolved Silicon (Si)	mg/L	3.7	+/- 0.71	0.50	B540116	5.3	+/- 1.0	0.50	B540116
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	0.00010	B540179	<0.00010	N/A	0.00010	B540179
Dissolved Sodium (Na)	mg/L	86	+/- 8.4	0.50	B540116	1900	+/- 180	5.0	B540116
Dissolved Strontium (Sr)	mg/L	0.41	+/- 0.040	0.020	B540116	11	+/- 1.1	0.20	B540116
Dissolved Sulphur (S)	mg/L	18	+/- 1.2	0.20	B540116	2800	+/- 190	2.0	B540116
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	0.00020	B540179	<0.00020	N/A	0.00020	B540179
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	0.0010	B540179	<0.0010	N/A	0.0010	B540179
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	0.0010	B540179	<0.0010	N/A	0.0010	B540179
Dissolved Uranium (U)	mg/L	<0.00010	N/A	0.00010	B540179	0.046	+/- 0.0041	0.00010	B540179
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	0.0010	B540179	<0.0010	N/A	0.0010	B540179
Dissolved Zinc (Zn)	mg/L	0.043	+/- 0.0038	0.0030	B540179	0.0036	+/- <RDL	0.0030	B540179

RDL = Reportable Detection Limit
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N/A = Not Applicable

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CVW763				CVW764			
Sampling Date		2024/09/19 12:45				2024/09/19 16:00			
COC Number		1/1				1/1			
	UNITS	RMW16-16-17	MU	RDL	QC Batch	MW21-3-15	MU	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	65	N/A	N/A	B529014	14	N/A	N/A	B529014
Cation Sum	meq/L	66	N/A	N/A	B529014	15	N/A	N/A	B529014
Hardness (CaCO3)	mg/L	1400	N/A	0.50	B528765	15	N/A	0.50	B529012
Ion Balance (% Difference)	%	1.2	N/A	N/A	B528962	2.4	N/A	N/A	B528962
Nitrate (N)	mg/L	<0.010	N/A	0.010	B528784	<0.010	N/A	0.010	B528784
Nitrate (NO3)	mg/L	<0.044	N/A	0.044	B528781	<0.044	N/A	0.044	B528781
Nitrite (NO2)	mg/L	<0.033	N/A	0.033	B528781	0.076	N/A	0.033	B528781
Calculated Total Dissolved Solids	mg/L	4200	N/A	25	B528819	810	N/A	10	B528819
Elements									
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	0.020	B528882	<0.020	N/A	0.020	B528882
Misc. Inorganics									
Conductivity	uS/cm	5200	+/- 140	2.0	B534118	1300	+/- 34	2.0	B534118
pH	pH	8.17	+/- 0.0809	N/A	B534116	8.64	+/- 0.0856	N/A	B534116
Anions									
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	1.0	B534112	38	+/- 2.8	1.0	B534112
Alkalinity (Total as CaCO3)	mg/L	720	+/- 53	1.0	B534112	540	+/- 40	1.0	B534112
Bicarbonate (HCO3)	mg/L	880	+/- 13	1.0	B534112	570	+/- 8.7	1.0	B534112
Carbonate (CO3)	mg/L	<1.0	N/A	1.0	B534112	45	N/A	1.0	B534112
Hydroxide (OH)	mg/L	<1.0	N/A	1.0	B534112	<1.0	N/A	1.0	B534112
Chloride (Cl)	mg/L	4.9	+/- 1.2	1.0	B534566	1.6	+/- 1.2	1.0	B534566
Sulphate (SO4)	mg/L	2400	+/- 150	25	B534566	150	+/- 9.8	5.0	B534566
Nutrients									
Nitrite (N)	mg/L	<0.010	N/A	0.010	B533986	0.023	+/- <RDL	0.010	B533986
Nitrate plus Nitrite (N)	mg/L	<0.010	N/A	0.010	B533986	0.029	+/- 0.012	0.010	B533986
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	<0.0030	N/A	0.0030	B540179	0.34	+/- 0.079	0.0030	B540179
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	0.00060	B540179	<0.00060	N/A	0.00060	B540179
Dissolved Arsenic (As)	mg/L	0.00051	+/- <RDL	0.00020	B540179	0.0011	+/- <RDL	0.00020	B540179
Dissolved Barium (Ba)	mg/L	<0.010	N/A	0.010	B540116	0.024	+/- <RDL	0.010	B540116
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	0.0010	B540179	<0.0010	N/A	0.0010	B540179
Dissolved Boron (B)	mg/L	0.21	+/- 0.022	0.020	B540116	0.23	+/- 0.023	0.020	B540116

RDL = Reportable Detection Limit
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N/A = Not Applicable

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CVW763				CVW764			
Sampling Date		2024/09/19 12:45				2024/09/19 16:00			
COC Number		1/1				1/1			
	UNITS	RMW16-16-17	MU	RDL	QC Batch	MW21-3-15	MU	RDL	QC Batch
Dissolved Calcium (Ca)	mg/L	290	+/- 29	0.30	B540116	5.3	+/- 0.55	0.30	B540116
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	0.0010	B540179	<0.0010	N/A	0.0010	B540179
Dissolved Cobalt (Co)	mg/L	0.0016	+/- <RDL	0.00030	B540179	<0.00030	N/A	0.00030	B540179
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	0.0010	B540179	<0.0010	N/A	0.0010	B540179
Dissolved Iron (Fe)	mg/L	<0.060	N/A	0.060	B540116	0.20	+/- <RDL	0.060	B540116
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	0.00020	B540179	0.00026	+/- <RDL	0.00020	B540179
Dissolved Lithium (Li)	mg/L	0.24	+/- 0.020	0.020	B540116	0.027	+/- <RDL	0.020	B540116
Dissolved Magnesium (Mg)	mg/L	150	+/- 9.8	0.20	B540116	0.44	+/- <RDL	0.20	B540116
Dissolved Manganese (Mn)	mg/L	0.34	+/- 0.023	0.0040	B540116	<0.0040	N/A	0.0040	B540116
Dissolved Molybdenum (Mo)	mg/L	0.00039	+/- 0.00025	0.00020	B540179	0.0013	+/- 0.00040	0.00020	B540179
Dissolved Nickel (Ni)	mg/L	0.0017	+/- <RDL	0.00050	B540179	<0.00050	N/A	0.00050	B540179
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	0.10	B540116	<0.10	N/A	0.10	B540116
Dissolved Potassium (K)	mg/L	7.7	+/- 0.40	0.30	B540116	0.72	+/- <RDL	0.30	B540116
Dissolved Selenium (Se)	mg/L	<0.00020	N/A	0.00020	B540179	<0.00020	N/A	0.00020	B540179
Dissolved Silicon (Si)	mg/L	4.7	+/- 0.90	0.50	B540116	3.9	+/- 0.75	0.50	B540116
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	0.00010	B540179	<0.00010	N/A	0.00010	B540179
Dissolved Sodium (Na)	mg/L	890	+/- 87	2.5	B540116	330	+/- 32	0.50	B540116
Dissolved Strontium (Sr)	mg/L	8.4	+/- 0.82	0.10	B540116	0.075	+/- <RDL	0.020	B540116
Dissolved Sulphur (S)	mg/L	830	+/- 55	1.0	B540116	42	+/- 2.8	0.20	B540116
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	0.00020	B540179	<0.00020	N/A	0.00020	B540179
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	0.0010	B540179	<0.0010	N/A	0.0010	B540179
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	0.0010	B540179	0.013	+/- 0.0036	0.0010	B540179
Dissolved Uranium (U)	mg/L	0.00030	+/- <RDL	0.00010	B540179	0.00041	+/- <RDL	0.00010	B540179
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	0.0010	B540179	0.0016	+/- <RDL	0.0010	B540179
Dissolved Zinc (Zn)	mg/L	0.011	+/- <RDL	0.0030	B540179	<0.0030	N/A	0.0030	B540179

RDL = Reportable Detection Limit
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N/A = Not Applicable

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TOTAL KJELDAHL NITROGEN (TOTAL)

Bureau Veritas ID		CVW761				CVW762			CVW763			
Sampling Date		2024/09/19 10:00				2024/09/19 11:15			2024/09/19 12:45			
COC Number		1/1				1/1			1/1			
	UNITS	SW11-R4-02	MU	RDL	QC Batch	RRMW16-17-8	MU	RDL	RMW16-16-17	MU	RDL	QC Batch
Calculated Parameters												
Total Kjeldahl Nitrogen (Calc)	mg/L	0.21	N/A	0.020	B528957	2.4	N/A	0.25	2.1	N/A	0.20	B528957
Nutrients												
Total Nitrogen (N)	mg/L	0.21	+/- 0.048	0.020	B531281	2.4 (1)	+/- 0.35	0.20	2.1 (1)	+/- 0.31	0.20	B531283

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Bureau Veritas ID		CVW764			
Sampling Date		2024/09/19 16:00			
COC Number		1/1			
	UNITS	MW21-3-15	MU	RDL	QC Batch
Calculated Parameters					
Total Kjeldahl Nitrogen (Calc)	mg/L	0.83	N/A	0.20	B528957
Nutrients					
Total Nitrogen (N)	mg/L	0.86 (1)	+/- <RDL	0.20	B531283

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		CVW761		CVW761			
Sampling Date		2024/09/19 10:00		2024/09/19 10:00			
COC Number		1/1		1/1			
	UNITS	SW11-R4-02	MU	SW11-R4-02 Lab-Dup	MU	RDL	QC Batch
Lab Filtered Inorganics							
Dissolved Organic Carbon (C)	mg/L	<0.50 (1)	N/A	N/A	N/A	0.50	B536204
Microbiological Param.							
E.Coli DST	MPN/100mL	<1.0	N/A	N/A	N/A	1.0	B530297
Fecal Coliforms	MPN/100mL	<1.0	N/A	<1.0	N/A	1.0	B530306
Heterotrophic DST	MPN/100mL	2400	N/A	N/A	N/A	1.0	B529676
Total Coliforms DST	MPN/100mL	<1.0	N/A	N/A	N/A	1.0	B530297
Nutrients							
Total Ammonia (N)	mg/L	0.18	+/- 0.022	N/A	N/A	0.015	B532644
Orthophosphate (P)	mg/L	<0.0030	N/A	N/A	N/A	0.0030	B533450
Lab Filtered Nutrients							
Dissolved Phosphorus (P)	mg/L	<0.0030 (1)	N/A	N/A	N/A	0.0030	B534184

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Sample filtered and preserved past method specified hold time

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		CVW762		CVW762			
Sampling Date		2024/09/19 11:15		2024/09/19 11:15			
COC Number		1/1		1/1			
	UNITS	RRMW16-17-8	MU	RRMW16-17-8 Lab-Dup	MU	RDL	QC Batch
Lab Filtered Inorganics							
Dissolved Organic Carbon (C)	mg/L	23 (1)	+/- 2.6	N/A	N/A	1.0	B536204
Microbiological Param.							
E.Coli DST	MPN/100mL	<100 (2)	N/A	N/A	N/A	100	B530297
Fecal Coliforms	MPN/100mL	<100 (2)	N/A	N/A	N/A	100	B530306
Heterotrophic DST	MPN/100mL	>2400	N/A	N/A	N/A	1.0	B529676
Total Coliforms DST	MPN/100mL	3800 (2)	N/A	N/A	N/A	100	B530297
Nutrients							
Total Ammonia (N)	mg/L	0.89	+/- 0.098	0.87	+/- 0.095	0.015	B532601
Orthophosphate (P)	mg/L	0.0074	+/- 0.0036	N/A	N/A	0.0030	B533450
Lab Filtered Nutrients							
Dissolved Phosphorus (P)	mg/L	0.0040 (3)	+/- 0.0048	0.0032	+/- 0.0048	0.0030	B534184

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Sample filtered and preserved past method specified hold time
(2) Detection limit raised due to matrix interference.
(3) Sample filtered and preserved past method specified hold time Phosphorus < Orthophosphate: Both values fall within the method uncertainty for duplicates and are likely equivalent.

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		CVW763				CVW764			
Sampling Date		2024/09/19 12:45				2024/09/19 16:00			
COC Number		1/1				1/1			
	UNITS	RMW16-16-17	MU	RDL	QC Batch	MW21-3-15	MU	RDL	QC Batch
Lab Filtered Inorganics									
Dissolved Organic Carbon (C)	mg/L	2.2 (1)	+/- <RDL	0.50	B536204	1.6 (1)	+/- <RDL	0.50	B536204
Microbiological Param.									
E.Coli DST	MPN/100mL	<1.0	N/A	1.0	B530297	<2.0 (2)	N/A	2.0	B530297
Fecal Coliforms	MPN/100mL	<1.0	N/A	1.0	B530306	2.0 (2)	N/A	2.0	B530306
Heterotrophic DST	MPN/100mL	490	N/A	1.0	B529676	>2400	N/A	1.0	B529676
Total Coliforms DST	MPN/100mL	2.0	N/A	1.0	B530297	<2.0 (2)	N/A	2.0	B530297
Nutrients									
Total Ammonia (N)	mg/L	1.7	+/- 0.18	0.015	B532644	0.47	+/- 0.052	0.015	B532601
Orthophosphate (P)	mg/L	<0.0030	N/A	0.0030	B533450	0.019	+/- 0.0042	0.0030	B533450
Lab Filtered Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0030 (1)	N/A	0.0030	B534184	0.017 (3)	+/- 0.0050	0.0030	B534184

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Sample filtered and preserved past method specified hold time
(2) Detection limit raised due to matrix interference.
(3) Sample filtered and preserved past method specified hold time Phosphorus < Orthophosphate: Both values fall within the method uncertainty for duplicates and are likely equivalent.

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MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		CVW761			CVW762			CVW763			
Sampling Date		2024/09/19 10:00			2024/09/19 11:15			2024/09/19 12:45			
COC Number		1/1			1/1			1/1			
	UNITS	SW11-R4-02	MU	RDL	RRMW16-17-8	MU	RDL	RMW16-16-17	MU	RDL	QC Batch
Elements											
Total Mercury (Hg)	ug/L	<0.0019	N/A	0.0019	0.191 (1)	+/- <RDL	0.038	<0.0019	N/A	0.0019	B533464
Lab Filtered Elements											
Dissolved Mercury (Hg)	ug/L	<0.0019	N/A	0.0019	<0.0019	N/A	0.0019	<0.0019	N/A	0.0019	B533454

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Bureau Veritas ID		CVW764			
Sampling Date		2024/09/19 16:00			
COC Number		1/1			
	UNITS	MW21-3-15	MU	RDL	QC Batch
Elements					
Total Mercury (Hg)	ug/L	0.152 (1)	+/- 0.026	0.019	B533464
Lab Filtered Elements					
Dissolved Mercury (Hg)	ug/L	0.0034	+/- 1.17	0.0019	B533454

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	3.4°C

Sample CVW761 [SW11-R4-02] : Orthophosphate by Automated Analyzer completed within five days of sampling. Data is satisfactory for compliance purposes. NO2 (N); NO2 (N) + NO3 (N) in Water completed within five days of sampling. Data is satisfactory for compliance purposes.

Sample CVW762 [RRMW16-17-8] : Orthophosphate by Automated Analyzer completed within five days of sampling. Data is satisfactory for compliance purposes. NO2 (N); NO2 (N) + NO3 (N) in Water completed within five days of sampling. Data is satisfactory for compliance purposes.

Sample CVW763 [RMW16-16-17] : Orthophosphate by Automated Analyzer completed within five days of sampling. Data is satisfactory for compliance purposes. NO2 (N); NO2 (N) + NO3 (N) in Water completed within five days of sampling. Data is satisfactory for compliance purposes.

Sample CVW764 [MW21-3-15] : Orthophosphate by Automated Analyzer completed within five days of sampling. Data is satisfactory for compliance purposes. NO2 (N); NO2 (N) + NO3 (N) in Water completed within five days of sampling. Data is satisfactory for compliance purposes.

The estimate of uncertainty has been reported as an expanded uncertainty and calculated using a coverage factor of 2, which gives a level of confidence of 95%.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B529676	SOG	Method Blank	Heterotrophic DST	2024/09/21	<1.0		mpn/100mL	
B529676	SOG	RPD	Heterotrophic DST	2024/09/21	NC		%	N/A
B530297	SOG	Method Blank	E.Coli DST	2024/09/21	<1.0		mpn/100mL	
			Total Coliforms DST	2024/09/21	<1.0		mpn/100mL	
B530297	SOG	RPD	E.Coli DST	2024/09/21	NC		%	N/A
			Total Coliforms DST	2024/09/21	NC		%	N/A
B530306	SOG	Method Blank	Fecal Coliforms	2024/09/21	<1.0		MPN/100mL	
B530306	SOG	RPD [CVW761-09]	Fecal Coliforms	2024/09/21	NC		%	N/A
B530888	CHA	Spiked Blank	O-TERPHENYL (sur.)	2024/09/24		100	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2024/09/24		90	%	60 - 140
B530888	CHA	Method Blank	O-TERPHENYL (sur.)	2024/09/24		99	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2024/09/24	<0.10		mg/L	
B531231	DO1	Matrix Spike [CVW761-08]	1,4-Difluorobenzene (sur.)	2024/09/24		90	%	50 - 140
			4-Bromofluorobenzene (sur.)	2024/09/24		106	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2024/09/24		89	%	50 - 140
			Benzene	2024/09/24		79	%	50 - 140
			Toluene	2024/09/24		82	%	50 - 140
			Ethylbenzene	2024/09/24		85	%	50 - 140
			m & p-Xylene	2024/09/24		84	%	50 - 140
			o-Xylene	2024/09/24		84	%	50 - 140
			F1 (C6-C10)	2024/09/24		97	%	60 - 140
B531231	DO1	Spiked Blank	1,4-Difluorobenzene (sur.)	2024/09/24		92	%	50 - 140
			4-Bromofluorobenzene (sur.)	2024/09/24		106	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2024/09/24		87	%	50 - 140
			Benzene	2024/09/24		80	%	60 - 130
			Toluene	2024/09/24		84	%	60 - 130
			Ethylbenzene	2024/09/24		88	%	60 - 130
			m & p-Xylene	2024/09/24		87	%	60 - 130
			o-Xylene	2024/09/24		88	%	60 - 130
			F1 (C6-C10)	2024/09/24		82	%	60 - 140
B531231	DO1	Method Blank	1,4-Difluorobenzene (sur.)	2024/09/24		97	%	50 - 140
			4-Bromofluorobenzene (sur.)	2024/09/24		99	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2024/09/24		95	%	50 - 140
			Benzene	2024/09/24	<0.00040		mg/L	
			Toluene	2024/09/24	<0.00040		mg/L	
			Ethylbenzene	2024/09/24	<0.00040		mg/L	
			m & p-Xylene	2024/09/24	<0.00080		mg/L	
			o-Xylene	2024/09/24	<0.00040		mg/L	
			F1 (C6-C10)	2024/09/24	<0.10		mg/L	
B531231	DO1	RPD	Benzene	2024/09/24	0.18		%	30
			Toluene	2024/09/24	NC		%	30
			Ethylbenzene	2024/09/24	NC		%	30
			m & p-Xylene	2024/09/24	NC		%	30
			o-Xylene	2024/09/24	NC		%	30
			F1 (C6-C10)	2024/09/24	NC		%	30
B531281	YL7	Matrix Spike	Total Nitrogen (N)	2024/09/23		115	%	80 - 120
B531281	YL7	QC Standard	Total Nitrogen (N)	2024/09/23		103	%	80 - 120
B531281	YL7	Spiked Blank	Total Nitrogen (N)	2024/09/23		107	%	80 - 120
B531281	YL7	Method Blank	Total Nitrogen (N)	2024/09/23	<0.020		mg/L	
B531281	YL7	RPD	Total Nitrogen (N)	2024/09/23	6.4		%	20
B531283	YL7	Matrix Spike	Total Nitrogen (N)	2024/09/23		111	%	80 - 120
B531283	YL7	QC Standard	Total Nitrogen (N)	2024/09/23		104	%	80 - 120
B531283	YL7	Spiked Blank	Total Nitrogen (N)	2024/09/23		106	%	80 - 120

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B531283	YL7	Method Blank	Total Nitrogen (N)	2024/09/23	<0.020		mg/L	
B531283	YL7	RPD	Total Nitrogen (N)	2024/09/23	NC		%	20
B531881	WPK	Matrix Spike	1,4-Difluorobenzene (sur.)	2024/09/22		99	%	50 - 140
			4-Bromofluorobenzene (sur.)	2024/09/22		105	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2024/09/22		105	%	50 - 140
			Benzene	2024/09/22		93	%	50 - 140
			Toluene	2024/09/22		93	%	50 - 140
			Ethylbenzene	2024/09/22		97	%	50 - 140
			m & p-Xylene	2024/09/22		93	%	50 - 140
			o-Xylene	2024/09/22		99	%	50 - 140
			F1 (C6-C10)	2024/09/22		101	%	60 - 140
B531881	WPK	Spiked Blank	1,4-Difluorobenzene (sur.)	2024/09/22		97	%	50 - 140
			4-Bromofluorobenzene (sur.)	2024/09/22		102	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2024/09/22		102	%	50 - 140
			Benzene	2024/09/22		90	%	60 - 130
			Toluene	2024/09/22		91	%	60 - 130
			Ethylbenzene	2024/09/22		96	%	60 - 130
			m & p-Xylene	2024/09/22		92	%	60 - 130
			o-Xylene	2024/09/22		97	%	60 - 130
			F1 (C6-C10)	2024/09/22		102	%	60 - 140
B531881	WPK	Method Blank	1,4-Difluorobenzene (sur.)	2024/09/22		102	%	50 - 140
			4-Bromofluorobenzene (sur.)	2024/09/22		101	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2024/09/22		105	%	50 - 140
			Benzene	2024/09/22	<0.00040		mg/L	
			Toluene	2024/09/22	<0.00040		mg/L	
			Ethylbenzene	2024/09/22	<0.00040		mg/L	
			m & p-Xylene	2024/09/22	<0.00080		mg/L	
			o-Xylene	2024/09/22	<0.00040		mg/L	
			F1 (C6-C10)	2024/09/22	<0.10		mg/L	
B531881	WPK	RPD	Benzene	2024/09/22	NC		%	30
			Toluene	2024/09/22	NC		%	30
			Ethylbenzene	2024/09/22	NC		%	30
			m & p-Xylene	2024/09/22	NC		%	30
			o-Xylene	2024/09/22	NC		%	30
			F1 (C6-C10)	2024/09/22	NC		%	30
B532581	CHA	Spiked Blank	O-TERPHENYL (sur.)	2024/09/25		103	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2024/09/25		101	%	60 - 140
B532581	CHA	Method Blank	O-TERPHENYL (sur.)	2024/09/25		100	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2024/09/25	<0.10		mg/L	
B532601	SBN	Matrix Spike [CVW762-05]	Total Ammonia (N)	2024/09/23		92	%	80 - 120
B532601	SBN	Spiked Blank	Total Ammonia (N)	2024/09/23		108	%	80 - 120
B532601	SBN	Method Blank	Total Ammonia (N)	2024/09/23	<0.015		mg/L	
B532601	SBN	RPD [CVW762-05]	Total Ammonia (N)	2024/09/23	2.4		%	20
B532644	SBN	Matrix Spike	Total Ammonia (N)	2024/09/23		111	%	80 - 120
B532644	SBN	Spiked Blank	Total Ammonia (N)	2024/09/23		105	%	80 - 120
B532644	SBN	Method Blank	Total Ammonia (N)	2024/09/23	<0.015		mg/L	
B532644	SBN	RPD	Total Ammonia (N)	2024/09/23	NC		%	20
B533450	YL7	Matrix Spike	Orthophosphate (P)	2024/09/23		NC	%	80 - 120
B533450	YL7	Spiked Blank	Orthophosphate (P)	2024/09/23		99	%	80 - 120
B533450	YL7	Method Blank	Orthophosphate (P)	2024/09/23	<0.0030		mg/L	
B533450	YL7	RPD	Orthophosphate (P)	2024/09/23	0.75		%	20
B533454	KHU	Matrix Spike	Dissolved Mercury (Hg)	2024/09/25		106	%	80 - 120
B533454	KHU	Spiked Blank	Dissolved Mercury (Hg)	2024/09/25		100	%	80 - 120

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B533454	KHU	Method Blank	Dissolved Mercury (Hg)	2024/09/25	<0.0019		ug/L	
B533454	KHU	RPD	Dissolved Mercury (Hg)	2024/09/25	NC		%	20
B533464	KHU	Matrix Spike	Total Mercury (Hg)	2024/09/24		104	%	80 - 120
B533464	KHU	Spiked Blank	Total Mercury (Hg)	2024/09/24		98	%	80 - 120
B533464	KHU	Method Blank	Total Mercury (Hg)	2024/09/24	<0.0019		ug/L	
B533464	KHU	RPD	Total Mercury (Hg)	2024/09/24	NC		%	20
B533986	AFI	Matrix Spike	Nitrite (N)	2024/09/24		101	%	80 - 120
			Nitrate plus Nitrite (N)	2024/09/24		115	%	80 - 120
B533986	AFI	Spiked Blank	Nitrite (N)	2024/09/24		95	%	80 - 120
			Nitrate plus Nitrite (N)	2024/09/24		105	%	80 - 120
B533986	AFI	Method Blank	Nitrite (N)	2024/09/24	<0.010		mg/L	
			Nitrate plus Nitrite (N)	2024/09/24	<0.010		mg/L	
B533986	AFI	RPD	Nitrite (N)	2024/09/24	NC		%	20
			Nitrate plus Nitrite (N)	2024/09/24	2.7		%	20
B534112	AYE	Spiked Blank	Alkalinity (Total as CaCO3)	2024/09/26		98	%	80 - 120
B534112	AYE	Method Blank	Alkalinity (PP as CaCO3)	2024/09/26	<1.0		mg/L	
			Alkalinity (Total as CaCO3)	2024/09/26	<1.0		mg/L	
			Bicarbonate (HCO3)	2024/09/26	<1.0		mg/L	
			Carbonate (CO3)	2024/09/26	<1.0		mg/L	
			Hydroxide (OH)	2024/09/26	<1.0		mg/L	
B534112	AYE	RPD	Alkalinity (PP as CaCO3)	2024/09/26	NC		%	20
			Alkalinity (Total as CaCO3)	2024/09/26	1.5		%	20
			Bicarbonate (HCO3)	2024/09/26	1.5		%	20
			Carbonate (CO3)	2024/09/26	NC		%	20
			Hydroxide (OH)	2024/09/26	NC		%	20
B534116	AYE	Spiked Blank	pH	2024/09/26		100	%	97 - 103
B534116	AYE	RPD	pH	2024/09/26	2.1		%	N/A
B534118	AYE	Spiked Blank	Conductivity	2024/09/26		102	%	90 - 110
B534118	AYE	Method Blank	Conductivity	2024/09/26	<2.0		uS/cm	
B534118	AYE	RPD	Conductivity	2024/09/26	0.84		%	10
B534184	MAP	Matrix Spike [CVW762-01]	Dissolved Phosphorus (P)	2024/09/24		107	%	80 - 120
B534184	MAP	QC Standard	Dissolved Phosphorus (P)	2024/09/24		91	%	80 - 120
B534184	MAP	Spiked Blank	Dissolved Phosphorus (P)	2024/09/24		102	%	80 - 120
B534184	MAP	Method Blank	Dissolved Phosphorus (P)	2024/09/24	<0.0030		mg/L	
B534184	MAP	RPD [CVW762-01]	Dissolved Phosphorus (P)	2024/09/24	NC		%	20
B534358	TOR	Matrix Spike	Chloride (Cl)	2024/09/24		100	%	80 - 120
			Sulphate (SO4)	2024/09/24		88	%	80 - 120
B534358	TOR	Spiked Blank	Chloride (Cl)	2024/09/24		101	%	80 - 120
			Sulphate (SO4)	2024/09/24		99	%	80 - 120
B534358	TOR	Method Blank	Chloride (Cl)	2024/09/24	<1.0		mg/L	
			Sulphate (SO4)	2024/09/24	<1.0		mg/L	
B534358	TOR	RPD	Chloride (Cl)	2024/09/24	10		%	20
			Sulphate (SO4)	2024/09/24	0.13		%	20
B534566	HAP	Matrix Spike	Chloride (Cl)	2024/09/25		97	%	80 - 120
			Sulphate (SO4)	2024/09/25		NC	%	80 - 120
B534566	HAP	Spiked Blank	Chloride (Cl)	2024/09/25		101	%	80 - 120
			Sulphate (SO4)	2024/09/25		93	%	80 - 120
B534566	HAP	Method Blank	Chloride (Cl)	2024/09/25	<1.0		mg/L	
			Sulphate (SO4)	2024/09/25	<1.0		mg/L	
B534566	HAP	RPD	Chloride (Cl)	2024/09/25	2.6		%	20
			Sulphate (SO4)	2024/09/25	0.25		%	20
B536204	JYU	Matrix Spike	Dissolved Organic Carbon (C)	2024/09/25		97	%	75 - 125
B536204	JYU	Spiked Blank	Dissolved Organic Carbon (C)	2024/09/25		108	%	80 - 120

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B536204	JYU	Method Blank	Dissolved Organic Carbon (C)	2024/09/25	<0.50		mg/L	
B536204	JYU	RPD	Dissolved Organic Carbon (C)	2024/09/25	0.48		%	20
B540116	IK0	Matrix Spike	Dissolved Barium (Ba)	2024/09/27		101	%	80 - 120
			Dissolved Boron (B)	2024/09/27		102	%	80 - 120
			Dissolved Calcium (Ca)	2024/09/27		86	%	80 - 120
			Dissolved Iron (Fe)	2024/09/27		105	%	80 - 120
			Dissolved Lithium (Li)	2024/09/27		86	%	80 - 120
			Dissolved Magnesium (Mg)	2024/09/27		99	%	80 - 120
			Dissolved Manganese (Mn)	2024/09/27		99	%	80 - 120
			Dissolved Phosphorus (P)	2024/09/27		100	%	80 - 120
			Dissolved Potassium (K)	2024/09/27		91	%	80 - 120
			Dissolved Silicon (Si)	2024/09/27		93	%	80 - 120
			Dissolved Sodium (Na)	2024/09/27		86	%	80 - 120
			Dissolved Strontium (Sr)	2024/09/27		100	%	80 - 120
			Dissolved Sulphur (S)	2024/09/27		NC	%	80 - 120
B540116	IK0	Spiked Blank	Dissolved Barium (Ba)	2024/09/27		103	%	80 - 120
			Dissolved Boron (B)	2024/09/27		99	%	80 - 120
			Dissolved Calcium (Ca)	2024/09/27		93	%	80 - 120
			Dissolved Iron (Fe)	2024/09/27		109	%	80 - 120
			Dissolved Lithium (Li)	2024/09/27		88	%	80 - 120
			Dissolved Magnesium (Mg)	2024/09/27		105	%	80 - 120
			Dissolved Manganese (Mn)	2024/09/27		104	%	80 - 120
			Dissolved Phosphorus (P)	2024/09/27		101	%	80 - 120
			Dissolved Potassium (K)	2024/09/27		94	%	80 - 120
			Dissolved Silicon (Si)	2024/09/27		99	%	80 - 120
			Dissolved Sodium (Na)	2024/09/27		91	%	80 - 120
			Dissolved Strontium (Sr)	2024/09/27		104	%	80 - 120
			Dissolved Sulphur (S)	2024/09/27		98	%	80 - 120
B540116	IK0	Method Blank	Dissolved Barium (Ba)	2024/09/27	<0.010		mg/L	
			Dissolved Boron (B)	2024/09/27	<0.020		mg/L	
			Dissolved Calcium (Ca)	2024/09/27	<0.30		mg/L	
			Dissolved Iron (Fe)	2024/09/27	<0.060		mg/L	
			Dissolved Lithium (Li)	2024/09/27	<0.020		mg/L	
			Dissolved Magnesium (Mg)	2024/09/27	<0.20		mg/L	
			Dissolved Manganese (Mn)	2024/09/27	<0.0040		mg/L	
			Dissolved Phosphorus (P)	2024/09/27	<0.10		mg/L	
			Dissolved Potassium (K)	2024/09/27	<0.30		mg/L	
			Dissolved Silicon (Si)	2024/09/27	<0.50		mg/L	
			Dissolved Sodium (Na)	2024/09/27	<0.50		mg/L	
			Dissolved Strontium (Sr)	2024/09/27	<0.020		mg/L	
			Dissolved Sulphur (S)	2024/09/27	<0.20		mg/L	
B540116	IK0	RPD	Dissolved Barium (Ba)	2024/09/27	2.3		%	20
			Dissolved Boron (B)	2024/09/27	1.5		%	20
			Dissolved Calcium (Ca)	2024/09/27	1.5		%	20
			Dissolved Iron (Fe)	2024/09/27	2.7		%	20
			Dissolved Lithium (Li)	2024/09/27	NC		%	20
			Dissolved Magnesium (Mg)	2024/09/27	0.77		%	20
			Dissolved Manganese (Mn)	2024/09/27	0.22		%	20
			Dissolved Phosphorus (P)	2024/09/27	NC		%	20
			Dissolved Potassium (K)	2024/09/27	1.6		%	20
			Dissolved Silicon (Si)	2024/09/27	0.76		%	20
			Dissolved Sodium (Na)	2024/09/27	1.7		%	20
			Dissolved Strontium (Sr)	2024/09/27	1.3		%	20
			Dissolved Sulphur (S)	2024/09/27	3.0		%	20

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B540179	KH2	Matrix Spike	Dissolved Aluminum (Al)	2024/09/27		92	%	80 - 120
			Dissolved Antimony (Sb)	2024/09/27		97	%	80 - 120
			Dissolved Arsenic (As)	2024/09/27		101	%	80 - 120
			Dissolved Beryllium (Be)	2024/09/27		98	%	80 - 120
			Dissolved Chromium (Cr)	2024/09/27		90	%	80 - 120
			Dissolved Cobalt (Co)	2024/09/27		86	%	80 - 120
			Dissolved Copper (Cu)	2024/09/27		86	%	80 - 120
			Dissolved Lead (Pb)	2024/09/27		87	%	80 - 120
			Dissolved Molybdenum (Mo)	2024/09/27		99	%	80 - 120
			Dissolved Nickel (Ni)	2024/09/27		86	%	80 - 120
			Dissolved Selenium (Se)	2024/09/27		108	%	80 - 120
			Dissolved Silver (Ag)	2024/09/27		91	%	80 - 120
			Dissolved Thallium (Tl)	2024/09/27		86	%	80 - 120
			Dissolved Tin (Sn)	2024/09/27		98	%	80 - 120
			Dissolved Titanium (Ti)	2024/09/27		93	%	80 - 120
			Dissolved Uranium (U)	2024/09/27		93	%	80 - 120
			Dissolved Vanadium (V)	2024/09/27		92	%	80 - 120
			Dissolved Zinc (Zn)	2024/09/27		94	%	80 - 120
B540179	KH2	Spiked Blank	Dissolved Aluminum (Al)	2024/09/27		100	%	80 - 120
			Dissolved Antimony (Sb)	2024/09/27		99	%	80 - 120
			Dissolved Arsenic (As)	2024/09/27		98	%	80 - 120
			Dissolved Beryllium (Be)	2024/09/27		98	%	80 - 120
			Dissolved Chromium (Cr)	2024/09/27		93	%	80 - 120
			Dissolved Cobalt (Co)	2024/09/27		93	%	80 - 120
			Dissolved Copper (Cu)	2024/09/27		94	%	80 - 120
			Dissolved Lead (Pb)	2024/09/27		95	%	80 - 120
			Dissolved Molybdenum (Mo)	2024/09/27		95	%	80 - 120
			Dissolved Nickel (Ni)	2024/09/27		94	%	80 - 120
			Dissolved Selenium (Se)	2024/09/27		100	%	80 - 120
			Dissolved Silver (Ag)	2024/09/27		93	%	80 - 120
			Dissolved Thallium (Tl)	2024/09/27		94	%	80 - 120
			Dissolved Tin (Sn)	2024/09/27		95	%	80 - 120
			Dissolved Titanium (Ti)	2024/09/27		95	%	80 - 120
			Dissolved Uranium (U)	2024/09/27		97	%	80 - 120
			Dissolved Vanadium (V)	2024/09/27		94	%	80 - 120
			Dissolved Zinc (Zn)	2024/09/27		91	%	80 - 120
B540179	KH2	Method Blank	Dissolved Aluminum (Al)	2024/09/27	<0.0030		mg/L	
			Dissolved Antimony (Sb)	2024/09/27	<0.00060		mg/L	
			Dissolved Arsenic (As)	2024/09/27	<0.00020		mg/L	
			Dissolved Beryllium (Be)	2024/09/27	<0.0010		mg/L	
			Dissolved Chromium (Cr)	2024/09/27	<0.0010		mg/L	
			Dissolved Cobalt (Co)	2024/09/27	<0.00030		mg/L	
			Dissolved Copper (Cu)	2024/09/27	<0.0010		mg/L	
			Dissolved Lead (Pb)	2024/09/27	<0.00020		mg/L	
			Dissolved Molybdenum (Mo)	2024/09/27	<0.00020		mg/L	
			Dissolved Nickel (Ni)	2024/09/27	<0.00050		mg/L	
			Dissolved Selenium (Se)	2024/09/27	<0.00020		mg/L	
			Dissolved Silver (Ag)	2024/09/27	<0.00010		mg/L	
			Dissolved Thallium (Tl)	2024/09/27	<0.00020		mg/L	
			Dissolved Tin (Sn)	2024/09/27	<0.0010		mg/L	
			Dissolved Titanium (Ti)	2024/09/27	<0.0010		mg/L	
			Dissolved Uranium (U)	2024/09/27	<0.00010		mg/L	
			Dissolved Vanadium (V)	2024/09/27	<0.0010		mg/L	
			Dissolved Zinc (Zn)	2024/09/27	<0.0030		mg/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B540179	KH2	RPD	Dissolved Aluminum (Al)	2024/09/27	NC		%	20
			Dissolved Antimony (Sb)	2024/09/27	NC		%	20
			Dissolved Arsenic (As)	2024/09/27	NC		%	20
			Dissolved Beryllium (Be)	2024/09/27	NC		%	20
			Dissolved Chromium (Cr)	2024/09/27	NC		%	20
			Dissolved Cobalt (Co)	2024/09/27	NC		%	20
			Dissolved Copper (Cu)	2024/09/27	NC		%	20
			Dissolved Lead (Pb)	2024/09/27	NC		%	20
			Dissolved Molybdenum (Mo)	2024/09/27	5.8		%	20
			Dissolved Nickel (Ni)	2024/09/27	3.2		%	20
			Dissolved Selenium (Se)	2024/09/27	NC		%	20
			Dissolved Silver (Ag)	2024/09/27	NC		%	20
			Dissolved Thallium (Tl)	2024/09/27	NC		%	20
			Dissolved Tin (Sn)	2024/09/27	NC		%	20
			Dissolved Titanium (Ti)	2024/09/27	NC		%	20
			Dissolved Uranium (U)	2024/09/27	0.76		%	20
			Dissolved Vanadium (V)	2024/09/27	NC		%	20
			Dissolved Zinc (Zn)	2024/09/27	NC		%	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

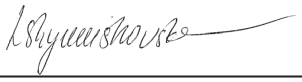
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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:



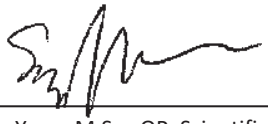
Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics



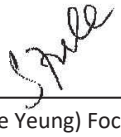
Luba Shymushovska, B.Sc., QP, Senior Analyst, Organics



Rahul Suryawanshi, Senior Analyst



Sandy Yuan, M.Sc., QP, Scientific Specialist



Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist



Automated Statchk

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C474428
2024/09/19 17:45

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☐ Winnipeg, MB: D-675 Berry St. R3H 1A7 Toll Free (866) 800-6208

CHAIN OF CUSTODY RECORD

ENV COC - 00013v5

MCAL-2024-09-1713

Invoice Information	Invoice to (requires report) ☐	Report Information (if differs from invoice)		Project Information	
Company:	Stantec	Company:		Quotation #:	
Contact Name:	Dylan King	Contact Name:		P.O. #/ AFE#:	
Street Address:	#300, 10220 103 Ave NW	Street Address:		Project #:	110773396
City:	Edmonton Prov: AB Postal Code: T5J 0K4	City:	Prov: Postal Code:	Site #:	
Phone:	780 969 2223	Phone:		Site Location:	
Email:	dylan.king@stantec.com	Email:		Site Location Province:	AB
Copies:		Copies:		Sampled By:	TH/DB

Rush Confirmation #:

Regulatory Criteria

☑ AT1 ☐ CCME ☐ Drinking Water - Canada ☐ Drinking Water - Manitoba
☐ Saskatchewan ☐ Drinking Water - Alberta ☐ Other _____

SAMPLES MUST BE KEPT COOL (<10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

	Sample Identification	Date Sampled YY	MM	DD	Time (24hr) HH	MM	Matrix	1 FIELD FILTERED	2 FIELD PRESERVED	3 LAB FILTRATION REQUIRED	4 BTEX F1	5 VOCs	6 BTEX F1-F2	7 BTEX F1-F4	8 Routine water	9 Regulated metals - total	10 Regulated metals - dissolved	11 Mercury - total	12 Mercury - dissolved	13 Sulphur TKN	14 Sample Comments DOC	15 Texture (% sand, silt, clay)	16 Basic class II landfill	17 dissolved phosphorous	18 phosphate	19 ammonia	20 bacteria fecal*	21 # OF CONTAINERS SUBMITTED	22 HOLD - DO NOT ANALYZE
1	SW11-R4-02	24	09	19	10	00	Water			X			X		X		X	X	X	X	X			X	X	X	X	11	
2	RRMW16-17-8	24	09	19	11	15	↓			Y			X		X		X	X	X	X	X			X	X	X	X	11	
3	RMW16-16-17	24	09	19	12	45				X			X		X		X	X	X	X	X			X	X	X	X	11	
4	MW21-3-15	24	09	19	16	00	↓			X			X		X		X	X	X	X	X			X	X	X	X	11	
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

Regular Turnaround Time (TAT)
☑ 5 to 7 Day ☐ 10 Day

Rush Turnaround Time (TAT) Surcharges apply
☐ Same Day ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ 4 Day

Date Required: YY MM DD

Comments

*UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS AND CONDITIONS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS OR BY CALLING THE LABORATORY LISTED ABOVE TO OBTAIN A COPY

LAB USE ONLY	Yes	No	°C	1	2	3
Seal present		✓	3.3	3.2	3.7	
Seal intact		✓				
Cooling media present	✓					

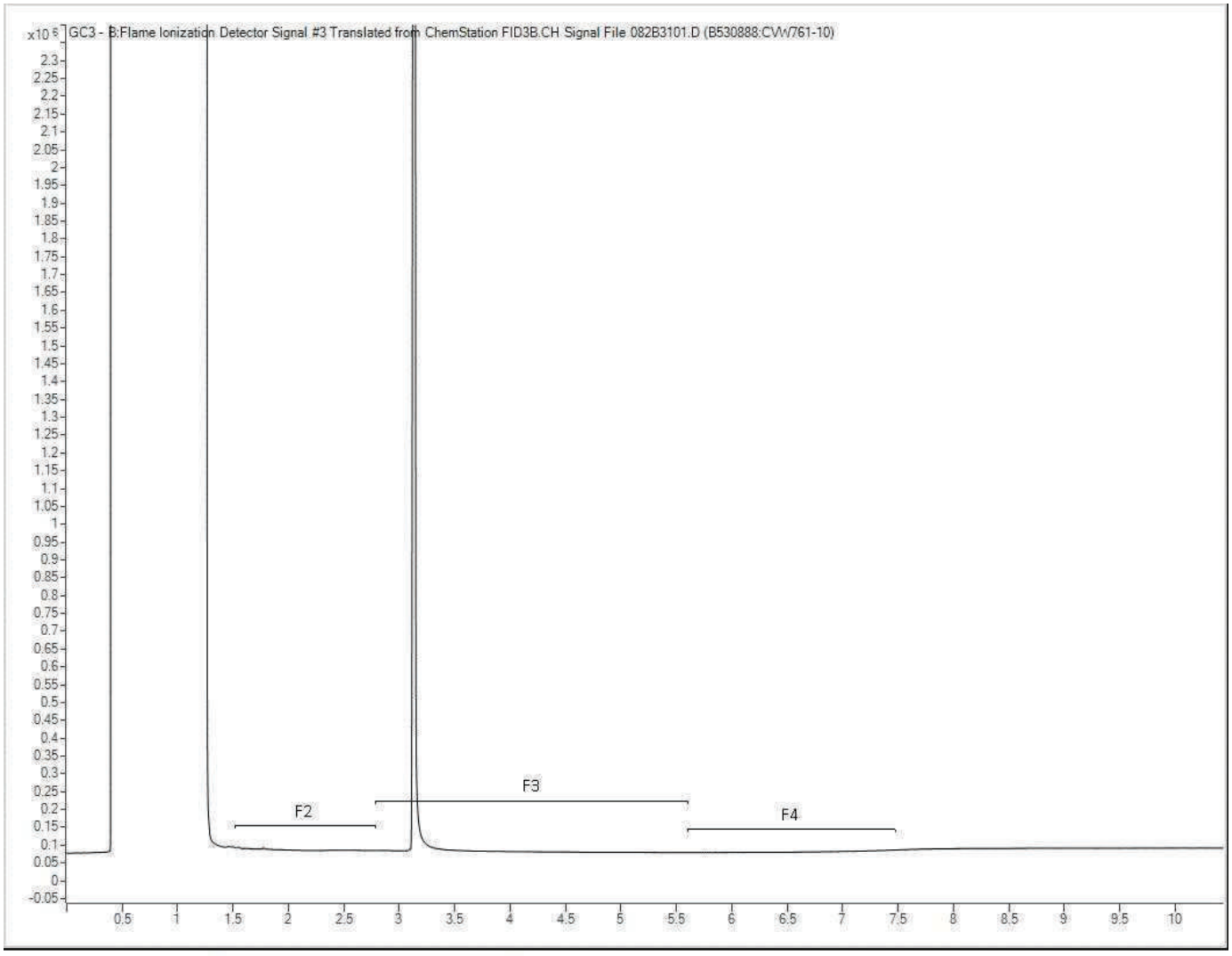
LAB USE ONLY	Yes	No	°C	1	2	3
Seal present						
Seal intact						
Cooling media present						

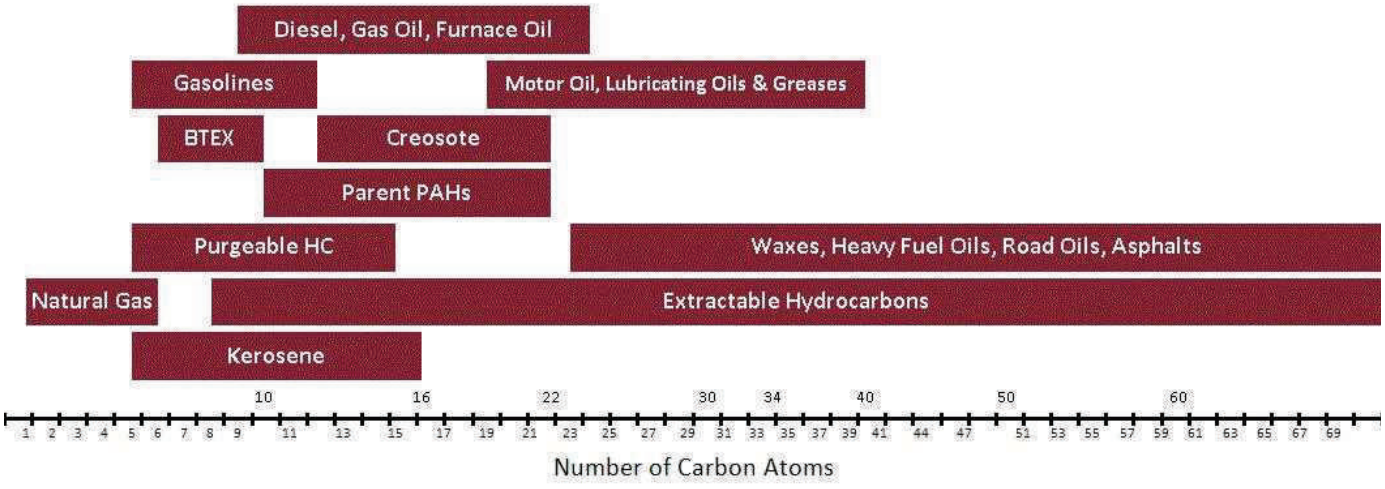
LAB USE ONLY	Yes	No	°C	1	2	3	Temperature reading by:
Seal present							
Seal intact							
Cooling media present							

	Relinquished by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM	Received by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM	Special Instructions
1	Taylor Harris	2024	09	19	17	45	1 NH NAVDEEP GILL	2024	09	19	17	45	* total coliforms, fecal coliforms, heterotrophic plate count*
2							2						

Dissolve parameters, please lab filter~ not field filtered and rinsed,

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

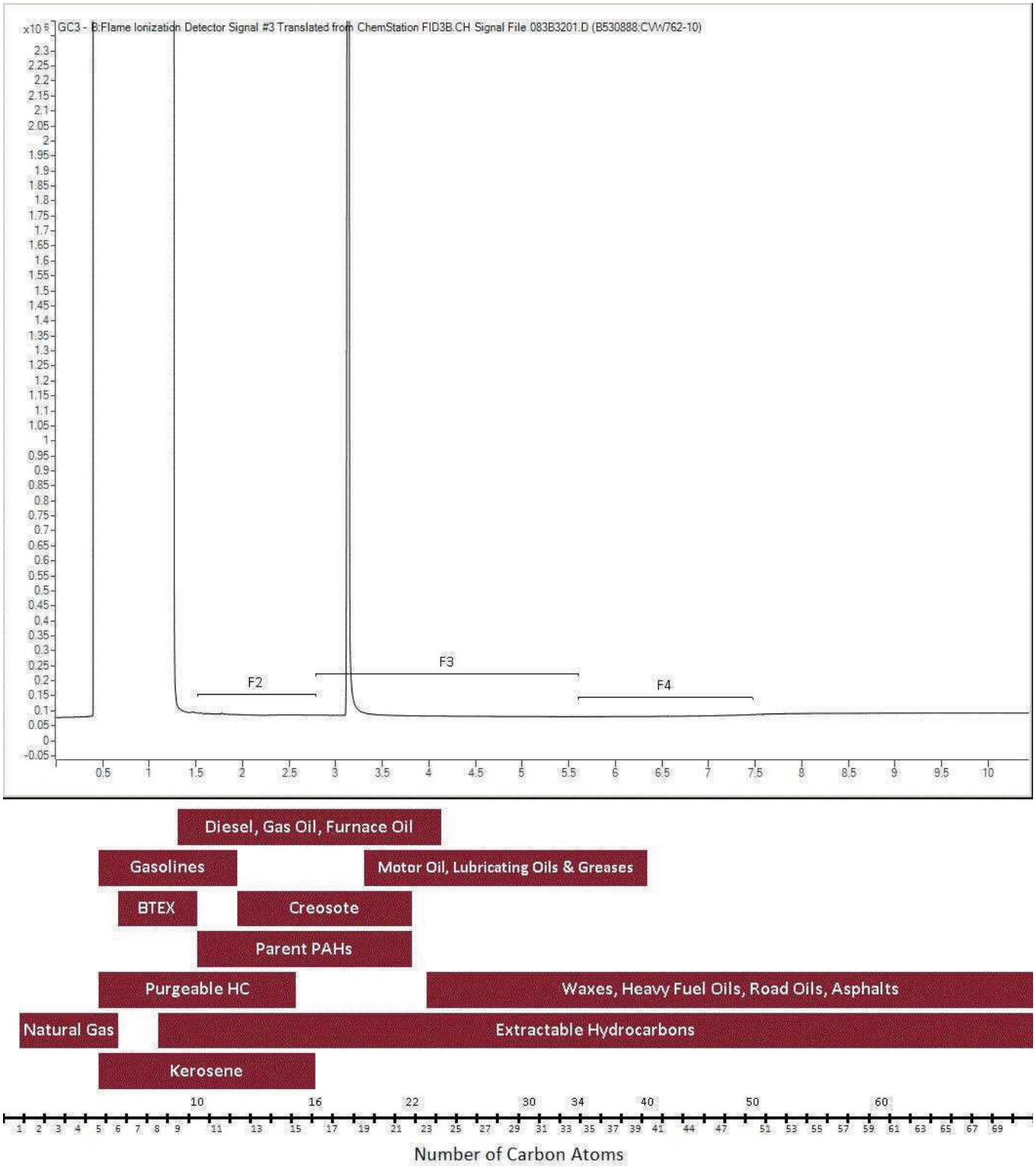




hpchem20\HPchem\1\DATA\2024\09\RUN0924

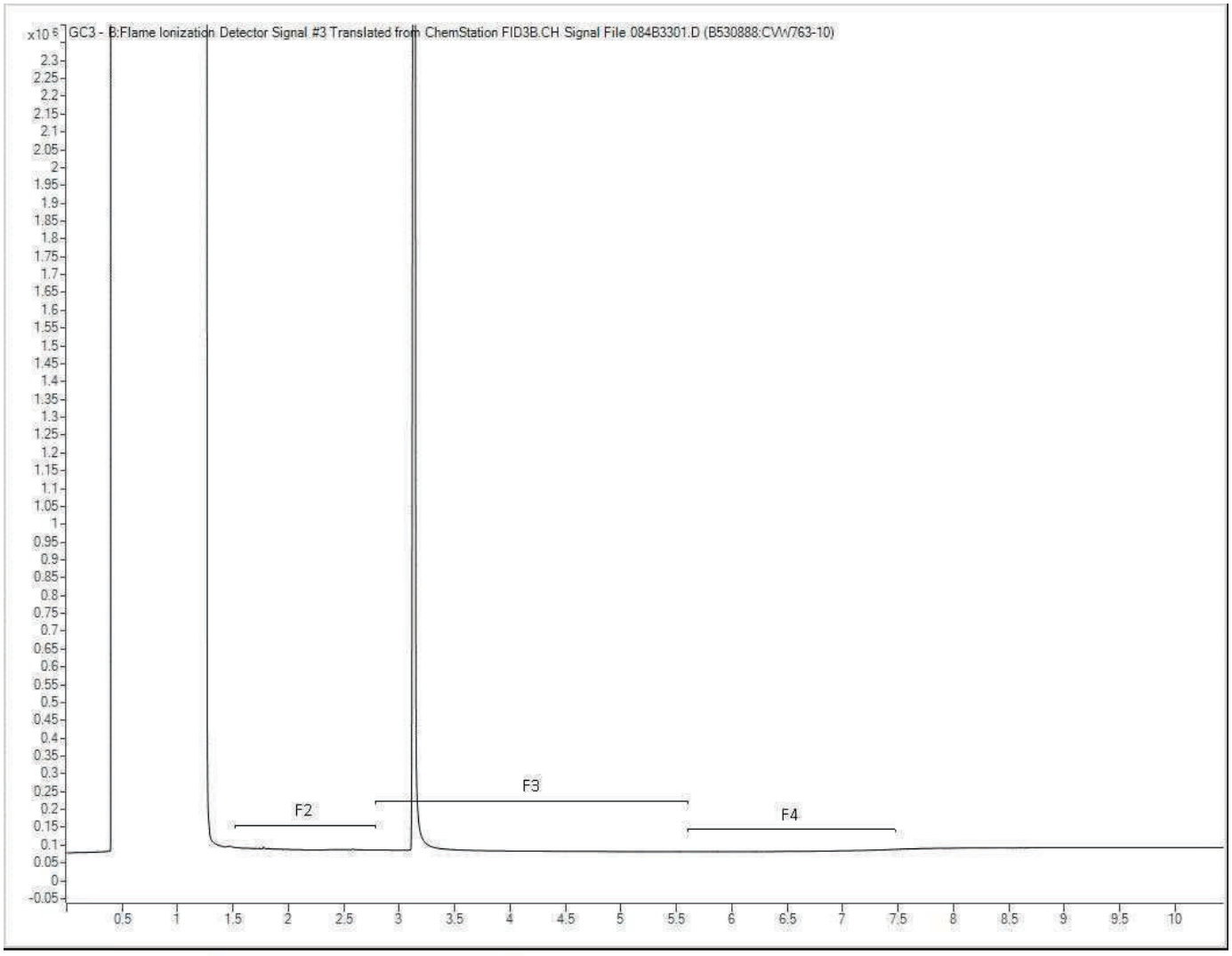
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

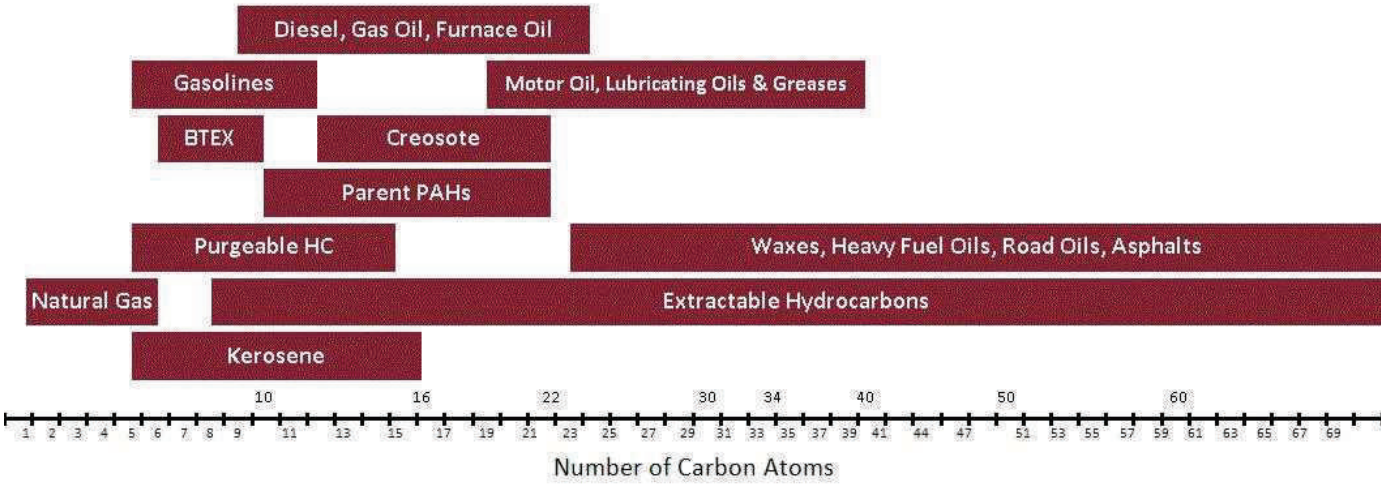
CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

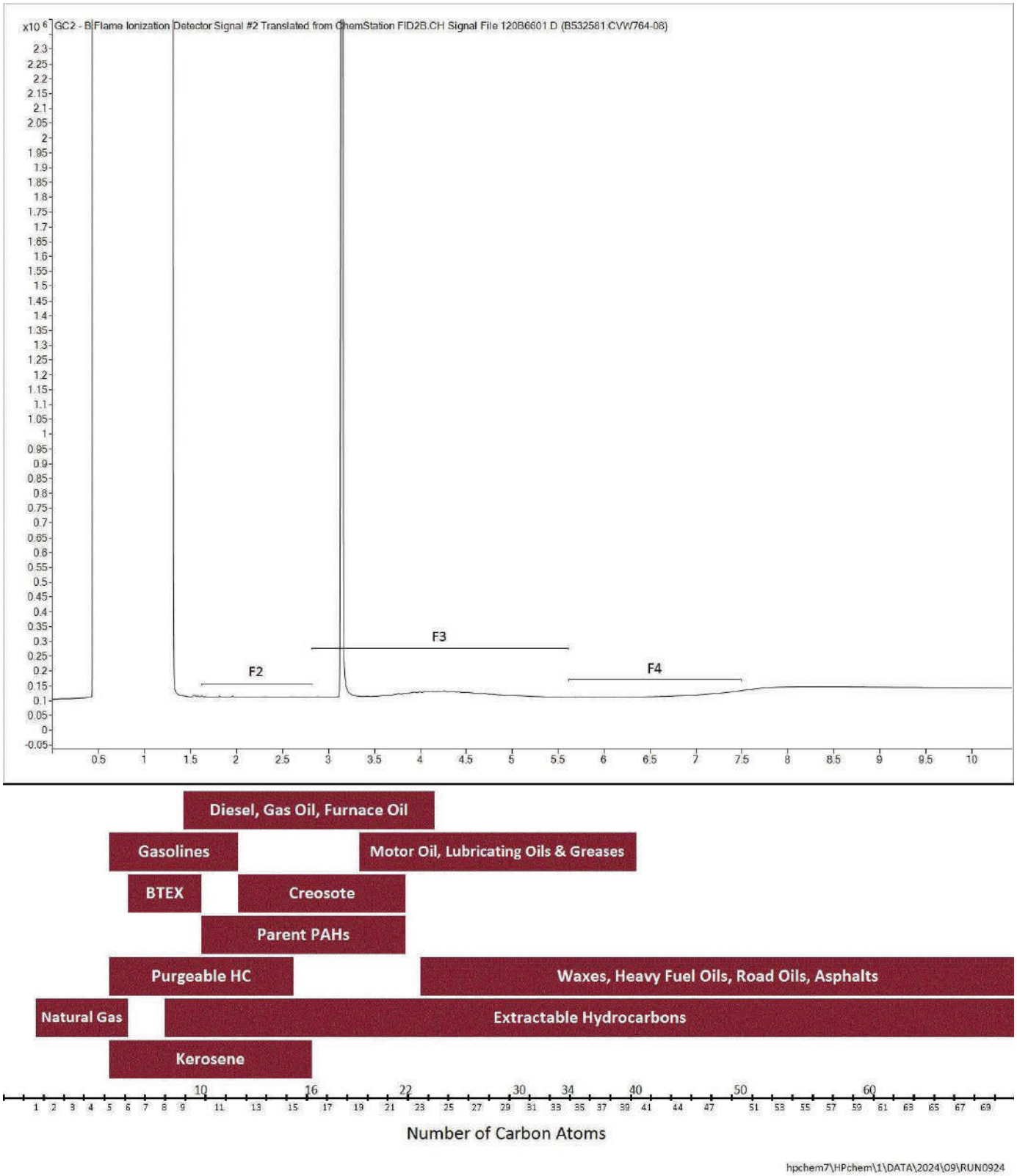




hpchem20\HPchem\1\DATA\2024\09\RUN0924

Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your Project #: 110773396
Your C.O.C. #: 1OF1

Attention: DYLAN KING

STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
EDMONTON, AB
CANADA T5J 0K4

Report Date: 2024/09/30
Report #: R3563939
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C474887
Received: 2024/09/20, 16:20

Sample Matrix: Water
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH	3	N/A	2024/09/26	AB SOP-00005	SM 24 2320 B m
BTEX/F1 in Water by HS GC/MS/FID	3	N/A	2024/09/23	AB SOP-00039	CCME CWS/EPA 8260d m
F1-BTEX	3	N/A	2024/09/24		Auto Calc
Cadmium - low level CCME - Dissolved	3	N/A	2024/09/24		Auto Calc
Chloride/Sulphate by Auto Colourimetry	2	N/A	2024/09/24	AB SOP-00020	SM24-4500-Cl/SO4-E m
Chloride/Sulphate by Auto Colourimetry	1	N/A	2024/09/26	AB SOP-00020	SM24-4500-Cl/SO4-E m
Fecal Coliforms (MPN/100mL)	3	2024/09/21	2024/09/22	AB SOP-00089	SM 24 9223 A,B m
Heterotrophic Plate Count Quant	3	2024/09/21	2024/09/23	CAL SOP-00012	SM 24 9215 A, E m
Total Coliforms and E.Coli	3	2024/09/21	2024/09/22	AB SOP-00089	SM 24 9223 A,B m
Carbon (DOC) -Lab Filtered (1)	3	N/A	2024/09/27	AB SOP-00087	MMCW 119 1996 m
Conductivity @25C	3	N/A	2024/09/26	AB SOP-00005	SM 24 2510 B m
CCME Hydrocarbons in Water (F2; C10-C16) (2)	3	2024/09/25	2024/09/25	AB SOP-00037 AB SOP-00040	CCME PHC-CWS m
Hardness	3	N/A	2024/09/27		Auto Calc
Mercury (Dissolved) by CV-Lab Filtered	2	2024/09/24	2024/09/25	AB SOP-00084	BCMOE BCLM Oct2013 m
Mercury (Dissolved) by CV-Lab Filtered	1	2024/09/24	2024/09/26	AB SOP-00084	BCMOE BCLM Oct2013 m
Mercury (Total) by CV	3	2024/09/24	2024/09/25	AB SOP-00084	BCMOE BCLM Oct2013 m
Elements by ICP-Dissolved-Lab Filtered (3)	3	N/A	2024/09/27	AB SOP-00042	EPA 6010d R5 m
Elements by ICPMS-Dissolved-Lab Filtered (4)	2	N/A	2024/09/23	AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS-Dissolved-Lab Filtered (4)	1	N/A	2024/09/24	AB SOP-00043	EPA 6020b R2 m
Ion Balance	3	N/A	2024/09/27		Auto Calc
Sum of cations, anions	3	N/A	2024/09/27		Auto Calc
Ammonia-N (Total)	3	N/A	2024/09/26	AB SOP-00007	SM 24 4500 NH3 A G m
Nitrate and Nitrite	3	N/A	2024/09/24		Auto Calc
NO2 (N); NO2 (N) + NO3 (N) in Water	3	N/A	2024/09/23	AB SOP-00091	SM 24 4500 NO3m
Nitrate (as N)	3	2024/09/20	2024/09/24		Auto Calc
pH @25°C (5)	3	N/A	2024/09/26	AB SOP-00005	SM 24 4500-H+B m
Orthophosphate by Automated Analyzer (6)	3	N/A	2024/09/23	AB SOP-00025	SM 24 4500-P A,F m
Total Dissolved Solids (Calculated)	3	N/A	2024/09/27		Auto Calc
Total Kjeldahl Nitrogen (Total)	3	N/A	2024/09/25	BBY WI-00033	Auto Calc
Nitrogen (Total)	2	2024/09/24	2024/09/25	AB SOP-00093	SM 24 4500-N C m
Nitrogen (Total)	1	2024/09/25	2024/09/25	AB SOP-00093	SM 24 4500-N C m

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Your Project #: 110773396
Your C.O.C. #: 1OF1

Attention: DYLAN KING

STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
EDMONTON, AB
CANADA T5J 0K4

Report Date: 2024/09/30
Report #: R3563939
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C474887
Received: 2024/09/20, 16:20

Sample Matrix: Water
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Total Phosphorus-Dissolved-Lab Filtered (7)	3	2024/09/23	2024/09/24	AB SOP-00024	SM 24 4500-P A,B,F m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
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Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) DOC present in the sample should be considered as non-purgeable DOC. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(2) Silica gel clean up employed.
(3) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(4) Samples were filtered and preserved at the lab. Values may not reflect concentrations at the time of sampling. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(5) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.
(6) Orthophosphate > Total Phosphorus Imbalance: When applicable, Orthophosphate, Total Phosphorus and dissolved Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
(7) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Your Project #: 110773396
Your C.O.C. #: 1OF1

Attention: DYLAN KING

STANTEC CONSULTING LTD
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EDMONTON, AB
CANADA T5J 0K4

Report Date: 2024/09/30
Report #: R3563939
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C474887
Received: 2024/09/20, 16:20

Encryption Key

AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas
30 Sep 2024 11:21:34

Please direct all questions regarding this Certificate of Analysis to:
Geraldlyn Gouthro, Key Account Specialist
Email: geraldlyn.gouthro@bureauveritas.com
Phone# (403) 291-3077

==========

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AT1 BTEX AND F1-F2 IN WATER (WATER)

Bureau Veritas ID		CVZ682		CVZ683		CVZ684			
Sampling Date		2024/09/20 09:10		2024/09/20 10:10		2024/09/20 13:45			
COC Number		1OF1		1OF1		1OF1			
	UNITS	WSH-01	MU	MW21-6-12	MU	RMW16-13-37	MU	RDL	QC Batch
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B532111
Volatiles									
Benzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B532065
Toluene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B532065
Ethylbenzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B532065
m & p-Xylene	mg/L	<0.00080	N/A	<0.00080	N/A	<0.00080	N/A	0.00080	B532065
o-Xylene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B532065
Xylenes (Total)	mg/L	<0.00089	N/A	<0.00089	N/A	<0.00089	N/A	0.00089	B531091
F1 (C6-C10) - BTEX	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B531091
F1 (C6-C10)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B532065
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	98	N/A	97	N/A	95	N/A	N/A	B532065
4-Bromofluorobenzene (sur.)	%	110	N/A	109	N/A	110	N/A	N/A	B532065
D4-1,2-Dichloroethane (sur.)	%	91	N/A	92	N/A	96	N/A	N/A	B532065
O-TERPHENYL (sur.)	%	86	N/A	87	N/A	85	N/A	N/A	B532111

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N/A = Not Applicable

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CVZ682				CVZ683			
Sampling Date		2024/09/20 09:10				2024/09/20 10:10			
COC Number		1OF1				1OF1			
	UNITS	WSH-01	MU	RDL	QC Batch	MW21-6-12	MU	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	9.6	N/A	N/A	B531067	19	N/A	N/A	B531067
Cation Sum	meq/L	10	N/A	N/A	B531067	21	N/A	N/A	B531067
Hardness (CaCO3)	mg/L	270	N/A	0.50	B531109	430	N/A	0.50	B531109
Ion Balance (% Difference)	%	2.3	N/A	N/A	B531113	4.5	N/A	N/A	B531113
Nitrate (N)	mg/L	<0.010	N/A	0.010	B531116	<0.010	N/A	0.010	B531116
Nitrate (NO3)	mg/L	<0.044	N/A	0.044	B531103	<0.044	N/A	0.044	B531103
Nitrite (NO2)	mg/L	<0.033	N/A	0.033	B531103	<0.033	N/A	0.033	B531103
Calculated Total Dissolved Solids	mg/L	490	N/A	10	B531121	1100	N/A	10	B531121
Elements									
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	0.020	B531098	<0.020	N/A	0.020	B531098
Misc. Inorganics									
Conductivity	uS/cm	840	+/- 22	2.0	B533505	1700	+/- 46	2.0	B533505
pH	pH	7.86	+/- 0.0779	N/A	B533502	7.75	+/- 0.0768	N/A	B533502
Anions									
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	1.0	B533488	<1.0	N/A	1.0	B533488
Alkalinity (Total as CaCO3)	mg/L	450	+/- 34	1.0	B533488	530	+/- 39	1.0	B533488
Bicarbonate (HCO3)	mg/L	550	+/- 8.5	1.0	B533488	650	+/- 9.9	1.0	B533488
Carbonate (CO3)	mg/L	<1.0	N/A	1.0	B533488	<1.0	N/A	1.0	B533488
Hydroxide (OH)	mg/L	<1.0	N/A	1.0	B533488	<1.0	N/A	1.0	B533488
Chloride (Cl)	mg/L	4.5	+/- 1.2	1.0	B534585	91	+/- 7.0	1.0	B535024
Sulphate (SO4)	mg/L	17	+/- 1.6	1.0	B534585	270	+/- 18	5.0	B535024
Nutrients									
Nitrite (N)	mg/L	<0.010	N/A	0.010	B533146	<0.010	N/A	0.010	B533146
Nitrate plus Nitrite (N)	mg/L	<0.010	N/A	0.010	B533146	<0.010 (1)	N/A	0.010	B533146
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	<0.0030	N/A	0.0030	B533246	<0.0030	N/A	0.0030	B533246
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	0.00060	B533246	<0.00060	N/A	0.00060	B533246
Dissolved Arsenic (As)	mg/L	0.00033	+/- <RDL	0.00020	B533246	0.00050	+/- <RDL	0.00020	B533246
Dissolved Barium (Ba)	mg/L	0.28	+/- 0.024	0.010	B533414	0.018	+/- <RDL	0.010	B533414
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	0.0010	B533246	<0.0010	N/A	0.0010	B533246

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Matrix spike exceeds acceptance limits due to probable matrix interference.

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CVZ682				CVZ683			
Sampling Date		2024/09/20 09:10				2024/09/20 10:10			
COC Number		1OF1				1OF1			
	UNITS	WSH-01	MU	RDL	QC Batch	MW21-6-12	MU	RDL	QC Batch
Dissolved Boron (B)	mg/L	0.32	+/- 0.031	0.020	B533414	0.23	+/- 0.023	0.020	B533414
Dissolved Calcium (Ca)	mg/L	58	+/- 5.9	0.30	B533414	120	+/- 12	0.30	B533414
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	0.0010	B533246	<0.0010	N/A	0.0010	B533246
Dissolved Cobalt (Co)	mg/L	<0.00030	N/A	0.00030	B533246	0.00035	+/- <RDL	0.00030	B533246
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	0.0010	B533246	<0.0010	N/A	0.0010	B533246
Dissolved Iron (Fe)	mg/L	<0.060	N/A	0.060	B533414	<0.060	N/A	0.060	B533414
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	0.00020	B533246	<0.00020	N/A	0.00020	B533246
Dissolved Lithium (Li)	mg/L	<0.020	N/A	0.020	B533414	0.044	+/- <RDL	0.020	B533414
Dissolved Magnesium (Mg)	mg/L	31	+/- 2.0	0.20	B533414	35	+/- 2.2	0.20	B533414
Dissolved Manganese (Mn)	mg/L	0.38	+/- 0.025	0.0040	B533414	0.084	+/- 0.0059	0.0040	B533414
Dissolved Molybdenum (Mo)	mg/L	0.0037	+/- 0.00095	0.00020	B533246	0.00087	+/- 0.00032	0.00020	B533246
Dissolved Nickel (Ni)	mg/L	<0.00050	N/A	0.00050	B533246	0.0033	+/- <RDL	0.00050	B533246
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	0.10	B533414	<0.10	N/A	0.10	B533414
Dissolved Potassium (K)	mg/L	4.8	+/- <RDL	0.30	B533414	4.9	+/- <RDL	0.30	B533414
Dissolved Selenium (Se)	mg/L	<0.00020	N/A	0.00020	B533246	<0.00020	N/A	0.00020	B533246
Dissolved Silicon (Si)	mg/L	6.0	+/- 1.1	0.50	B533414	4.5	+/- 0.87	0.50	B533414
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	0.00010	B533246	<0.00010	N/A	0.00010	B533246
Dissolved Sodium (Na)	mg/L	100	+/- 10	0.50	B533414	270	+/- 27	0.50	B533414
Dissolved Strontium (Sr)	mg/L	2.8	+/- 0.28	0.020	B533414	1.8	+/- 0.18	0.020	B533414
Dissolved Sulphur (S)	mg/L	5.7	+/- 0.40	0.20	B533414	110	+/- 7.3	0.20	B533414
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	0.00020	B533246	<0.00020	N/A	0.00020	B533246
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	0.0010	B533246	<0.0010	N/A	0.0010	B533246
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	0.0010	B533246	<0.0010	N/A	0.0010	B533246
Dissolved Uranium (U)	mg/L	0.00010	+/- <RDL	0.00010	B533246	0.0075	+/- 0.00068	0.00010	B533246
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	0.0010	B533246	<0.0010	N/A	0.0010	B533246
Dissolved Zinc (Zn)	mg/L	<0.0030	N/A	0.0030	B533246	<0.0030	N/A	0.0030	B533246

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CVZ683			CVZ684		CVZ684			
Sampling Date		2024/09/20 10:10			2024/09/20 13:45		2024/09/20 13:45			
COC Number		1OF1			1OF1		1OF1			
	UNITS	MW21-6-12 Lab-Dup	MU	RDL	RMW16-13-37	MU	RMW16-13-37 Lab-Dup	MU	RDL	QC Batch
Calculated Parameters										
Anion Sum	meq/L	N/A	N/A	N/A	13	N/A	N/A	N/A	N/A	B531067
Cation Sum	meq/L	N/A	N/A	N/A	14	N/A	N/A	N/A	N/A	B531067
Hardness (CaCO3)	mg/L	N/A	N/A	0.50	33	N/A	N/A	N/A	0.50	B531109
Ion Balance (% Difference)	%	N/A	N/A	N/A	3.1	N/A	N/A	N/A	N/A	B531113
Nitrate (N)	mg/L	N/A	N/A	0.010	0.019	N/A	N/A	N/A	0.010	B531116
Nitrate (NO3)	mg/L	N/A	N/A	0.044	0.084	N/A	N/A	N/A	0.044	B531103
Nitrite (NO2)	mg/L	N/A	N/A	0.033	0.046	N/A	N/A	N/A	0.033	B531103
Calculated Total Dissolved Solids	mg/L	N/A	N/A	10	710	N/A	N/A	N/A	10	B531121
Elements										
Dissolved Cadmium (Cd)	ug/L	N/A	N/A	0.020	0.030	+/- <RDL	N/A	N/A	0.020	B531098
Misc. Inorganics										
Conductivity	uS/cm	N/A	N/A	2.0	1200	+/- 31	N/A	N/A	2.0	B533505
pH	pH	N/A	N/A	N/A	8.25	+/- 0.0818	N/A	N/A	N/A	B533502
Anions										
Alkalinity (PP as CaCO3)	mg/L	N/A	N/A	1.0	<1.0	N/A	N/A	N/A	1.0	B533488
Alkalinity (Total as CaCO3)	mg/L	N/A	N/A	1.0	530	+/- 39	N/A	N/A	1.0	B533488
Bicarbonate (HCO3)	mg/L	N/A	N/A	1.0	650	+/- 9.9	N/A	N/A	1.0	B533488
Carbonate (CO3)	mg/L	N/A	N/A	1.0	<1.0	N/A	N/A	N/A	1.0	B533488
Hydroxide (OH)	mg/L	N/A	N/A	1.0	<1.0	N/A	N/A	N/A	1.0	B533488
Chloride (Cl)	mg/L	N/A	N/A	1.0	51	+/- 4.1	N/A	N/A	1.0	B535024
Sulphate (SO4)	mg/L	N/A	N/A	5.0	32	+/- 2.5	N/A	N/A	1.0	B535024
Nutrients										
Nitrite (N)	mg/L	<0.010	N/A	0.010	0.014	+/- <RDL	N/A	N/A	0.010	B533146
Nitrate plus Nitrite (N)	mg/L	<0.010	N/A	0.010	0.033	+/- 0.012	N/A	N/A	0.010	B533146
Lab Filtered Elements										
Dissolved Aluminum (Al)	mg/L	N/A	N/A	0.0030	0.31	+/- 0.071	0.35	+/- 0.080	0.0030	B533246
Dissolved Antimony (Sb)	mg/L	N/A	N/A	0.00060	<0.00060	N/A	<0.00060	N/A	0.00060	B533246
Dissolved Arsenic (As)	mg/L	N/A	N/A	0.00020	0.0017	+/- 0.00021	0.0017	+/- 0.00021	0.00020	B533246
Dissolved Barium (Ba)	mg/L	N/A	N/A	0.010	0.081	+/- <RDL	N/A	N/A	0.010	B533414
Dissolved Beryllium (Be)	mg/L	N/A	N/A	0.0010	<0.0010	N/A	<0.0010	N/A	0.0010	B533246

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CVZ683			CVZ684		CVZ684			
Sampling Date		2024/09/20 10:10			2024/09/20 13:45		2024/09/20 13:45			
COC Number		1OF1			1OF1		1OF1			
	UNITS	MW21-6-12 Lab-Dup	MU	RDL	RMW16-13-37	MU	RMW16-13-37 Lab-Dup	MU	RDL	QC Batch
Dissolved Boron (B)	mg/L	N/A	N/A	0.020	0.12	+/- <RDL	N/A	N/A	0.020	B533414
Dissolved Calcium (Ca)	mg/L	N/A	N/A	0.30	11	+/- 1.1	N/A	N/A	0.30	B533414
Dissolved Chromium (Cr)	mg/L	N/A	N/A	0.0010	<0.0010	N/A	<0.0010	N/A	0.0010	B533246
Dissolved Cobalt (Co)	mg/L	N/A	N/A	0.00030	<0.00030	N/A	<0.00030	N/A	0.00030	B533246
Dissolved Copper (Cu)	mg/L	N/A	N/A	0.0010	0.0011	+/- <RDL	0.0012	+/- <RDL	0.0010	B533246
Dissolved Iron (Fe)	mg/L	N/A	N/A	0.060	<0.060	N/A	N/A	N/A	0.060	B533414
Dissolved Lead (Pb)	mg/L	N/A	N/A	0.00020	0.00046	+/- <RDL	0.00053	+/- <RDL	0.00020	B533246
Dissolved Lithium (Li)	mg/L	N/A	N/A	0.020	0.036	+/- <RDL	N/A	N/A	0.020	B533414
Dissolved Magnesium (Mg)	mg/L	N/A	N/A	0.20	1.6	+/- <RDL	N/A	N/A	0.20	B533414
Dissolved Manganese (Mn)	mg/L	N/A	N/A	0.0040	0.011	+/- <RDL	N/A	N/A	0.0040	B533414
Dissolved Molybdenum (Mo)	mg/L	N/A	N/A	0.00020	0.042	+/- 0.0098	0.041	+/- 0.0096	0.00020	B533246
Dissolved Nickel (Ni)	mg/L	N/A	N/A	0.00050	0.00082	+/- <RDL	0.00077	+/- <RDL	0.00050	B533246
Dissolved Phosphorus (P)	mg/L	N/A	N/A	0.10	<0.10	N/A	N/A	N/A	0.10	B533414
Dissolved Potassium (K)	mg/L	N/A	N/A	0.30	2.3	+/- <RDL	N/A	N/A	0.30	B533414
Dissolved Selenium (Se)	mg/L	N/A	N/A	0.00020	<0.00020	N/A	<0.00020	N/A	0.00020	B533246
Dissolved Silicon (Si)	mg/L	N/A	N/A	0.50	2.5	+/- <RDL	N/A	N/A	0.50	B533414
Dissolved Silver (Ag)	mg/L	N/A	N/A	0.00010	<0.00010	N/A	<0.00010	N/A	0.00010	B533246
Dissolved Sodium (Na)	mg/L	N/A	N/A	0.50	290	+/- 29	N/A	N/A	0.50	B533414
Dissolved Strontium (Sr)	mg/L	N/A	N/A	0.020	0.20	+/- <RDL	N/A	N/A	0.020	B533414
Dissolved Sulphur (S)	mg/L	N/A	N/A	0.20	11	+/- 0.75	N/A	N/A	0.20	B533414
Dissolved Thallium (Tl)	mg/L	N/A	N/A	0.00020	<0.00020	N/A	<0.00020	N/A	0.00020	B533246
Dissolved Tin (Sn)	mg/L	N/A	N/A	0.0010	0.0030	+/- <RDL	0.0025	+/- <RDL	0.0010	B533246
Dissolved Titanium (Ti)	mg/L	N/A	N/A	0.0010	0.013	+/- 0.0035	0.013	+/- 0.0035	0.0010	B533246
Dissolved Uranium (U)	mg/L	N/A	N/A	0.00010	0.0066	+/- 0.00060	0.0064	+/- 0.00058	0.00010	B533246
Dissolved Vanadium (V)	mg/L	N/A	N/A	0.0010	0.0022	+/- <RDL	0.0022	+/- <RDL	0.0010	B533246
Dissolved Zinc (Zn)	mg/L	N/A	N/A	0.0030	<0.0030	N/A	<0.0030	N/A	0.0030	B533246

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TOTAL KJELDAHL NITROGEN (TOTAL)

Bureau Veritas ID		CVZ682			CVZ683		CVZ683			
Sampling Date		2024/09/20 09:10			2024/09/20 10:10		2024/09/20 10:10			
COC Number		1OF1			1OF1		1OF1			
	UNITS	WSH-01	MU	QC Batch	MW21-6-12	MU	MW21-6-12 Lab-Dup	MU	RDL	QC Batch
Calculated Parameters										
Total Kjeldahl Nitrogen (Calc)	mg/L	0.50	N/A	B531074	0.23	N/A	N/A	N/A	0.020	B531074
Nutrients										
Total Nitrogen (N)	mg/L	0.50	+/- 0.084	B534840	0.23	+/- 0.050	0.22	+/- 0.049	0.020	B536479

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas ID		CVZ684			
Sampling Date		2024/09/20 13:45			
COC Number		1OF1			
	UNITS	RMW16-13-37	MU	RDL	QC Batch
Calculated Parameters					
Total Kjeldahl Nitrogen (Calc)	mg/L	1.4	N/A	0.20	B531074
Nutrients					
Total Nitrogen (N)	mg/L	1.5 (1)	+/- 0.22	0.20	B534840

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		CVZ682			CVZ683		CVZ683			
Sampling Date		2024/09/20 09:10			2024/09/20 10:10		2024/09/20 10:10			
COC Number		1OF1			1OF1		1OF1			
	UNITS	WSH-01	MU	QC Batch	MW21-6-12	MU	MW21-6-12 Lab-Dup	MU	RDL	QC Batch
Lab Filtered Inorganics										
Dissolved Organic Carbon (C)	mg/L	0.98	+/- <RDL	B539945	2.6	+/- <RDL	N/A	N/A	0.50	B539945
Microbiological Param.										
E.Coli DST	MPN/100mL	<1.0	N/A	B531525	<1.0	N/A	N/A	N/A	1.0	B531525
Fecal Coliforms	MPN/100mL	<1.0	N/A	B531528	<1.0	N/A	N/A	N/A	1.0	B531528
Heterotrophic DST	MPN/100mL	>2400	N/A	B531286	2400	N/A	1300	N/A	1.0	B531286
Total Coliforms DST	MPN/100mL	<1.0	N/A	B531525	3.1	N/A	N/A	N/A	1.0	B531525
Nutrients										
Total Ammonia (N)	mg/L	0.24	+/- 0.028	B536591	0.11	+/- 0.016	N/A	N/A	0.015	B536643
Orthophosphate (P)	mg/L	<0.0030	N/A	B532727	<0.0030	N/A	N/A	N/A	0.0030	B532727
Lab Filtered Nutrients										
Dissolved Phosphorus (P)	mg/L	0.0036	+/- 0.0048	B533523	<0.0030	N/A	N/A	N/A	0.0030	B533523

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas ID		CVZ684			
Sampling Date		2024/09/20 13:45			
COC Number		1OF1			
	UNITS	RMW16-13-37	MU	RDL	QC Batch
Lab Filtered Inorganics					
Dissolved Organic Carbon (C)	mg/L	3.9	+/- 0.60	0.50	B539945
Microbiological Param.					
E.Coli DST	MPN/100mL	10 (1)	N/A	2.0	B531525
Fecal Coliforms	MPN/100mL	58 (1)	N/A	2.0	B531528
Heterotrophic DST	MPN/100mL	>2400	N/A	1.0	B531286
Total Coliforms DST	MPN/100mL	>4800 (1)	N/A	2.0	B531525
Nutrients					
Total Ammonia (N)	mg/L	0.54	+/- 0.060	0.015	B536625
Orthophosphate (P)	mg/L	0.024	+/- 0.0046	0.0030	B532727
Lab Filtered Nutrients					
Dissolved Phosphorus (P)	mg/L	0.028	+/- 0.0054	0.0030	B533523

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Detection limit raised due to matrix interference.

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MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		CVZ682			CVZ683			CVZ684			
Sampling Date		2024/09/20 09:10			2024/09/20 10:10			2024/09/20 13:45			
COC Number		1OF1			1OF1			1OF1			
	UNITS	**WSH-01**	**MU**	**QC Batch**	**MW21-6-12**	**MU**	**RDL**	**RMW16-13-37**	**MU**	**RDL**	**QC Batch**
Elements											
Total Mercury (Hg)	ug/L	<0.0019	N/A	B534973	<0.0019	N/A	0.0019	0.028 (1)	+/- <RDL	0.019	B534973
Lab Filtered Elements											
Dissolved Mercury (Hg)	ug/L	<0.0019	N/A	B534419	<0.0019	N/A	0.0019	<0.0019	N/A	0.0019	B533454

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.6°C

The estimate of uncertainty has been reported as an expanded uncertainty and calculated using a coverage factor of 2, which gives a level of confidence of 95%.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B531286	YYL	Method Blank	Heterotrophic DST	2024/09/23	<1.0		mpn/100mL	
B531286	YYL	RPD [CVZ683-01]	Heterotrophic DST	2024/09/23	60		%	N/A
B531525	SOG	Method Blank	E.Coli DST	2024/09/22	<1.0		mpn/100mL	
			Total Coliforms DST	2024/09/22	<1.0		mpn/100mL	
B531525	SOG	RPD	E.Coli DST	2024/09/22	NC		%	N/A
			Total Coliforms DST	2024/09/22	NC		%	N/A
B531528	SOG	Method Blank	Fecal Coliforms	2024/09/22	<1.0		MPN/100mL	
B531528	SOG	RPD	Fecal Coliforms	2024/09/22	NC		%	N/A
B532065	DO1	Matrix Spike	1,4-Difluorobenzene (sur.)	2024/09/23		88	%	50 - 140
			4-Bromofluorobenzene (sur.)	2024/09/23		115	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2024/09/23		107	%	50 - 140
			Benzene	2024/09/23		78	%	50 - 140
			Toluene	2024/09/23		78	%	50 - 140
			Ethylbenzene	2024/09/23		75	%	50 - 140
			m & p-Xylene	2024/09/23		77	%	50 - 140
			o-Xylene	2024/09/23		81	%	50 - 140
			F1 (C6-C10)	2024/09/23		77	%	60 - 140
B532065	DO1	Spiked Blank	1,4-Difluorobenzene (sur.)	2024/09/23		89	%	50 - 140
			4-Bromofluorobenzene (sur.)	2024/09/23		115	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2024/09/23		105	%	50 - 140
			Benzene	2024/09/23		81	%	60 - 130
			Toluene	2024/09/23		81	%	60 - 130
			Ethylbenzene	2024/09/23		79	%	60 - 130
			m & p-Xylene	2024/09/23		80	%	60 - 130
			o-Xylene	2024/09/23		83	%	60 - 130
			F1 (C6-C10)	2024/09/23		111	%	60 - 140
B532065	DO1	Method Blank	1,4-Difluorobenzene (sur.)	2024/09/23		97	%	50 - 140
			4-Bromofluorobenzene (sur.)	2024/09/23		109	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2024/09/23		91	%	50 - 140
			Benzene	2024/09/23	<0.00040		mg/L	
			Toluene	2024/09/23	<0.00040		mg/L	
			Ethylbenzene	2024/09/23	<0.00040		mg/L	
			m & p-Xylene	2024/09/23	<0.00080		mg/L	
			o-Xylene	2024/09/23	<0.00040		mg/L	
			F1 (C6-C10)	2024/09/23	<0.10		mg/L	
B532065	DO1	RPD	Benzene	2024/09/23	NC		%	30
			Toluene	2024/09/23	NC		%	30
			Ethylbenzene	2024/09/23	NC		%	30
			m & p-Xylene	2024/09/23	NC		%	30
			o-Xylene	2024/09/23	NC		%	30
			F1 (C6-C10)	2024/09/23	NC		%	30
B532111	CHA	Spiked Blank	O-TERPHENYL (sur.)	2024/09/25		88	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2024/09/25		80	%	60 - 140
B532111	CHA	Method Blank	O-TERPHENYL (sur.)	2024/09/25		89	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2024/09/25	<0.10		mg/L	
B532727	YL7	Matrix Spike	Orthophosphate (P)	2024/09/23		80	%	80 - 120
B532727	YL7	Spiked Blank	Orthophosphate (P)	2024/09/23		101	%	80 - 120
B532727	YL7	Method Blank	Orthophosphate (P)	2024/09/23	<0.0030		mg/L	
B532727	YL7	RPD	Orthophosphate (P)	2024/09/23	NC		%	20
B533146	ISW	Matrix Spike [CVZ683-02]	Nitrite (N)	2024/09/23		104	%	80 - 120
			Nitrate plus Nitrite (N)	2024/09/23		133 (1)	%	80 - 120
B533146	ISW	Spiked Blank	Nitrite (N)	2024/09/23		101	%	80 - 120
			Nitrate plus Nitrite (N)	2024/09/23		104	%	80 - 120
B533146	ISW	Method Blank	Nitrite (N)	2024/09/23	<0.010		mg/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Nitrate plus Nitrite (N)	2024/09/23	<0.010		mg/L	
B533146	ISW	RPD [CVZ683-02]	Nitrite (N)	2024/09/23	NC		%	20
			Nitrate plus Nitrite (N)	2024/09/23	NC		%	20
B533246	KH2	Matrix Spike [CVZ684-02]	Dissolved Aluminum (Al)	2024/09/23		NC	%	80 - 120
			Dissolved Antimony (Sb)	2024/09/23		92	%	80 - 120
			Dissolved Arsenic (As)	2024/09/23		97	%	80 - 120
			Dissolved Beryllium (Be)	2024/09/23		94	%	80 - 120
			Dissolved Chromium (Cr)	2024/09/23		95	%	80 - 120
			Dissolved Cobalt (Co)	2024/09/23		96	%	80 - 120
			Dissolved Copper (Cu)	2024/09/23		93	%	80 - 120
			Dissolved Lead (Pb)	2024/09/23		91	%	80 - 120
			Dissolved Molybdenum (Mo)	2024/09/23		102	%	80 - 120
			Dissolved Nickel (Ni)	2024/09/23		95	%	80 - 120
			Dissolved Selenium (Se)	2024/09/23		97	%	80 - 120
			Dissolved Silver (Ag)	2024/09/23		91	%	80 - 120
			Dissolved Thallium (Tl)	2024/09/23		91	%	80 - 120
			Dissolved Tin (Sn)	2024/09/23		94	%	80 - 120
			Dissolved Titanium (Ti)	2024/09/23		97	%	80 - 120
			Dissolved Uranium (U)	2024/09/23		94	%	80 - 120
			Dissolved Vanadium (V)	2024/09/23		97	%	80 - 120
			Dissolved Zinc (Zn)	2024/09/23		93	%	80 - 120
B533246	KH2	Spiked Blank	Dissolved Aluminum (Al)	2024/09/23		114	%	80 - 120
			Dissolved Antimony (Sb)	2024/09/23		94	%	80 - 120
			Dissolved Arsenic (As)	2024/09/23		94	%	80 - 120
			Dissolved Beryllium (Be)	2024/09/23		97	%	80 - 120
			Dissolved Chromium (Cr)	2024/09/23		96	%	80 - 120
			Dissolved Cobalt (Co)	2024/09/23		99	%	80 - 120
			Dissolved Copper (Cu)	2024/09/23		98	%	80 - 120
			Dissolved Lead (Pb)	2024/09/23		98	%	80 - 120
			Dissolved Molybdenum (Mo)	2024/09/23		98	%	80 - 120
			Dissolved Nickel (Ni)	2024/09/23		98	%	80 - 120
			Dissolved Selenium (Se)	2024/09/23		94	%	80 - 120
			Dissolved Silver (Ag)	2024/09/23		96	%	80 - 120
			Dissolved Thallium (Tl)	2024/09/23		97	%	80 - 120
			Dissolved Tin (Sn)	2024/09/23		92	%	80 - 120
			Dissolved Titanium (Ti)	2024/09/23		94	%	80 - 120
			Dissolved Uranium (U)	2024/09/23		96	%	80 - 120
			Dissolved Vanadium (V)	2024/09/23		97	%	80 - 120
			Dissolved Zinc (Zn)	2024/09/23		93	%	80 - 120
B533246	KH2	Method Blank	Dissolved Aluminum (Al)	2024/09/24	<0.0030		mg/L	
			Dissolved Antimony (Sb)	2024/09/24	<0.00060		mg/L	
			Dissolved Arsenic (As)	2024/09/24	<0.00020		mg/L	
			Dissolved Beryllium (Be)	2024/09/24	<0.0010		mg/L	
			Dissolved Chromium (Cr)	2024/09/24	<0.0010		mg/L	
			Dissolved Cobalt (Co)	2024/09/24	<0.00030		mg/L	
			Dissolved Copper (Cu)	2024/09/24	<0.0010		mg/L	
			Dissolved Lead (Pb)	2024/09/24	<0.00020		mg/L	
			Dissolved Molybdenum (Mo)	2024/09/24	<0.00020		mg/L	
			Dissolved Nickel (Ni)	2024/09/24	<0.00050		mg/L	
			Dissolved Selenium (Se)	2024/09/24	<0.00020		mg/L	
			Dissolved Silver (Ag)	2024/09/24	<0.00010		mg/L	
			Dissolved Thallium (Tl)	2024/09/24	<0.00020		mg/L	
			Dissolved Tin (Sn)	2024/09/24	<0.0010		mg/L	
			Dissolved Titanium (Ti)	2024/09/24	<0.0010		mg/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Uranium (U)	2024/09/24	<0.00010		mg/L	
			Dissolved Vanadium (V)	2024/09/24	<0.0010		mg/L	
			Dissolved Zinc (Zn)	2024/09/24	<0.0030		mg/L	
B533246	KH2	RPD [CVZ684-02]	Dissolved Aluminum (Al)	2024/09/24	12		%	20
			Dissolved Antimony (Sb)	2024/09/24	NC		%	20
			Dissolved Arsenic (As)	2024/09/24	2.4		%	20
			Dissolved Beryllium (Be)	2024/09/24	NC		%	20
			Dissolved Chromium (Cr)	2024/09/24	NC		%	20
			Dissolved Cobalt (Co)	2024/09/24	NC		%	20
			Dissolved Copper (Cu)	2024/09/24	7.6		%	20
			Dissolved Lead (Pb)	2024/09/24	12		%	20
			Dissolved Molybdenum (Mo)	2024/09/24	2.3		%	20
			Dissolved Nickel (Ni)	2024/09/24	6.1		%	20
			Dissolved Selenium (Se)	2024/09/24	NC		%	20
			Dissolved Silver (Ag)	2024/09/24	NC		%	20
			Dissolved Thallium (Tl)	2024/09/24	NC		%	20
			Dissolved Tin (Sn)	2024/09/24	18		%	20
			Dissolved Titanium (Ti)	2024/09/24	0.78		%	20
			Dissolved Uranium (U)	2024/09/24	3.4		%	20
			Dissolved Vanadium (V)	2024/09/24	1.4		%	20
			Dissolved Zinc (Zn)	2024/09/24	NC		%	20
B533414	VSC	Matrix Spike	Dissolved Barium (Ba)	2024/09/27		7.7 (1)	%	80 - 120
			Dissolved Boron (B)	2024/09/27		96	%	80 - 120
			Dissolved Calcium (Ca)	2024/09/27		NC	%	80 - 120
			Dissolved Iron (Fe)	2024/09/27		107	%	80 - 120
			Dissolved Lithium (Li)	2024/09/27		97	%	80 - 120
			Dissolved Magnesium (Mg)	2024/09/27		NC	%	80 - 120
			Dissolved Manganese (Mn)	2024/09/27		101	%	80 - 120
			Dissolved Phosphorus (P)	2024/09/27		106	%	80 - 120
			Dissolved Potassium (K)	2024/09/27		102	%	80 - 120
			Dissolved Silicon (Si)	2024/09/27		93	%	80 - 120
			Dissolved Sodium (Na)	2024/09/27		NC	%	80 - 120
			Dissolved Strontium (Sr)	2024/09/27		81	%	80 - 120
			Dissolved Sulphur (S)	2024/09/27		NC	%	80 - 120
B533414	VSC	Spiked Blank	Dissolved Barium (Ba)	2024/09/27		101	%	80 - 120
			Dissolved Boron (B)	2024/09/27		99	%	80 - 120
			Dissolved Calcium (Ca)	2024/09/27		102	%	80 - 120
			Dissolved Iron (Fe)	2024/09/27		105	%	80 - 120
			Dissolved Lithium (Li)	2024/09/27		99	%	80 - 120
			Dissolved Magnesium (Mg)	2024/09/27		105	%	80 - 120
			Dissolved Manganese (Mn)	2024/09/27		101	%	80 - 120
			Dissolved Phosphorus (P)	2024/09/27		100	%	80 - 120
			Dissolved Potassium (K)	2024/09/27		103	%	80 - 120
			Dissolved Silicon (Si)	2024/09/27		96	%	80 - 120
			Dissolved Sodium (Na)	2024/09/27		103	%	80 - 120
			Dissolved Strontium (Sr)	2024/09/27		99	%	80 - 120
			Dissolved Sulphur (S)	2024/09/27		98	%	80 - 120
B533414	VSC	Method Blank	Dissolved Barium (Ba)	2024/09/27	<0.010		mg/L	
			Dissolved Boron (B)	2024/09/27	<0.020		mg/L	
			Dissolved Calcium (Ca)	2024/09/27	<0.30		mg/L	
			Dissolved Iron (Fe)	2024/09/27	<0.060		mg/L	
			Dissolved Lithium (Li)	2024/09/27	<0.020		mg/L	
			Dissolved Magnesium (Mg)	2024/09/27	<0.20		mg/L	
			Dissolved Manganese (Mn)	2024/09/27	<0.0040		mg/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Phosphorus (P)	2024/09/27	<0.10		mg/L	
			Dissolved Potassium (K)	2024/09/27	<0.30		mg/L	
			Dissolved Silicon (Si)	2024/09/27	<0.50		mg/L	
			Dissolved Sodium (Na)	2024/09/27	<0.50		mg/L	
			Dissolved Strontium (Sr)	2024/09/27	<0.020		mg/L	
			Dissolved Sulphur (S)	2024/09/27	<0.20		mg/L	
B533414	VSC	RPD	Dissolved Calcium (Ca)	2024/09/27	0.82		%	20
			Dissolved Iron (Fe)	2024/09/27	NC		%	20
			Dissolved Magnesium (Mg)	2024/09/27	0.84		%	20
			Dissolved Manganese (Mn)	2024/09/27	0.33		%	20
			Dissolved Potassium (K)	2024/09/27	0.37		%	20
			Dissolved Sodium (Na)	2024/09/27	0.53		%	20
B533454	KHU	Matrix Spike	Dissolved Mercury (Hg)	2024/09/25		106	%	80 - 120
B533454	KHU	Spiked Blank	Dissolved Mercury (Hg)	2024/09/25		100	%	80 - 120
B533454	KHU	Method Blank	Dissolved Mercury (Hg)	2024/09/25	<0.0019		ug/L	
B533454	KHU	RPD	Dissolved Mercury (Hg)	2024/09/25	NC		%	20
B533488	AYE	Spiked Blank	Alkalinity (Total as CaCO3)	2024/09/26		100	%	80 - 120
B533488	AYE	Method Blank	Alkalinity (PP as CaCO3)	2024/09/26	<1.0		mg/L	
			Alkalinity (Total as CaCO3)	2024/09/26	<1.0		mg/L	
			Bicarbonate (HCO3)	2024/09/26	<1.0		mg/L	
			Carbonate (CO3)	2024/09/26	<1.0		mg/L	
			Hydroxide (OH)	2024/09/26	<1.0		mg/L	
B533488	AYE	RPD	Alkalinity (PP as CaCO3)	2024/09/26	NC		%	20
			Alkalinity (Total as CaCO3)	2024/09/26	0.77		%	20
			Bicarbonate (HCO3)	2024/09/26	0.77		%	20
			Carbonate (CO3)	2024/09/26	NC		%	20
			Hydroxide (OH)	2024/09/26	NC		%	20
B533502	AYE	Spiked Blank	pH	2024/09/26		100	%	97 - 103
B533502	AYE	RPD	pH	2024/09/26	0.89		%	N/A
B533505	AYE	Spiked Blank	Conductivity	2024/09/26		101	%	90 - 110
B533505	AYE	Method Blank	Conductivity	2024/09/26	<2.0		uS/cm	
B533505	AYE	RPD	Conductivity	2024/09/26	0.70		%	10
B533523	MAP	Matrix Spike	Dissolved Phosphorus (P)	2024/09/24		103	%	80 - 120
B533523	MAP	QC Standard	Dissolved Phosphorus (P)	2024/09/24		91	%	80 - 120
B533523	MAP	Spiked Blank	Dissolved Phosphorus (P)	2024/09/24		101	%	80 - 120
B533523	MAP	Method Blank	Dissolved Phosphorus (P)	2024/09/24	<0.0030		mg/L	
B533523	MAP	RPD	Dissolved Phosphorus (P)	2024/09/24	5.3		%	20
B534419	MPK	Matrix Spike	Dissolved Mercury (Hg)	2024/09/26		94	%	80 - 120
B534419	MPK	Spiked Blank	Dissolved Mercury (Hg)	2024/09/26		99	%	80 - 120
B534419	MPK	Method Blank	Dissolved Mercury (Hg)	2024/09/26	<0.0019		ug/L	
B534419	MPK	RPD	Dissolved Mercury (Hg)	2024/09/26	NC		%	20
B534585	TOR	Matrix Spike	Chloride (Cl)	2024/09/26		110	%	80 - 120
			Sulphate (SO4)	2024/09/26		97	%	80 - 120
B534585	TOR	Spiked Blank	Chloride (Cl)	2024/09/26		105	%	80 - 120
			Sulphate (SO4)	2024/09/26		98	%	80 - 120
B534585	TOR	Method Blank	Chloride (Cl)	2024/09/26	<1.0		mg/L	
			Sulphate (SO4)	2024/09/26	<1.0		mg/L	
B534585	TOR	RPD	Chloride (Cl)	2024/09/26	1.4		%	20
			Sulphate (SO4)	2024/09/26	2.9		%	20
B534840	YL7	Matrix Spike	Total Nitrogen (N)	2024/09/25		NC	%	80 - 120
B534840	YL7	QC Standard	Total Nitrogen (N)	2024/09/25		105	%	N/A
B534840	YL7	Spiked Blank	Total Nitrogen (N)	2024/09/25		107	%	80 - 120
B534840	YL7	Method Blank	Total Nitrogen (N)	2024/09/25	<0.020		mg/L	
B534840	YL7	RPD	Total Nitrogen (N)	2024/09/25	11		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B534973	KHU	Matrix Spike	Total Mercury (Hg)	2024/09/25		95	%	80 - 120
B534973	KHU	Spiked Blank	Total Mercury (Hg)	2024/09/25		98	%	80 - 120
B534973	KHU	Method Blank	Total Mercury (Hg)	2024/09/25	<0.0019		ug/L	
B534973	KHU	RPD	Total Mercury (Hg)	2024/09/25	NC		%	20
B535024	HAP	Matrix Spike	Chloride (Cl)	2024/09/24		97	%	80 - 120
			Sulphate (SO4)	2024/09/24		NC	%	80 - 120
B535024	HAP	Spiked Blank	Chloride (Cl)	2024/09/24		97	%	80 - 120
			Sulphate (SO4)	2024/09/24		94	%	80 - 120
B535024	HAP	Method Blank	Chloride (Cl)	2024/09/24	<1.0		mg/L	
			Sulphate (SO4)	2024/09/24	<1.0		mg/L	
B535024	HAP	RPD	Chloride (Cl)	2024/09/24	0.80		%	20
			Sulphate (SO4)	2024/09/24	1.3		%	20
B536479	YL7	Matrix Spike [CVZ683-03]	Total Nitrogen (N)	2024/09/25		108	%	80 - 120
B536479	YL7	QC Standard	Total Nitrogen (N)	2024/09/25		100	%	80 - 120
B536479	YL7	Spiked Blank	Total Nitrogen (N)	2024/09/25		109	%	80 - 120
B536479	YL7	Method Blank	Total Nitrogen (N)	2024/09/25	<0.020		mg/L	
B536479	YL7	RPD [CVZ683-03]	Total Nitrogen (N)	2024/09/25	3.5		%	20
B536591	AFI	Matrix Spike	Total Ammonia (N)	2024/09/26		110	%	80 - 120
B536591	AFI	Spiked Blank	Total Ammonia (N)	2024/09/26		105	%	80 - 120
B536591	AFI	Method Blank	Total Ammonia (N)	2024/09/26	<0.015		mg/L	
B536591	AFI	RPD	Total Ammonia (N)	2024/09/26	6.0		%	20
B536625	AFI	Matrix Spike	Total Ammonia (N)	2024/09/26		108	%	80 - 120
B536625	AFI	Spiked Blank	Total Ammonia (N)	2024/09/26		106	%	80 - 120
B536625	AFI	Method Blank	Total Ammonia (N)	2024/09/26	<0.015		mg/L	
B536625	AFI	RPD	Total Ammonia (N)	2024/09/26	5.3		%	20
B536643	AFI	Matrix Spike	Total Ammonia (N)	2024/09/26		110	%	80 - 120
B536643	AFI	Spiked Blank	Total Ammonia (N)	2024/09/26		105	%	80 - 120
B536643	AFI	Method Blank	Total Ammonia (N)	2024/09/26	<0.015		mg/L	
B536643	AFI	RPD	Total Ammonia (N)	2024/09/26	10		%	20
B539945	JYU	Matrix Spike	Dissolved Organic Carbon (C)	2024/09/27		101	%	75 - 125
B539945	JYU	Spiked Blank	Dissolved Organic Carbon (C)	2024/09/27		97	%	80 - 120
B539945	JYU	Method Blank	Dissolved Organic Carbon (C)	2024/09/27	<0.50		mg/L	
B539945	JYU	RPD	Dissolved Organic Carbon (C)	2024/09/27	1.0		%	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

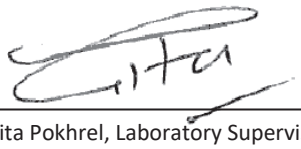
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VALIDATION SIGNATURE PAGE

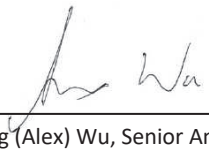
The analytical data and all QC contained in this report were reviewed and validated by:



Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics



Gita Pokhrel, Laboratory Supervisor



Qiliang (Alex) Wu, Senior Analyst

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Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

C474887
2024/09/20 16:20

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Winnipeg, MB: 0-675 Berry St. R3H 1A7 Toll Free (866) 800-6208

CHAIN OF CUSTODY RECORD

ENV COC - 00013v5

Page 1 of 1

Invoice Information	Invoice to (requires report)	Report Information (if differs from Invoice)	Project Information
Company:	Stantec	Company:	Quotation #:
Contact Name:	Dylan King	Contact Name:	P.O. #/ AFE#:
Street Address:	#300, 10220 103 Ave NW	Street Address:	Project #: 110773396
City:	Edmonton Prov: AB Postal Code: T5J0K4	City: Prov: Postal Code:	Site #:
Phone:	780 969 2223	Phone:	Site Location:
Email:	dylan.king@stantec.com	Email:	Site Location Province: AB
Copies:		Copies:	Sampled By: TH/DB

LAB USE ONLY - PLACE STICKER HERE

Rush Confirmation #:

Regulatory Criteria

☑ AT1 ☐ CCME ☐ Drinking Water - Canada ☐ Drinking Water - Manitoba ☐ Saskatchewan ☐ Drinking Water - Alberta ☐ Other _____

Regular Turnaround Time (TAT)

☑ 5 to 7 Day ☐ 10 Day

Rush Turnaround Time (TAT) Surcharges apply

☐ Same Day ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ 4 Day

Date Required: YY MM DD

SAMPLES MUST BE KEPT COOL (<10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

	Sample Identification	Date Sampled YY	MM	DD	Time (24hr) HH	MM	Matrix	FIELD FILTERED	FIELD PRESERVED	LAB FILTRATION REQUIRED	BTEX F1	VOCs	BTEX F1-F2	BTEX F3-F4	Routine water	Regulated metals - total	Regulated metals - dissolved	Mercury - total	Mercury - dissolved	Sulphide DOC	Sulphide Total TKN	Texture (% sand, silt, clay)	Basic class III landfill	d (3 srlves) phosphorus phosphate	ammonia	bacteriological*	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	Comments
1	WSH-01	24	09	20	09	10	water			X			X		X		X	X	X	X	X			X	X	X	11		
2	MW21-6-12	24	09	20	10	10	↓			X			X		X		X	X	X	X	X			X	X	X	11		
3	RMW16-13-37	24	09	20	13	45	↓			X			X		X		X	X	X	X	X			X	X	X	11		
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

MCAL-2024-09-1836

*UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS AND CONDITIONS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS OR BY CALLING THE LABORATORY LISTED ABOVE TO OBTAIN A COPY

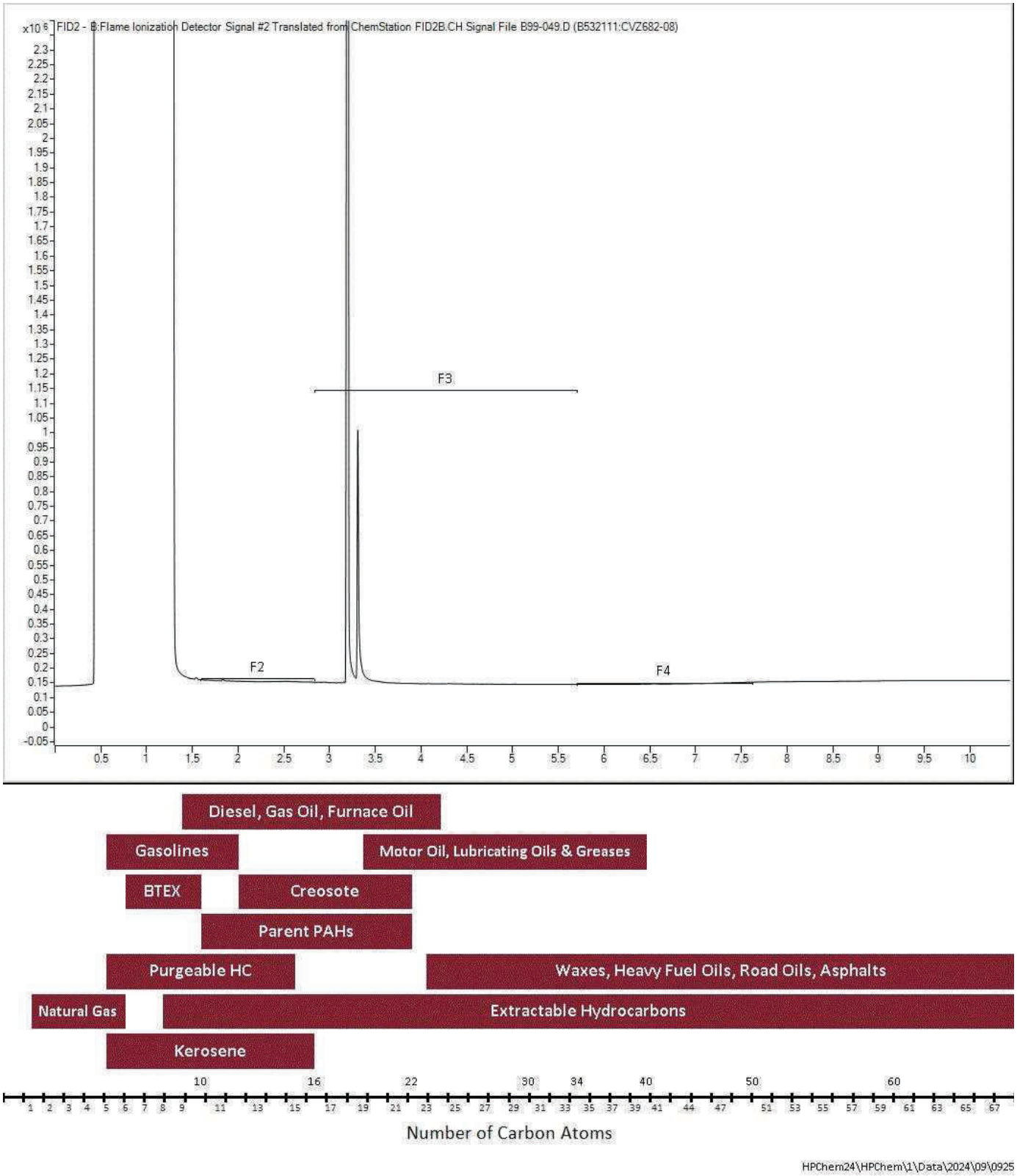
LAB USE ONLY	Yes	No	°C	1	2	3
Seal present		✓				
Seal intact		✓				
Cooling media present	✓			1.8	1.6	1.5

LAB USE ONLY	Yes	No	°C	1	2	3
Seal present						
Seal intact						
Cooling media present						

LAB USE ONLY	Yes	No	°C	1	2	3	Temperature reading by:
Seal present							
Seal intact							
Cooling media present							

	Relinquished by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM	Received by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM	Special Instructions
1	Taylor Harris	2024	09	20	16	15	[signature] / ZAIN MUHAMMAD	2024	09	22	16	22	* total coliforms, fecal coliforms, heterotrophic plate count.
2							2						

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

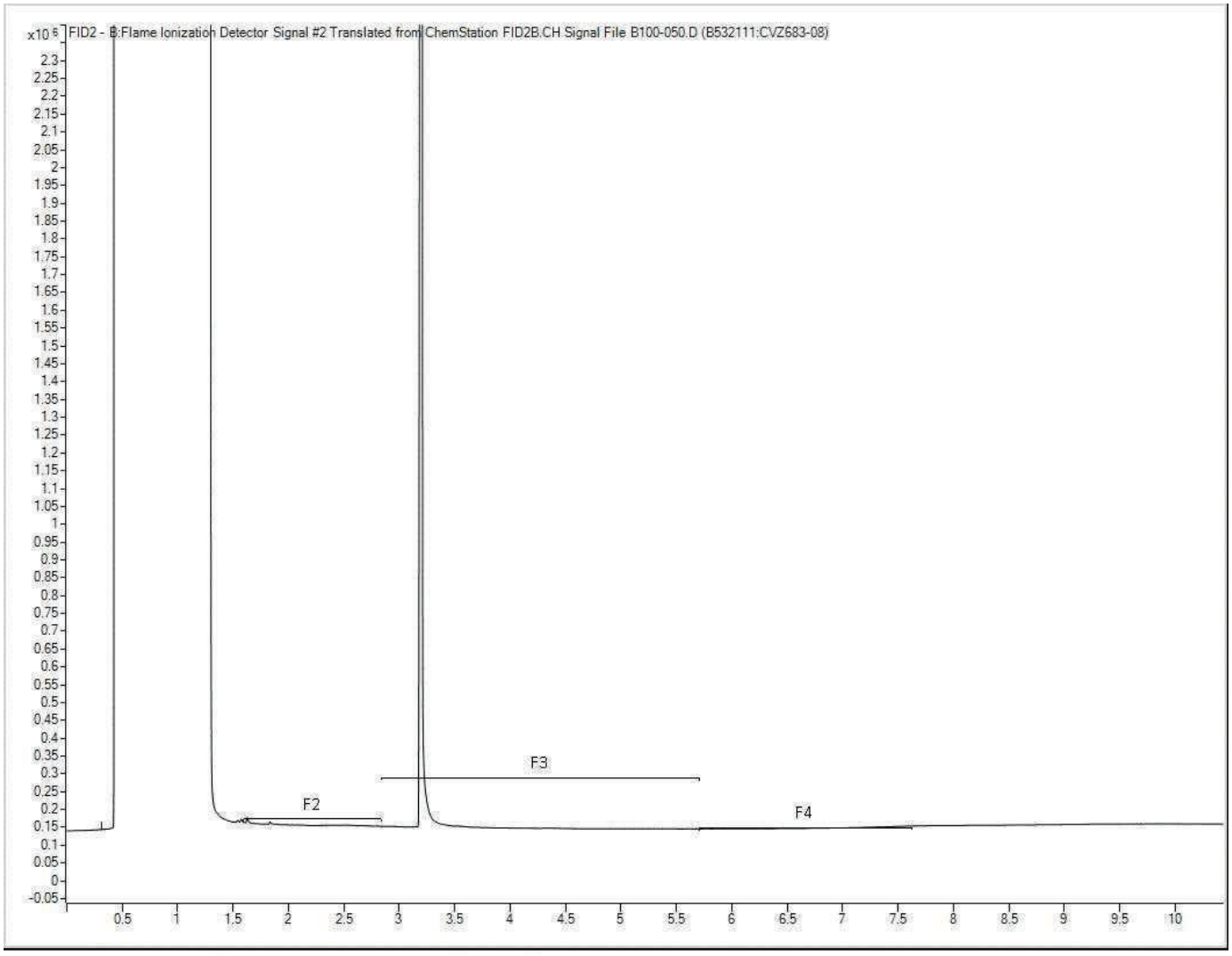


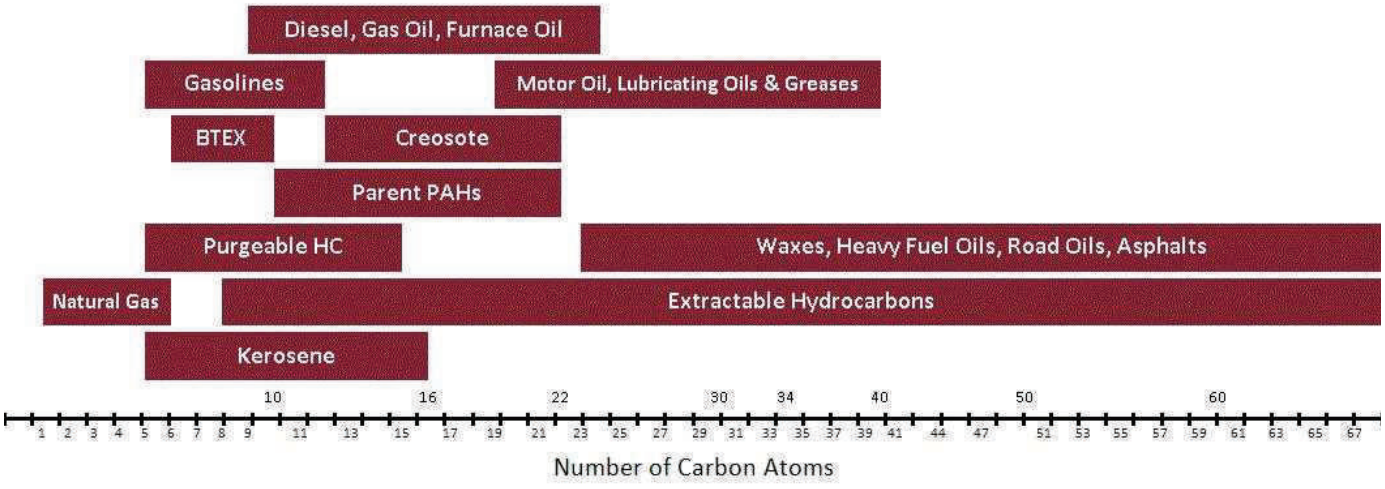
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C474887
Report Date: 2024/09/30
Bureau Veritas Sample: CVZ683

STANTEC CONSULTING LTD
Client Project #: 110773396
Client ID: MW21-6-12

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





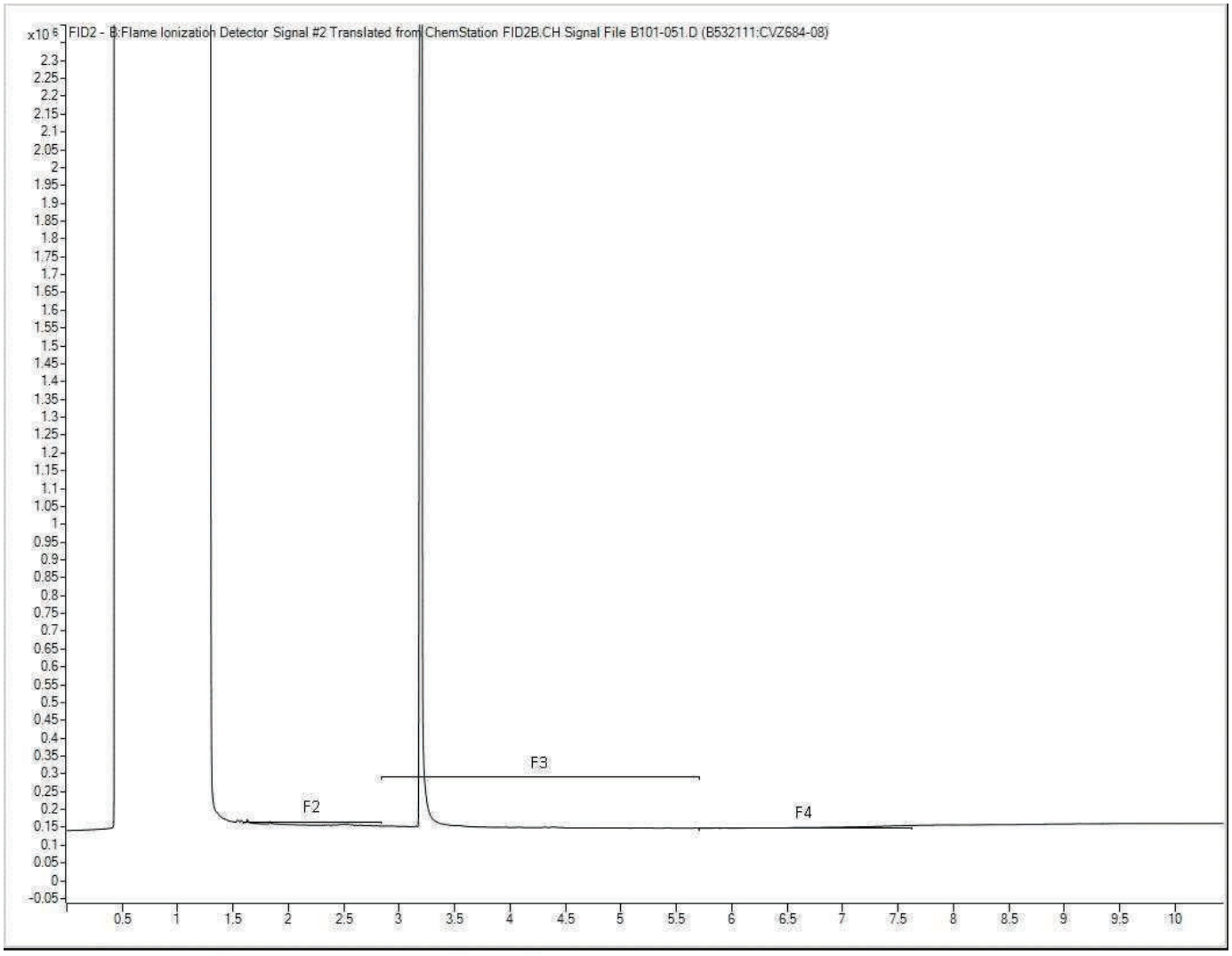
HPChem24\HPChem\1\Data\2024\09\0925

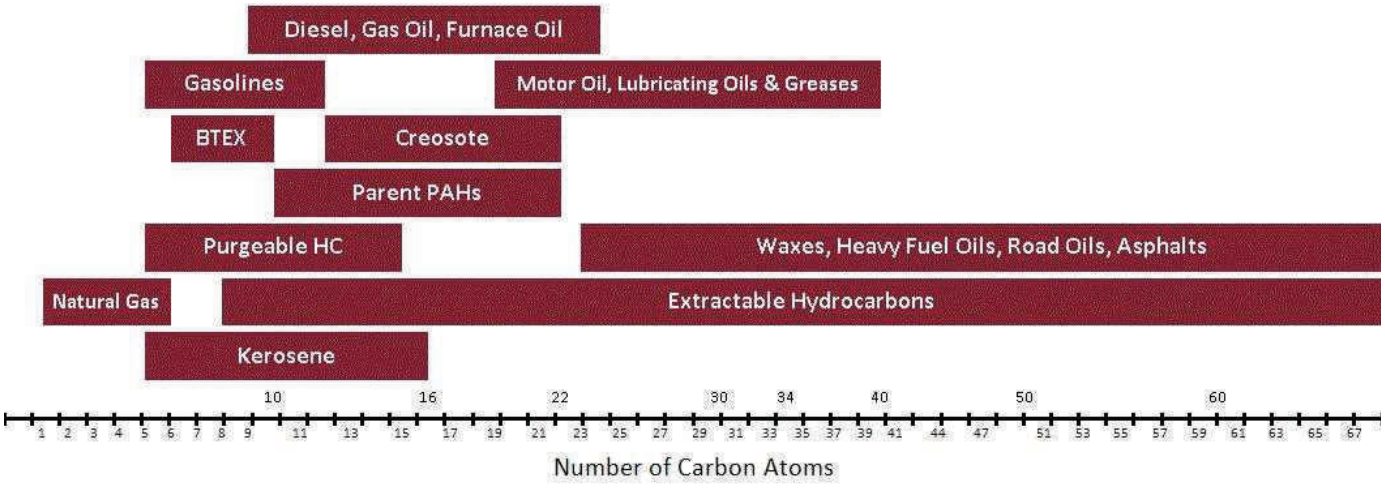
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C474887
Report Date: 2024/09/30
Bureau Veritas Sample: CVZ684

STANTEC CONSULTING LTD
Client Project #: 110773396
Client ID: RMW16-13-37

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





HPChem24\HPChem\1\Data\2024\09\0925

Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your Project #: 110773396
Your C.O.C. #: 1/1

Attention: DYLAN KING

STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
EDMONTON, AB
CANADA T5J 0K4

Report Date: 2024/09/30
Report #: R3564116
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C475057
Received: 2024/09/22, 09:00

Sample Matrix: Water
Samples Received: 9

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH	8	N/A	2024/09/26	AB SOP-00005	SM 24 2320 B m
Alkalinity @25C (pp, total), CO3,HCO3,OH	1	N/A	2024/09/27	AB SOP-00005	SM 24 2320 B m
BTEX/F1 in Water by HS GC/MS/FID	9	N/A	2024/09/25	AB SOP-00039	CCME CWS/EPA 8260d m
F1-BTEX	9	N/A	2024/09/26		Auto Calc
Cadmium - low level CCME - Dissolved	9	N/A	2024/09/25		Auto Calc
Chloride/Sulphate by Auto Colourimetry	8	N/A	2024/09/24	AB SOP-00020	SM24-4500-Cl/SO4-E m
Chloride/Sulphate by Auto Colourimetry	1	N/A	2024/09/26	AB SOP-00020	SM24-4500-Cl/SO4-E m
Fecal Coliforms (MPN/100mL)	9	2024/09/22	2024/09/23	AB SOP-00089	SM 24 9223 A,B m
Heterotrophic Plate Count Quant	9	2024/09/22	2024/09/24	CAL SOP-00012	SM 24 9215 A, E m
Total Coliforms and E.Coli	9	2024/09/22	2024/09/23	AB SOP-00089	SM 24 9223 A,B m
Carbon (DOC) -Lab Filtered (1)	9	N/A	2024/09/27	AB SOP-00087	MMCW 119 1996 m
Conductivity @25C	8	N/A	2024/09/26	AB SOP-00005	SM 24 2510 B m
Conductivity @25C	1	N/A	2024/09/27	AB SOP-00005	SM 24 2510 B m
CCME Hydrocarbons in Water (F2; C10-C16) (2)	4	2024/09/25	2024/09/25	AB SOP-00037 AB SOP-00040	CCME PHC-CWS m
CCME Hydrocarbons in Water (F2; C10-C16) (2)	5	2024/09/25	2024/09/26	AB SOP-00037 AB SOP-00040	CCME PHC-CWS m
Hardness	8	N/A	2024/09/25		Auto Calc
Hardness	1	N/A	2024/09/30		Auto Calc
Mercury (Dissolved) by CV-Lab Filtered	4	2024/09/24	2024/09/25	AB SOP-00084	BCMOE BCLM Oct2013 m
Mercury (Dissolved) by CV-Lab Filtered	5	2024/09/24	2024/09/26	AB SOP-00084	BCMOE BCLM Oct2013 m
Mercury (Total) by CV	9	2024/09/24	2024/09/26	AB SOP-00084	BCMOE BCLM Oct2013 m
Elements by ICP-Dissolved-Lab Filtered (3)	8	N/A	2024/09/25	AB SOP-00042	EPA 6010d R5 m
Elements by ICP-Dissolved-Lab Filtered (3)	1	N/A	2024/09/30	AB SOP-00042	EPA 6010d R5 m
Elements by ICPMS-Dissolved-Lab Filtered (4)	8	N/A	2024/09/24	AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS-Dissolved-Lab Filtered (4)	1	N/A	2024/09/25	AB SOP-00043	EPA 6020b R2 m
Ion Balance	8	N/A	2024/09/27		Auto Calc
Ion Balance	1	N/A	2024/09/30		Auto Calc
Sum of cations, anions	8	N/A	2024/09/25		Auto Calc
Sum of cations, anions	1	N/A	2024/09/30		Auto Calc
Ammonia-N (Total)	9	N/A	2024/09/26	AB SOP-00007	SM 24 4500 NH3 A G m
Nitrate and Nitrite	8	N/A	2024/09/25		Auto Calc

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Your Project #: 110773396
Your C.O.C. #: 1/1

Attention: DYLAN KING

STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
EDMONTON, AB
CANADA T5J 0K4

Report Date: 2024/09/30
Report #: R3564116
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C475057
Received: 2024/09/22, 09:00

Sample Matrix: Water
Samples Received: 9

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Nitrate and Nitrite	1	N/A	2024/09/26		Auto Calc
NO2 (N); NO2 (N) + NO3 (N) in Water	8	N/A	2024/09/24	AB SOP-00091	SM 24 4500 NO3m
NO2 (N); NO2 (N) + NO3 (N) in Water	1	N/A	2024/09/26	AB SOP-00091	SM 24 4500 NO3m
Nitrate (as N)	8	2024/09/22	2024/09/25		Auto Calc
Nitrate (as N)	1	2024/09/22	2024/09/26		Auto Calc
pH @25°C (5)	8	N/A	2024/09/26	AB SOP-00005	SM 24 4500-H+B m
pH @25°C (5)	1	N/A	2024/09/27	AB SOP-00005	SM 24 4500-H+B m
Orthophosphate by Automated Analyzer (6)	9	N/A	2024/09/24	AB SOP-00025	SM 24 4500-P A,F m
Total Dissolved Solids (Calculated)	8	N/A	2024/09/27		Auto Calc
Total Dissolved Solids (Calculated)	1	N/A	2024/09/30		Auto Calc
Total Kjeldahl Nitrogen (Total)	8	N/A	2024/09/25	BBY WI-00033	Auto Calc
Total Kjeldahl Nitrogen (Total)	1	N/A	2024/09/26	BBY WI-00033	Auto Calc
Nitrogen (Total)	7	2024/09/24	2024/09/25	AB SOP-00093	SM 24 4500-N C m
Nitrogen (Total)	1	2024/09/25	2024/09/25	AB SOP-00093	SM 24 4500-N C m
Nitrogen (Total)	1	2024/09/29	2024/09/30	AB SOP-00093	SM 24 4500-N C m
Total Phosphorus-Dissolved-Lab Filtered (7)	9	2024/09/25	2024/09/26	AB SOP-00024	SM 24 4500-P A,B,F m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope

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Your Project #: 110773396
Your C.O.C. #: 1/1

Attention: DYLAN KING

STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
EDMONTON, AB
CANADA T5J 0K4

Report Date: 2024/09/30
Report #: R3564116
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C475057
Received: 2024/09/22, 09:00

dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) DOC present in the sample should be considered as non-purgeable DOC. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(2) Silica gel clean up employed.
(3) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(4) Samples were filtered and preserved at the lab. Values may not reflect concentrations at the time of sampling. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(5) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.
(6) Orthophosphate > Total Phosphorus Imbalance: When applicable, Orthophosphate, Total Phosphorus and dissolved Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
(7) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.

Encryption Key

AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas
30 Sep 2024 15:19:29

Please direct all questions regarding this Certificate of Analysis to:
Geraldlyn Gouthro, Key Account Specialist
Email: geraldlyn.gouthro@bureauveritas.com
Phone# (403) 291-3077

==========

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Bureau Veritas Job #: C475057
Report Date: 2024/09/30

STANTEC CONSULTING LTD
Client Project #: 110773396
Sampler Initials: TH

AT1 BTEX AND F1-F2 IN WATER (WATER)

Bureau Veritas ID		CWB146		CWB147		CWB148		CWB149			
Sampling Date		2024/09/21 08:40		2024/09/21 10:55		2024/09/21 11:42		2024/09/21 13:22			
COC Number		1/1		1/1		1/1		1/1			
	UNITS	MW16-3-7	MU	MW16-2-6	MU	MW16-7-5	MU	MW16-10-15	MU	RDL	QC Batch
Ext. Pet. Hydrocarbon											
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	N/A	0.17	+/- 0.10	<0.10	N/A	<0.10	N/A	0.10	B532546
Volatiles											
Benzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B533161
Toluene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B533161
Ethylbenzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B533161
m & p-Xylene	mg/L	<0.00080	N/A	<0.00080	N/A	<0.00080	N/A	<0.00080	N/A	0.00080	B533161
o-Xylene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B533161
Xylenes (Total)	mg/L	<0.00089	N/A	<0.00089	N/A	<0.00089	N/A	<0.00089	N/A	0.00089	B531808
F1 (C6-C10) - BTEX	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B531808
F1 (C6-C10)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B533161
Surrogate Recovery (%)											
1,4-Difluorobenzene (sur.)	%	100	N/A	99	N/A	102	N/A	99	N/A	N/A	B533161
4-Bromofluorobenzene (sur.)	%	100	N/A	103	N/A	104	N/A	100	N/A	N/A	B533161
D4-1,2-Dichloroethane (sur.)	%	94	N/A	97	N/A	92	N/A	96	N/A	N/A	B533161
O-TERPHENYL (sur.)	%	93	N/A	92	N/A	92	N/A	94	N/A	N/A	B532546

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

AT1 BTEX AND F1-F2 IN WATER (WATER)

Bureau Veritas ID		CWB150		CWB151		CWB152		CWB153			
Sampling Date		2024/09/21 14:20		2024/09/21 17:12		2024/09/21 16:52		2024/09/21 09:43			
COC Number		1/1		1/1		1/1		1/1			
	UNITS	MW16-11-15	MU	MW16-6-20	MU	MW16-6-11	MU	SW35-R4-01	MU	RDL	QC Batch
Ext. Pet. Hydrocarbon											
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B532546
Volatiles											
Benzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B533161
Toluene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B533161
Ethylbenzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B533161
m & p-Xylene	mg/L	<0.00080	N/A	<0.00080	N/A	<0.00080	N/A	<0.00080	N/A	0.00080	B533161
o-Xylene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B533161
Xylenes (Total)	mg/L	<0.00089	N/A	<0.00089	N/A	<0.00089	N/A	<0.00089	N/A	0.00089	B531808
F1 (C6-C10) - BTEX	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B531808
F1 (C6-C10)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B533161
Surrogate Recovery (%)											
1,4-Difluorobenzene (sur.)	%	99	N/A	101	N/A	99	N/A	101	N/A	N/A	B533161
4-Bromofluorobenzene (sur.)	%	102	N/A	103	N/A	99	N/A	98	N/A	N/A	B533161
D4-1,2-Dichloroethane (sur.)	%	94	N/A	93	N/A	98	N/A	92	N/A	N/A	B533161
O-TERPHENYL (sur.)	%	96	N/A	96	N/A	92	N/A	94	N/A	N/A	B532546

RDL = Reportable Detection Limit
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N/A = Not Applicable

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AT1 BTEX AND F1-F2 IN WATER (WATER)

Bureau Veritas ID		CWB154			
Sampling Date		2024/09/21 17:20			
COC Number		1/1			
	UNITS	SR24-07	MU	RDL	QC Batch
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	N/A	0.10	B532546
Volatiles					
Benzene	mg/L	<0.00040	N/A	0.00040	B533161
Toluene	mg/L	<0.00040	N/A	0.00040	B533161
Ethylbenzene	mg/L	<0.00040	N/A	0.00040	B533161
m & p-Xylene	mg/L	<0.00080	N/A	0.00080	B533161
o-Xylene	mg/L	<0.00040	N/A	0.00040	B533161
Xylenes (Total)	mg/L	<0.00089	N/A	0.00089	B531808
F1 (C6-C10) - BTEX	mg/L	<0.10	N/A	0.10	B531808
F1 (C6-C10)	mg/L	<0.10	N/A	0.10	B533161
Surrogate Recovery (%)					
1,4-Difluorobenzene (sur.)	%	98	N/A	N/A	B533161
4-Bromofluorobenzene (sur.)	%	100	N/A	N/A	B533161
D4-1,2-Dichloroethane (sur.)	%	97	N/A	N/A	B533161
O-TERPHENYL (sur.)	%	95	N/A	N/A	B532546

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N/A = Not Applicable

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWB146				CWB147			
Sampling Date		2024/09/21 08:40				2024/09/21 10:55			
COC Number		1/1				1/1			
	UNITS	MW16-3-7	MU	RDL	QC Batch	MW16-2-6	MU	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	32	N/A	N/A	B531993	84	N/A	N/A	B531993
Cation Sum	meq/L	28	N/A	N/A	B531993	120	N/A	N/A	B531993
Hardness (CaCO3)	mg/L	820	N/A	0.50	B531981	2600	N/A	0.50	B531981
Ion Balance (% Difference)	%	6.4	N/A	N/A	B531989	16	N/A	N/A	B531989
Nitrate (N)	mg/L	0.15	N/A	0.010	B532004	<0.10	N/A	0.10	B532004
Nitrate (NO3)	mg/L	0.64	N/A	0.044	B532003	<0.44	N/A	0.44	B532003
Nitrite (NO2)	mg/L	<0.033	N/A	0.033	B532003	<0.033	N/A	0.033	B532003
Calculated Total Dissolved Solids	mg/L	1900	N/A	26	B532015	6100	N/A	26	B532015
Elements									
Dissolved Cadmium (Cd)	ug/L	0.036	+/- 0.020	0.020	B531954	0.17	+/- 0.069	0.020	B531954
Misc. Inorganics									
Conductivity	uS/cm	2500	+/- 66	2.0	B534885	6500	+/- 170	2.0	B535308
pH	pH	7.96	+/- 0.0789	N/A	B534884	7.84	+/- 0.0777	N/A	B535297
Anions									
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	1.0	B534875	<1.0	N/A	1.0	B535271
Alkalinity (Total as CaCO3)	mg/L	430	+/- 32	1.0	B534875	650	+/- 48	1.0	B535271
Bicarbonate (HCO3)	mg/L	530	+/- 8.1	1.0	B534875	790	+/- 12	1.0	B535271
Carbonate (CO3)	mg/L	<1.0	N/A	1.0	B534875	<1.0	N/A	1.0	B535271
Hydroxide (OH)	mg/L	<1.0	N/A	1.0	B534875	<1.0	N/A	1.0	B535271
Chloride (Cl)	mg/L	160	+/- 12	5.0	B534022	1.7	+/- 1.2	1.0	B535018
Sulphate (SO4)	mg/L	920	+/- 58	25	B534022	3400	+/- 220	25	B535018
Nutrients									
Nitrite (N)	mg/L	<0.010	N/A	0.010	B534412	<0.010	N/A	0.010	B534549
Nitrate plus Nitrite (N)	mg/L	0.15	+/- 0.019	0.010	B534412	<0.10 (1)	N/A	0.10	B534549
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	0.0057	+/- <RDL	0.0030	B535001	<0.0030	N/A	0.0030	B535001
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	0.00060	B535001	<0.00060	N/A	0.00060	B535001
Dissolved Arsenic (As)	mg/L	0.00041	+/- <RDL	0.00020	B535001	0.0010	+/- <RDL	0.00020	B535001
Dissolved Barium (Ba)	mg/L	0.077	+/- <RDL	0.010	B534820	<0.010	N/A	0.010	B534820
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	0.0010	B535001	<0.0010	N/A	0.0010	B535001

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N/A = Not Applicable
(1) Detection limits raised due to matrix interference.

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWB146				CWB147			
Sampling Date		2024/09/21 08:40				2024/09/21 10:55			
COC Number		1/1				1/1			
	UNITS	MW16-3-7	MU	RDL	QC Batch	MW16-2-6	MU	RDL	QC Batch
Dissolved Boron (B)	mg/L	0.084	+/- <RDL	0.020	B534820	0.10	+/- <RDL	0.020	B534820
Dissolved Calcium (Ca)	mg/L	140	+/- 14	0.30	B534820	370	+/- 37	0.30	B534820
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	0.0010	B535001	<0.0010	N/A	0.0010	B535001
Dissolved Cobalt (Co)	mg/L	<0.00030	N/A	0.00030	B535001	0.0033	+/- 0.00031	0.00030	B535001
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	0.0010	B535001	0.0016	+/- <RDL	0.0010	B535001
Dissolved Iron (Fe)	mg/L	<0.060	N/A	0.060	B534820	<0.060	N/A	0.060	B534820
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	0.00020	B535001	<0.00020	N/A	0.00020	B535001
Dissolved Lithium (Li)	mg/L	0.047	+/- <RDL	0.020	B534820	0.11	+/- <RDL	0.020	B534820
Dissolved Magnesium (Mg)	mg/L	110	+/- 7.3	0.20	B534820	410	+/- 26	0.20	B534820
Dissolved Manganese (Mn)	mg/L	0.052	+/- <RDL	0.0040	B534820	0.95	+/- 0.064	0.0040	B534820
Dissolved Molybdenum (Mo)	mg/L	0.0030	+/- 0.00078	0.00020	B535001	0.0014	+/- 0.00043	0.00020	B535001
Dissolved Nickel (Ni)	mg/L	0.0024	+/- <RDL	0.00050	B535001	0.0081	+/- 0.00069	0.00050	B535001
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	0.10	B534820	<0.10	N/A	0.10	B534820
Dissolved Potassium (K)	mg/L	4.8	+/- <RDL	0.30	B534820	7.8	+/- 0.40	0.30	B534820
Dissolved Selenium (Se)	mg/L	0.00031	+/- <RDL	0.00020	B535001	0.00052	+/- <RDL	0.00020	B535001
Dissolved Silicon (Si)	mg/L	4.2	+/- 0.80	0.50	B534820	4.5	+/- 0.86	0.50	B534820
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	0.00010	B535001	<0.00010	N/A	0.00010	B535001
Dissolved Sodium (Na)	mg/L	280	+/- 27	0.50	B534820	1500	+/- 150	5.0	B534820
Dissolved Strontium (Sr)	mg/L	1.3	+/- 0.13	0.020	B534820	4.8	+/- 0.47	0.020	B534820
Dissolved Sulphur (S)	mg/L	260	+/- 17	0.20	B534820	2600	+/- 170	2.0	B534820
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	0.00020	B535001	<0.00020	N/A	0.00020	B535001
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	0.0010	B535001	<0.0010	N/A	0.0010	B535001
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	0.0010	B535001	<0.0010	N/A	0.0010	B535001
Dissolved Uranium (U)	mg/L	0.014	+/- 0.0012	0.00010	B535001	0.028	+/- 0.0025	0.00010	B535001
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	0.0010	B535001	0.0011	+/- <RDL	0.0010	B535001
Dissolved Zinc (Zn)	mg/L	<0.0030	N/A	0.0030	B535001	0.0050	+/- <RDL	0.0030	B535001

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWB147				CWB148			
Sampling Date		2024/09/21 10:55				2024/09/21 11:42			
COC Number		1/1				1/1			
	UNITS	MW16-2-6 Lab-Dup	MU	RDL	QC Batch	MW16-7-5	MU	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	N/A	N/A	N/A	B531993	34	N/A	N/A	B531993
Cation Sum	meq/L	N/A	N/A	N/A	B531993	33	N/A	N/A	B531993
Hardness (CaCO3)	mg/L	N/A	N/A	0.50	B531981	910	N/A	0.50	B531981
Ion Balance (% Difference)	%	N/A	N/A	N/A	B531989	2.3	N/A	N/A	B531989
Nitrate (N)	mg/L	N/A	N/A	0.10	B532004	<0.050	N/A	0.050	B532004
Nitrate (NO3)	mg/L	N/A	N/A	0.44	B532003	<0.22	N/A	0.22	B532003
Nitrite (NO2)	mg/L	N/A	N/A	0.033	B532003	<0.033	N/A	0.033	B532003
Calculated Total Dissolved Solids	mg/L	N/A	N/A	26	B532015	2100	N/A	25	B532015
Elements									
Dissolved Cadmium (Cd)	ug/L	N/A	N/A	0.020	B531954	0.036	+/- 0.020	0.020	B531954
Misc. Inorganics									
Conductivity	uS/cm	6500	+/- 170	2.0	B535308	2800	+/- 72	2.0	B534972
pH	pH	7.97	+/- 0.0790	N/A	B535297	7.94	+/- 0.0787	N/A	B534967
Anions									
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	1.0	B535271	<1.0	N/A	1.0	B534961
Alkalinity (Total as CaCO3)	mg/L	630	+/- 47	1.0	B535271	550	+/- 40	1.0	B534961
Bicarbonate (HCO3)	mg/L	770	+/- 12	1.0	B535271	670	+/- 10	1.0	B534961
Carbonate (CO3)	mg/L	<1.0	N/A	1.0	B535271	<1.0	N/A	1.0	B534961
Hydroxide (OH)	mg/L	<1.0	N/A	1.0	B535271	<1.0	N/A	1.0	B534961
Chloride (Cl)	mg/L	1.7	+/- 1.2	1.0	B535018	3.4	+/- 1.2	1.0	B535026
Sulphate (SO4)	mg/L	3400	+/- 210	50	B535018	1100	+/- 71	25	B535026
Nutrients									
Nitrite (N)	mg/L	<0.010	N/A	0.010	B534549	<0.010	N/A	0.010	B534412
Nitrate plus Nitrite (N)	mg/L	<0.10	N/A	0.10	B534549	<0.050 (1)	N/A	0.050	B534412
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	N/A	N/A	N/A	B535001	<0.0030	N/A	0.0030	B535001
Dissolved Antimony (Sb)	mg/L	N/A	N/A	N/A	B535001	<0.00060	N/A	0.00060	B535001
Dissolved Arsenic (As)	mg/L	N/A	N/A	N/A	B535001	0.00028	+/- <RDL	0.00020	B535001
Dissolved Barium (Ba)	mg/L	N/A	N/A	N/A	B534820	0.017	+/- <RDL	0.010	B534820

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Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWB147				CWB148			
Sampling Date		2024/09/21 10:55				2024/09/21 11:42			
COC Number		1/1				1/1			
	UNITS	MW16-2-6 Lab-Dup	MU	RDL	QC Batch	MW16-7-5	MU	RDL	QC Batch
Dissolved Beryllium (Be)	mg/L	N/A	N/A	N/A	B535001	<0.0010	N/A	0.0010	B535001
Dissolved Boron (B)	mg/L	N/A	N/A	N/A	B534820	0.11	+/- <RDL	0.020	B534820
Dissolved Calcium (Ca)	mg/L	N/A	N/A	N/A	B534820	150	+/- 15	0.30	B534820
Dissolved Chromium (Cr)	mg/L	N/A	N/A	N/A	B535001	<0.0010	N/A	0.0010	B535001
Dissolved Cobalt (Co)	mg/L	N/A	N/A	N/A	B535001	<0.00030	N/A	0.00030	B535001
Dissolved Copper (Cu)	mg/L	N/A	N/A	N/A	B535001	<0.0010	N/A	0.0010	B535001
Dissolved Iron (Fe)	mg/L	N/A	N/A	N/A	B534820	<0.060	N/A	0.060	B534820
Dissolved Lead (Pb)	mg/L	N/A	N/A	N/A	B535001	<0.00020	N/A	0.00020	B535001
Dissolved Lithium (Li)	mg/L	N/A	N/A	N/A	B534820	0.045	+/- <RDL	0.020	B534820
Dissolved Magnesium (Mg)	mg/L	N/A	N/A	N/A	B534820	130	+/- 8.2	0.20	B534820
Dissolved Manganese (Mn)	mg/L	N/A	N/A	N/A	B534820	0.078	+/- 0.0055	0.0040	B534820
Dissolved Molybdenum (Mo)	mg/L	N/A	N/A	N/A	B535001	0.0012	+/- 0.00039	0.00020	B535001
Dissolved Nickel (Ni)	mg/L	N/A	N/A	N/A	B535001	0.0023	+/- <RDL	0.00050	B535001
Dissolved Phosphorus (P)	mg/L	N/A	N/A	N/A	B534820	<0.10	N/A	0.10	B534820
Dissolved Potassium (K)	mg/L	N/A	N/A	N/A	B534820	4.7	+/- <RDL	0.30	B534820
Dissolved Selenium (Se)	mg/L	N/A	N/A	N/A	B535001	<0.00020	N/A	0.00020	B535001
Dissolved Silicon (Si)	mg/L	N/A	N/A	N/A	B534820	4.6	+/- 0.87	0.50	B534820
Dissolved Silver (Ag)	mg/L	N/A	N/A	N/A	B535001	<0.00010	N/A	0.00010	B535001
Dissolved Sodium (Na)	mg/L	N/A	N/A	N/A	B534820	330	+/- 33	0.50	B534820
Dissolved Strontium (Sr)	mg/L	N/A	N/A	N/A	B534820	1.6	+/- 0.16	0.020	B534820
Dissolved Sulphur (S)	mg/L	N/A	N/A	N/A	B534820	350	+/- 24	0.20	B534820
Dissolved Thallium (Tl)	mg/L	N/A	N/A	N/A	B535001	<0.00020	N/A	0.00020	B535001
Dissolved Tin (Sn)	mg/L	N/A	N/A	N/A	B535001	<0.0010	N/A	0.0010	B535001
Dissolved Titanium (Ti)	mg/L	N/A	N/A	N/A	B535001	<0.0010	N/A	0.0010	B535001
Dissolved Uranium (U)	mg/L	N/A	N/A	N/A	B535001	0.012	+/- 0.0011	0.00010	B535001
Dissolved Vanadium (V)	mg/L	N/A	N/A	N/A	B535001	<0.0010	N/A	0.0010	B535001
Dissolved Zinc (Zn)	mg/L	N/A	N/A	N/A	B535001	0.0035	+/- <RDL	0.0030	B535001

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N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWB149		CWB149			
Sampling Date		2024/09/21 13:22		2024/09/21 13:22			
COC Number		1/1		1/1			
	UNITS	MW16-10-15	MU	MW16-10-15 Lab-Dup	MU	RDL	QC Batch
Calculated Parameters							
Anion Sum	meq/L	73	N/A	N/A	N/A	N/A	B531993
Cation Sum	meq/L	69	N/A	N/A	N/A	N/A	B531993
Hardness (CaCO3)	mg/L	2500	N/A	N/A	N/A	0.50	B531981
Ion Balance (% Difference)	%	2.7	N/A	N/A	N/A	N/A	B531989
Nitrate (N)	mg/L	0.069	N/A	N/A	N/A	0.050	B532004
Nitrate (NO3)	mg/L	0.31	N/A	N/A	N/A	0.22	B532003
Nitrite (NO2)	mg/L	<0.033	N/A	N/A	N/A	0.033	B532003
Calculated Total Dissolved Solids	mg/L	4600	N/A	N/A	N/A	25	B532015
Elements							
Dissolved Cadmium (Cd)	ug/L	0.14	+/- 0.059	N/A	N/A	0.020	B531954
Misc. Inorganics							
Conductivity	uS/cm	4700	+/- 120	4700	+/- 120	2.0	B535404
pH	pH	7.59	+/- 0.0752	7.73	+/- 0.0766	N/A	B535402
Anions							
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	<1.0	N/A	1.0	B535398
Alkalinity (Total as CaCO3)	mg/L	530	+/- 39	520	+/- 39	1.0	B535398
Bicarbonate (HCO3)	mg/L	640	+/- 9.8	640	+/- 9.7	1.0	B535398
Carbonate (CO3)	mg/L	<1.0	N/A	<1.0	N/A	1.0	B535398
Hydroxide (OH)	mg/L	<1.0	N/A	<1.0	N/A	1.0	B535398
Chloride (Cl)	mg/L	2.5	+/- 1.2	N/A	N/A	1.0	B536588
Sulphate (SO4)	mg/L	3000	+/- 190	N/A	N/A	25	B536588
Nutrients							
Nitrite (N)	mg/L	<0.010	N/A	N/A	N/A	0.010	B537306
Nitrate plus Nitrite (N)	mg/L	0.069 (1)	+/- <RDL	N/A	N/A	0.050	B537306
Lab Filtered Elements							
Dissolved Aluminum (Al)	mg/L	<0.0030	N/A	N/A	N/A	0.0030	B536757
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	N/A	N/A	0.00060	B536757
Dissolved Arsenic (As)	mg/L	0.00023	+/- <RDL	N/A	N/A	0.00020	B536757
Dissolved Barium (Ba)	mg/L	0.014	+/- <RDL	N/A	N/A	0.010	B537443

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Detection limits raised due to matrix interference.

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWB149		CWB149			
Sampling Date		2024/09/21 13:22		2024/09/21 13:22			
COC Number		1/1		1/1			
	UNITS	MW16-10-15	MU	MW16-10-15 Lab-Dup	MU	RDL	QC Batch
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B536757
Dissolved Boron (B)	mg/L	0.22	+/- 0.022	N/A	N/A	0.020	B537443
Dissolved Calcium (Ca)	mg/L	480	+/- 49	N/A	N/A	0.30	B537443
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B536757
Dissolved Cobalt (Co)	mg/L	0.0038	+/- 0.00035	N/A	N/A	0.00030	B536757
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B536757
Dissolved Iron (Fe)	mg/L	<0.060	N/A	N/A	N/A	0.060	B537443
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B536757
Dissolved Lithium (Li)	mg/L	0.069	+/- <RDL	N/A	N/A	0.020	B537443
Dissolved Magnesium (Mg)	mg/L	310	+/- 20	N/A	N/A	0.20	B537443
Dissolved Manganese (Mn)	mg/L	2.7	+/- 0.18	N/A	N/A	0.0040	B537443
Dissolved Molybdenum (Mo)	mg/L	0.00056	+/- 0.00027	N/A	N/A	0.00020	B536757
Dissolved Nickel (Ni)	mg/L	0.0070	+/- 0.00061	N/A	N/A	0.00050	B536757
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	N/A	N/A	0.10	B537443
Dissolved Potassium (K)	mg/L	10	+/- 0.53	N/A	N/A	0.30	B537443
Dissolved Selenium (Se)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B536757
Dissolved Silicon (Si)	mg/L	5.5	+/- 1.0	N/A	N/A	0.50	B537443
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	N/A	N/A	0.00010	B536757
Dissolved Sodium (Na)	mg/L	430	+/- 42	N/A	N/A	0.50	B537443
Dissolved Strontium (Sr)	mg/L	7.7	+/- 0.75	N/A	N/A	0.10	B537443
Dissolved Sulphur (S)	mg/L	1000	+/- 66	N/A	N/A	1.0	B537443
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B536757
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B536757
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B536757
Dissolved Uranium (U)	mg/L	0.013	+/- 0.0012	N/A	N/A	0.00010	B536757
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B536757
Dissolved Zinc (Zn)	mg/L	<0.0030	N/A	N/A	N/A	0.0030	B536757

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWB150		CWB150			
Sampling Date		2024/09/21 14:20		2024/09/21 14:20			
COC Number		1/1		1/1			
	UNITS	MW16-11-15	MU	MW16-11-15 Lab-Dup	MU	RDL	QC Batch
Calculated Parameters							
Anion Sum	meq/L	38	N/A	N/A	N/A	N/A	B531993
Cation Sum	meq/L	38	N/A	N/A	N/A	N/A	B531993
Hardness (CaCO3)	mg/L	1200	N/A	N/A	N/A	0.50	B531981
Ion Balance (% Difference)	%	0.037	N/A	N/A	N/A	N/A	B531989
Nitrate (N)	mg/L	<0.050	N/A	N/A	N/A	0.050	B532004
Nitrate (NO3)	mg/L	<0.22	N/A	N/A	N/A	0.22	B532003
Nitrite (NO2)	mg/L	<0.033	N/A	N/A	N/A	0.033	B532003
Calculated Total Dissolved Solids	mg/L	2400	N/A	N/A	N/A	25	B532015
Elements							
Dissolved Cadmium (Cd)	ug/L	0.097	+/- 0.042	N/A	N/A	0.020	B531954
Misc. Inorganics							
Conductivity	uS/cm	3100	+/- 82	N/A	N/A	2.0	B534885
pH	pH	7.76	+/- 0.0769	N/A	N/A	N/A	B534884
Anions							
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	N/A	N/A	1.0	B534875
Alkalinity (Total as CaCO3)	mg/L	420	+/- 32	N/A	N/A	1.0	B534875
Bicarbonate (HCO3)	mg/L	520	+/- 8.0	N/A	N/A	1.0	B534875
Carbonate (CO3)	mg/L	<1.0	N/A	N/A	N/A	1.0	B534875
Hydroxide (OH)	mg/L	<1.0	N/A	N/A	N/A	1.0	B534875
Chloride (Cl)	mg/L	<1.0	N/A	N/A	N/A	1.0	B535026
Sulphate (SO4)	mg/L	1400	+/- 91	N/A	N/A	25	B535026
Nutrients							
Nitrite (N)	mg/L	<0.010	N/A	N/A	N/A	0.010	B534412
Nitrate plus Nitrite (N)	mg/L	<0.050 (1)	N/A	N/A	N/A	0.050	B534412
Lab Filtered Elements							
Dissolved Aluminum (Al)	mg/L	<0.0030	N/A	<0.0030	N/A	0.0030	B535001
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	<0.00060	N/A	0.00060	B535001
Dissolved Arsenic (As)	mg/L	0.00035	+/- <RDL	0.00038	+/- <RDL	0.00020	B535001
Dissolved Barium (Ba)	mg/L	0.011	+/- <RDL	N/A	N/A	0.010	B534820

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Detection limits raised due to matrix interference.

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWB150		CWB150			
Sampling Date		2024/09/21 14:20		2024/09/21 14:20			
COC Number		1/1		1/1			
	UNITS	MW16-11-15	MU	MW16-11-15 Lab-Dup	MU	RDL	QC Batch
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	<0.0010	N/A	0.0010	B535001
Dissolved Boron (B)	mg/L	0.11	+/- <RDL	N/A	N/A	0.020	B534820
Dissolved Calcium (Ca)	mg/L	300	+/- 30	N/A	N/A	0.30	B534820
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	<0.0010	N/A	0.0010	B535001
Dissolved Cobalt (Co)	mg/L	0.0014	+/- <RDL	0.0015	+/- <RDL	0.00030	B535001
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	<0.0010	N/A	0.0010	B535001
Dissolved Iron (Fe)	mg/L	<0.060	N/A	N/A	N/A	0.060	B534820
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	<0.00020	N/A	0.00020	B535001
Dissolved Lithium (Li)	mg/L	0.036	+/- <RDL	N/A	N/A	0.020	B534820
Dissolved Magnesium (Mg)	mg/L	120	+/- 7.6	N/A	N/A	0.20	B534820
Dissolved Manganese (Mn)	mg/L	1.1	+/- 0.072	N/A	N/A	0.0040	B534820
Dissolved Molybdenum (Mo)	mg/L	0.00068	+/- 0.00029	0.00054	+/- 0.00027	0.00020	B535001
Dissolved Nickel (Ni)	mg/L	0.0023	+/- <RDL	0.0026	+/- <RDL	0.00050	B535001
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	N/A	N/A	0.10	B534820
Dissolved Potassium (K)	mg/L	5.6	+/- 0.30	N/A	N/A	0.30	B534820
Dissolved Selenium (Se)	mg/L	0.00023	+/- <RDL	<0.00020	N/A	0.00020	B535001
Dissolved Silicon (Si)	mg/L	4.4	+/- 0.85	N/A	N/A	0.50	B534820
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	<0.00010	N/A	0.00010	B535001
Dissolved Sodium (Na)	mg/L	310	+/- 30	N/A	N/A	0.50	B534820
Dissolved Strontium (Sr)	mg/L	2.7	+/- 0.26	N/A	N/A	0.020	B534820
Dissolved Sulphur (S)	mg/L	490	+/- 33	N/A	N/A	0.20	B534820
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	<0.00020	N/A	0.00020	B535001
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	<0.0010	N/A	0.0010	B535001
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	<0.0010	N/A	0.0010	B535001
Dissolved Uranium (U)	mg/L	0.0053	+/- 0.00049	0.0058	+/- 0.00053	0.00010	B535001
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	<0.0010	N/A	0.0010	B535001
Dissolved Zinc (Zn)	mg/L	<0.0030	N/A	<0.0030	N/A	0.0030	B535001

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
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N/A = Not Applicable

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWB151				CWB152			
Sampling Date		2024/09/21 17:12				2024/09/21 16:52			
COC Number		1/1				1/1			
	UNITS	MW16-6-20	MU	RDL	QC Batch	MW16-6-11	MU	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	26	N/A	N/A	B531993	46	N/A	N/A	B531993
Cation Sum	meq/L	23	N/A	N/A	B531993	41	N/A	N/A	B531993
Hardness (CaCO3)	mg/L	190	N/A	0.50	B531981	1300	N/A	0.50	B531981
Ion Balance (% Difference)	%	7.6	N/A	N/A	B531989	5.8	N/A	N/A	B531989
Nitrate (N)	mg/L	<0.010	N/A	0.010	B532004	0.017	N/A	0.010	B532004
Nitrate (NO3)	mg/L	<0.044	N/A	0.044	B532003	0.076	N/A	0.044	B532003
Nitrite (NO2)	mg/L	<0.033	N/A	0.033	B532003	<0.033	N/A	0.033	B532003
Calculated Total Dissolved Solids	mg/L	1600	N/A	25	B532015	2800	N/A	25	B532015
Elements									
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	0.020	B531954	0.12	+/- 0.050	0.020	B531954
Misc. Inorganics									
Conductivity	uS/cm	2200	+/- 58	2.0	B534885	3400	+/- 88	2.0	B534972
pH	pH	8.23	+/- 0.0815	N/A	B534884	7.80	+/- 0.0773	N/A	B534967
Anions									
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	1.0	B534875	<1.0	N/A	1.0	B534961
Alkalinity (Total as CaCO3)	mg/L	310	+/- 23	1.0	B534875	430	+/- 32	1.0	B534961
Bicarbonate (HCO3)	mg/L	380	+/- 6.0	1.0	B534875	520	+/- 8.0	1.0	B534961
Carbonate (CO3)	mg/L	<1.0	N/A	1.0	B534875	<1.0	N/A	1.0	B534961
Hydroxide (OH)	mg/L	<1.0	N/A	1.0	B534875	<1.0	N/A	1.0	B534961
Chloride (Cl)	mg/L	1.6	+/- 1.2	1.0	B534022	1.8	+/- 1.2	1.0	B534022
Sulphate (SO4)	mg/L	960	+/- 61	25	B534022	1800	+/- 110	25	B534022
Nutrients									
Nitrite (N)	mg/L	<0.010	N/A	0.010	B534412	<0.010	N/A	0.010	B534412
Nitrate plus Nitrite (N)	mg/L	<0.010	N/A	0.010	B534412	0.017	+/- 0.012	0.010	B534412
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	<0.0030	N/A	0.0030	B535001	<0.0030	N/A	0.0030	B535001
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	0.00060	B535001	<0.00060	N/A	0.00060	B535001
Dissolved Arsenic (As)	mg/L	<0.00020	N/A	0.00020	B535001	0.00026	+/- <RDL	0.00020	B535001
Dissolved Barium (Ba)	mg/L	<0.010	N/A	0.010	B534820	0.010	+/- <RDL	0.010	B534820
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	0.0010	B535001	<0.0010	N/A	0.0010	B535001
Dissolved Boron (B)	mg/L	0.11	+/- <RDL	0.020	B534820	0.13	+/- <RDL	0.020	B534820

RDL = Reportable Detection Limit
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N/A = Not Applicable

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWB151				CWB152			
Sampling Date		2024/09/21 17:12				2024/09/21 16:52			
COC Number		1/1				1/1			
	UNITS	MW16-6-20	MU	RDL	QC Batch	MW16-6-11	MU	RDL	QC Batch
Dissolved Calcium (Ca)	mg/L	50	+/- 5.1	0.30	B534820	310	+/- 31	0.30	B534820
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	0.0010	B535001	<0.0010	N/A	0.0010	B535001
Dissolved Cobalt (Co)	mg/L	<0.00030	N/A	0.00030	B535001	0.0016	+/- <RDL	0.00030	B535001
Dissolved Copper (Cu)	mg/L	0.0017	+/- <RDL	0.0010	B535001	<0.0010	N/A	0.0010	B535001
Dissolved Iron (Fe)	mg/L	<0.060	N/A	0.060	B534820	<0.060	N/A	0.060	B534820
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	0.00020	B535001	<0.00020	N/A	0.00020	B535001
Dissolved Lithium (Li)	mg/L	0.062	+/- <RDL	0.020	B534820	0.044	+/- <RDL	0.020	B534820
Dissolved Magnesium (Mg)	mg/L	15	+/- 0.97	0.20	B534820	130	+/- 8.2	0.20	B534820
Dissolved Manganese (Mn)	mg/L	0.068	+/- 0.0048	0.0040	B534820	0.91	+/- 0.061	0.0040	B534820
Dissolved Molybdenum (Mo)	mg/L	0.0025	+/- 0.00066	0.00020	B535001	0.00087	+/- 0.00032	0.00020	B535001
Dissolved Nickel (Ni)	mg/L	<0.00050	N/A	0.00050	B535001	0.0035	+/- <RDL	0.00050	B535001
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	0.10	B534820	<0.10	N/A	0.10	B534820
Dissolved Potassium (K)	mg/L	3.9	+/- <RDL	0.30	B534820	6.6	+/- 0.35	0.30	B534820
Dissolved Selenium (Se)	mg/L	<0.00020	N/A	0.00020	B535001	0.00025	+/- <RDL	0.00020	B535001
Dissolved Silicon (Si)	mg/L	3.1	+/- 0.59	0.50	B534820	4.3	+/- 0.82	0.50	B534820
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	0.00010	B535001	<0.00010	N/A	0.00010	B535001
Dissolved Sodium (Na)	mg/L	430	+/- 42	0.50	B534820	340	+/- 34	0.50	B534820
Dissolved Strontium (Sr)	mg/L	0.93	+/- 0.091	0.020	B534820	2.5	+/- 0.25	0.020	B534820
Dissolved Sulphur (S)	mg/L	260	+/- 17	0.20	B534820	550	+/- 37	1.0	B534820
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	0.00020	B535001	<0.00020	N/A	0.00020	B535001
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	0.0010	B535001	<0.0010	N/A	0.0010	B535001
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	0.0010	B535001	<0.0010	N/A	0.0010	B535001
Dissolved Uranium (U)	mg/L	<0.00010	N/A	0.00010	B535001	0.0060	+/- 0.00055	0.00010	B535001
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	0.0010	B535001	<0.0010	N/A	0.0010	B535001
Dissolved Zinc (Zn)	mg/L	0.0040	+/- <RDL	0.0030	B535001	0.0041	+/- <RDL	0.0030	B535001

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWB153			CWB154			
Sampling Date		2024/09/21 09:43			2024/09/21 17:20			
COC Number		1/1			1/1			
	UNITS	SW35-R4-01	MU	RDL	SR24-07	MU	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	17	N/A	N/A	61	N/A	N/A	B531993
Cation Sum	meq/L	15	N/A	N/A	59	N/A	N/A	B531993
Hardness (CaCO3)	mg/L	79	N/A	0.50	2100	N/A	0.50	B531981
Ion Balance (% Difference)	%	4.3	N/A	N/A	1.5	N/A	N/A	B531989
Nitrate (N)	mg/L	1.5	N/A	0.050	0.11	N/A	0.050	B532004
Nitrate (NO3)	mg/L	6.5	N/A	0.22	0.49	N/A	0.22	B532003
Nitrite (NO2)	mg/L	0.037	N/A	0.033	<0.033	N/A	0.033	B532003
Calculated Total Dissolved Solids	mg/L	900	N/A	10	3800	N/A	25	B532015
Elements								
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	0.020	0.13	+/- 0.056	0.020	B531954
Misc. Inorganics								
Conductivity	uS/cm	1400	+/- 37	2.0	4700	+/- 120	2.0	B534885
pH	pH	8.23	+/- 0.0816	N/A	7.57	+/- 0.0750	N/A	B534884
Anions								
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	1.0	<1.0	N/A	1.0	B534875
Alkalinity (Total as CaCO3)	mg/L	650	+/- 48	1.0	540	+/- 40	1.0	B534875
Bicarbonate (HCO3)	mg/L	800	+/- 12	1.0	660	+/- 10	1.0	B534875
Carbonate (CO3)	mg/L	<1.0	N/A	1.0	<1.0	N/A	1.0	B534875
Hydroxide (OH)	mg/L	<1.0	N/A	1.0	<1.0	N/A	1.0	B534875
Chloride (Cl)	mg/L	5.6	+/- 1.3	1.0	2.4	+/- 1.2	1.0	B535026
Sulphate (SO4)	mg/L	150	+/- 9.9	5.0	2400	+/- 150	25	B535026
Nutrients								
Nitrite (N)	mg/L	0.011	+/- <RDL	0.010	<0.010	N/A	0.010	B534412
Nitrate plus Nitrite (N)	mg/L	1.5	+/- 0.13	0.050	0.11 (1)	+/- <RDL	0.050	B534412
Lab Filtered Elements								
Dissolved Aluminum (Al)	mg/L	<0.0030	N/A	0.0030	<0.0030	N/A	0.0030	B535001
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	0.00060	<0.00060	N/A	0.00060	B535001
Dissolved Arsenic (As)	mg/L	0.00049	+/- <RDL	0.00020	0.00026	+/- <RDL	0.00020	B535001
Dissolved Barium (Ba)	mg/L	0.022	+/- <RDL	0.010	<0.010	N/A	0.010	B534820
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B535001

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Detection limits raised due to matrix interference.

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWB153			CWB154			
Sampling Date		2024/09/21 09:43			2024/09/21 17:20			
COC Number		1/1			1/1			
	UNITS	SW35-R4-01	MU	RDL	SR24-07	MU	RDL	QC Batch
Dissolved Boron (B)	mg/L	0.076	+/- <RDL	0.020	0.19	+/- 0.020	0.020	B534820
Dissolved Calcium (Ca)	mg/L	20	+/- 2.1	0.30	430	+/- 43	0.30	B534820
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B535001
Dissolved Cobalt (Co)	mg/L	<0.00030	N/A	0.00030	0.0039	+/- 0.00036	0.00030	B535001
Dissolved Copper (Cu)	mg/L	0.0034	+/- 0.0010	0.0010	<0.0010	N/A	0.0010	B535001
Dissolved Iron (Fe)	mg/L	<0.060	N/A	0.060	<0.060	N/A	0.060	B534820
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	0.00020	<0.00020	N/A	0.00020	B535001
Dissolved Lithium (Li)	mg/L	0.062	+/- <RDL	0.020	0.059	+/- <RDL	0.020	B534820
Dissolved Magnesium (Mg)	mg/L	6.7	+/- 0.44	0.20	250	+/- 16	0.20	B534820
Dissolved Manganese (Mn)	mg/L	0.0092	+/- <RDL	0.0040	2.5	+/- 0.17	0.0040	B534820
Dissolved Molybdenum (Mo)	mg/L	0.0052	+/- 0.0013	0.00020	0.00064	+/- 0.00028	0.00020	B535001
Dissolved Nickel (Ni)	mg/L	<0.00050	N/A	0.00050	0.0072	+/- 0.00062	0.00050	B535001
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	0.10	<0.10	N/A	0.10	B534820
Dissolved Potassium (K)	mg/L	2.7	+/- <RDL	0.30	9.5	+/- 0.48	0.30	B534820
Dissolved Selenium (Se)	mg/L	0.0014	+/- <RDL	0.00020	<0.00020	N/A	0.00020	B535001
Dissolved Silicon (Si)	mg/L	2.8	+/- 0.54	0.50	4.8	+/- 0.92	0.50	B534820
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	0.00010	<0.00010	N/A	0.00010	B535001
Dissolved Sodium (Na)	mg/L	310	+/- 30	0.50	390	+/- 38	0.50	B534820
Dissolved Strontium (Sr)	mg/L	0.31	+/- 0.030	0.020	6.3	+/- 0.62	0.10	B534820
Dissolved Sulphur (S)	mg/L	49	+/- 3.3	0.20	900	+/- 60	1.0	B534820
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	0.00020	<0.00020	N/A	0.00020	B535001
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B535001
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B535001
Dissolved Uranium (U)	mg/L	0.00063	+/- <RDL	0.00010	0.013	+/- 0.0012	0.00010	B535001
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B535001
Dissolved Zinc (Zn)	mg/L	0.018	+/- <RDL	0.0030	0.0032	+/- <RDL	0.0030	B535001

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

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TOTAL KJELDAHL NITROGEN (TOTAL)

Bureau Veritas ID		CWB146			CWB147			CWB148			
Sampling Date		2024/09/21 08:40			2024/09/21 10:55			2024/09/21 11:42			
COC Number		1/1			1/1			1/1			
	UNITS	MW16-3-7	MU	QC Batch	MW16-2-6	MU	QC Batch	MW16-7-5	MU	RDL	QC Batch
Calculated Parameters											
Total Kjeldahl Nitrogen (Calc)	mg/L	0.32	N/A	B532022	1.4	N/A	B532022	0.92	N/A	0.20	B532022
Nutrients											
Total Nitrogen (N)	mg/L	0.47 (1)	+/- <RDL	B536479	1.4 (1)	+/- 0.20	B534872	0.92 (1)	+/- <RDL	0.20	B534840

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Bureau Veritas ID		CWB149			CWB150			CWB151			
Sampling Date		2024/09/21 13:22			2024/09/21 14:20			2024/09/21 17:12			
COC Number		1/1			1/1			1/1			
	UNITS	MW16-10-15	MU	QC Batch	MW16-11-15	MU	RDL	MW16-6-20	MU	RDL	QC Batch
Calculated Parameters											
Total Kjeldahl Nitrogen (Calc)	mg/L	1.3	N/A	B532022	1.1	N/A	0.20	1.4	N/A	0.020	B532022
Nutrients											
Total Nitrogen (N)	mg/L	1.4 (1)	+/- 0.21	B534872	1.1 (1)	+/- <RDL	0.20	1.4	+/- 0.21	0.020	B534840

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Bureau Veritas ID		CWB152				CWB153		CWB153			
Sampling Date		2024/09/21 16:52				2024/09/21 09:43		2024/09/21 09:43			
COC Number		1/1				1/1		1/1			
	UNITS	MW16-6-11	MU	RDL	QC Batch	SW35-R4-01	MU	SW35-R4-01 Lab-Dup	MU	RDL	QC Batch
Calculated Parameters											
Total Kjeldahl Nitrogen (Calc)	mg/L	2.1	N/A	2.0	B532022	<0.050	N/A	N/A	N/A	0.050	B532022
Nutrients											
Total Nitrogen (N)	mg/L	2.1 (1)	+/- <RDL	2.0	B534872	1.4 (2)	+/- 0.22	1.5	+/- 0.22	0.020	B542445

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.
(2) Nitrogen < Nitrate: Both values fall within the method uncertainty for duplicates and are likely equivalent.

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TOTAL KJELDAHL NITROGEN (TOTAL)

Bureau Veritas ID		CWB154			
Sampling Date		2024/09/21 17:20			
COC Number		1/1			
	UNITS	**SR24-07**	**MU**	**RDL**	**QC Batch**
Calculated Parameters					
Total Kjeldahl Nitrogen (Calc)	mg/L	1.1	N/A	0.20	B532022
Nutrients					
Total Nitrogen (N)	mg/L	1.2 (1)	+/- <RDL	0.20	B534840

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		CWB146		CWB147		CWB147			
Sampling Date		2024/09/21 08:40		2024/09/21 10:55		2024/09/21 10:55			
COC Number		1/1		1/1		1/1			
	UNITS	MW16-3-7	MU	MW16-2-6	MU	MW16-2-6 Lab-Dup	MU	RDL	QC Batch
Lab Filtered Inorganics									
Dissolved Organic Carbon (C)	mg/L	3.2	+/- 0.54	3.7	+/- 0.58	N/A	N/A	0.50	B539945
Microbiological Param.									
E.Coli DST	MPN/100mL	<2.0 (1)	N/A	<2.0 (1)	N/A	N/A	N/A	2.0	B532128
Fecal Coliforms	MPN/100mL	<2.0 (1)	N/A	2.0 (1)	N/A	N/A	N/A	2.0	B532129
Heterotrophic DST	MPN/100mL	>2400	N/A	>2400	N/A	>2400	N/A	1.0	B532133
Total Coliforms DST	MPN/100mL	<2.0 (1)	N/A	<2.0 (1)	N/A	N/A	N/A	2.0	B532128
Nutrients									
Total Ammonia (N)	mg/L	0.020	+/- <RDL	0.19	+/- 0.024	N/A	N/A	0.015	B536591
Orthophosphate (P)	mg/L	0.013	+/- 0.0039	0.0040	+/- 0.0035	N/A	N/A	0.0030	B534933
Lab Filtered Nutrients									
Dissolved Phosphorus (P)	mg/L	0.010 (2)	+/- 0.0049	<0.0030 (2)	N/A	N/A	N/A	0.0030	B536572

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Detection limit raised due to matrix interference.
(2) Phosphorus < Orthophosphate: Both values fall within the method uncertainty for duplicates and are likely equivalent.

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		CWB148			CWB149		CWB149			
Sampling Date		2024/09/21 11:42			2024/09/21 13:22		2024/09/21 13:22			
COC Number		1/1			1/1		1/1			
	UNITS	MW16-7-5	MU	QC Batch	MW16-10-15	MU	MW16-10-15 Lab-Dup	MU	RDL	QC Batch
Lab Filtered Inorganics										
Dissolved Organic Carbon (C)	mg/L	1.7	+/- <RDL	B540201	1.8	+/- <RDL	1.7	+/- <RDL	0.50	B539945
Microbiological Param.										
E.Coli DST	MPN/100mL	<5.0 (1)	N/A	B532128	<5.0 (1)	N/A	N/A	N/A	5.0	B532128
Fecal Coliforms	MPN/100mL	<5.0 (1)	N/A	B532129	<5.0 (1)	N/A	N/A	N/A	5.0	B532129
Heterotrophic DST	MPN/100mL	>2400	N/A	B532133	>2400	N/A	N/A	N/A	1.0	B532133
Total Coliforms DST	MPN/100mL	2900 (1)	N/A	B532128	<5.0 (1)	N/A	N/A	N/A	5.0	B532128
Nutrients										
Total Ammonia (N)	mg/L	0.019	+/- <RDL	B536591	0.37	+/- 0.042	N/A	N/A	0.015	B536591
Orthophosphate (P)	mg/L	0.0085	+/- 0.0036	B534933	<0.0030	N/A	N/A	N/A	0.0030	B535122
Lab Filtered Nutrients										
Dissolved Phosphorus (P)	mg/L	0.0056 (2)	+/- 0.0048	B536572	0.0058	+/- 0.0048	N/A	N/A	0.0030	B536572

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Detection limit raised due to matrix interference.
(2) Phosphorus < Orthophosphate: Both values fall within the method uncertainty for duplicates and are likely equivalent.

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		CWB150		CWB150			CWB151			
Sampling Date		2024/09/21 14:20		2024/09/21 14:20			2024/09/21 17:12			
COC Number		1/1		1/1			1/1			
	UNITS	MW16-11-15	MU	MW16-11-15 Lab-Dup	MU	RDL	MW16-6-20	MU	RDL	QC Batch
Lab Filtered Inorganics										
Dissolved Organic Carbon (C)	mg/L	2.2	+/- <RDL	N/A	N/A	0.50	2.0	+/- <RDL	0.50	B539945
Microbiological Param.										
E.Coli DST	MPN/100mL	<5.0 (1)	N/A	N/A	N/A	5.0	<1.0	N/A	1.0	B532128
Fecal Coliforms	MPN/100mL	<5.0 (1)	N/A	N/A	N/A	5.0	<1.0	N/A	1.0	B532129
Heterotrophic DST	MPN/100mL	>4800 (1)	N/A	N/A	N/A	2.0	>2400	N/A	1.0	B532133
Total Coliforms DST	MPN/100mL	<5.0 (1)	N/A	N/A	N/A	5.0	56	N/A	1.0	B532128
Nutrients										
Total Ammonia (N)	mg/L	0.46	+/- 0.051	N/A	N/A	0.015	1.1	+/- 0.12	0.015	B536591
Orthophosphate (P)	mg/L	<0.0030	N/A	<0.0030	N/A	0.0030	<0.0030	N/A	0.0030	B534933
Lab Filtered Nutrients										
Dissolved Phosphorus (P)	mg/L	<0.0030	N/A	N/A	N/A	0.0030	0.089	+/- 0.0088	0.0030	B536572

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Detection limit raised due to matrix interference.

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		CWB151		CWB152		CWB153		CWB153			
Sampling Date		2024/09/21 17:12		2024/09/21 16:52		2024/09/21 09:43		2024/09/21 09:43			
COC Number		1/1		1/1		1/1		1/1			
	UNITS	MW16-6-20 Lab-Dup	MU	MW16-6-11	MU	SW35-R4-01	MU	SW35-R4-01 Lab-Dup	MU	RDL	QC Batch
Lab Filtered Inorganics											
Dissolved Organic Carbon (C)	mg/L	N/A	N/A	2.0	+/- <RDL	1.2	+/- <RDL	N/A	N/A	0.50	B539945
Microbiological Param.											
E.Coli DST	MPN/100mL	N/A	N/A	<1.0	N/A	<1.0	N/A	<1.0	N/A	1.0	B532128
Fecal Coliforms	MPN/100mL	<1.0	N/A	<1.0	N/A	<1.0	N/A	N/A	N/A	1.0	B532129
Heterotrophic DST	MPN/100mL	N/A	N/A	>2400	N/A	2000	N/A	N/A	N/A	1.0	B532133
Total Coliforms DST	MPN/100mL	N/A	N/A	1.0	N/A	<1.0	N/A	<1.0	N/A	1.0	B532128
Nutrients											
Total Ammonia (N)	mg/L	N/A	N/A	0.26	+/- 0.030	0.12	+/- 0.017	N/A	N/A	0.015	B536591
Orthophosphate (P)	mg/L	N/A	N/A	<0.0030	N/A	0.0093	+/- 0.0037	N/A	N/A	0.0030	B534933
Lab Filtered Nutrients											
Dissolved Phosphorus (P)	mg/L	N/A	N/A	<0.0030	N/A	0.0049 (1)	+/- 0.0048	N/A	N/A	0.0030	B536572

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Phosphorus < Orthophosphate: Both values fall within the method uncertainty for duplicates and are likely equivalent.

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		CWB154			
Sampling Date		2024/09/21 17:20			
COC Number		1/1			
	UNITS	SR24-07	MU	RDL	QC Batch
Lab Filtered Inorganics					
Dissolved Organic Carbon (C)	mg/L	1.8	+/- <RDL	0.50	B540201
Microbiological Param.					
E.Coli DST	MPN/100mL	<5.0 (1)	N/A	5.0	B532128
Fecal Coliforms	MPN/100mL	<5.0 (1)	N/A	5.0	B532129
Heterotrophic DST	MPN/100mL	>2400	N/A	1.0	B532133
Total Coliforms DST	MPN/100mL	5.0 (1)	N/A	5.0	B532128
Nutrients					
Total Ammonia (N)	mg/L	0.37	+/- 0.042	0.015	B536591
Orthophosphate (P)	mg/L	<0.0030	N/A	0.0030	B534933
Lab Filtered Nutrients					
Dissolved Phosphorus (P)	mg/L	<0.0030	N/A	0.0030	B536572

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Detection limit raised due to matrix interference.

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MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		CWB146			CWB147			CWB148			
Sampling Date		2024/09/21 08:40			2024/09/21 10:55			2024/09/21 11:42			
COC Number		1/1			1/1			1/1			
	UNITS	MW16-3-7	MU	RDL	MW16-2-6	MU	QC Batch	MW16-7-5	MU	RDL	QC Batch
Elements											
Total Mercury (Hg)	ug/L	0.0167	+/- 0.0034	0.0019	0.088 (1)	+/- <RDL	B534623	0.032 (1)	+/- <RDL	0.019	B534579
Lab Filtered Elements											
Dissolved Mercury (Hg)	ug/L	<0.0019	N/A	0.0019	<0.0019	N/A	B534419	<0.0019	N/A	0.0019	B533454

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Bureau Veritas ID		CWB149		CWB150			CWB151			
Sampling Date		2024/09/21 13:22		2024/09/21 14:20			2024/09/21 17:12			
COC Number		1/1		1/1			1/1			
	UNITS	MW16-10-15	MU	MW16-11-15	MU	RDL	MW16-6-20	MU	RDL	QC Batch
Elements										
Total Mercury (Hg)	ug/L	0.038 (1)	+/- <RDL	0.244 (1)	+/- 0.042	0.019	<0.0019	N/A	0.0019	B534579
Lab Filtered Elements										
Dissolved Mercury (Hg)	ug/L	<0.0019	N/A	<0.0019	N/A	0.0019	<0.0019	N/A	0.0019	B533454

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Bureau Veritas ID		CWB152			CWB153			CWB154			
Sampling Date		2024/09/21 16:52			2024/09/21 09:43			2024/09/21 17:20			
COC Number		1/1			1/1			1/1			
	UNITS	MW16-6-11	MU	RDL	SW35-R4-01	MU	RDL	SR24-07	MU	RDL	QC Batch
Elements											
Total Mercury (Hg)	ug/L	0.727 (1)	+/- 0.124	0.019	<0.0019	N/A	0.0019	0.047 (1)	+/- <RDL	0.019	B534623
Lab Filtered Elements											
Dissolved Mercury (Hg)	ug/L	<0.0019	N/A	0.0019	<0.0019	N/A	0.0019	<0.0019	N/A	0.0019	B534419

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.2°C
Package 2	2.4°C

Sample CWB149 [MW16-10-15] : NO2 (N); NO2 (N) + NO3 (N) in Water completed within five days of sampling. Data is satisfactory for compliance purposes.

The estimate of uncertainty has been reported as an expanded uncertainty and calculated using a coverage factor of 2, which gives a level of confidence of 95%.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B532128	SOG	Method Blank	E.Coli DST	2024/09/23	<1.0		mpn/100mL	
			Total Coliforms DST	2024/09/23	<1.0		mpn/100mL	
B532128	SOG	RPD [CWB153-10]	E.Coli DST	2024/09/23	NC		%	N/A
			Total Coliforms DST	2024/09/23	NC		%	N/A
B532129	YYL	Method Blank	Fecal Coliforms	2024/09/23	<1.0		MPN/100mL	
B532129	YYL	RPD [CWB151-10]	Fecal Coliforms	2024/09/23	NC		%	N/A
B532133	YYL	Method Blank	Heterotrophic DST	2024/09/24	<1.0		mpn/100mL	
B532133	YYL	RPD [CWB147-10]	Heterotrophic DST	2024/09/24	NC		%	N/A
B532546	BQU	Spiked Blank	O-TERPHENYL (sur.)	2024/09/25		99	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2024/09/25		92	%	60 - 140
B532546	BQU	Method Blank	O-TERPHENYL (sur.)	2024/09/25		94	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2024/09/25	<0.10		mg/L	
B533161	RIL	Matrix Spike	1,4-Difluorobenzene (sur.)	2024/09/25		97	%	50 - 140
			4-Bromofluorobenzene (sur.)	2024/09/25		103	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2024/09/25		92	%	50 - 140
			Benzene	2024/09/25		86	%	50 - 140
			Toluene	2024/09/25		90	%	50 - 140
			Ethylbenzene	2024/09/25		93	%	50 - 140
			m & p-Xylene	2024/09/25		93	%	50 - 140
			o-Xylene	2024/09/25		97	%	50 - 140
			F1 (C6-C10)	2024/09/25		95	%	60 - 140
B533161	RIL	Spiked Blank	1,4-Difluorobenzene (sur.)	2024/09/25		100	%	50 - 140
			4-Bromofluorobenzene (sur.)	2024/09/25		106	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2024/09/25		93	%	50 - 140
			Benzene	2024/09/25		85	%	60 - 130
			Toluene	2024/09/25		89	%	60 - 130
			Ethylbenzene	2024/09/25		93	%	60 - 130
			m & p-Xylene	2024/09/25		92	%	60 - 130
			o-Xylene	2024/09/25		95	%	60 - 130
			F1 (C6-C10)	2024/09/25		97	%	60 - 140
B533161	RIL	Method Blank	1,4-Difluorobenzene (sur.)	2024/09/25		100	%	50 - 140
			4-Bromofluorobenzene (sur.)	2024/09/25		103	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2024/09/25		94	%	50 - 140
			Benzene	2024/09/25	<0.00040		mg/L	
			Toluene	2024/09/25	<0.00040		mg/L	
			Ethylbenzene	2024/09/25	<0.00040		mg/L	
			m & p-Xylene	2024/09/25	<0.00080		mg/L	
			o-Xylene	2024/09/25	<0.00040		mg/L	
			F1 (C6-C10)	2024/09/25	<0.10		mg/L	
B533161	RIL	RPD	Benzene	2024/09/25	NC		%	30
			Toluene	2024/09/25	NC		%	30
			Ethylbenzene	2024/09/25	NC		%	30
			m & p-Xylene	2024/09/25	NC		%	30
			o-Xylene	2024/09/25	NC		%	30
			F1 (C6-C10)	2024/09/25	NC		%	30
B533454	KHU	Matrix Spike	Dissolved Mercury (Hg)	2024/09/25		106	%	80 - 120
B533454	KHU	Spiked Blank	Dissolved Mercury (Hg)	2024/09/25		100	%	80 - 120
B533454	KHU	Method Blank	Dissolved Mercury (Hg)	2024/09/25	<0.0019		ug/L	
B533454	KHU	RPD	Dissolved Mercury (Hg)	2024/09/25	NC		%	20
B534022	HAP	Matrix Spike	Chloride (Cl)	2024/09/24		NC	%	80 - 120
			Sulphate (SO4)	2024/09/24		NC	%	80 - 120
B534022	HAP	Spiked Blank	Chloride (Cl)	2024/09/24		98	%	80 - 120
			Sulphate (SO4)	2024/09/24		107	%	80 - 120
B534022	HAP	Method Blank	Chloride (Cl)	2024/09/24	<1.0		mg/L	

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			Sulphate (SO4)	2024/09/24	<1.0		mg/L	
B534022	HAP	RPD	Chloride (Cl)	2024/09/24	0.043		%	20
			Sulphate (SO4)	2024/09/24	1.5		%	20
B534412	AFI	Matrix Spike	Nitrite (N)	2024/09/24		109	%	80 - 120
			Nitrate plus Nitrite (N)	2024/09/24		95	%	80 - 120
B534412	AFI	Spiked Blank	Nitrite (N)	2024/09/24		102	%	80 - 120
			Nitrate plus Nitrite (N)	2024/09/24		102	%	80 - 120
B534412	AFI	Method Blank	Nitrite (N)	2024/09/24	<0.010		mg/L	
			Nitrate plus Nitrite (N)	2024/09/24	<0.010		mg/L	
B534412	AFI	RPD	Nitrite (N)	2024/09/24	NC		%	20
			Nitrate plus Nitrite (N)	2024/09/24	NC		%	20
B534419	MPK	Matrix Spike	Dissolved Mercury (Hg)	2024/09/26		94	%	80 - 120
B534419	MPK	Spiked Blank	Dissolved Mercury (Hg)	2024/09/26		99	%	80 - 120
B534419	MPK	Method Blank	Dissolved Mercury (Hg)	2024/09/26	<0.0019		ug/L	
B534419	MPK	RPD	Dissolved Mercury (Hg)	2024/09/26	NC		%	20
B534549	AFI	Matrix Spike [CWB147-01]	Nitrite (N)	2024/09/24		107	%	80 - 120
			Nitrate plus Nitrite (N)	2024/09/24		104	%	80 - 120
B534549	AFI	Spiked Blank	Nitrite (N)	2024/09/24		102	%	80 - 120
			Nitrate plus Nitrite (N)	2024/09/24		100	%	80 - 120
B534549	AFI	Method Blank	Nitrite (N)	2024/09/24	<0.010		mg/L	
			Nitrate plus Nitrite (N)	2024/09/24	<0.010		mg/L	
B534549	AFI	RPD [CWB147-01]	Nitrite (N)	2024/09/24	NC		%	20
			Nitrate plus Nitrite (N)	2024/09/24	NC		%	20
B534579	MPK	Matrix Spike	Total Mercury (Hg)	2024/09/26		102	%	80 - 120
B534579	MPK	Spiked Blank	Total Mercury (Hg)	2024/09/26		97	%	80 - 120
B534579	MPK	Method Blank	Total Mercury (Hg)	2024/09/26	<0.0019		ug/L	
B534579	MPK	RPD	Total Mercury (Hg)	2024/09/26	NC		%	20
B534623	MPK	Matrix Spike	Total Mercury (Hg)	2024/09/26		100	%	80 - 120
B534623	MPK	Spiked Blank	Total Mercury (Hg)	2024/09/26		96	%	80 - 120
B534623	MPK	Method Blank	Total Mercury (Hg)	2024/09/26	<0.0019		ug/L	
B534623	MPK	RPD	Total Mercury (Hg)	2024/09/26	NC		%	20
B534820	VSC	Matrix Spike	Dissolved Barium (Ba)	2024/09/25		92	%	80 - 120
			Dissolved Boron (B)	2024/09/25		93	%	80 - 120
			Dissolved Calcium (Ca)	2024/09/25		NC	%	80 - 120
			Dissolved Iron (Fe)	2024/09/25		109	%	80 - 120
			Dissolved Lithium (Li)	2024/09/25		93	%	80 - 120
			Dissolved Magnesium (Mg)	2024/09/25		NC	%	80 - 120
			Dissolved Manganese (Mn)	2024/09/25		108	%	80 - 120
			Dissolved Phosphorus (P)	2024/09/25		106	%	80 - 120
			Dissolved Potassium (K)	2024/09/25		97	%	80 - 120
			Dissolved Silicon (Si)	2024/09/25		96	%	80 - 120
			Dissolved Sodium (Na)	2024/09/25		NC	%	80 - 120
			Dissolved Strontium (Sr)	2024/09/25		NC	%	80 - 120
			Dissolved Sulphur (S)	2024/09/25		NC	%	80 - 120
B534820	VSC	Spiked Blank	Dissolved Barium (Ba)	2024/09/25		100	%	80 - 120
			Dissolved Boron (B)	2024/09/25		97	%	80 - 120
			Dissolved Calcium (Ca)	2024/09/25		98	%	80 - 120
			Dissolved Iron (Fe)	2024/09/25		105	%	80 - 120
			Dissolved Lithium (Li)	2024/09/25		100	%	80 - 120
			Dissolved Magnesium (Mg)	2024/09/25		96	%	80 - 120
			Dissolved Manganese (Mn)	2024/09/25		102	%	80 - 120
			Dissolved Phosphorus (P)	2024/09/25		100	%	80 - 120
			Dissolved Potassium (K)	2024/09/25		100	%	80 - 120

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			Dissolved Silicon (Si)	2024/09/25		95	%	80 - 120
			Dissolved Sodium (Na)	2024/09/25		99	%	80 - 120
			Dissolved Strontium (Sr)	2024/09/25		94	%	80 - 120
			Dissolved Sulphur (S)	2024/09/25		96	%	80 - 120
B534820	VSC	Method Blank	Dissolved Barium (Ba)	2024/09/25	<0.010		mg/L	
			Dissolved Boron (B)	2024/09/25	<0.020		mg/L	
			Dissolved Calcium (Ca)	2024/09/25	<0.30		mg/L	
			Dissolved Iron (Fe)	2024/09/25	<0.060		mg/L	
			Dissolved Lithium (Li)	2024/09/25	<0.020		mg/L	
			Dissolved Magnesium (Mg)	2024/09/25	<0.20		mg/L	
			Dissolved Manganese (Mn)	2024/09/25	<0.0040		mg/L	
			Dissolved Phosphorus (P)	2024/09/25	<0.10		mg/L	
			Dissolved Potassium (K)	2024/09/25	<0.30		mg/L	
			Dissolved Silicon (Si)	2024/09/25	<0.50		mg/L	
			Dissolved Sodium (Na)	2024/09/25	<0.50		mg/L	
			Dissolved Strontium (Sr)	2024/09/25	<0.020		mg/L	
			Dissolved Sulphur (S)	2024/09/25	<0.20		mg/L	
B534820	VSC	RPD	Dissolved Calcium (Ca)	2024/09/25	0.94		%	20
			Dissolved Iron (Fe)	2024/09/25	NC		%	20
			Dissolved Magnesium (Mg)	2024/09/25	2.1		%	20
			Dissolved Manganese (Mn)	2024/09/25	2.8		%	20
			Dissolved Potassium (K)	2024/09/25	1.8		%	20
			Dissolved Sodium (Na)	2024/09/25	1.3		%	20
B534840	YL7	Matrix Spike	Total Nitrogen (N)	2024/09/25		NC	%	80 - 120
B534840	YL7	QC Standard	Total Nitrogen (N)	2024/09/25		105	%	N/A
B534840	YL7	Spiked Blank	Total Nitrogen (N)	2024/09/25		107	%	80 - 120
B534840	YL7	Method Blank	Total Nitrogen (N)	2024/09/25	<0.020		mg/L	
B534840	YL7	RPD	Total Nitrogen (N)	2024/09/25	11		%	20
B534872	YL7	Matrix Spike	Total Nitrogen (N)	2024/09/25		107	%	80 - 120
B534872	YL7	QC Standard	Total Nitrogen (N)	2024/09/25		103	%	80 - 120
B534872	YL7	Spiked Blank	Total Nitrogen (N)	2024/09/25		104	%	80 - 120
B534872	YL7	Method Blank	Total Nitrogen (N)	2024/09/25	<0.020		mg/L	
B534872	YL7	RPD	Total Nitrogen (N)	2024/09/25	7.9		%	20
B534875	AYE	Spiked Blank	Alkalinity (Total as CaCO3)	2024/09/26		101	%	80 - 120
B534875	AYE	Method Blank	Alkalinity (PP as CaCO3)	2024/09/26	<1.0		mg/L	
			Alkalinity (Total as CaCO3)	2024/09/26	<1.0		mg/L	
			Bicarbonate (HCO3)	2024/09/26	<1.0		mg/L	
			Carbonate (CO3)	2024/09/26	<1.0		mg/L	
			Hydroxide (OH)	2024/09/26	<1.0		mg/L	
B534875	AYE	RPD	Alkalinity (PP as CaCO3)	2024/09/26	NC		%	20
			Alkalinity (Total as CaCO3)	2024/09/26	0.45		%	20
			Bicarbonate (HCO3)	2024/09/26	0.45		%	20
			Carbonate (CO3)	2024/09/26	NC		%	20
			Hydroxide (OH)	2024/09/26	NC		%	20
B534884	AYE	Spiked Blank	pH	2024/09/26		100	%	97 - 103
B534884	AYE	RPD	pH	2024/09/26	0.14		%	N/A
B534885	AYE	Spiked Blank	Conductivity	2024/09/26		101	%	90 - 110
B534885	AYE	Method Blank	Conductivity	2024/09/26	<2.0		uS/cm	
B534885	AYE	RPD	Conductivity	2024/09/26	0		%	10
B534933	YL7	Matrix Spike [CWB150-01]	Orthophosphate (P)	2024/09/24		96	%	80 - 120
B534933	YL7	Spiked Blank	Orthophosphate (P)	2024/09/24		99	%	80 - 120
B534933	YL7	Method Blank	Orthophosphate (P)	2024/09/24	<0.0030		mg/L	
B534933	YL7	RPD [CWB150-01]	Orthophosphate (P)	2024/09/24	NC		%	20

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B534961	AYE	Spiked Blank	Alkalinity (Total as CaCO3)	2024/09/26		103	%	80 - 120
B534961	AYE	Method Blank	Alkalinity (PP as CaCO3)	2024/09/26	<1.0		mg/L	
			Alkalinity (Total as CaCO3)	2024/09/26	<1.0		mg/L	
			Bicarbonate (HCO3)	2024/09/26	<1.0		mg/L	
			Carbonate (CO3)	2024/09/26	<1.0		mg/L	
			Hydroxide (OH)	2024/09/26	<1.0		mg/L	
B534961	AYE	RPD	Alkalinity (PP as CaCO3)	2024/09/26	9.5		%	20
			Alkalinity (Total as CaCO3)	2024/09/26	3.8		%	20
			Bicarbonate (HCO3)	2024/09/26	4.4		%	20
			Carbonate (CO3)	2024/09/26	9.5		%	20
			Hydroxide (OH)	2024/09/26	NC		%	20
B534967	AYE	Spiked Blank	pH	2024/09/26		100	%	97 - 103
B534967	AYE	RPD	pH	2024/09/26	0.15		%	N/A
B534972	AYE	Spiked Blank	Conductivity	2024/09/26		102	%	90 - 110
B534972	AYE	Method Blank	Conductivity	2024/09/26	<2.0		uS/cm	
B534972	AYE	RPD	Conductivity	2024/09/26	0.10		%	10
B535001	KH2	Matrix Spike [CWB150-01]	Dissolved Aluminum (Al)	2024/09/24		101	%	80 - 120
			Dissolved Antimony (Sb)	2024/09/24		86	%	80 - 120
			Dissolved Arsenic (As)	2024/09/24		96	%	80 - 120
			Dissolved Beryllium (Be)	2024/09/24		94	%	80 - 120
			Dissolved Chromium (Cr)	2024/09/24		100	%	80 - 120
			Dissolved Cobalt (Co)	2024/09/24		100	%	80 - 120
			Dissolved Copper (Cu)	2024/09/24		93	%	80 - 120
			Dissolved Lead (Pb)	2024/09/24		86	%	80 - 120
			Dissolved Molybdenum (Mo)	2024/09/24		105	%	80 - 120
			Dissolved Nickel (Ni)	2024/09/24		97	%	80 - 120
			Dissolved Selenium (Se)	2024/09/24		93	%	80 - 120
			Dissolved Silver (Ag)	2024/09/24		90	%	80 - 120
			Dissolved Thallium (Tl)	2024/09/24		86	%	80 - 120
			Dissolved Tin (Sn)	2024/09/24		99	%	80 - 120
			Dissolved Titanium (Ti)	2024/09/24		100	%	80 - 120
			Dissolved Uranium (U)	2024/09/24		94	%	80 - 120
			Dissolved Vanadium (V)	2024/09/24		103	%	80 - 120
			Dissolved Zinc (Zn)	2024/09/24		86	%	80 - 120
B535001	KH2	Spiked Blank	Dissolved Aluminum (Al)	2024/09/24		112	%	80 - 120
			Dissolved Antimony (Sb)	2024/09/24		87	%	80 - 120
			Dissolved Arsenic (As)	2024/09/24		85	%	80 - 120
			Dissolved Beryllium (Be)	2024/09/24		97	%	80 - 120
			Dissolved Chromium (Cr)	2024/09/24		101	%	80 - 120
			Dissolved Cobalt (Co)	2024/09/24		104	%	80 - 120
			Dissolved Copper (Cu)	2024/09/24		102	%	80 - 120
			Dissolved Lead (Pb)	2024/09/24		96	%	80 - 120
			Dissolved Molybdenum (Mo)	2024/09/24		99	%	80 - 120
			Dissolved Nickel (Ni)	2024/09/24		103	%	80 - 120
			Dissolved Selenium (Se)	2024/09/24		82	%	80 - 120
			Dissolved Silver (Ag)	2024/09/24		96	%	80 - 120
			Dissolved Thallium (Tl)	2024/09/24		94	%	80 - 120
			Dissolved Tin (Sn)	2024/09/24		97	%	80 - 120
			Dissolved Titanium (Ti)	2024/09/24		97	%	80 - 120
			Dissolved Uranium (U)	2024/09/24		97	%	80 - 120
			Dissolved Vanadium (V)	2024/09/24		100	%	80 - 120
			Dissolved Zinc (Zn)	2024/09/24		88	%	80 - 120
B535001	KH2	Method Blank	Dissolved Aluminum (Al)	2024/09/24	<0.0030		mg/L	

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			Dissolved Antimony (Sb)	2024/09/24	<0.00060		mg/L	
			Dissolved Arsenic (As)	2024/09/24	<0.00020		mg/L	
			Dissolved Beryllium (Be)	2024/09/24	<0.0010		mg/L	
			Dissolved Chromium (Cr)	2024/09/24	<0.0010		mg/L	
			Dissolved Cobalt (Co)	2024/09/24	<0.00030		mg/L	
			Dissolved Copper (Cu)	2024/09/24	<0.0010		mg/L	
			Dissolved Lead (Pb)	2024/09/24	<0.00020		mg/L	
			Dissolved Molybdenum (Mo)	2024/09/24	<0.00020		mg/L	
			Dissolved Nickel (Ni)	2024/09/24	<0.00050		mg/L	
			Dissolved Selenium (Se)	2024/09/24	<0.00020		mg/L	
			Dissolved Silver (Ag)	2024/09/24	<0.00010		mg/L	
			Dissolved Thallium (Tl)	2024/09/24	<0.00020		mg/L	
			Dissolved Tin (Sn)	2024/09/24	<0.0010		mg/L	
			Dissolved Titanium (Ti)	2024/09/24	<0.0010		mg/L	
			Dissolved Uranium (U)	2024/09/24	<0.00010		mg/L	
			Dissolved Vanadium (V)	2024/09/24	<0.0010		mg/L	
			Dissolved Zinc (Zn)	2024/09/24	<0.0030		mg/L	
B535001	KH2	RPD [CWB150-01]	Dissolved Aluminum (Al)	2024/09/24	NC		%	20
			Dissolved Antimony (Sb)	2024/09/24	NC		%	20
			Dissolved Arsenic (As)	2024/09/24	7.7		%	20
			Dissolved Beryllium (Be)	2024/09/24	NC		%	20
			Dissolved Chromium (Cr)	2024/09/24	NC		%	20
			Dissolved Cobalt (Co)	2024/09/24	6.2		%	20
			Dissolved Copper (Cu)	2024/09/24	NC		%	20
			Dissolved Lead (Pb)	2024/09/24	NC		%	20
			Dissolved Molybdenum (Mo)	2024/09/24	NC		%	20
			Dissolved Nickel (Ni)	2024/09/24	11		%	20
			Dissolved Selenium (Se)	2024/09/24	14		%	20
			Dissolved Silver (Ag)	2024/09/24	NC		%	20
			Dissolved Thallium (Tl)	2024/09/24	NC		%	20
			Dissolved Tin (Sn)	2024/09/24	NC		%	20
			Dissolved Titanium (Ti)	2024/09/24	NC		%	20
			Dissolved Uranium (U)	2024/09/24	9.0		%	20
			Dissolved Vanadium (V)	2024/09/24	NC		%	20
			Dissolved Zinc (Zn)	2024/09/24	NC		%	20
B535018	HAP	Matrix Spike [CWB147-01]	Chloride (Cl)	2024/09/24		94	%	80 - 120
			Sulphate (SO4)	2024/09/24		NC	%	80 - 120
B535018	HAP	Spiked Blank	Chloride (Cl)	2024/09/24		97	%	80 - 120
			Sulphate (SO4)	2024/09/24		94	%	80 - 120
B535018	HAP	Method Blank	Chloride (Cl)	2024/09/24	<1.0		mg/L	
			Sulphate (SO4)	2024/09/24	<1.0		mg/L	
B535018	HAP	RPD [CWB147-01]	Chloride (Cl)	2024/09/24	0.18		%	20
			Sulphate (SO4)	2024/09/24	1.5		%	20
B535026	HAP	Matrix Spike	Chloride (Cl)	2024/09/24		92	%	80 - 120
			Sulphate (SO4)	2024/09/24		NC	%	80 - 120
B535026	HAP	Spiked Blank	Chloride (Cl)	2024/09/24		97	%	80 - 120
			Sulphate (SO4)	2024/09/24		93	%	80 - 120
B535026	HAP	Method Blank	Chloride (Cl)	2024/09/24	<1.0		mg/L	
			Sulphate (SO4)	2024/09/24	<1.0		mg/L	
B535026	HAP	RPD	Chloride (Cl)	2024/09/24	0.47		%	20
B535122	YL7	Matrix Spike	Orthophosphate (P)	2024/09/24		NC	%	80 - 120
B535122	YL7	Spiked Blank	Orthophosphate (P)	2024/09/24		97	%	80 - 120
B535122	YL7	Method Blank	Orthophosphate (P)	2024/09/24	<0.0030		mg/L	

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B535122	YL7	RPD	Orthophosphate (P)	2024/09/24	0.30		%	20
B535271	AYE	Spiked Blank	Alkalinity (Total as CaCO3)	2024/09/27		98	%	80 - 120
B535271	AYE	Method Blank	Alkalinity (PP as CaCO3)	2024/09/27	<1.0		mg/L	
			Alkalinity (Total as CaCO3)	2024/09/27	<1.0		mg/L	
			Bicarbonate (HCO3)	2024/09/27	<1.0		mg/L	
			Carbonate (CO3)	2024/09/27	<1.0		mg/L	
			Hydroxide (OH)	2024/09/27	<1.0		mg/L	
B535271	AYE	RPD [CWB147-01]	Alkalinity (PP as CaCO3)	2024/09/27	NC		%	20
			Alkalinity (Total as CaCO3)	2024/09/27	2.1		%	20
			Bicarbonate (HCO3)	2024/09/27	2.1		%	20
			Carbonate (CO3)	2024/09/27	NC		%	20
			Hydroxide (OH)	2024/09/27	NC		%	20
B535297	AYE	Spiked Blank	pH	2024/09/27		100	%	97 - 103
B535297	AYE	RPD [CWB147-01]	pH	2024/09/27	1.7		%	N/A
B535308	AYE	Spiked Blank	Conductivity	2024/09/27		101	%	90 - 110
B535308	AYE	Method Blank	Conductivity	2024/09/27	<2.0		uS/cm	
B535308	AYE	RPD [CWB147-01]	Conductivity	2024/09/27	0.30		%	10
B535398	AYE	Spiked Blank	Alkalinity (Total as CaCO3)	2024/09/26		99	%	80 - 120
B535398	AYE	Method Blank	Alkalinity (PP as CaCO3)	2024/09/26	<1.0		mg/L	
			Alkalinity (Total as CaCO3)	2024/09/26	<1.0		mg/L	
			Bicarbonate (HCO3)	2024/09/26	<1.0		mg/L	
			Carbonate (CO3)	2024/09/26	<1.0		mg/L	
			Hydroxide (OH)	2024/09/26	<1.0		mg/L	
B535398	AYE	RPD [CWB149-01]	Alkalinity (PP as CaCO3)	2024/09/26	NC		%	20
			Alkalinity (Total as CaCO3)	2024/09/26	0.81		%	20
			Bicarbonate (HCO3)	2024/09/26	0.81		%	20
			Carbonate (CO3)	2024/09/26	NC		%	20
			Hydroxide (OH)	2024/09/26	NC		%	20
B535402	AYE	Spiked Blank	pH	2024/09/26		100	%	97 - 103
B535402	AYE	RPD [CWB149-01]	pH	2024/09/26	1.9		%	N/A
B535404	AYE	Spiked Blank	Conductivity	2024/09/26		101	%	90 - 110
B535404	AYE	Method Blank	Conductivity	2024/09/26	<2.0		uS/cm	
B535404	AYE	RPD [CWB149-01]	Conductivity	2024/09/26	0.42		%	10
B536479	YL7	Matrix Spike	Total Nitrogen (N)	2024/09/25		108	%	80 - 120
B536479	YL7	QC Standard	Total Nitrogen (N)	2024/09/25		100	%	80 - 120
B536479	YL7	Spiked Blank	Total Nitrogen (N)	2024/09/25		109	%	80 - 120
B536479	YL7	Method Blank	Total Nitrogen (N)	2024/09/25	<0.020		mg/L	
B536479	YL7	RPD	Total Nitrogen (N)	2024/09/25	3.5		%	20
B536572	MAP	Matrix Spike	Dissolved Phosphorus (P)	2024/09/26		NC	%	80 - 120
B536572	MAP	QC Standard	Dissolved Phosphorus (P)	2024/09/26		91	%	80 - 120
B536572	MAP	Spiked Blank	Dissolved Phosphorus (P)	2024/09/26		100	%	80 - 120
B536572	MAP	Method Blank	Dissolved Phosphorus (P)	2024/09/26	<0.0030		mg/L	
B536572	MAP	RPD	Dissolved Phosphorus (P)	2024/09/26	1.0		%	20
B536588	HAP	Matrix Spike	Chloride (Cl)	2024/09/26		101	%	80 - 120
			Sulphate (SO4)	2024/09/26		109	%	80 - 120
B536588	HAP	Spiked Blank	Chloride (Cl)	2024/09/26		96	%	80 - 120
			Sulphate (SO4)	2024/09/26		104	%	80 - 120
B536588	HAP	Method Blank	Chloride (Cl)	2024/09/26	<1.0		mg/L	
			Sulphate (SO4)	2024/09/26	<1.0		mg/L	
B536588	HAP	RPD	Chloride (Cl)	2024/09/26	8.0		%	20
			Sulphate (SO4)	2024/09/26	NC		%	20
B536591	AFI	Matrix Spike	Total Ammonia (N)	2024/09/26		110	%	80 - 120
B536591	AFI	Spiked Blank	Total Ammonia (N)	2024/09/26		105	%	80 - 120
B536591	AFI	Method Blank	Total Ammonia (N)	2024/09/26	<0.015		mg/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B536591	AFI	RPD	Total Ammonia (N)	2024/09/26	6.0		%	20
B536757	KH2	Matrix Spike	Dissolved Aluminum (Al)	2024/09/25		99	%	80 - 120
			Dissolved Antimony (Sb)	2024/09/25		92	%	80 - 120
			Dissolved Arsenic (As)	2024/09/25		95	%	80 - 120
			Dissolved Beryllium (Be)	2024/09/25		91	%	80 - 120
			Dissolved Chromium (Cr)	2024/09/25		95	%	80 - 120
			Dissolved Cobalt (Co)	2024/09/25		96	%	80 - 120
			Dissolved Copper (Cu)	2024/09/25		96	%	80 - 120
			Dissolved Lead (Pb)	2024/09/25		93	%	80 - 120
			Dissolved Molybdenum (Mo)	2024/09/25		99	%	80 - 120
			Dissolved Nickel (Ni)	2024/09/25		95	%	80 - 120
			Dissolved Selenium (Se)	2024/09/25		95	%	80 - 120
			Dissolved Silver (Ag)	2024/09/25		92	%	80 - 120
			Dissolved Thallium (Tl)	2024/09/25		92	%	80 - 120
			Dissolved Tin (Sn)	2024/09/25		93	%	80 - 120
			Dissolved Titanium (Ti)	2024/09/25		96	%	80 - 120
			Dissolved Uranium (U)	2024/09/25		91	%	80 - 120
			Dissolved Vanadium (V)	2024/09/25		96	%	80 - 120
			Dissolved Zinc (Zn)	2024/09/25		NC	%	80 - 120
B536757	KH2	Spiked Blank	Dissolved Aluminum (Al)	2024/09/25		98	%	80 - 120
			Dissolved Antimony (Sb)	2024/09/25		95	%	80 - 120
			Dissolved Arsenic (As)	2024/09/25		96	%	80 - 120
			Dissolved Beryllium (Be)	2024/09/25		92	%	80 - 120
			Dissolved Chromium (Cr)	2024/09/25		97	%	80 - 120
			Dissolved Cobalt (Co)	2024/09/25		97	%	80 - 120
			Dissolved Copper (Cu)	2024/09/25		98	%	80 - 120
			Dissolved Lead (Pb)	2024/09/25		97	%	80 - 120
			Dissolved Molybdenum (Mo)	2024/09/25		101	%	80 - 120
			Dissolved Nickel (Ni)	2024/09/25		96	%	80 - 120
			Dissolved Selenium (Se)	2024/09/25		95	%	80 - 120
			Dissolved Silver (Ag)	2024/09/25		95	%	80 - 120
			Dissolved Thallium (Tl)	2024/09/25		95	%	80 - 120
			Dissolved Tin (Sn)	2024/09/25		95	%	80 - 120
			Dissolved Titanium (Ti)	2024/09/25		91	%	80 - 120
			Dissolved Uranium (U)	2024/09/25		94	%	80 - 120
			Dissolved Vanadium (V)	2024/09/25		97	%	80 - 120
			Dissolved Zinc (Zn)	2024/09/25		92	%	80 - 120
B536757	KH2	Method Blank	Dissolved Aluminum (Al)	2024/09/25	<0.0030		mg/L	
			Dissolved Antimony (Sb)	2024/09/25	<0.00060		mg/L	
			Dissolved Arsenic (As)	2024/09/25	<0.00020		mg/L	
			Dissolved Beryllium (Be)	2024/09/25	<0.0010		mg/L	
			Dissolved Chromium (Cr)	2024/09/25	<0.0010		mg/L	
			Dissolved Cobalt (Co)	2024/09/25	<0.00030		mg/L	
			Dissolved Copper (Cu)	2024/09/25	<0.0010		mg/L	
			Dissolved Lead (Pb)	2024/09/25	<0.00020		mg/L	
			Dissolved Molybdenum (Mo)	2024/09/25	<0.00020		mg/L	
			Dissolved Nickel (Ni)	2024/09/25	<0.00050		mg/L	
			Dissolved Selenium (Se)	2024/09/25	<0.00020		mg/L	
			Dissolved Silver (Ag)	2024/09/25	<0.00010		mg/L	
			Dissolved Thallium (Tl)	2024/09/25	<0.00020		mg/L	
			Dissolved Tin (Sn)	2024/09/25	<0.0010		mg/L	
			Dissolved Titanium (Ti)	2024/09/25	<0.0010		mg/L	
			Dissolved Uranium (U)	2024/09/25	<0.00010		mg/L	
			Dissolved Vanadium (V)	2024/09/25	<0.0010		mg/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Zinc (Zn)	2024/09/25	<0.0030		mg/L	
B536757	KH2	RPD	Dissolved Molybdenum (Mo)	2024/09/25	NC		%	20
B537306	AFI	Matrix Spike	Nitrite (N)	2024/09/25		101	%	80 - 120
			Nitrate plus Nitrite (N)	2024/09/25		39 (1)	%	80 - 120
B537306	AFI	Spiked Blank	Nitrite (N)	2024/09/25		103	%	80 - 120
			Nitrate plus Nitrite (N)	2024/09/25		105	%	80 - 120
B537306	AFI	Method Blank	Nitrite (N)	2024/09/25	<0.010		mg/L	
			Nitrate plus Nitrite (N)	2024/09/25	<0.010		mg/L	
B537306	AFI	RPD	Nitrite (N)	2024/09/26	0.40		%	20
			Nitrate plus Nitrite (N)	2024/09/26	5.0		%	20
B537443	VSC	Matrix Spike	Dissolved Barium (Ba)	2024/09/27		12 (1)	%	80 - 120
			Dissolved Boron (B)	2024/09/27		91	%	80 - 120
			Dissolved Iron (Fe)	2024/09/27		104	%	80 - 120
			Dissolved Lithium (Li)	2024/09/27		91	%	80 - 120
			Dissolved Magnesium (Mg)	2024/09/27		NC	%	80 - 120
			Dissolved Manganese (Mn)	2024/09/27		102	%	80 - 120
			Dissolved Phosphorus (P)	2024/09/27		103	%	80 - 120
			Dissolved Potassium (K)	2024/09/27		NC	%	80 - 120
			Dissolved Silicon (Si)	2024/09/27		90	%	80 - 120
B537443	VSC	Spiked Blank	Dissolved Barium (Ba)	2024/09/27		99	%	80 - 120
			Dissolved Boron (B)	2024/09/27		98	%	80 - 120
			Dissolved Calcium (Ca)	2024/09/27		100	%	80 - 120
			Dissolved Iron (Fe)	2024/09/27		104	%	80 - 120
			Dissolved Lithium (Li)	2024/09/27		97	%	80 - 120
			Dissolved Magnesium (Mg)	2024/09/27		103	%	80 - 120
			Dissolved Manganese (Mn)	2024/09/27		99	%	80 - 120
			Dissolved Phosphorus (P)	2024/09/27		99	%	80 - 120
			Dissolved Potassium (K)	2024/09/27		100	%	80 - 120
			Dissolved Silicon (Si)	2024/09/27		96	%	80 - 120
			Dissolved Sodium (Na)	2024/09/27		101	%	80 - 120
			Dissolved Strontium (Sr)	2024/09/27		97	%	80 - 120
			Dissolved Sulphur (S)	2024/09/27		97	%	80 - 120
B537443	VSC	Method Blank	Dissolved Barium (Ba)	2024/09/27	<0.010		mg/L	
			Dissolved Boron (B)	2024/09/27	<0.020		mg/L	
			Dissolved Calcium (Ca)	2024/09/27	<0.30		mg/L	
			Dissolved Iron (Fe)	2024/09/27	<0.060		mg/L	
			Dissolved Lithium (Li)	2024/09/27	<0.020		mg/L	
			Dissolved Magnesium (Mg)	2024/09/27	<0.20		mg/L	
			Dissolved Manganese (Mn)	2024/09/27	<0.0040		mg/L	
			Dissolved Phosphorus (P)	2024/09/27	<0.10		mg/L	
			Dissolved Potassium (K)	2024/09/27	<0.30		mg/L	
			Dissolved Silicon (Si)	2024/09/27	<0.50		mg/L	
			Dissolved Sodium (Na)	2024/09/27	<0.50		mg/L	
			Dissolved Strontium (Sr)	2024/09/27	<0.020		mg/L	
			Dissolved Sulphur (S)	2024/09/27	<0.20		mg/L	
B537443	VSC	RPD	Dissolved Barium (Ba)	2024/09/27	3.1		%	20
			Dissolved Boron (B)	2024/09/27	3.2		%	20
			Dissolved Calcium (Ca)	2024/09/27	1.2		%	20
			Dissolved Iron (Fe)	2024/09/27	NC		%	20
			Dissolved Lithium (Li)	2024/09/27	1.2		%	20
			Dissolved Magnesium (Mg)	2024/09/27	1.2		%	20
			Dissolved Manganese (Mn)	2024/09/27	4.3		%	20
			Dissolved Phosphorus (P)	2024/09/27	NC		%	20
			Dissolved Potassium (K)	2024/09/27	2.3		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Silicon (Si)	2024/09/27	0.87		%	20
			Dissolved Sodium (Na)	2024/09/27	1.8		%	20
			Dissolved Strontium (Sr)	2024/09/27	1.2		%	20
			Dissolved Sulphur (S)	2024/09/27	22 (1)		%	20
B539945	JYU	Matrix Spike [CWB149-01]	Dissolved Organic Carbon (C)	2024/09/27		101	%	75 - 125
B539945	JYU	Spiked Blank	Dissolved Organic Carbon (C)	2024/09/27		97	%	80 - 120
B539945	JYU	Method Blank	Dissolved Organic Carbon (C)	2024/09/27	<0.50		mg/L	
B539945	JYU	RPD [CWB149-01]	Dissolved Organic Carbon (C)	2024/09/27	1.0		%	20
B540201	JYU	Matrix Spike	Dissolved Organic Carbon (C)	2024/09/27		105	%	75 - 125
B540201	JYU	Spiked Blank	Dissolved Organic Carbon (C)	2024/09/27		103	%	80 - 120
B540201	JYU	Method Blank	Dissolved Organic Carbon (C)	2024/09/27	<0.50		mg/L	
B540201	JYU	RPD	Dissolved Organic Carbon (C)	2024/09/27	1.3		%	20
B542445	YL7	Matrix Spike [CWB153-03]	Total Nitrogen (N)	2024/09/30		NC	%	80 - 120
B542445	YL7	QC Standard	Total Nitrogen (N)	2024/09/30		105	%	80 - 120
B542445	YL7	Spiked Blank	Total Nitrogen (N)	2024/09/30		107	%	80 - 120
B542445	YL7	Method Blank	Total Nitrogen (N)	2024/09/30	<0.020		mg/L	
B542445	YL7	RPD [CWB153-03]	Total Nitrogen (N)	2024/09/30	3.5		%	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

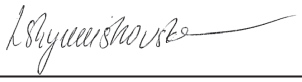
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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:



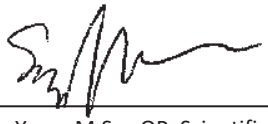
Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics



Luba Shymushovska, B.Sc., QP, Senior Analyst, Organics



Rahul Suryawanshi, Senior Analyst



Sandy Yuan, M.Sc., QP, Scientific Specialist



Automated Statchk

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Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Your Project #: 16773396
Your C.O.C. #: 1/1

Attention: DYLAN KING

STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
EDMONTON, AB
CANADA T5J 0K4

Report Date: 2024/10/02
Report #: R3565424
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C475814
Received: 2024/09/24, 18:51

Sample Matrix: Water
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH	1	N/A	2024/09/28	AB SOP-00005	SM 24 2320 B m
Alkalinity @25C (pp, total), CO3,HCO3,OH	3	N/A	2024/09/29	AB SOP-00005	SM 24 2320 B m
Alkalinity @25C (pp, total), CO3,HCO3,OH	2	N/A	2024/09/30	AB SOP-00005	SM 24 2320 B m
BTEX/F1 in Water by HS GC/MS/FID	6	N/A	2024/09/29	AB SOP-00039	CCME CWS/EPA 8260d m
F1-BTEX	6	N/A	2024/09/29		Auto Calc
Cadmium - low level CCME - Dissolved	6	N/A	2024/09/29		Auto Calc
Chloride/Sulphate by Auto Colourimetry	4	N/A	2024/09/26	AB SOP-00020	SM24-4500-Cl/SO4-E m
Chloride/Sulphate by Auto Colourimetry	2	N/A	2024/09/27	AB SOP-00020	SM24-4500-Cl/SO4-E m
Fecal Coliforms (MPN/100mL)	6	2024/09/26	2024/09/26	AB SOP-00089	SM 24 9223 A,B m
Heterotrophic Plate Count Quant	6	2024/09/25	2024/09/27	CAL SOP-00012	SM 24 9215 A, E m
Total Coliforms and E.Coli	6	2024/09/24	2024/09/26	AB SOP-00089	SM 24 9223 A,B m
Carbon (DOC) -Lab Filtered (1)	6	N/A	2024/09/28	AB SOP-00087	MMCW 119 1996 m
Conductivity @25C	1	N/A	2024/09/28	AB SOP-00005	SM 24 2510 B m
Conductivity @25C	3	N/A	2024/09/29	AB SOP-00005	SM 24 2510 B m
Conductivity @25C	2	N/A	2024/09/30	AB SOP-00005	SM 24 2510 B m
CCME Hydrocarbons in Water (F2; C10-C16) (2)	2	2024/09/26	2024/09/26	AB SOP-00037 AB SOP-00040	CCME PHC-CWS m
CCME Hydrocarbons in Water (F2; C10-C16) (2)	4	2024/09/26	2024/09/27	AB SOP-00037 AB SOP-00040	CCME PHC-CWS m
Hardness	6	N/A	2024/09/30		Auto Calc
Mercury (Dissolved) by CV-Lab Filtered	4	2024/09/27	2024/09/27	AB SOP-00084	BCMOE BCLM Oct2013 m
Mercury (Dissolved) by CV-Lab Filtered	2	2024/09/30	2024/10/01	AB SOP-00084	BCMOE BCLM Oct2013 m
Mercury (Total) by CV	6	2024/09/30	2024/10/01	AB SOP-00084	BCMOE BCLM Oct2013 m
Elements by ICP-Dissolved-Lab Filtered (3)	2	N/A	2024/09/27	AB SOP-00042	EPA 6010d R5 m
Elements by ICP-Dissolved-Lab Filtered (3)	4	N/A	2024/09/28	AB SOP-00042	EPA 6010d R5 m
Elements by ICPMS-Dissolved-Lab Filtered (4)	6	N/A	2024/09/28	AB SOP-00043	EPA 6020b R2 m
Ion Balance	6	N/A	2024/09/30		Auto Calc
Sum of cations, anions	6	N/A	2024/09/30		Auto Calc
Ammonia-N (Total)	6	N/A	2024/09/26	AB SOP-00007	SM 24 4500 NH3 A G m
Nitrate and Nitrite	6	N/A	2024/09/27		Auto Calc
NO2 (N); NO2 (N) + NO3 (N) in Water	4	N/A	2024/09/26	AB SOP-00091	SM 24 4500 NO3m
NO2 (N); NO2 (N) + NO3 (N) in Water	2	N/A	2024/09/27	AB SOP-00091	SM 24 4500 NO3m

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Your Project #: 16773396
Your C.O.C. #: 1/1

Attention: DYLAN KING

STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
EDMONTON, AB
CANADA T5J 0K4

Report Date: 2024/10/02
Report #: R3565424
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C475814
Received: 2024/09/24, 18:51

Sample Matrix: Water
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Nitrate (as N)	6	2024/09/24	2024/09/27		Auto Calc
pH @25°C (5)	1	N/A	2024/09/28	AB SOP-00005	SM 24 4500-H+B m
pH @25°C (5)	3	N/A	2024/09/29	AB SOP-00005	SM 24 4500-H+B m
pH @25°C (5)	2	N/A	2024/09/30	AB SOP-00005	SM 24 4500-H+B m
Orthophosphate by Automated Analyzer (6)	6	N/A	2024/09/26	AB SOP-00025	SM 24 4500-P A,F m
Total Dissolved Solids (Calculated)	6	N/A	2024/09/30		Auto Calc
Total Kjeldahl Nitrogen (Total)	6	N/A	2024/09/27	BBY WI-00033	Auto Calc
Nitrogen (Total)	6	2024/09/26	2024/09/27	AB SOP-00093	SM 24 4500-N C m
Total Phosphorus-Dissolved-Lab Filtered (7)	4	2024/09/27	2024/09/27	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus-Dissolved-Lab Filtered (7)	2	2024/09/27	2024/09/30	AB SOP-00024	SM 24 4500-P A,B,F m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) DOC present in the sample should be considered as non-purgeable DOC. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.

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Your Project #: 16773396
Your C.O.C. #: 1/1

Attention: DYLAN KING

STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
EDMONTON, AB
CANADA T5J 0K4

Report Date: 2024/10/02
Report #: R3565424
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C475814
Received: 2024/09/24, 18:51

(2) Silica gel clean up employed.
(3) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(4) Samples were filtered and preserved at the lab. Values may not reflect concentrations at the time of sampling. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(5) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.
(6) Orthophosphate > Total Phosphorus Imbalance: When applicable, Orthophosphate, Total Phosphorus and dissolved Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
(7) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.

Encryption Key

AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas
02 Oct 2024 14:20:40

Please direct all questions regarding this Certificate of Analysis to:
Geraldlyn Gouthro, Key Account Specialist
Email: geraldlyn.gouthro@bureauveritas.com
Phone# (403) 291-3077

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Bureau Veritas Job #: C475814
Report Date: 2024/10/02

STANTEC CONSULTING LTD
Client Project #: 16773396
Sampler Initials: TH

AT1 BTEX AND F1-F2 IN WATER (WATER)

Bureau Veritas ID		CWH292		CWH293		CWH294			CWH295			
Sampling Date		2024/09/24 10:42		2024/09/24 11:40		2024/09/24 14:55			2024/09/24 14:18			
COC Number		1/1		1/1		1/1			1/1			
	UNITS	MW16-4-22	MU	RMW16-5-12	MU	MW16-8-8	MU	QC Batch	MW16-8-19	MU	RDL	QC Batch
Ext. Pet. Hydrocarbon												
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	B535698	<0.10	N/A	0.10	B535698
Volatiles												
Benzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	B537038	<0.00040	N/A	0.00040	B537045
Toluene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	B537038	<0.00040	N/A	0.00040	B537045
Ethylbenzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	B537038	<0.00040	N/A	0.00040	B537045
m & p-Xylene	mg/L	<0.00080	N/A	<0.00080	N/A	<0.00080	N/A	B537038	<0.00080	N/A	0.00080	B537045
o-Xylene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	B537038	<0.00040	N/A	0.00040	B537045
Xylenes (Total)	mg/L	<0.00089	N/A	<0.00089	N/A	<0.00089	N/A	B535269	<0.00089	N/A	0.00089	B535269
F1 (C6-C10) - BTEX	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	B535269	<0.10	N/A	0.10	B535269
F1 (C6-C10)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	B537038	<0.10	N/A	0.10	B537045
Surrogate Recovery (%)												
1,4-Difluorobenzene (sur.)	%	97	N/A	95	N/A	98	N/A	B537038	103	N/A	N/A	B537045
4-Bromofluorobenzene (sur.)	%	108	N/A	109	N/A	108	N/A	B537038	97	N/A	N/A	B537045
D4-1,2-Dichloroethane (sur.)	%	92	N/A	96	N/A	93	N/A	B537038	100	N/A	N/A	B537045
O-TERPHENYL (sur.)	%	101	N/A	100	N/A	100	N/A	B535698	99	N/A	N/A	B535698

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

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AT1 BTEX AND F1-F2 IN WATER (WATER)

Bureau Veritas ID		CWH295		CWH296		CWH297			
Sampling Date		2024/09/24 14:18		2024/09/24 16:50		2024/09/24 16:57			
COC Number		1/1		1/1		1/1			
	UNITS	MW16-8-19 Lab-Dup	MU	RMW16-15-39	MU	SR24-08	MU	RDL	QC Batch
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/L	N/A	N/A	<0.10	N/A	<0.10	N/A	0.10	B535698
Volatiles									
Benzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B537045
Toluene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B537045
Ethylbenzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B537045
m & p-Xylene	mg/L	<0.00080	N/A	<0.00080	N/A	<0.00080	N/A	0.00080	B537045
o-Xylene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B537045
Xylenes (Total)	mg/L	N/A	N/A	<0.00089	N/A	<0.00089	N/A	0.00089	B535269
F1 (C6-C10) - BTEX	mg/L	N/A	N/A	<0.10	N/A	<0.10	N/A	0.10	B535269
F1 (C6-C10)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B537045
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	102	N/A	101	N/A	100	N/A	N/A	B537045
4-Bromofluorobenzene (sur.)	%	98	N/A	98	N/A	98	N/A	N/A	B537045
D4-1,2-Dichloroethane (sur.)	%	102	N/A	108	N/A	106	N/A	N/A	B537045
O-TERPHENYL (sur.)	%	N/A	N/A	99	N/A	101	N/A	N/A	B535698

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWH292		CWH292			
Sampling Date		2024/09/24 10:42		2024/09/24 10:42			
COC Number		1/1		1/1			
	UNITS	MW16-4-22	MU	MW16-4-22 Lab-Dup	MU	RDL	QC Batch
Calculated Parameters							
Anion Sum	meq/L	57	N/A	N/A	N/A	N/A	B534711
Cation Sum	meq/L	61	N/A	N/A	N/A	N/A	B534711
Hardness (CaCO3)	mg/L	2100	N/A	N/A	N/A	0.50	B535320
Ion Balance (% Difference)	%	3.5	N/A	N/A	N/A	N/A	B535331
Nitrate (N)	mg/L	0.069	N/A	N/A	N/A	0.050	B534726
Nitrate (NO3)	mg/L	0.31	N/A	N/A	N/A	0.22	B534720
Nitrite (NO2)	mg/L	<0.033	N/A	N/A	N/A	0.033	B534720
Calculated Total Dissolved Solids	mg/L	3700	N/A	N/A	N/A	25	B534764
Elements							
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	N/A	N/A	0.020	B534665
Misc. Inorganics							
Conductivity	uS/cm	4300	+/- 110	N/A	N/A	2.0	B542407
pH	pH	7.88	+/- 0.0781	N/A	N/A	N/A	B542406
Anions							
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	N/A	N/A	1.0	B542382
Alkalinity (Total as CaCO3)	mg/L	480	+/- 35	N/A	N/A	1.0	B542382
Bicarbonate (HCO3)	mg/L	580	+/- 8.9	N/A	N/A	1.0	B542382
Carbonate (CO3)	mg/L	<1.0	N/A	N/A	N/A	1.0	B542382
Hydroxide (OH)	mg/L	<1.0	N/A	N/A	N/A	1.0	B542382
Chloride (Cl)	mg/L	1.8	+/- 1.2	N/A	N/A	1.0	B539209
Sulphate (SO4)	mg/L	2300	+/- 140	N/A	N/A	25	B539209
Nutrients							
Nitrite (N)	mg/L	<0.010	N/A	N/A	N/A	0.010	B539208
Nitrate plus Nitrite (N)	mg/L	0.069 (1)	+/- <RDL	N/A	N/A	0.050	B539208
Lab Filtered Elements							
Dissolved Aluminum (Al)	mg/L	0.0059	+/- <RDL	0.0034	+/- <RDL	0.0030	B540233
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	<0.00060	N/A	0.00060	B540233
Dissolved Arsenic (As)	mg/L	0.0011	+/- <RDL	0.00094	+/- <RDL	0.00020	B540233
Dissolved Barium (Ba)	mg/L	<0.010	N/A	N/A	N/A	0.010	B540294

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Detection limits raised due to matrix interference.

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWH292		CWH292			
Sampling Date		2024/09/24 10:42		2024/09/24 10:42			
COC Number		1/1		1/1			
	UNITS	MW16-4-22	MU	MW16-4-22 Lab-Dup	MU	RDL	QC Batch
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	<0.0010	N/A	0.0010	B540233
Dissolved Boron (B)	mg/L	0.12	+/- <RDL	N/A	N/A	0.020	B540294
Dissolved Calcium (Ca)	mg/L	460	+/- 46	N/A	N/A	0.30	B540294
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	<0.0010	N/A	0.0010	B540233
Dissolved Cobalt (Co)	mg/L	0.00039	+/- <RDL	0.00040	+/- <RDL	0.00030	B540233
Dissolved Copper (Cu)	mg/L	0.0050	+/- 0.0014	0.0048	+/- 0.0013	0.0010	B540233
Dissolved Iron (Fe)	mg/L	<0.060	N/A	N/A	N/A	0.060	B540294
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	<0.00020	N/A	0.00020	B540233
Dissolved Lithium (Li)	mg/L	0.11	+/- <RDL	N/A	N/A	0.020	B540294
Dissolved Magnesium (Mg)	mg/L	230	+/- 14	N/A	N/A	0.20	B540294
Dissolved Manganese (Mn)	mg/L	0.82	+/- 0.055	N/A	N/A	0.0040	B540294
Dissolved Molybdenum (Mo)	mg/L	0.00092	+/- 0.00033	0.0010	+/- 0.00035	0.00020	B540233
Dissolved Nickel (Ni)	mg/L	0.0020	+/- <RDL	0.0020	+/- <RDL	0.00050	B540233
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	N/A	N/A	0.10	B540294
Dissolved Potassium (K)	mg/L	9.2	+/- 0.47	N/A	N/A	0.30	B540294
Dissolved Selenium (Se)	mg/L	<0.00020	N/A	<0.00020	N/A	0.00020	B540233
Dissolved Silicon (Si)	mg/L	4.7	+/- 0.90	N/A	N/A	0.50	B540294
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	<0.00010	N/A	0.00010	B540233
Dissolved Sodium (Na)	mg/L	440	+/- 43	N/A	N/A	0.50	B540294
Dissolved Strontium (Sr)	mg/L	7.1	+/- 0.69	N/A	N/A	0.10	B540294
Dissolved Sulphur (S)	mg/L	870	+/- 58	N/A	N/A	1.0	B540294
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	<0.00020	N/A	0.00020	B540233
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	<0.0010	N/A	0.0010	B540233
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	<0.0010	N/A	0.0010	B540233
Dissolved Uranium (U)	mg/L	0.0022	+/- 0.00021	0.0022	+/- 0.00022	0.00010	B540233
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	<0.0010	N/A	0.0010	B540233
Dissolved Zinc (Zn)	mg/L	0.011	+/- <RDL	0.011	+/- <RDL	0.0030	B540233

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWH293				CWH294			
Sampling Date		2024/09/24 11:40				2024/09/24 14:55			
COC Number		1/1				1/1			
	UNITS	RMW16-5-12	MU	RDL	QC Batch	MW16-8-8	MU	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	9.3	N/A	N/A	B534711	14	N/A	N/A	B534711
Cation Sum	meq/L	8.9	N/A	N/A	B534711	15	N/A	N/A	B534711
Hardness (CaCO3)	mg/L	290	N/A	0.50	B535320	670	N/A	0.50	B535320
Ion Balance (% Difference)	%	2.5	N/A	N/A	B535331	2.8	N/A	N/A	B535331
Nitrate (N)	mg/L	0.036	N/A	0.010	B534726	0.64	N/A	0.010	B534726
Nitrate (NO3)	mg/L	0.16	N/A	0.044	B534720	2.8	N/A	0.044	B534720
Nitrite (NO2)	mg/L	<0.033	N/A	0.033	B534720	<0.033	N/A	0.033	B534720
Calculated Total Dissolved Solids	mg/L	460	N/A	10	B534764	760	N/A	10	B535616
Elements									
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	0.020	B534665	<0.020	N/A	0.020	B534665
Misc. Inorganics									
Conductivity	uS/cm	780	+/- 21	2.0	B541795	1100	+/- 30	2.0	B541795
pH	pH	8.06	+/- 0.0799	N/A	B541794	7.83	+/- 0.0776	N/A	B541794
Anions									
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	1.0	B541792	<1.0	N/A	1.0	B541792
Alkalinity (Total as CaCO3)	mg/L	420	+/- 31	1.0	B541792	430	+/- 32	1.0	B541792
Bicarbonate (HCO3)	mg/L	510	+/- 7.9	1.0	B541792	530	+/- 8.1	1.0	B541792
Carbonate (CO3)	mg/L	<1.0	N/A	1.0	B541792	<1.0	N/A	1.0	B541792
Hydroxide (OH)	mg/L	<1.0	N/A	1.0	B541792	<1.0	N/A	1.0	B541792
Chloride (Cl)	mg/L	2.2	+/- 1.2	1.0	B539285	26	+/- 2.4	1.0	B539887
Sulphate (SO4)	mg/L	41	+/- 3.0	1.0	B539285	220	+/- 14	5.0	B539887
Nutrients									
Nitrite (N)	mg/L	<0.010	N/A	0.010	B539212	<0.010	N/A	0.010	B539208
Nitrate plus Nitrite (N)	mg/L	0.036	+/- 0.012	0.010	B539212	0.64	+/- 0.060	0.010	B539208
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	0.022	+/- 0.0051	0.0030	B540233	0.0067	+/- <RDL	0.0030	B540242
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	0.00060	B540233	0.00063	+/- <RDL	0.00060	B540242
Dissolved Arsenic (As)	mg/L	<0.00020	N/A	0.00020	B540233	<0.00020	N/A	0.00020	B540242
Dissolved Barium (Ba)	mg/L	0.059	+/- <RDL	0.010	B540286	0.043	+/- <RDL	0.010	B540294
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	0.0010	B540233	<0.0010	N/A	0.0010	B540242
Dissolved Boron (B)	mg/L	0.096	+/- <RDL	0.020	B540286	0.039	+/- <RDL	0.020	B540294

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWH293				CWH294			
Sampling Date		2024/09/24 11:40				2024/09/24 14:55			
COC Number		1/1				1/1			
	UNITS	RMW16-5-12	MU	RDL	QC Batch	MW16-8-8	MU	RDL	QC Batch
Dissolved Calcium (Ca)	mg/L	63	+/- 6.4	0.30	B540286	140	+/- 14	0.30	B540294
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	0.0010	B540233	<0.0010	N/A	0.0010	B540242
Dissolved Cobalt (Co)	mg/L	0.00031	+/- <RDL	0.00030	B540233	<0.00030	N/A	0.00030	B540242
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	0.0010	B540233	<0.0010	N/A	0.0010	B540242
Dissolved Iron (Fe)	mg/L	<0.060	N/A	0.060	B540286	<0.060	N/A	0.060	B540294
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	0.00020	B540233	<0.00020	N/A	0.00020	B540242
Dissolved Lithium (Li)	mg/L	<0.020	N/A	0.020	B540286	0.032	+/- <RDL	0.020	B540294
Dissolved Magnesium (Mg)	mg/L	33	+/- 2.1	0.20	B540286	78	+/- 5.0	0.20	B540294
Dissolved Manganese (Mn)	mg/L	0.14	+/- 0.0093	0.0040	B540286	0.0095	+/- <RDL	0.0040	B540294
Dissolved Molybdenum (Mo)	mg/L	0.00065	+/- 0.00028	0.00020	B540233	0.00092	+/- 0.00033	0.00020	B540242
Dissolved Nickel (Ni)	mg/L	0.00066	+/- <RDL	0.00050	B540233	0.00088	+/- <RDL	0.00050	B540242
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	0.10	B540286	<0.10	N/A	0.10	B540294
Dissolved Potassium (K)	mg/L	6.0	+/- 0.32	0.30	B540286	6.1	+/- 0.32	0.30	B540294
Dissolved Selenium (Se)	mg/L	0.0010	+/- <RDL	0.00020	B540233	0.0024	+/- 0.00023	0.00020	B540242
Dissolved Silicon (Si)	mg/L	2.8	+/- 0.53	0.50	B540286	4.3	+/- 0.83	0.50	B540294
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	0.00010	B540233	<0.00010	N/A	0.00010	B540242
Dissolved Sodium (Na)	mg/L	65	+/- 6.4	0.50	B540286	26	+/- 2.6	0.50	B540294
Dissolved Strontium (Sr)	mg/L	1.3	+/- 0.13	0.020	B540286	1.2	+/- 0.12	0.020	B540294
Dissolved Sulphur (S)	mg/L	12	+/- 0.82	0.20	B540286	74	+/- 4.9	0.20	B540294
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	0.00020	B540233	<0.00020	N/A	0.00020	B540242
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	0.0010	B540233	0.0036	+/- 0.0010	0.0010	B540242
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	0.0010	B540233	<0.0010	N/A	0.0010	B540242
Dissolved Uranium (U)	mg/L	0.0013	+/- 0.00013	0.00010	B540233	0.014	+/- 0.0012	0.00010	B540242
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	0.0010	B540233	<0.0010	N/A	0.0010	B540242
Dissolved Zinc (Zn)	mg/L	<0.0030	N/A	0.0030	B540233	<0.0030	N/A	0.0030	B540242

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWH295			CWH296			
Sampling Date		2024/09/24 14:18			2024/09/24 16:50			
COC Number		1/1			1/1			
	UNITS	MW16-8-19	MU	QC Batch	RMW16-15-39	MU	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	13	N/A	B534711	11	N/A	N/A	B535613
Cation Sum	meq/L	15	N/A	B534711	9.8	N/A	N/A	B535613
Hardness (CaCO3)	mg/L	620	N/A	B535320	25	N/A	0.50	B535320
Ion Balance (% Difference)	%	4.7	N/A	B535331	4.5	N/A	N/A	B535331
Nitrate (N)	mg/L	0.59	N/A	B534726	0.024	N/A	0.010	B534726
Nitrate (NO3)	mg/L	2.6	N/A	B534720	0.11	N/A	0.044	B534720
Nitrite (NO2)	mg/L	<0.033	N/A	B534720	0.18	N/A	0.033	B534720
Calculated Total Dissolved Solids	mg/L	720	N/A	B535616	570	N/A	10	B535616
Elements								
Dissolved Cadmium (Cd)	ug/L	0.035	+/- 0.020	B534665	<0.020	N/A	0.020	B534665
Misc. Inorganics								
Conductivity	uS/cm	1300	+/- 33	B542407	930	+/- 25	2.0	B541795
pH	pH	7.65	+/- 0.0758	B542406	8.44	+/- 0.0837	N/A	B541794
Anions								
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	B542382	7.8	+/- <RDL	1.0	B541792
Alkalinity (Total as CaCO3)	mg/L	420	+/- 31	B542382	450	+/- 33	1.0	B541792
Bicarbonate (HCO3)	mg/L	520	+/- 7.9	B542382	530	+/- 8.1	1.0	B541792
Carbonate (CO3)	mg/L	<1.0	N/A	B542382	9.4	N/A	1.0	B541792
Hydroxide (OH)	mg/L	<1.0	N/A	B542382	<1.0	N/A	1.0	B541792
Chloride (Cl)	mg/L	110	+/- 8.0	B539285	4.5	+/- 1.2	1.0	B539285
Sulphate (SO4)	mg/L	96	+/- 6.4	B539285	78	+/- 5.3	1.0	B539285
Nutrients								
Nitrite (N)	mg/L	<0.010	N/A	B539212	0.054	+/- <RDL	0.010	B539212
Nitrate plus Nitrite (N)	mg/L	0.59	+/- 0.055	B539212	0.078	+/- 0.015	0.010	B539212
Lab Filtered Elements								
Dissolved Aluminum (Al)	mg/L	0.0034	+/- <RDL	B540233	0.36	+/- 0.083	0.0030	B540233
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	B540233	<0.00060	N/A	0.00060	B540233
Dissolved Arsenic (As)	mg/L	<0.00020	N/A	B540233	0.0013	+/- <RDL	0.00020	B540233
Dissolved Barium (Ba)	mg/L	0.064	+/- <RDL	B540286	0.033	+/- <RDL	0.010	B540286
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	B540233	<0.0010	N/A	0.0010	B540233
Dissolved Boron (B)	mg/L	0.044	+/- <RDL	B540286	0.049	+/- <RDL	0.020	B540286

RDL = Reportable Detection Limit
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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWH295			CWH296			
Sampling Date		2024/09/24 14:18			2024/09/24 16:50			
COC Number		1/1			1/1			
	UNITS	MW16-8-19	MU	QC Batch	RMW16-15-39	MU	RDL	QC Batch
Dissolved Calcium (Ca)	mg/L	140	+/- 14	B540286	6.6	+/- 0.69	0.30	B540286
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	B540233	<0.0010	N/A	0.0010	B540233
Dissolved Cobalt (Co)	mg/L	<0.00030	N/A	B540233	<0.00030	N/A	0.00030	B540233
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	B540233	0.0018	+/- <RDL	0.0010	B540233
Dissolved Iron (Fe)	mg/L	<0.060	N/A	B540286	0.083	+/- <RDL	0.060	B540286
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	B540233	0.00035	+/- <RDL	0.00020	B540233
Dissolved Lithium (Li)	mg/L	<0.020	N/A	B540286	0.037	+/- <RDL	0.020	B540286
Dissolved Magnesium (Mg)	mg/L	64	+/- 4.1	B540286	2.0	+/- <RDL	0.20	B540286
Dissolved Manganese (Mn)	mg/L	<0.0040	N/A	B540286	0.015	+/- <RDL	0.0040	B540286
Dissolved Molybdenum (Mo)	mg/L	0.00064	+/- 0.00028	B540233	0.018	+/- 0.0041	0.00020	B540233
Dissolved Nickel (Ni)	mg/L	<0.00050	N/A	B540233	0.0012	+/- <RDL	0.00050	B540233
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	B540286	<0.10	N/A	0.10	B540286
Dissolved Potassium (K)	mg/L	6.0	+/- 0.32	B540286	2.6	+/- <RDL	0.30	B540286
Dissolved Selenium (Se)	mg/L	0.0059	+/- 0.00054	B540233	0.00043	+/- <RDL	0.00020	B540233
Dissolved Silicon (Si)	mg/L	3.8	+/- 0.73	B540286	3.5	+/- 0.66	0.50	B540286
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	B540233	<0.00010	N/A	0.00010	B540233
Dissolved Sodium (Na)	mg/L	51	+/- 5.0	B540286	210	+/- 21	0.50	B540286
Dissolved Strontium (Sr)	mg/L	1.5	+/- 0.15	B540286	0.10	+/- <RDL	0.020	B540286
Dissolved Sulphur (S)	mg/L	29	+/- 2.0	B540286	25	+/- 1.7	0.20	B540286
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	B540233	<0.00020	N/A	0.00020	B540233
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	B540233	<0.0010	N/A	0.0010	B540233
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	B540233	0.0066	+/- 0.0018	0.0010	B540233
Dissolved Uranium (U)	mg/L	0.0059	+/- 0.00054	B540233	0.0016	+/- 0.00016	0.00010	B540233
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	B540233	0.0029	+/- <RDL	0.0010	B540233
Dissolved Zinc (Zn)	mg/L	<0.0030	N/A	B540233	<0.0030	N/A	0.0030	B540233

RDL = Reportable Detection Limit
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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWH297		CWH297			
Sampling Date		2024/09/24 16:57		2024/09/24 16:57			
COC Number		1/1		1/1			
	UNITS	SR24-08	MU	SR24-08 Lab-Dup	MU	RDL	QC Batch
Calculated Parameters							
Anion Sum	meq/L	67	N/A	N/A	N/A	N/A	B535613
Cation Sum	meq/L	59	N/A	N/A	N/A	N/A	B535613
Hardness (CaCO3)	mg/L	2000	N/A	N/A	N/A	0.50	B535320
Ion Balance (% Difference)	%	6.6	N/A	N/A	N/A	N/A	B535331
Nitrate (N)	mg/L	0.28	N/A	N/A	N/A	0.25	B534726
Nitrate (NO3)	mg/L	1.2	N/A	N/A	N/A	1.1	B535614
Nitrite (NO2)	mg/L	<0.033	N/A	N/A	N/A	0.033	B535614
Calculated Total Dissolved Solids	mg/L	4100	N/A	N/A	N/A	25	B535616
Elements							
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	N/A	N/A	0.020	B534665
Misc. Inorganics							
Conductivity	uS/cm	4300	+/- 110	N/A	N/A	2.0	B541795
pH	pH	7.67	+/- 0.0761	N/A	N/A	N/A	B541794
Anions							
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	N/A	N/A	1.0	B541792
Alkalinity (Total as CaCO3)	mg/L	530	+/- 39	N/A	N/A	1.0	B541792
Bicarbonate (HCO3)	mg/L	650	+/- 9.9	N/A	N/A	1.0	B541792
Carbonate (CO3)	mg/L	<1.0	N/A	N/A	N/A	1.0	B541792
Hydroxide (OH)	mg/L	<1.0	N/A	N/A	N/A	1.0	B541792
Chloride (Cl)	mg/L	<1.0	N/A	N/A	N/A	1.0	B539887
Sulphate (SO4)	mg/L	2700	+/- 170	N/A	N/A	25	B539887
Nutrients							
Nitrite (N)	mg/L	<0.010	N/A	N/A	N/A	0.010	B539208
Nitrate plus Nitrite (N)	mg/L	0.28 (1)	+/- <RDL	N/A	N/A	0.25	B539208
Lab Filtered Elements							
Dissolved Aluminum (Al)	mg/L	0.0031	+/- <RDL	N/A	N/A	0.0030	B540242
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	N/A	N/A	0.00060	B540242
Dissolved Arsenic (As)	mg/L	0.0010	+/- <RDL	N/A	N/A	0.00020	B540242
Dissolved Barium (Ba)	mg/L	<0.010	N/A	<0.010	N/A	0.010	B540286

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Detection limits raised due to matrix interference.

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWH297		CWH297			
Sampling Date		2024/09/24 16:57		2024/09/24 16:57			
COC Number		1/1		1/1			
	UNITS	SR24-08	MU	SR24-08 Lab-Dup	MU	RDL	QC Batch
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B540242
Dissolved Boron (B)	mg/L	0.13	+/- <RDL	0.12	+/- <RDL	0.020	B540286
Dissolved Calcium (Ca)	mg/L	450	+/- 46	450	+/- 46	0.30	B540286
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B540242
Dissolved Cobalt (Co)	mg/L	0.00033	+/- <RDL	N/A	N/A	0.00030	B540242
Dissolved Copper (Cu)	mg/L	0.0045	+/- 0.0013	N/A	N/A	0.0010	B540242
Dissolved Iron (Fe)	mg/L	<0.060	N/A	<0.060	N/A	0.060	B540286
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B540242
Dissolved Lithium (Li)	mg/L	0.083	+/- <RDL	0.085	+/- <RDL	0.020	B540286
Dissolved Magnesium (Mg)	mg/L	210	+/- 14	210	+/- 14	0.20	B540286
Dissolved Manganese (Mn)	mg/L	0.79	+/- 0.053	0.79	+/- 0.053	0.0040	B540286
Dissolved Molybdenum (Mo)	mg/L	0.00095	+/- 0.00034	N/A	N/A	0.00020	B540242
Dissolved Nickel (Ni)	mg/L	0.0018	+/- <RDL	N/A	N/A	0.00050	B540242
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	<0.10	N/A	0.10	B540286
Dissolved Potassium (K)	mg/L	9.0	+/- 0.46	9.1	+/- 0.46	0.30	B540286
Dissolved Selenium (Se)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B540242
Dissolved Silicon (Si)	mg/L	4.6	+/- 0.89	4.6	+/- 0.89	0.50	B540286
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	N/A	N/A	0.00010	B540242
Dissolved Sodium (Na)	mg/L	420	+/- 41	420	+/- 41	0.50	B540286
Dissolved Strontium (Sr)	mg/L	6.9	+/- 0.68	6.8	+/- 0.67	0.10	B540286
Dissolved Sulphur (S)	mg/L	840	+/- 56	840	+/- 56	1.0	B540286
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B540242
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B540242
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B540242
Dissolved Uranium (U)	mg/L	0.0023	+/- 0.00022	N/A	N/A	0.00010	B540242
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B540242
Dissolved Zinc (Zn)	mg/L	0.010	+/- <RDL	N/A	N/A	0.0030	B540242

RDL = Reportable Detection Limit
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TOTAL KJELDAHL NITROGEN (TOTAL)

Bureau Veritas ID		CWH292				CWH293		CWH294			
Sampling Date		2024/09/24 10:42				2024/09/24 11:40		2024/09/24 14:55			
COC Number		1/1				1/1		1/1			
	UNITS	MW16-4-22	MU	RDL	QC Batch	RMW16-5-12	MU	MW16-8-8	MU	RDL	QC Batch
Calculated Parameters											
Total Kjeldahl Nitrogen (Calc)	mg/L	1.2	N/A	0.050	B533910	<0.20	N/A	<0.20	N/A	0.20	B533910
Nutrients											
Total Nitrogen (N)	mg/L	1.3	+/- 0.19	0.020	B538371	0.23 (1)	+/- <RDL	0.58 (2)	+/- <RDL	0.20	B538374

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.
(2) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly. Nitrogen < Nitrate: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Bureau Veritas ID		CWH295			CWH296			CWH297			
Sampling Date		2024/09/24 14:18			2024/09/24 16:50			2024/09/24 16:57			
COC Number		1/1			1/1			1/1			
	UNITS	MW16-8-19	MU	RDL	RMW16-15-39	MU	RDL	SR24-08	MU	RDL	QC Batch
Calculated Parameters											
Total Kjeldahl Nitrogen (Calc)	mg/L	<0.020	N/A	0.020	1.2	N/A	0.40	1.1	N/A	0.25	B533910
Nutrients											
Total Nitrogen (N)	mg/L	0.45 (1)	+/- 0.077	0.020	1.2 (2)	+/- <RDL	0.40	1.4	+/- 0.21	0.020	B538374

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Nitrogen < Nitrate: Both values fall within the method uncertainty for duplicates and are likely equivalent.
(2) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		CWH292				CWH293			
Sampling Date		2024/09/24 10:42				2024/09/24 11:40			
COC Number		1/1				1/1			
	UNITS	MW16-4-22	MU	RDL	QC Batch	RMW16-5-12	MU	RDL	QC Batch
Lab Filtered Inorganics									
Dissolved Organic Carbon (C)	mg/L	4.8	+/- 0.68	0.50	B540856	1.0	+/- <RDL	0.50	B540858
Microbiological Param.									
E.Coli DST	MPN/100mL	<1.0	N/A	1.0	B536288	<2.0 (1)	N/A	2.0	B536288
Fecal Coliforms	MPN/100mL	<1.0	N/A	1.0	B537364	<2.0 (1)	N/A	2.0	B537364
Heterotrophic DST	MPN/100mL	>2400	N/A	1.0	B536636	>2400	N/A	1.0	B536636
Total Coliforms DST	MPN/100mL	<1.0	N/A	1.0	B536288	2.0 (1)	N/A	2.0	B536288
Nutrients									
Total Ammonia (N)	mg/L	0.99	+/- 0.11	0.015	B538577	0.13	+/- 0.018	0.015	B538581
Orthophosphate (P)	mg/L	<0.0030	N/A	0.0030	B538956	<0.0030	N/A	0.0030	B538956
Lab Filtered Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0030	N/A	0.0030	B539678	<0.0030	N/A	0.0030	B539678

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Detection limit raised due to matrix interference.

Bureau Veritas ID		CWH294				CWH295			
Sampling Date		2024/09/24 14:55				2024/09/24 14:18			
COC Number		1/1				1/1			
	UNITS	MW16-8-8	MU	RDL	QC Batch	MW16-8-19	MU	RDL	QC Batch
Lab Filtered Inorganics									
Dissolved Organic Carbon (C)	mg/L	1.8	+/- <RDL	0.50	B540856	2.1	+/- <RDL	0.50	B540856
Microbiological Param.									
E.Coli DST	MPN/100mL	<5.0 (1)	N/A	5.0	B536288	<1.0	N/A	1.0	B536288
Fecal Coliforms	MPN/100mL	<2.0 (1)	N/A	2.0	B537364	<5.0 (1)	N/A	5.0	B537364
Heterotrophic DST	MPN/100mL	>2400	N/A	1.0	B536636	1000	N/A	1.0	B536636
Total Coliforms DST	MPN/100mL	37 (1)	N/A	5.0	B536288	6.3	N/A	1.0	B536288
Nutrients									
Total Ammonia (N)	mg/L	<0.015	N/A	0.015	B538577	<0.015	N/A	0.015	B538581
Orthophosphate (P)	mg/L	<0.0030	N/A	0.0030	B539265	<0.0030	N/A	0.0030	B538956
Lab Filtered Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0030	N/A	0.0030	B539704	<0.0030	N/A	0.0030	B539678

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Detection limit raised due to matrix interference.

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		CWH296		CWH296			
Sampling Date		2024/09/24 16:50		2024/09/24 16:50			
COC Number		1/1		1/1			
	UNITS	RMW16-15-39	MU	RMW16-15-39 Lab-Dup	MU	RDL	QC Batch
Lab Filtered Inorganics							
Dissolved Organic Carbon (C)	mg/L	3.4	+/- 0.55	3.4	+/- 0.55	0.50	B540858
Microbiological Param.							
E.Coli DST	MPN/100mL	<100 (1)	N/A	N/A	N/A	100	B536288
Fecal Coliforms	MPN/100mL	<100 (1)	N/A	N/A	N/A	100	B537364
Heterotrophic DST	MPN/100mL	>2400	N/A	N/A	N/A	1.0	B536636
Total Coliforms DST	MPN/100mL	<100 (1)	N/A	N/A	N/A	100	B536288
Nutrients							
Total Ammonia (N)	mg/L	0.62	+/- 0.069	N/A	N/A	0.015	B538577
Orthophosphate (P)	mg/L	0.017	+/- 0.0042	N/A	N/A	0.0030	B538956
Lab Filtered Nutrients							
Dissolved Phosphorus (P)	mg/L	0.026	+/- 0.0053	N/A	N/A	0.0030	B539678

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Detection limit raised due to matrix interference.

Bureau Veritas ID		CWH297			
Sampling Date		2024/09/24 16:57			
COC Number		1/1			
	UNITS	SR24-08	MU	RDL	QC Batch
Lab Filtered Inorganics					
Dissolved Organic Carbon (C)	mg/L	5.4	+/- 0.74	0.50	B540856
Microbiological Param.					
E.Coli DST	MPN/100mL	<1.0	N/A	1.0	B536288
Fecal Coliforms	MPN/100mL	<1.0	N/A	1.0	B537364
Heterotrophic DST	MPN/100mL	>2400	N/A	1.0	B536636
Total Coliforms DST	MPN/100mL	<1.0	N/A	1.0	B536288
Nutrients					
Total Ammonia (N)	mg/L	1.0	+/- 0.11	0.015	B538581
Orthophosphate (P)	mg/L	<0.0030	N/A	0.0030	B539265
Lab Filtered Nutrients					
Dissolved Phosphorus (P)	mg/L	<0.0030	N/A	0.0030	B539704

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

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MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		CWH292			CWH293			CWH294			
Sampling Date		2024/09/24 10:42			2024/09/24 11:40			2024/09/24 14:55			
COC Number		1/1			1/1			1/1			
	UNITS	MW16-4-22	MU	QC Batch	RMW16-5-12	MU	RDL	MW16-8-8	MU	RDL	QC Batch
Elements											
Total Mercury (Hg)	ug/L	<0.0019	N/A	B543198	0.0167	+/- 0.0034	0.0019	2.13 (1)	+/- 0.36	0.19	B543198
Lab Filtered Elements											
Dissolved Mercury (Hg)	ug/L	<0.0019	N/A	B543474	<0.0019	N/A	0.0019	<0.0019	N/A	0.0019	B540097

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Bureau Veritas ID		CWH295			CWH296			
Sampling Date		2024/09/24 14:18			2024/09/24 16:50			
COC Number		1/1			1/1			
	UNITS	MW16-8-19	MU	RDL	RMW16-15-39	MU	RDL	QC Batch
Elements								
Total Mercury (Hg)	ug/L	0.0026	+/- 0.0019	0.0019	0.058 (1)	+/- <RDL	0.019	B543198
Lab Filtered Elements								
Dissolved Mercury (Hg)	ug/L	<0.0019	N/A	0.0019	<0.0019	N/A	0.0019	B540097

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Bureau Veritas ID		CWH297		CWH297			
Sampling Date		2024/09/24 16:57		2024/09/24 16:57			
COC Number		1/1		1/1			
	UNITS	SR24-08	MU	SR24-08 Lab-Dup	MU	RDL	QC Batch
Elements							
Total Mercury (Hg)	ug/L	<0.0019	N/A	N/A	N/A	0.0019	B543198
Lab Filtered Elements							
Dissolved Mercury (Hg)	ug/L	<0.0019	N/A	<0.0019	N/A	0.0019	B543474

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	8.0°C

The estimate of uncertainty has been reported as an expanded uncertainty and calculated using a coverage factor of 2, which gives a level of confidence of 95%.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B535698	CHA	Spiked Blank	O-TERPHENYL (sur.)	2024/09/26		103	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2024/09/26		87	%	60 - 140
B535698	CHA	Method Blank	O-TERPHENYL (sur.)	2024/09/26		101	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2024/09/26	<0.10		mg/L	
B536288	R4S	Method Blank	E.Coli DST	2024/09/26	<1.0		mpn/100mL	
			Total Coliforms DST	2024/09/26	<1.0		mpn/100mL	
B536288	R4S	RPD	E.Coli DST	2024/09/26	NC		%	N/A
			Total Coliforms DST	2024/09/26	NC		%	N/A
B536636	SOG	Method Blank	Heterotrophic DST	2024/09/27	<1.0		mpn/100mL	
B536636	SOG	RPD	Heterotrophic DST	2024/09/27	NC		%	N/A
B537038	WPK	Matrix Spike	1,4-Difluorobenzene (sur.)	2024/09/28		95	%	50 - 140
			4-Bromofluorobenzene (sur.)	2024/09/28		113	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2024/09/28		91	%	50 - 140
			Benzene	2024/09/28		87	%	50 - 140
			Toluene	2024/09/28		91	%	50 - 140
			Ethylbenzene	2024/09/28		92	%	50 - 140
			m & p-Xylene	2024/09/28		92	%	50 - 140
			o-Xylene	2024/09/28		93	%	50 - 140
			F1 (C6-C10)	2024/09/28		80	%	60 - 140
B537038	WPK	Spiked Blank	1,4-Difluorobenzene (sur.)	2024/09/28		93	%	50 - 140
			4-Bromofluorobenzene (sur.)	2024/09/28		114	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2024/09/28		89	%	50 - 140
			Benzene	2024/09/28		87	%	60 - 130
			Toluene	2024/09/28		92	%	60 - 130
			Ethylbenzene	2024/09/28		93	%	60 - 130
			m & p-Xylene	2024/09/28		94	%	60 - 130
			o-Xylene	2024/09/28		95	%	60 - 130
			F1 (C6-C10)	2024/09/28		98	%	60 - 140
B537038	WPK	Method Blank	1,4-Difluorobenzene (sur.)	2024/09/29		97	%	50 - 140
			4-Bromofluorobenzene (sur.)	2024/09/29		110	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2024/09/29		93	%	50 - 140
			Benzene	2024/09/29	<0.00040		mg/L	
			Toluene	2024/09/29	<0.00040		mg/L	
			Ethylbenzene	2024/09/29	<0.00040		mg/L	
			m & p-Xylene	2024/09/29	<0.00080		mg/L	
			o-Xylene	2024/09/29	<0.00040		mg/L	
			F1 (C6-C10)	2024/09/29	<0.10		mg/L	
B537038	WPK	RPD	Benzene	2024/09/29	2.8		%	30
			Toluene	2024/09/29	NC		%	30
			Ethylbenzene	2024/09/29	NC		%	30
			m & p-Xylene	2024/09/29	NC		%	30
			o-Xylene	2024/09/29	NC		%	30
			F1 (C6-C10)	2024/09/29	NC		%	30
B537045	RIL	Matrix Spike [CWH296-03]	1,4-Difluorobenzene (sur.)	2024/09/29		101	%	50 - 140
			4-Bromofluorobenzene (sur.)	2024/09/29		97	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2024/09/29		105	%	50 - 140
			Benzene	2024/09/29		92	%	50 - 140
			Toluene	2024/09/29		90	%	50 - 140
			Ethylbenzene	2024/09/29		89	%	50 - 140
			m & p-Xylene	2024/09/29		88	%	50 - 140
			o-Xylene	2024/09/29		92	%	50 - 140
			F1 (C6-C10)	2024/09/29		90	%	60 - 140
B537045	RIL	Spiked Blank	1,4-Difluorobenzene (sur.)	2024/09/29		101	%	50 - 140

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			4-Bromofluorobenzene (sur.)	2024/09/29		97	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2024/09/29		104	%	50 - 140
			Benzene	2024/09/29		95	%	60 - 130
			Toluene	2024/09/29		93	%	60 - 130
			Ethylbenzene	2024/09/29		93	%	60 - 130
			m & p-Xylene	2024/09/29		93	%	60 - 130
			o-Xylene	2024/09/29		96	%	60 - 130
			F1 (C6-C10)	2024/09/29		101	%	60 - 140
B537045	RIL	Method Blank	1,4-Difluorobenzene (sur.)	2024/09/29		101	%	50 - 140
			4-Bromofluorobenzene (sur.)	2024/09/29		99	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2024/09/29		103	%	50 - 140
			Benzene	2024/09/29	<0.00040		mg/L	
			Toluene	2024/09/29	<0.00040		mg/L	
			Ethylbenzene	2024/09/29	<0.00040		mg/L	
			m & p-Xylene	2024/09/29	<0.00080		mg/L	
			o-Xylene	2024/09/29	<0.00040		mg/L	
			F1 (C6-C10)	2024/09/29	<0.10		mg/L	
B537045	RIL	RPD [CWH295-03]	Benzene	2024/09/29	NC		%	30
			Toluene	2024/09/29	NC		%	30
			Ethylbenzene	2024/09/29	NC		%	30
			m & p-Xylene	2024/09/29	NC		%	30
			o-Xylene	2024/09/29	NC		%	30
			F1 (C6-C10)	2024/09/29	NC		%	30
B537364	R4S	Method Blank	Fecal Coliforms	2024/09/26	<1.0		MPN/100mL	
B537364	R4S	RPD	Fecal Coliforms	2024/09/26	33		%	N/A
B538371	YL7	Matrix Spike	Total Nitrogen (N)	2024/09/27		104	%	80 - 120
B538371	YL7	QC Standard	Total Nitrogen (N)	2024/09/27		105	%	80 - 120
B538371	YL7	Spiked Blank	Total Nitrogen (N)	2024/09/27		107	%	80 - 120
B538371	YL7	Method Blank	Total Nitrogen (N)	2024/09/27	<0.020		mg/L	
B538371	YL7	RPD	Total Nitrogen (N)	2024/09/27	7.5		%	20
B538374	YL7	Matrix Spike	Total Nitrogen (N)	2024/09/27		108	%	80 - 120
B538374	YL7	QC Standard	Total Nitrogen (N)	2024/09/27		105	%	80 - 120
B538374	YL7	Spiked Blank	Total Nitrogen (N)	2024/09/27		105	%	80 - 120
B538374	YL7	Method Blank	Total Nitrogen (N)	2024/09/27	<0.020		mg/L	
B538374	YL7	RPD	Total Nitrogen (N)	2024/09/27	1.6		%	20
B538577	AFI	Matrix Spike	Total Ammonia (N)	2024/09/26		97	%	80 - 120
B538577	AFI	Spiked Blank	Total Ammonia (N)	2024/09/26		105	%	80 - 120
B538577	AFI	Method Blank	Total Ammonia (N)	2024/09/26	<0.015		mg/L	
B538577	AFI	RPD	Total Ammonia (N)	2024/09/26	2.0		%	20
B538581	AFI	Matrix Spike	Total Ammonia (N)	2024/09/26		102	%	80 - 120
B538581	AFI	Spiked Blank	Total Ammonia (N)	2024/09/26		106	%	80 - 120
B538581	AFI	Method Blank	Total Ammonia (N)	2024/09/26	<0.015		mg/L	
B538581	AFI	RPD	Total Ammonia (N)	2024/09/26	2.4		%	20
B538956	YL7	Matrix Spike	Orthophosphate (P)	2024/09/26		97	%	80 - 120
B538956	YL7	Spiked Blank	Orthophosphate (P)	2024/09/26		98	%	80 - 120
B538956	YL7	Method Blank	Orthophosphate (P)	2024/09/26	<0.0030		mg/L	
B538956	YL7	RPD	Orthophosphate (P)	2024/09/26	2.3		%	20
B539208	AFI	Matrix Spike	Nitrite (N)	2024/09/27		106	%	80 - 120
			Nitrate plus Nitrite (N)	2024/09/27		88	%	80 - 120
B539208	AFI	Spiked Blank	Nitrite (N)	2024/09/26		103	%	80 - 120
			Nitrate plus Nitrite (N)	2024/09/26		104	%	80 - 120
B539208	AFI	Method Blank	Nitrite (N)	2024/09/26	<0.010		mg/L	
			Nitrate plus Nitrite (N)	2024/09/26	<0.010		mg/L	
B539208	AFI	RPD	Nitrite (N)	2024/09/27	NC		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Nitrate plus Nitrite (N)	2024/09/27	NC		%	20
B539209	TOR	Matrix Spike	Chloride (Cl)	2024/09/26		111	%	80 - 120
			Sulphate (SO4)	2024/09/26		98	%	80 - 120
B539209	TOR	Spiked Blank	Chloride (Cl)	2024/09/26		102	%	80 - 120
			Sulphate (SO4)	2024/09/26		99	%	80 - 120
B539209	TOR	Method Blank	Chloride (Cl)	2024/09/26	<1.0		mg/L	
			Sulphate (SO4)	2024/09/26	<1.0		mg/L	
B539209	TOR	RPD	Chloride (Cl)	2024/09/26	NC		%	20
			Sulphate (SO4)	2024/09/26	0.24		%	20
B539212	AFI	Matrix Spike	Nitrite (N)	2024/09/26		106	%	80 - 120
			Nitrate plus Nitrite (N)	2024/09/26		108	%	80 - 120
B539212	AFI	Spiked Blank	Nitrite (N)	2024/09/27		103	%	80 - 120
			Nitrate plus Nitrite (N)	2024/09/27		108	%	80 - 120
B539212	AFI	Method Blank	Nitrite (N)	2024/09/26	<0.010		mg/L	
			Nitrate plus Nitrite (N)	2024/09/26	<0.010		mg/L	
B539212	AFI	RPD	Nitrite (N)	2024/09/26	NC		%	20
			Nitrate plus Nitrite (N)	2024/09/26	NC		%	20
B539265	YL7	Matrix Spike	Orthophosphate (P)	2024/09/26		104	%	80 - 120
B539265	YL7	Spiked Blank	Orthophosphate (P)	2024/09/26		99	%	80 - 120
B539265	YL7	Method Blank	Orthophosphate (P)	2024/09/26	<0.0030		mg/L	
B539265	YL7	RPD	Orthophosphate (P)	2024/09/26	NC		%	20
B539285	TOR	Matrix Spike	Chloride (Cl)	2024/09/26		97	%	80 - 120
			Sulphate (SO4)	2024/09/26		114	%	80 - 120
B539285	TOR	Spiked Blank	Chloride (Cl)	2024/09/26		97	%	80 - 120
			Sulphate (SO4)	2024/09/26		100	%	80 - 120
B539285	TOR	Method Blank	Chloride (Cl)	2024/09/26	<1.0		mg/L	
			Sulphate (SO4)	2024/09/26	<1.0		mg/L	
B539285	TOR	RPD	Chloride (Cl)	2024/09/26	2.3		%	20
			Sulphate (SO4)	2024/09/26	1.4		%	20
B539678	MAP	Matrix Spike	Dissolved Phosphorus (P)	2024/09/27		99	%	80 - 120
B539678	MAP	QC Standard	Dissolved Phosphorus (P)	2024/09/27		89	%	80 - 120
B539678	MAP	Spiked Blank	Dissolved Phosphorus (P)	2024/09/27		97	%	80 - 120
B539678	MAP	Method Blank	Dissolved Phosphorus (P)	2024/09/27	<0.0030		mg/L	
B539678	MAP	RPD	Dissolved Phosphorus (P)	2024/09/27	NC		%	20
B539704	MAP	Matrix Spike	Dissolved Phosphorus (P)	2024/09/30		98	%	80 - 120
B539704	MAP	QC Standard	Dissolved Phosphorus (P)	2024/09/30		87	%	80 - 120
B539704	MAP	Spiked Blank	Dissolved Phosphorus (P)	2024/09/30		96	%	80 - 120
B539704	MAP	Method Blank	Dissolved Phosphorus (P)	2024/09/30	<0.0030		mg/L	
B539704	MAP	RPD	Dissolved Phosphorus (P)	2024/09/30	NC		%	20
B539887	HAP	Matrix Spike	Chloride (Cl)	2024/09/27		99	%	80 - 120
			Sulphate (SO4)	2024/09/27		119	%	80 - 120
B539887	HAP	Spiked Blank	Chloride (Cl)	2024/09/27		98	%	80 - 120
			Sulphate (SO4)	2024/09/27		103	%	80 - 120
B539887	HAP	Method Blank	Chloride (Cl)	2024/09/27	<1.0		mg/L	
			Sulphate (SO4)	2024/09/27	<1.0		mg/L	
B539887	HAP	RPD	Chloride (Cl)	2024/09/27	0.37		%	20
			Sulphate (SO4)	2024/09/27	2.5		%	20
B540097	KHU	Matrix Spike	Dissolved Mercury (Hg)	2024/09/27		102	%	80 - 120
B540097	KHU	Spiked Blank	Dissolved Mercury (Hg)	2024/09/27		92	%	80 - 120
B540097	KHU	Method Blank	Dissolved Mercury (Hg)	2024/09/27	<0.0019		ug/L	
B540097	KHU	RPD	Dissolved Mercury (Hg)	2024/09/27	NC		%	20
B540233	JAB	Matrix Spike [CWH292-02]	Dissolved Aluminum (Al)	2024/09/28		87	%	80 - 120
			Dissolved Antimony (Sb)	2024/09/28		102	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Arsenic (As)	2024/09/28		109	%	80 - 120
			Dissolved Beryllium (Be)	2024/09/28		97	%	80 - 120
			Dissolved Chromium (Cr)	2024/09/28		102	%	80 - 120
			Dissolved Cobalt (Co)	2024/09/28		100	%	80 - 120
			Dissolved Copper (Cu)	2024/09/28		94	%	80 - 120
			Dissolved Lead (Pb)	2024/09/28		91	%	80 - 120
			Dissolved Molybdenum (Mo)	2024/09/28		114	%	80 - 120
			Dissolved Nickel (Ni)	2024/09/28		98	%	80 - 120
			Dissolved Selenium (Se)	2024/09/28		115	%	80 - 120
			Dissolved Silver (Ag)	2024/09/28		96	%	80 - 120
			Dissolved Thallium (Tl)	2024/09/28		93	%	80 - 120
			Dissolved Tin (Sn)	2024/09/28		107	%	80 - 120
			Dissolved Titanium (Ti)	2024/09/28		110	%	80 - 120
			Dissolved Uranium (U)	2024/09/28		97	%	80 - 120
			Dissolved Vanadium (V)	2024/09/28		106	%	80 - 120
			Dissolved Zinc (Zn)	2024/09/28		94	%	80 - 120
B540233	JAB	Spiked Blank	Dissolved Aluminum (Al)	2024/09/28		103	%	80 - 120
			Dissolved Antimony (Sb)	2024/09/28		101	%	80 - 120
			Dissolved Arsenic (As)	2024/09/28		102	%	80 - 120
			Dissolved Beryllium (Be)	2024/09/28		98	%	80 - 120
			Dissolved Chromium (Cr)	2024/09/28		101	%	80 - 120
			Dissolved Cobalt (Co)	2024/09/28		102	%	80 - 120
			Dissolved Copper (Cu)	2024/09/28		103	%	80 - 120
			Dissolved Lead (Pb)	2024/09/28		100	%	80 - 120
			Dissolved Molybdenum (Mo)	2024/09/28		103	%	80 - 120
			Dissolved Nickel (Ni)	2024/09/28		102	%	80 - 120
			Dissolved Selenium (Se)	2024/09/28		101	%	80 - 120
			Dissolved Silver (Ag)	2024/09/28		101	%	80 - 120
			Dissolved Thallium (Tl)	2024/09/28		100	%	80 - 120
			Dissolved Tin (Sn)	2024/09/28		100	%	80 - 120
			Dissolved Titanium (Ti)	2024/09/28		94	%	80 - 120
			Dissolved Uranium (U)	2024/09/28		100	%	80 - 120
			Dissolved Vanadium (V)	2024/09/28		102	%	80 - 120
			Dissolved Zinc (Zn)	2024/09/28		100	%	80 - 120
B540233	JAB	Method Blank	Dissolved Aluminum (Al)	2024/09/28	<0.0030		mg/L	
			Dissolved Antimony (Sb)	2024/09/28	<0.00060		mg/L	
			Dissolved Arsenic (As)	2024/09/28	<0.00020		mg/L	
			Dissolved Beryllium (Be)	2024/09/28	<0.0010		mg/L	
			Dissolved Chromium (Cr)	2024/09/28	<0.0010		mg/L	
			Dissolved Cobalt (Co)	2024/09/28	<0.00030		mg/L	
			Dissolved Copper (Cu)	2024/09/28	<0.0010		mg/L	
			Dissolved Lead (Pb)	2024/09/28	<0.00020		mg/L	
			Dissolved Molybdenum (Mo)	2024/09/28	<0.00020		mg/L	
			Dissolved Nickel (Ni)	2024/09/28	<0.00050		mg/L	
			Dissolved Selenium (Se)	2024/09/28	<0.00020		mg/L	
			Dissolved Silver (Ag)	2024/09/28	<0.00010		mg/L	
			Dissolved Thallium (Tl)	2024/09/28	<0.00020		mg/L	
			Dissolved Tin (Sn)	2024/09/28	<0.0010		mg/L	
			Dissolved Titanium (Ti)	2024/09/28	<0.0010		mg/L	
			Dissolved Uranium (U)	2024/09/28	<0.00010		mg/L	
			Dissolved Vanadium (V)	2024/09/28	<0.0010		mg/L	
			Dissolved Zinc (Zn)	2024/09/28	<0.0030		mg/L	
B540233	JAB	RPD [CWH292-02]	Dissolved Aluminum (Al)	2024/09/28	NC		%	20
			Dissolved Antimony (Sb)	2024/09/28	NC		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Arsenic (As)	2024/09/28	16		%	20
			Dissolved Beryllium (Be)	2024/09/28	NC		%	20
			Dissolved Chromium (Cr)	2024/09/28	NC		%	20
			Dissolved Cobalt (Co)	2024/09/28	2.8		%	20
			Dissolved Copper (Cu)	2024/09/28	4.5		%	20
			Dissolved Lead (Pb)	2024/09/28	NC		%	20
			Dissolved Molybdenum (Mo)	2024/09/28	8.1		%	20
			Dissolved Nickel (Ni)	2024/09/28	0.71		%	20
			Dissolved Selenium (Se)	2024/09/28	NC		%	20
			Dissolved Silver (Ag)	2024/09/28	NC		%	20
			Dissolved Thallium (Tl)	2024/09/28	NC		%	20
			Dissolved Tin (Sn)	2024/09/28	NC		%	20
			Dissolved Titanium (Ti)	2024/09/28	NC		%	20
			Dissolved Uranium (U)	2024/09/28	1.8		%	20
			Dissolved Vanadium (V)	2024/09/28	NC		%	20
			Dissolved Zinc (Zn)	2024/09/28	0.18		%	20
B540242	JAB	Matrix Spike	Dissolved Aluminum (Al)	2024/09/28		98	%	80 - 120
			Dissolved Antimony (Sb)	2024/09/28		105	%	80 - 120
			Dissolved Arsenic (As)	2024/09/28		109	%	80 - 120
			Dissolved Beryllium (Be)	2024/09/28		105	%	80 - 120
			Dissolved Chromium (Cr)	2024/09/28		101	%	80 - 120
			Dissolved Cobalt (Co)	2024/09/28		100	%	80 - 120
			Dissolved Copper (Cu)	2024/09/28		97	%	80 - 120
			Dissolved Lead (Pb)	2024/09/28		97	%	80 - 120
			Dissolved Molybdenum (Mo)	2024/09/28		109	%	80 - 120
			Dissolved Nickel (Ni)	2024/09/28		98	%	80 - 120
			Dissolved Selenium (Se)	2024/09/28		111	%	80 - 120
			Dissolved Silver (Ag)	2024/09/28		101	%	80 - 120
			Dissolved Thallium (Tl)	2024/09/28		98	%	80 - 120
			Dissolved Tin (Sn)	2024/09/28		105	%	80 - 120
			Dissolved Titanium (Ti)	2024/09/28		104	%	80 - 120
			Dissolved Uranium (U)	2024/09/28		100	%	80 - 120
			Dissolved Vanadium (V)	2024/09/28		105	%	80 - 120
			Dissolved Zinc (Zn)	2024/09/28		104	%	80 - 120
B540242	JAB	Spiked Blank	Dissolved Aluminum (Al)	2024/09/28		114	%	80 - 120
			Dissolved Antimony (Sb)	2024/09/28		98	%	80 - 120
			Dissolved Arsenic (As)	2024/09/28		104	%	80 - 120
			Dissolved Beryllium (Be)	2024/09/28		103	%	80 - 120
			Dissolved Chromium (Cr)	2024/09/28		101	%	80 - 120
			Dissolved Cobalt (Co)	2024/09/28		103	%	80 - 120
			Dissolved Copper (Cu)	2024/09/28		102	%	80 - 120
			Dissolved Lead (Pb)	2024/09/28		98	%	80 - 120
			Dissolved Molybdenum (Mo)	2024/09/28		102	%	80 - 120
			Dissolved Nickel (Ni)	2024/09/28		103	%	80 - 120
			Dissolved Selenium (Se)	2024/09/28		99	%	80 - 120
			Dissolved Silver (Ag)	2024/09/28		101	%	80 - 120
			Dissolved Thallium (Tl)	2024/09/28		97	%	80 - 120
			Dissolved Tin (Sn)	2024/09/28		101	%	80 - 120
			Dissolved Titanium (Ti)	2024/09/28		101	%	80 - 120
			Dissolved Uranium (U)	2024/09/28		100	%	80 - 120
			Dissolved Vanadium (V)	2024/09/28		104	%	80 - 120
			Dissolved Zinc (Zn)	2024/09/28		101	%	80 - 120
B540242	JAB	Method Blank	Dissolved Aluminum (Al)	2024/09/28	<0.0030		mg/L	
			Dissolved Antimony (Sb)	2024/09/28	<0.00060		mg/L	

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Arsenic (As)	2024/09/28	<0.00020		mg/L	
			Dissolved Beryllium (Be)	2024/09/28	<0.0010		mg/L	
			Dissolved Chromium (Cr)	2024/09/28	<0.0010		mg/L	
			Dissolved Cobalt (Co)	2024/09/28	<0.00030		mg/L	
			Dissolved Copper (Cu)	2024/09/28	<0.0010		mg/L	
			Dissolved Lead (Pb)	2024/09/28	<0.00020		mg/L	
			Dissolved Molybdenum (Mo)	2024/09/28	<0.00020		mg/L	
			Dissolved Nickel (Ni)	2024/09/28	<0.00050		mg/L	
			Dissolved Selenium (Se)	2024/09/28	<0.00020		mg/L	
			Dissolved Silver (Ag)	2024/09/28	<0.00010		mg/L	
			Dissolved Thallium (Tl)	2024/09/28	<0.00020		mg/L	
			Dissolved Tin (Sn)	2024/09/28	<0.0010		mg/L	
			Dissolved Titanium (Ti)	2024/09/28	<0.0010		mg/L	
			Dissolved Uranium (U)	2024/09/28	<0.00010		mg/L	
			Dissolved Vanadium (V)	2024/09/28	<0.0010		mg/L	
			Dissolved Zinc (Zn)	2024/09/28	<0.0030		mg/L	
B540242	JAB	RPD	Dissolved Aluminum (Al)	2024/09/28	NC		%	20
			Dissolved Antimony (Sb)	2024/09/28	NC		%	20
			Dissolved Arsenic (As)	2024/09/28	14		%	20
			Dissolved Beryllium (Be)	2024/09/28	NC		%	20
			Dissolved Chromium (Cr)	2024/09/28	NC		%	20
			Dissolved Cobalt (Co)	2024/09/28	NC		%	20
			Dissolved Copper (Cu)	2024/09/28	8.9		%	20
			Dissolved Lead (Pb)	2024/09/28	NC		%	20
			Dissolved Molybdenum (Mo)	2024/09/28	2.4		%	20
			Dissolved Nickel (Ni)	2024/09/28	16		%	20
			Dissolved Selenium (Se)	2024/09/28	0.19		%	20
			Dissolved Silver (Ag)	2024/09/28	NC		%	20
			Dissolved Thallium (Tl)	2024/09/28	NC		%	20
			Dissolved Tin (Sn)	2024/09/28	NC		%	20
			Dissolved Titanium (Ti)	2024/09/28	NC		%	20
			Dissolved Uranium (U)	2024/09/28	0.29		%	20
			Dissolved Vanadium (V)	2024/09/28	NC		%	20
			Dissolved Zinc (Zn)	2024/09/28	NC		%	20
B540286	S1D	Matrix Spike [CWH297-02]	Dissolved Barium (Ba)	2024/09/28		49 (1)	%	80 - 120
			Dissolved Boron (B)	2024/09/28		95	%	80 - 120
			Dissolved Iron (Fe)	2024/09/28		103	%	80 - 120
			Dissolved Lithium (Li)	2024/09/28		99	%	80 - 120
			Dissolved Magnesium (Mg)	2024/09/28		NC	%	80 - 120
			Dissolved Manganese (Mn)	2024/09/28		99	%	80 - 120
			Dissolved Phosphorus (P)	2024/09/28		100	%	80 - 120
			Dissolved Potassium (K)	2024/09/28		97	%	80 - 120
			Dissolved Silicon (Si)	2024/09/28		93	%	80 - 120
			Dissolved Sodium (Na)	2024/09/28		NC	%	80 - 120
B540286	S1D	Spiked Blank	Dissolved Barium (Ba)	2024/09/28		101	%	80 - 120
			Dissolved Boron (B)	2024/09/28		98	%	80 - 120
			Dissolved Calcium (Ca)	2024/09/28		99	%	80 - 120
			Dissolved Iron (Fe)	2024/09/28		106	%	80 - 120
			Dissolved Lithium (Li)	2024/09/28		103	%	80 - 120
			Dissolved Magnesium (Mg)	2024/09/28		100	%	80 - 120
			Dissolved Manganese (Mn)	2024/09/28		102	%	80 - 120
			Dissolved Phosphorus (P)	2024/09/28		99	%	80 - 120
			Dissolved Potassium (K)	2024/09/28		99	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Silicon (Si)	2024/09/28		95	%	80 - 120
			Dissolved Sodium (Na)	2024/09/28		97	%	80 - 120
			Dissolved Strontium (Sr)	2024/09/28		98	%	80 - 120
			Dissolved Sulphur (S)	2024/09/28		97	%	80 - 120
B540286	S1D	Method Blank	Dissolved Barium (Ba)	2024/09/28	<0.010		mg/L	
			Dissolved Boron (B)	2024/09/28	<0.020		mg/L	
			Dissolved Calcium (Ca)	2024/09/28	<0.30		mg/L	
			Dissolved Iron (Fe)	2024/09/28	<0.060		mg/L	
			Dissolved Lithium (Li)	2024/09/28	<0.020		mg/L	
			Dissolved Magnesium (Mg)	2024/09/28	<0.20		mg/L	
			Dissolved Manganese (Mn)	2024/09/28	<0.0040		mg/L	
			Dissolved Phosphorus (P)	2024/09/28	<0.10		mg/L	
			Dissolved Potassium (K)	2024/09/28	<0.30		mg/L	
			Dissolved Silicon (Si)	2024/09/28	<0.50		mg/L	
			Dissolved Sodium (Na)	2024/09/28	<0.50		mg/L	
			Dissolved Strontium (Sr)	2024/09/28	<0.020		mg/L	
			Dissolved Sulphur (S)	2024/09/28	<0.20		mg/L	
B540286	S1D	RPD [CWH297-02]	Dissolved Barium (Ba)	2024/09/28	NC		%	20
			Dissolved Boron (B)	2024/09/28	1.1		%	20
			Dissolved Calcium (Ca)	2024/09/28	0.25		%	20
			Dissolved Iron (Fe)	2024/09/28	NC		%	20
			Dissolved Lithium (Li)	2024/09/28	3.2		%	20
			Dissolved Magnesium (Mg)	2024/09/28	0.11		%	20
			Dissolved Manganese (Mn)	2024/09/28	0.17		%	20
			Dissolved Phosphorus (P)	2024/09/28	NC		%	20
			Dissolved Potassium (K)	2024/09/28	0.61		%	20
			Dissolved Silicon (Si)	2024/09/28	0.0022		%	20
			Dissolved Sodium (Na)	2024/09/28	0.40		%	20
			Dissolved Strontium (Sr)	2024/09/28	1.1		%	20
			Dissolved Sulphur (S)	2024/09/28	0.62		%	20
B540294	S1D	Matrix Spike	Dissolved Barium (Ba)	2024/09/27		97	%	80 - 120
			Dissolved Boron (B)	2024/09/27		99	%	80 - 120
			Dissolved Calcium (Ca)	2024/09/27		NC	%	80 - 120
			Dissolved Iron (Fe)	2024/09/27		102	%	80 - 120
			Dissolved Lithium (Li)	2024/09/27		94	%	80 - 120
			Dissolved Magnesium (Mg)	2024/09/27		NC	%	80 - 120
			Dissolved Manganese (Mn)	2024/09/27		102	%	80 - 120
			Dissolved Phosphorus (P)	2024/09/27		105	%	80 - 120
			Dissolved Potassium (K)	2024/09/27		98	%	80 - 120
			Dissolved Silicon (Si)	2024/09/27		89	%	80 - 120
			Dissolved Sodium (Na)	2024/09/27		95	%	80 - 120
			Dissolved Strontium (Sr)	2024/09/27		93	%	80 - 120
			Dissolved Sulphur (S)	2024/09/27		NC	%	80 - 120
B540294	S1D	Spiked Blank	Dissolved Barium (Ba)	2024/09/27		100	%	80 - 120
			Dissolved Boron (B)	2024/09/27		98	%	80 - 120
			Dissolved Calcium (Ca)	2024/09/27		97	%	80 - 120
			Dissolved Iron (Fe)	2024/09/27		100	%	80 - 120
			Dissolved Lithium (Li)	2024/09/27		96	%	80 - 120
			Dissolved Magnesium (Mg)	2024/09/27		103	%	80 - 120
			Dissolved Manganese (Mn)	2024/09/27		99	%	80 - 120
			Dissolved Phosphorus (P)	2024/09/27		102	%	80 - 120
			Dissolved Potassium (K)	2024/09/27		99	%	80 - 120
			Dissolved Silicon (Si)	2024/09/27		91	%	80 - 120
			Dissolved Sodium (Na)	2024/09/27		98	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Strontium (Sr)	2024/09/27		97	%	80 - 120
			Dissolved Sulphur (S)	2024/09/27		98	%	80 - 120
B540294	S1D	Method Blank	Dissolved Barium (Ba)	2024/09/27	<0.010		mg/L	
			Dissolved Boron (B)	2024/09/27	<0.020		mg/L	
			Dissolved Calcium (Ca)	2024/09/27	<0.30		mg/L	
			Dissolved Iron (Fe)	2024/09/27	<0.060		mg/L	
			Dissolved Lithium (Li)	2024/09/27	<0.020		mg/L	
			Dissolved Magnesium (Mg)	2024/09/27	<0.20		mg/L	
			Dissolved Manganese (Mn)	2024/09/27	<0.0040		mg/L	
			Dissolved Phosphorus (P)	2024/09/27	<0.10		mg/L	
			Dissolved Potassium (K)	2024/09/27	<0.30		mg/L	
			Dissolved Silicon (Si)	2024/09/27	<0.50		mg/L	
			Dissolved Sodium (Na)	2024/09/27	<0.50		mg/L	
			Dissolved Strontium (Sr)	2024/09/27	<0.020		mg/L	
			Dissolved Sulphur (S)	2024/09/27	<0.20		mg/L	
B540294	S1D	RPD	Dissolved Barium (Ba)	2024/09/27	0.027		%	20
			Dissolved Boron (B)	2024/09/27	12		%	20
			Dissolved Calcium (Ca)	2024/09/27	0.96		%	20
			Dissolved Iron (Fe)	2024/09/27	NC		%	20
			Dissolved Lithium (Li)	2024/09/27	11		%	20
			Dissolved Magnesium (Mg)	2024/09/27	0.40		%	20
			Dissolved Manganese (Mn)	2024/09/27	NC		%	20
			Dissolved Phosphorus (P)	2024/09/27	NC		%	20
			Dissolved Potassium (K)	2024/09/27	2.3		%	20
			Dissolved Silicon (Si)	2024/09/27	0.77		%	20
			Dissolved Sodium (Na)	2024/09/27	0.95		%	20
			Dissolved Strontium (Sr)	2024/09/27	0.024		%	20
			Dissolved Sulphur (S)	2024/09/27	3.2		%	20
B540856	JYU	Matrix Spike	Dissolved Organic Carbon (C)	2024/09/28		NC	%	75 - 125
B540856	JYU	Spiked Blank	Dissolved Organic Carbon (C)	2024/09/28		98	%	80 - 120
B540856	JYU	Method Blank	Dissolved Organic Carbon (C)	2024/09/28	<0.50		mg/L	
B540856	JYU	RPD	Dissolved Organic Carbon (C)	2024/09/28	0.57		%	20
B540858	JYU	Matrix Spike [CWH296-02]	Dissolved Organic Carbon (C)	2024/09/28		102	%	75 - 125
B540858	JYU	Spiked Blank	Dissolved Organic Carbon (C)	2024/09/28		100	%	80 - 120
B540858	JYU	Method Blank	Dissolved Organic Carbon (C)	2024/09/28	<0.50		mg/L	
B540858	JYU	RPD [CWH296-02]	Dissolved Organic Carbon (C)	2024/09/28	0.30		%	20
B541792	AYE	Spiked Blank	Alkalinity (Total as CaCO3)	2024/09/28		101	%	80 - 120
B541792	AYE	Method Blank	Alkalinity (PP as CaCO3)	2024/09/28	<1.0		mg/L	
			Alkalinity (Total as CaCO3)	2024/09/28	<1.0		mg/L	
			Bicarbonate (HCO3)	2024/09/28	<1.0		mg/L	
			Carbonate (CO3)	2024/09/28	<1.0		mg/L	
			Hydroxide (OH)	2024/09/28	<1.0		mg/L	
B541792	AYE	RPD	Alkalinity (PP as CaCO3)	2024/09/28	NC		%	20
			Alkalinity (Total as CaCO3)	2024/09/28	1.0		%	20
			Bicarbonate (HCO3)	2024/09/28	1.0		%	20
			Carbonate (CO3)	2024/09/28	NC		%	20
			Hydroxide (OH)	2024/09/28	NC		%	20
B541794	AYE	Spiked Blank	pH	2024/09/28		100	%	97 - 103
B541794	AYE	RPD	pH	2024/09/29	1.7		%	N/A
B541795	AYE	Spiked Blank	Conductivity	2024/09/28		99	%	90 - 110
B541795	AYE	Method Blank	Conductivity	2024/09/28	<2.0		uS/cm	
B541795	AYE	RPD	Conductivity	2024/09/28	0.58		%	10
B542382	AYE	Spiked Blank	Alkalinity (Total as CaCO3)	2024/09/30		99	%	80 - 120

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B542382	AYE	Method Blank	Alkalinity (PP as CaCO3)	2024/09/30	<1.0		mg/L	
			Alkalinity (Total as CaCO3)	2024/09/30	<1.0		mg/L	
			Bicarbonate (HCO3)	2024/09/30	<1.0		mg/L	
			Carbonate (CO3)	2024/09/30	<1.0		mg/L	
			Hydroxide (OH)	2024/09/30	<1.0		mg/L	
B542382	AYE	RPD	Alkalinity (PP as CaCO3)	2024/09/30	NC		%	20
			Alkalinity (Total as CaCO3)	2024/09/30	0.16		%	20
			Bicarbonate (HCO3)	2024/09/30	0.16		%	20
			Carbonate (CO3)	2024/09/30	NC		%	20
			Hydroxide (OH)	2024/09/30	NC		%	20
B542406	AYE	Spiked Blank	pH	2024/09/30		101	%	97 - 103
B542406	AYE	RPD	pH	2024/09/30	2.0		%	N/A
B542407	AYE	Spiked Blank	Conductivity	2024/09/30		101	%	90 - 110
B542407	AYE	Method Blank	Conductivity	2024/09/30	<2.0		uS/cm	
B542407	AYE	RPD	Conductivity	2024/09/30	0		%	10
B543198	KHU	Matrix Spike	Total Mercury (Hg)	2024/10/01		107	%	80 - 120
B543198	KHU	Spiked Blank	Total Mercury (Hg)	2024/10/01		107	%	80 - 120
B543198	KHU	Method Blank	Total Mercury (Hg)	2024/10/01	<0.0019		ug/L	
B543198	KHU	RPD	Total Mercury (Hg)	2024/10/01	NC		%	20
B543474	KHU	Matrix Spike [CWH292-08]	Dissolved Mercury (Hg)	2024/10/01		107	%	80 - 120
B543474	KHU	Spiked Blank	Dissolved Mercury (Hg)	2024/10/01		106	%	80 - 120
B543474	KHU	Method Blank	Dissolved Mercury (Hg)	2024/10/01	<0.0019		ug/L	
B543474	KHU	RPD [CWH297-08]	Dissolved Mercury (Hg)	2024/10/01	NC		%	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

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Qiliang (Alex) Wu, Senior Analyst

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Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

C475814
2024/09/24 18:51

Choose Location:
Calgary, AB: 4000 - 19th St. NE, T2E 6P8 Toll Free (800) 386-7247
Edmonton, AB: 4326 - 76 Avenue NW, T6B 2T8 Toll Free (800) 386-7247
Winnipeg, MB: D-675 Berry St. R3H 1A7 Toll Free (866) 800-6208

www.BVNA.com

CHAIN OF CUSTODY RECORD

ENV COC - 00013v5

Page 1 of 1

Invoice Information	Invoice to (requires report)	Report Information (if differs from invoice)		Project Information	
Company:	Stantec	Company:		Quotation #:	
Contact Name:	Dylan King	Contact Name:		P.O. #/ AFE#:	
Street Address:	#300, 10220 103Ave NW	Street Address:		Project #:	110773396
City:	Edmonton Prov: AB Postal Code: T5J0K4	City:	Prov: Postal Code:	Site #:	
Phone:	780 969 2223	Phone:		Site Location:	
Email:	dylan.king@stantec.com	Email:		Site Location Province:	AB
Copies:		Copies:		Sampled By:	TH

MCAL-2024-09-2120

Regulatory Criteria

☑ AT1 | CCME | Drinking Water - Canada | Drinking Water - Manitoba
Saskatchewan | Drinking Water - Alberta | Other _____

SAMPLES MUST BE KEPT COOL (<10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

Regular Turnaround Time (TAT)
☑ 5 to 7 Day | 10 Day

Rush Turnaround Time (TAT) Surcharges apply
Same Day | 1 Day | 2 Day | 3 Day | 4 Day

Date Required: YY MM DD

Comments

	Sample Identification	Date Sampled YY	MM	DD	Time (24hr) HH	MM	Matrix	1 FIELD FILTERED	2 FIELD PRESERVED	3 LAB FILTRATION REQUIRED	4 BTEX-F3	5 VOCs	6 BTEX-F1-F2	7 BTEX-F3-F4	8 Routine water	9 Regulated metals - total	10 Regulated metals - dissolved	11 Mercury - total	12 Mercury - dissolved	13 ~~Subcon~~ Sieve-Hydrometer DOC	14 Sieve-Hydrometer TKN	15 Texture (% sand, silt, clay)	16 Basic class II landfill	17 Dissolved phosphorus	18 phosphate	19 ammonia	20 Bacteriological*	21 # OF CONTAINERS SUBMITTED	22 HOLD - DO NOT ANALYZE	Comments
1	MW16-4-22	24	09	24	10	42	water			X			X		X		X	X	X	X	X			X	X	X	X	11		
2	RMW16-5-12				11	40				X			X		X		X	X	X	X	X			X	X	X	X	11		
3	MW16-8-8				14	55				X			X		X		X	X	X	X	X			X	X	X	X	11		
4	MW16-8-19				14	18				X			X		X		X	X	X	X	X			X	X	X	X	11		
5	RMW16-15-39				16	50				X			X		X		X	X	X	X	X			X	X	X	X	11		
6	SR24-08				16	57				X			X		X		X	X	X	X	X			X	X	X	X	11		
7																													
8																													
9																													
10																													
11																													
12																													

*UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS AND CONDITIONS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS OR BY CALLING THE LABORATORY LISTED ABOVE TO OBTAIN A COPY

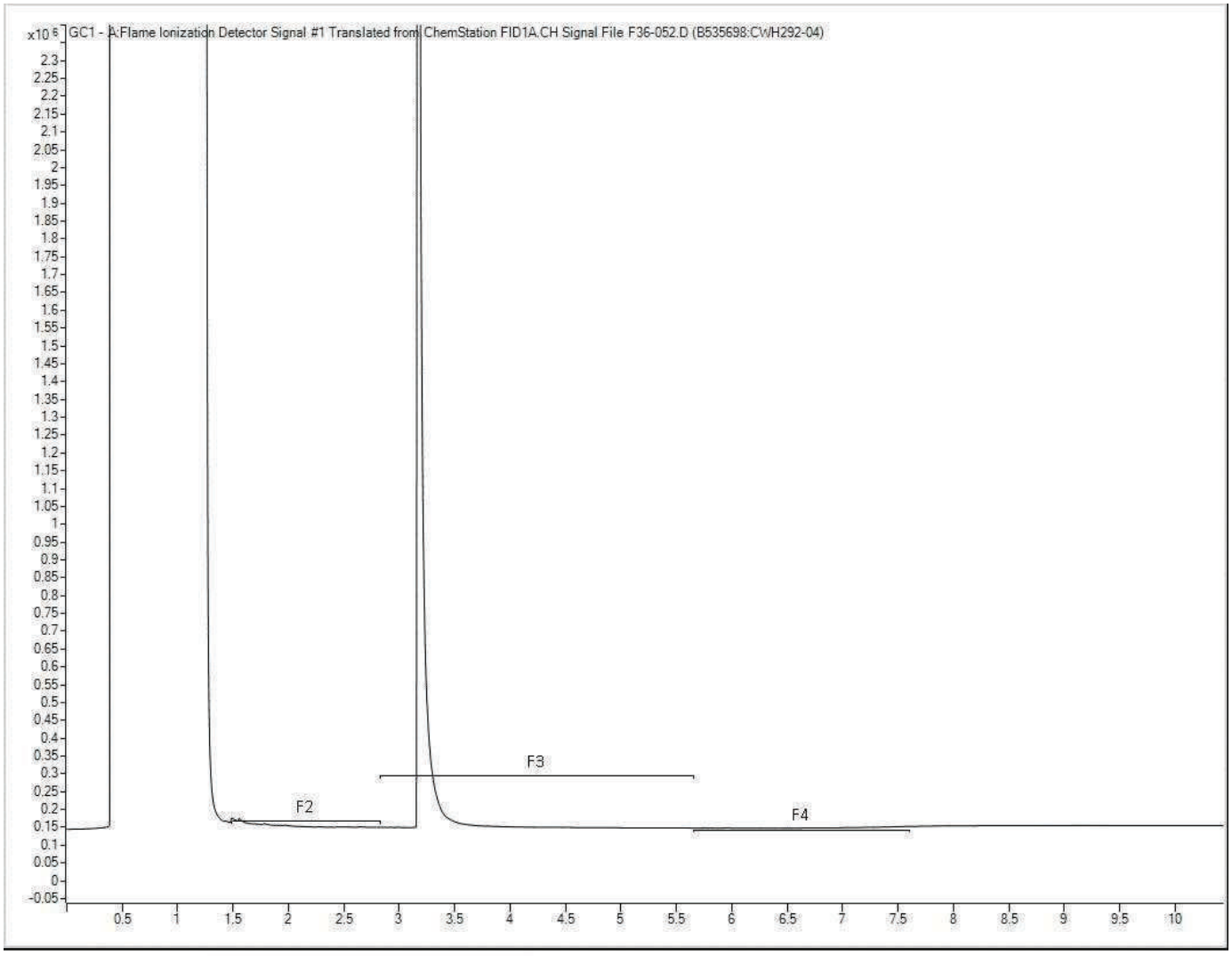
LAB USE ONLY	Yes	No	°C				Temperature reading by:
Seal present		☑					
Seal intact	☑		8.4	7.3	8.3		
Cooling media present			1	2	3		

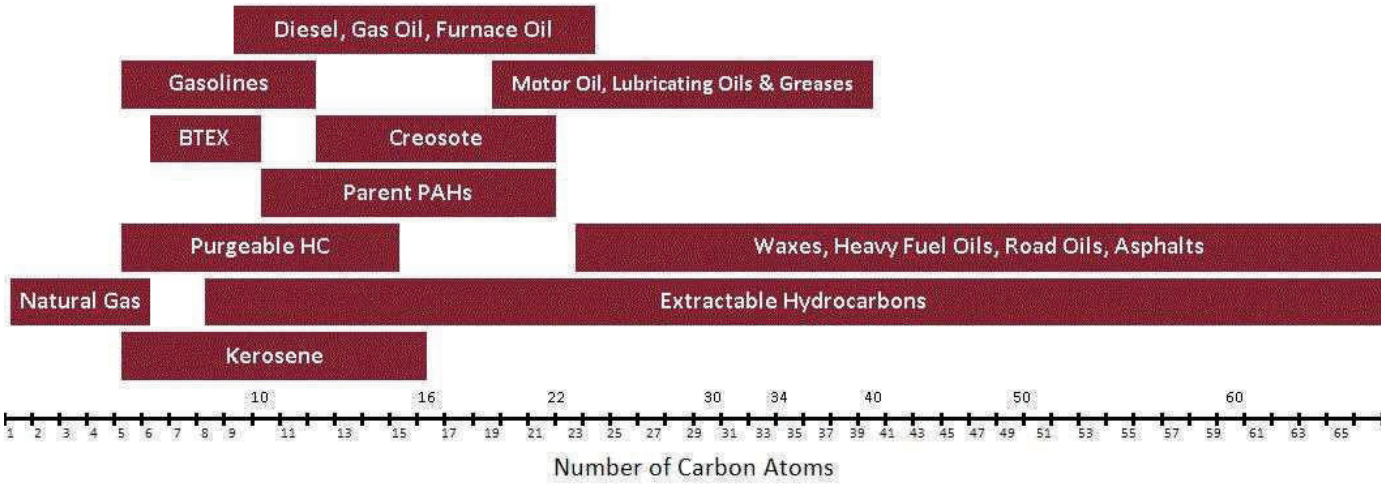
LAB USE ONLY	Yes	No	°C			
Seal present						
Seal intact						
Cooling media present			1	2	3	

LAB USE ONLY	Yes	No	°C			
Seal present						
Seal intact						
Cooling media present			1	2	3	

	Relinquished by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM	Received by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM	Special Instructions
1	Taylor Harris	2024	09	24	18	50	Daniel Choi	24	09	24	18	51	* total coliforms, fecal coliforms, e. coli, heterotrophic plate count
2													

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

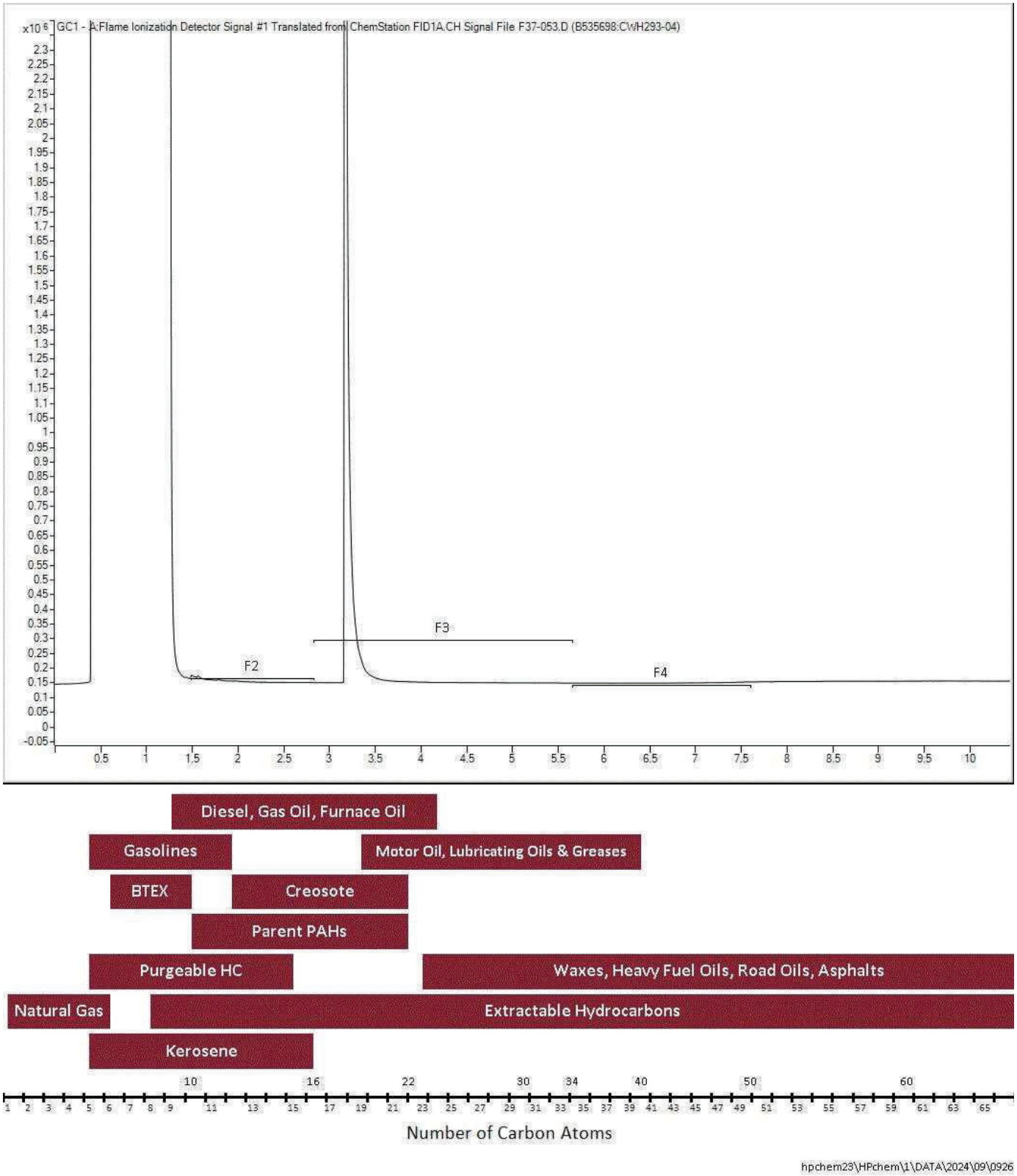




hpchem23\HPchem\1\DATA\2024\09\0926

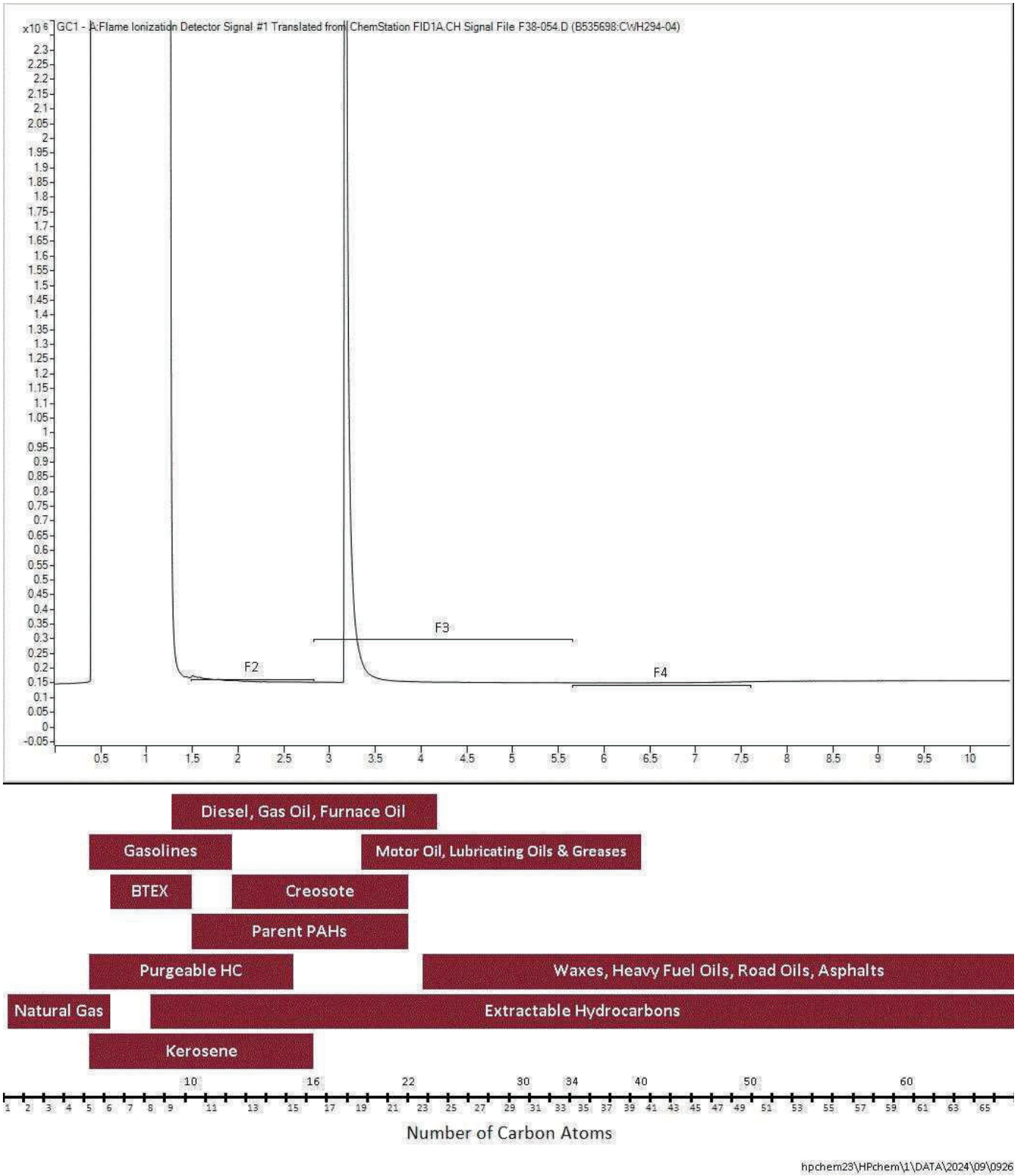
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

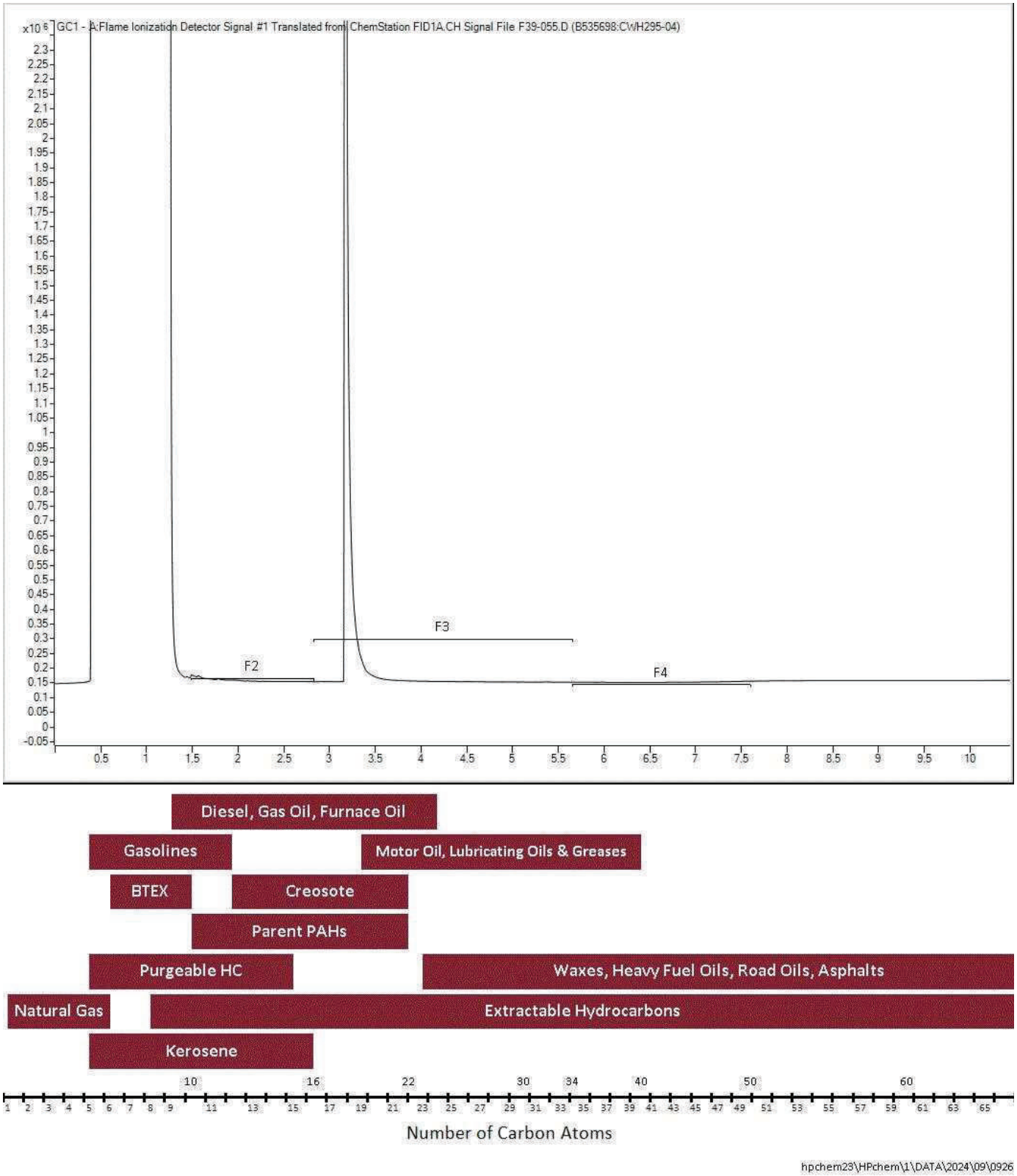


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C475814
Report Date: 2024/10/02
Bureau Veritas Sample: CWH295

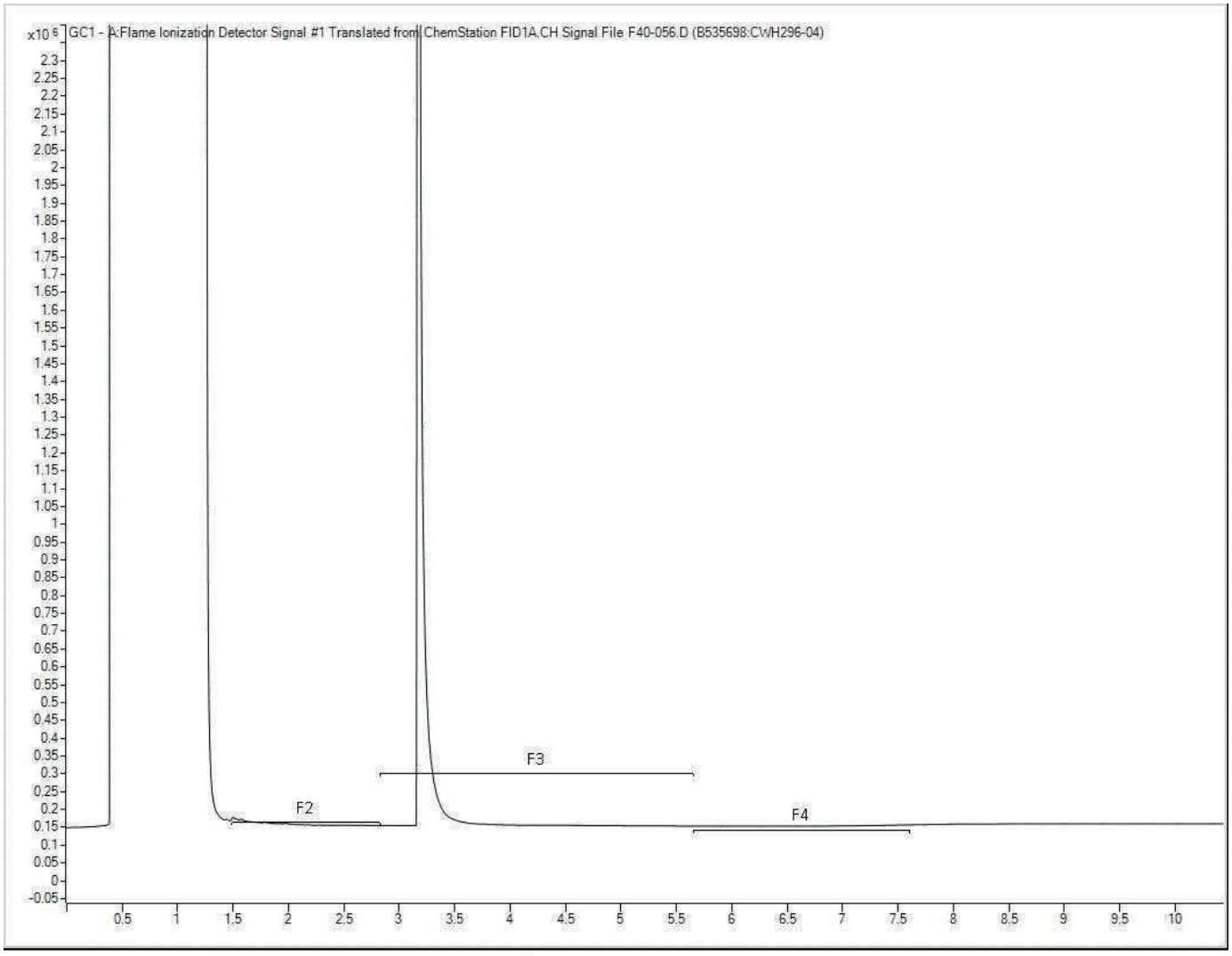
STANTEC CONSULTING LTD
Client Project #: 16773396
Client ID: MW16-8-19

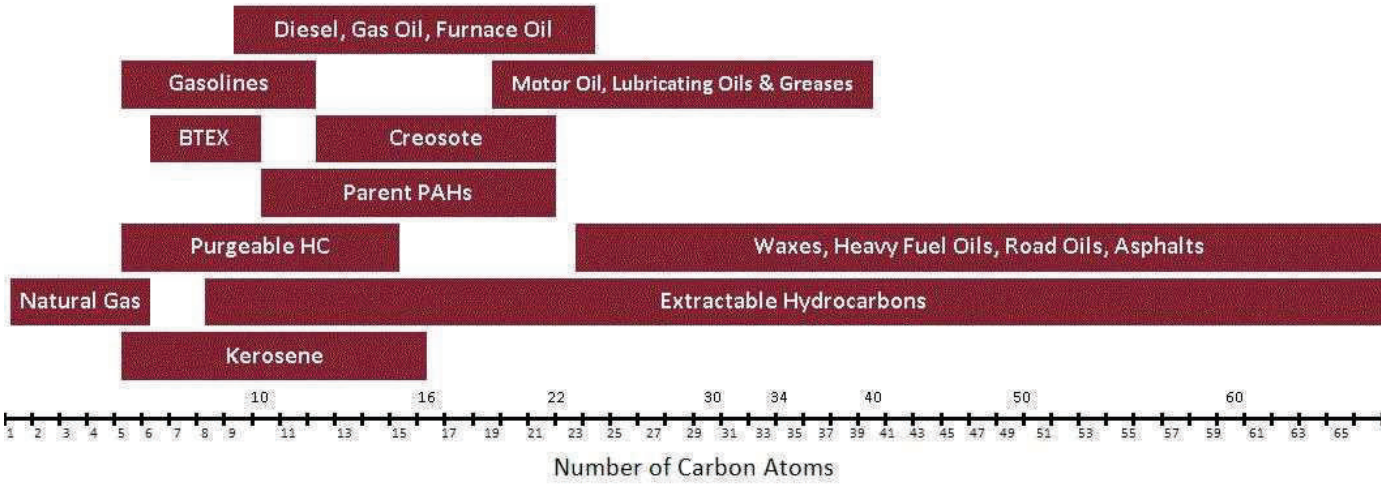
CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

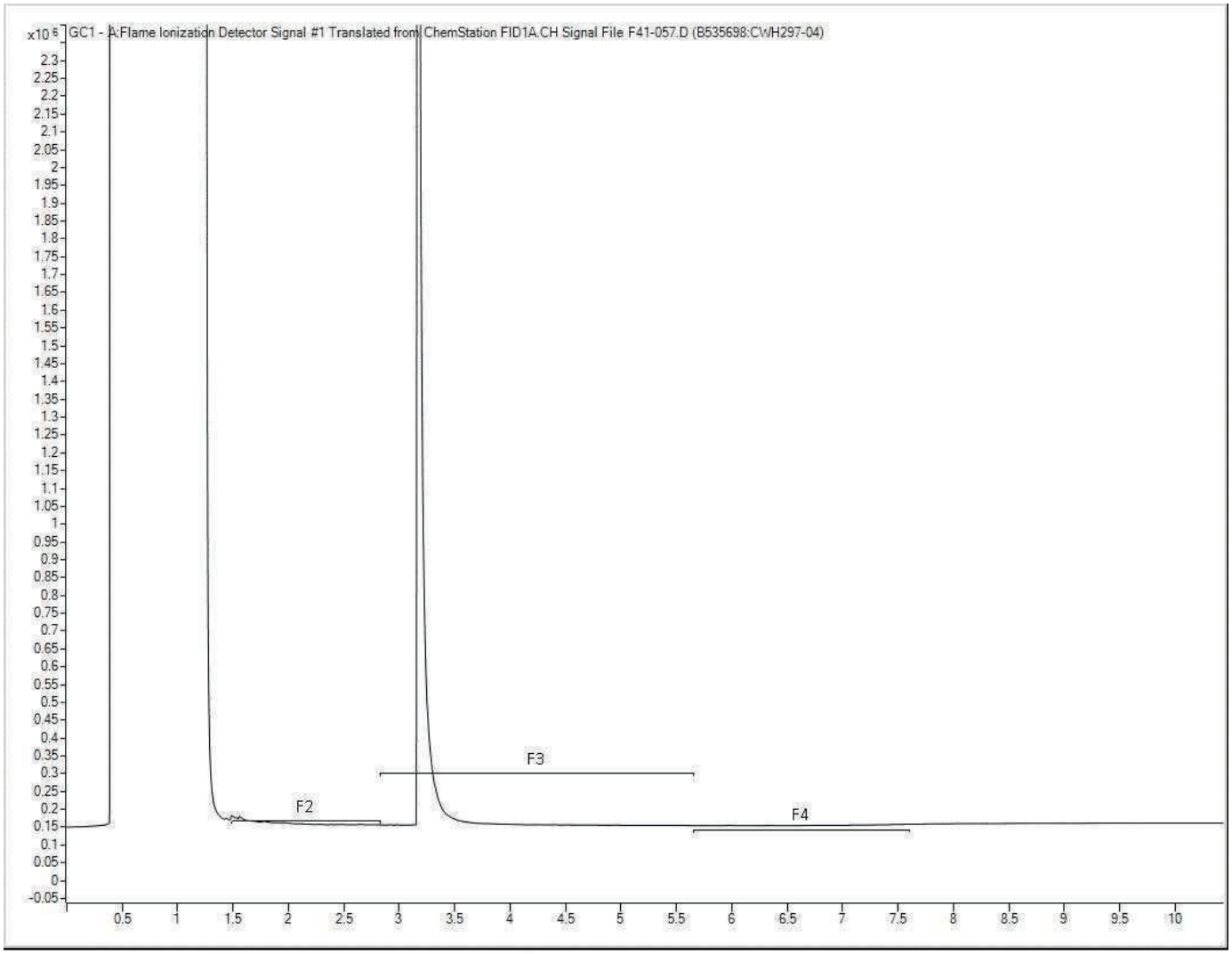


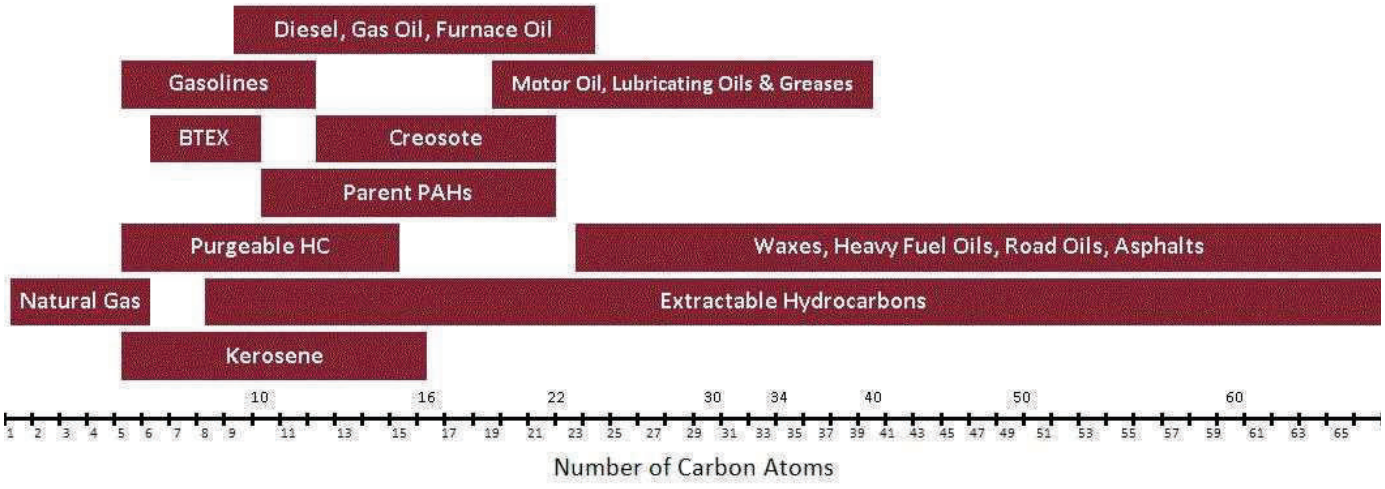


hpchem23\HPchem\1\DATA\2024\09\0926

Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





hpchem23\HPchem\1\DATA\2024\09\0926

Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your Project #: 110773396
Your C.O.C. #: 1OF1

Attention: DYLAN KING

STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
EDMONTON, AB
CANADA T5J 0K4

Report Date: 2024/10/03
Report #: R3566334
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C476327
Received: 2024/09/25, 18:45

Sample Matrix: Water
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH	8	N/A	2024/09/30	AB SOP-00005	SM 24 2320 B m
BTEX/F1 in Water by HS GC/MS/FID	4	N/A	2024/09/28	AB SOP-00039	CCME CWS/EPA 8260d m
BTEX/F1 in Water by HS GC/MS/FID	4	N/A	2024/09/29	AB SOP-00039	CCME CWS/EPA 8260d m
F1-BTEX	8	N/A	2024/09/29		Auto Calc
Cadmium - low level CCME - Dissolved	8	N/A	2024/09/29		Auto Calc
Chloride/Sulphate by Auto Colourimetry	7	N/A	2024/09/26	AB SOP-00020	SM24-4500-Cl/SO4-E m
Chloride/Sulphate by Auto Colourimetry	1	N/A	2024/09/27	AB SOP-00020	SM24-4500-Cl/SO4-E m
Fecal Coliforms (MPN/100mL)	8	2024/09/26	2024/09/27	AB SOP-00089	SM 24 9223 A,B m
Heterotrophic Plate Count Quant	8	2024/09/26	2024/09/28	CAL SOP-00012	SM 24 9215 A, E m
Total Coliforms and E.Coli	8	2024/09/26	2024/09/27	AB SOP-00089	SM 24 9223 A,B m
Carbon (DOC) -Lab Filtered (1)	4	N/A	2024/09/28	AB SOP-00087	MMCW 119 1996 m
Carbon (DOC) -Lab Filtered (1)	4	N/A	2024/09/30	AB SOP-00087	MMCW 119 1996 m
Conductivity @25C	8	N/A	2024/09/30	AB SOP-00005	SM 24 2510 B m
CCME Hydrocarbons in Water (F2; C10-C16) (2)	8	2024/09/29	2024/09/30	AB SOP-00037 AB SOP-00040	CCME PHC-CWS m
Hardness	8	N/A	2024/09/30		Auto Calc
Mercury (Dissolved) by CV-Lab Filtered	8	2024/09/27	2024/09/27	AB SOP-00084	BCMOE BCLM Oct2013 m
Mercury (Total) by CV	8	2024/09/30	2024/10/02	AB SOP-00084	BCMOE BCLM Oct2013 m
Elements by ICP-Dissolved-Lab Filtered (3)	8	N/A	2024/09/28	AB SOP-00042	EPA 6010d R5 m
Elements by ICPMS-Dissolved-Lab Filtered (4)	8	N/A	2024/09/28	AB SOP-00043	EPA 6020b R2 m
Ion Balance	8	N/A	2024/10/01		Auto Calc
Sum of cations, anions	8	N/A	2024/09/30		Auto Calc
Ammonia-N (Total)	8	N/A	2024/09/27	AB SOP-00007	SM 24 4500 NH3 A G m
Nitrate and Nitrite	8	N/A	2024/09/27		Auto Calc
NO2 (N); NO2 (N) + NO3 (N) in Water	7	N/A	2024/09/26	AB SOP-00091	SM 24 4500 NO3m
NO2 (N); NO2 (N) + NO3 (N) in Water	1	N/A	2024/09/27	AB SOP-00091	SM 24 4500 NO3m
Nitrate (as N)	8	2024/09/25	2024/09/27		Auto Calc
pH @25°C (5)	8	N/A	2024/09/30	AB SOP-00005	SM 24 4500-H+B m
Orthophosphate by Automated Analyzer (6)	8	N/A	2024/09/26	AB SOP-00025	SM 24 4500-P A,F m
Total Dissolved Solids (Calculated)	8	N/A	2024/10/01		Auto Calc
Total Kjeldahl Nitrogen (Total)	8	N/A	2024/09/27	BBY WI-00033	Auto Calc
Nitrogen (Total)	8	2024/09/26	2024/09/27	AB SOP-00093	SM 24 4500-N C m

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Your Project #: 110773396
Your C.O.C. #: 1OF1

Attention: DYLAN KING

STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
EDMONTON, AB
CANADA T5J 0K4

Report Date: 2024/10/03
Report #: R3566334
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C476327
Received: 2024/09/25, 18:45

Sample Matrix: Water
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Total Phosphorus-Dissolved-Lab Filtered (7)	6	2024/09/27	2024/09/27	AB SOP-00024	SM 24 4500-P A,B,F m
Total Phosphorus-Dissolved-Lab Filtered (7)	2	2024/09/27	2024/09/30	AB SOP-00024	SM 24 4500-P A,B,F m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) DOC present in the sample should be considered as non-purgeable DOC. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(2) Silica gel clean up employed.
(3) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(4) Samples were filtered and preserved at the lab. Values may not reflect concentrations at the time of sampling. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(5) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.
(6) Orthophosphate > Total Phosphorus Imbalance: When applicable, Orthophosphate, Total Phosphorus and dissolved Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
(7) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Your Project #: 110773396
Your C.O.C. #: 1OF1

Attention: DYLAN KING

STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
EDMONTON, AB
CANADA T5J 0K4

Report Date: 2024/10/03
Report #: R3566334
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C476327
Received: 2024/09/25, 18:45

Encryption Key



Bureau Veritas
03 Oct 2024 15:12:13

Please direct all questions regarding this Certificate of Analysis to:
Geraldlyn Gouthro, Key Account Specialist
Email: geraldlyn.gouthro@bureauveritas.com
Phone# (403) 291-3077

==========

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Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C476327
Report Date: 2024/10/03

STANTEC CONSULTING LTD
Client Project #: 110773396
Sampler Initials: TH

AT1 BTEX AND F1-F2 IN WATER (WATER)

Bureau Veritas ID		CWJ883		CWJ884		CWJ885			CWJ886			
Sampling Date		2024/09/25 09:49		2024/09/25 10:43		2024/09/25 11:50			2024/09/25 12:28			
COC Number		1OF1		1OF1		1OF1			1OF1			
	UNITS	WS51-01	MU	MW16-1-15	MU	WS81-01	MU	QC Batch	WS81-02	MU	RDL	QC Batch
Ext. Pet. Hydrocarbon												
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	B538622	<0.10	N/A	0.10	B538622
Volatiles												
Benzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	B539016	<0.00040	N/A	0.00040	B539016
Toluene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	B539016	<0.00040	N/A	0.00040	B539016
Ethylbenzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	B539016	<0.00040	N/A	0.00040	B539016
m & p-Xylene	mg/L	<0.00080	N/A	<0.00080	N/A	<0.00080	N/A	B539016	<0.00080	N/A	0.00080	B539016
o-Xylene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	B539016	<0.00040	N/A	0.00040	B539016
Xylenes (Total)	mg/L	<0.00089	N/A	<0.00089	N/A	<0.00089	N/A	B537101	<0.00089	N/A	0.00089	B537667
F1 (C6-C10) - BTEX	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	B537101	<0.10	N/A	0.10	B537667
F1 (C6-C10)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	B539016	<0.10	N/A	0.10	B539016
Surrogate Recovery (%)												
1,4-Difluorobenzene (sur.)	%	103	N/A	101	N/A	101	N/A	B539016	105	N/A	N/A	B539016
4-Bromofluorobenzene (sur.)	%	99	N/A	100	N/A	99	N/A	B539016	98	N/A	N/A	B539016
D4-1,2-Dichloroethane (sur.)	%	106	N/A	110	N/A	111	N/A	B539016	104	N/A	N/A	B539016
O-TERPHENYL (sur.)	%	84	N/A	86	N/A	96	N/A	B538622	96	N/A	N/A	B538622

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

AT1 BTEX AND F1-F2 IN WATER (WATER)

Bureau Veritas ID		CWJ887		CWJ888		CWJ889		CWJ890			
Sampling Date		2024/09/25 14:28		2024/09/25 15:28		2024/09/25 17:05		2024/09/25 17:11			
COC Number		1OF1		1OF1		1OF1		1OF1			
	UNITS	NE7-R3-01	MU	WS62-01	MU	NE20-R3-01	MU	SR24-09	MU	RDL	QC Batch
Ext. Pet. Hydrocarbon											
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B538622
Volatiles											
Benzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B539016
Toluene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B539016
Ethylbenzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B539016
m & p-Xylene	mg/L	<0.00080	N/A	<0.00080	N/A	<0.00080	N/A	<0.00080	N/A	0.00080	B539016
o-Xylene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B539016
Xylenes (Total)	mg/L	<0.00089	N/A	<0.00089	N/A	<0.00089	N/A	<0.00089	N/A	0.00089	B537667
F1 (C6-C10) - BTEX	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B537667
F1 (C6-C10)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B539016
Surrogate Recovery (%)											
1,4-Difluorobenzene (sur.)	%	103	N/A	104	N/A	106	N/A	104	N/A	N/A	B539016
4-Bromofluorobenzene (sur.)	%	100	N/A	99	N/A	98	N/A	98	N/A	N/A	B539016
D4-1,2-Dichloroethane (sur.)	%	105	N/A	102	N/A	101	N/A	104	N/A	N/A	B539016
O-TERPHENYL (sur.)	%	98	N/A	96	N/A	97	N/A	96	N/A	N/A	B538622

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWJ883		CWJ883			
Sampling Date		2024/09/25 09:49		2024/09/25 09:49			
COC Number		1OF1		1OF1			
	UNITS	WS51-01	MU	WS51-01 Lab-Dup	MU	RDL	QC Batch
Calculated Parameters							
Anion Sum	meq/L	8.6	N/A	N/A	N/A	N/A	B537574
Cation Sum	meq/L	8.3	N/A	N/A	N/A	N/A	B537574
Hardness (CaCO3)	mg/L	170	N/A	N/A	N/A	0.50	B537568
Ion Balance (% Difference)	%	1.8	N/A	N/A	N/A	N/A	B537670
Nitrate (N)	mg/L	<0.010	N/A	N/A	N/A	0.010	B537584
Nitrate (NO3)	mg/L	<0.044	N/A	N/A	N/A	0.044	B537580
Nitrite (NO2)	mg/L	<0.033	N/A	N/A	N/A	0.033	B537580
Calculated Total Dissolved Solids	mg/L	480	N/A	N/A	N/A	10	B537592
Elements							
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	N/A	N/A	0.020	B537622
Misc. Inorganics							
Conductivity	uS/cm	780	+/- 21	N/A	N/A	2.0	B542754
pH	pH	8.35	+/- 0.0827	N/A	N/A	N/A	B542753
Anions							
Alkalinity (PP as CaCO3)	mg/L	2.6	+/- <RDL	N/A	N/A	1.0	B542752
Alkalinity (Total as CaCO3)	mg/L	300	+/- 22	N/A	N/A	1.0	B542752
Bicarbonate (HCO3)	mg/L	360	+/- 5.6	N/A	N/A	1.0	B542752
Carbonate (CO3)	mg/L	3.2	N/A	N/A	N/A	1.0	B542752
Hydroxide (OH)	mg/L	<1.0	N/A	N/A	N/A	1.0	B542752
Chloride (Cl)	mg/L	<1.0	N/A	N/A	N/A	1.0	B539285
Sulphate (SO4)	mg/L	130	+/- 8.2	N/A	N/A	5.0	B539285
Nutrients							
Nitrite (N)	mg/L	<0.010	N/A	<0.010	N/A	0.010	B539212
Nitrate plus Nitrite (N)	mg/L	<0.010	N/A	<0.010	N/A	0.010	B539212
Lab Filtered Elements							
Dissolved Aluminum (Al)	mg/L	0.0066	+/- <RDL	N/A	N/A	0.0030	B540233
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	N/A	N/A	0.00060	B540233
Dissolved Arsenic (As)	mg/L	0.00045	+/- <RDL	N/A	N/A	0.00020	B540233
Dissolved Barium (Ba)	mg/L	0.014	+/- <RDL	N/A	N/A	0.010	B540291
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B540233

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWJ883		CWJ883			
Sampling Date		2024/09/25 09:49		2024/09/25 09:49			
COC Number		1OF1		1OF1			
	UNITS	WS51-01	MU	WS51-01 Lab-Dup	MU	RDL	QC Batch
Dissolved Boron (B)	mg/L	0.10	+/- <RDL	N/A	N/A	0.020	B540291
Dissolved Calcium (Ca)	mg/L	51	+/- 5.1	N/A	N/A	0.30	B540291
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B540233
Dissolved Cobalt (Co)	mg/L	<0.00030	N/A	N/A	N/A	0.00030	B540233
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B540233
Dissolved Iron (Fe)	mg/L	<0.060	N/A	N/A	N/A	0.060	B540291
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B540233
Dissolved Lithium (Li)	mg/L	<0.020	N/A	N/A	N/A	0.020	B540291
Dissolved Magnesium (Mg)	mg/L	10	+/- 0.65	N/A	N/A	0.20	B540291
Dissolved Manganese (Mn)	mg/L	0.13	+/- 0.0087	N/A	N/A	0.0040	B540291
Dissolved Molybdenum (Mo)	mg/L	0.0055	+/- 0.0014	N/A	N/A	0.00020	B540233
Dissolved Nickel (Ni)	mg/L	<0.00050	N/A	N/A	N/A	0.00050	B540233
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	N/A	N/A	0.10	B540291
Dissolved Potassium (K)	mg/L	1.1	+/- <RDL	N/A	N/A	0.30	B540291
Dissolved Selenium (Se)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B540233
Dissolved Silicon (Si)	mg/L	4.5	+/- 0.86	N/A	N/A	0.50	B540291
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	N/A	N/A	0.00010	B540233
Dissolved Sodium (Na)	mg/L	110	+/- 11	N/A	N/A	0.50	B540291
Dissolved Strontium (Sr)	mg/L	0.48	+/- 0.047	N/A	N/A	0.020	B540291
Dissolved Sulphur (S)	mg/L	39	+/- 2.6	N/A	N/A	0.20	B540291
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B540233
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B540233
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B540233
Dissolved Uranium (U)	mg/L	0.00025	+/- <RDL	N/A	N/A	0.00010	B540233
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B540233
Dissolved Zinc (Zn)	mg/L	<0.0030	N/A	N/A	N/A	0.0030	B540233

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
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N/A = Not Applicable

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWJ884		CWJ884			
Sampling Date		2024/09/25 10:43		2024/09/25 10:43			
COC Number		1OF1		1OF1			
	UNITS	MW16-1-15	MU	MW16-1-15 Lab-Dup	MU	RDL	QC Batch
Calculated Parameters							
Anion Sum	meq/L	31	N/A	N/A	N/A	N/A	B537671
Cation Sum	meq/L	27	N/A	N/A	N/A	N/A	B537671
Hardness (CaCO3)	mg/L	1000	N/A	N/A	N/A	0.50	B537568
Ion Balance (% Difference)	%	6.5	N/A	N/A	N/A	N/A	B537670
Nitrate (N)	mg/L	<0.050	N/A	N/A	N/A	0.050	B537584
Nitrate (NO3)	mg/L	<0.22	N/A	N/A	N/A	0.22	B537580
Nitrite (NO2)	mg/L	<0.033	N/A	N/A	N/A	0.033	B537580
Calculated Total Dissolved Solids	mg/L	1900	N/A	N/A	N/A	25	B537672
Elements							
Dissolved Cadmium (Cd)	ug/L	0.031	+/- <RDL	N/A	N/A	0.020	B537622
Misc. Inorganics							
Conductivity	uS/cm	2200	+/- 57	N/A	N/A	2.0	B542754
pH	pH	7.95	+/- 0.0788	N/A	N/A	N/A	B542753
Anions							
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	N/A	N/A	1.0	B542752
Alkalinity (Total as CaCO3)	mg/L	320	+/- 24	N/A	N/A	1.0	B542752
Bicarbonate (HCO3)	mg/L	390	+/- 6.1	N/A	N/A	1.0	B542752
Carbonate (CO3)	mg/L	<1.0	N/A	N/A	N/A	1.0	B542752
Hydroxide (OH)	mg/L	<1.0	N/A	N/A	N/A	1.0	B542752
Chloride (Cl)	mg/L	12	+/- 1.5	N/A	N/A	1.0	B539285
Sulphate (SO4)	mg/L	1200	+/- 74	N/A	N/A	25	B539285
Nutrients							
Nitrite (N)	mg/L	<0.010	N/A	<0.010	N/A	0.010	B539208
Nitrate plus Nitrite (N)	mg/L	<0.050 (1)	N/A	<0.050	N/A	0.050	B539208
Lab Filtered Elements							
Dissolved Aluminum (Al)	mg/L	0.0039	+/- <RDL	N/A	N/A	0.0030	B540233
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	N/A	N/A	0.00060	B540233
Dissolved Arsenic (As)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B540233
Dissolved Barium (Ba)	mg/L	<0.010	N/A	N/A	N/A	0.010	B540291

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
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N/A = Not Applicable
(1) Detection limits raised due to matrix interference.

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWJ884		CWJ884			
Sampling Date		2024/09/25 10:43		2024/09/25 10:43			
COC Number		1OF1		1OF1			
	UNITS	MW16-1-15	MU	MW16-1-15 Lab-Dup	MU	RDL	QC Batch
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B540233
Dissolved Boron (B)	mg/L	0.078	+/- <RDL	N/A	N/A	0.020	B540291
Dissolved Calcium (Ca)	mg/L	230	+/- 24	N/A	N/A	0.30	B540291
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B540233
Dissolved Cobalt (Co)	mg/L	0.00098	+/- <RDL	N/A	N/A	0.00030	B540233
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B540233
Dissolved Iron (Fe)	mg/L	<0.060	N/A	N/A	N/A	0.060	B540291
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B540233
Dissolved Lithium (Li)	mg/L	<0.020	N/A	N/A	N/A	0.020	B540291
Dissolved Magnesium (Mg)	mg/L	100	+/- 6.7	N/A	N/A	0.20	B540291
Dissolved Manganese (Mn)	mg/L	0.83	+/- 0.056	N/A	N/A	0.0040	B540291
Dissolved Molybdenum (Mo)	mg/L	0.0020	+/- 0.00055	N/A	N/A	0.00020	B540233
Dissolved Nickel (Ni)	mg/L	0.0015	+/- <RDL	N/A	N/A	0.00050	B540233
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	N/A	N/A	0.10	B540291
Dissolved Potassium (K)	mg/L	3.8	+/- <RDL	N/A	N/A	0.30	B540291
Dissolved Selenium (Se)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B540233
Dissolved Silicon (Si)	mg/L	4.4	+/- 0.84	N/A	N/A	0.50	B540291
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	N/A	N/A	0.00010	B540233
Dissolved Sodium (Na)	mg/L	150	+/- 15	N/A	N/A	0.50	B540291
Dissolved Strontium (Sr)	mg/L	1.6	+/- 0.15	N/A	N/A	0.020	B540291
Dissolved Sulphur (S)	mg/L	310	+/- 20	N/A	N/A	0.20	B540291
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B540233
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B540233
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B540233
Dissolved Uranium (U)	mg/L	0.0049	+/- 0.00045	N/A	N/A	0.00010	B540233
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B540233
Dissolved Zinc (Zn)	mg/L	0.0031	+/- <RDL	N/A	N/A	0.0030	B540233

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N/A = Not Applicable

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWJ885				CWJ886			
Sampling Date		2024/09/25 11:50				2024/09/25 12:28			
COC Number		1OF1				1OF1			
	UNITS	WS81-01	MU	RDL	QC Batch	WS81-02	MU	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	17	N/A	N/A	B537671	15	N/A	N/A	B537671
Cation Sum	meq/L	17	N/A	N/A	B537671	15	N/A	N/A	B537671
Hardness (CaCO3)	mg/L	230	N/A	0.50	B537568	490	N/A	0.50	B537669
Ion Balance (% Difference)	%	0.33	N/A	N/A	B537670	1.1	N/A	N/A	B537670
Nitrate (N)	mg/L	0.86	N/A	0.010	B537584	12	N/A	0.25	B537584
Nitrate (NO3)	mg/L	3.8	N/A	0.044	B537580	54	N/A	1.1	B537580
Nitrite (NO2)	mg/L	0.058	N/A	0.033	B537580	<0.033	N/A	0.033	B537580
Calculated Total Dissolved Solids	mg/L	960	N/A	10	B537672	820	N/A	10	B537672
Elements									
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	0.020	B537622	<0.020	N/A	0.020	B537622
Misc. Inorganics									
Conductivity	uS/cm	1500	+/- 39	2.0	B542754	1300	+/- 36	2.0	B542754
pH	pH	8.22	+/- 0.0815	N/A	B542753	8.11	+/- 0.0804	N/A	B542753
Anions									
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	1.0	B542752	<1.0	N/A	1.0	B542752
Alkalinity (Total as CaCO3)	mg/L	570	+/- 42	1.0	B542752	440	+/- 32	1.0	B542752
Bicarbonate (HCO3)	mg/L	690	+/- 11	1.0	B542752	530	+/- 8.2	1.0	B542752
Carbonate (CO3)	mg/L	<1.0	N/A	1.0	B542752	<1.0	N/A	1.0	B542752
Hydroxide (OH)	mg/L	<1.0	N/A	1.0	B542752	<1.0	N/A	1.0	B542752
Chloride (Cl)	mg/L	13	+/- 1.6	1.0	B539285	71	+/- 5.5	1.0	B539285
Sulphate (SO4)	mg/L	250	+/- 16	5.0	B539285	160	+/- 10	5.0	B539285
Nutrients									
Nitrite (N)	mg/L	0.018	+/- <RDL	0.010	B539212	<0.010	N/A	0.010	B539208
Nitrate plus Nitrite (N)	mg/L	0.88	+/- 0.080	0.010	B539212	12	+/- 1.0	0.25	B539208
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	0.0052	+/- <RDL	0.0030	B540233	<0.0030	N/A	0.0030	B540233
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	0.00060	B540233	<0.00060	N/A	0.00060	B540233
Dissolved Arsenic (As)	mg/L	0.00024	+/- <RDL	0.00020	B540233	<0.00020	N/A	0.00020	B540233
Dissolved Barium (Ba)	mg/L	0.038	+/- <RDL	0.010	B540291	0.026	+/- <RDL	0.010	B540291
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	0.0010	B540233	<0.0010	N/A	0.0010	B540233
Dissolved Boron (B)	mg/L	0.16	+/- <RDL	0.020	B540291	0.12	+/- <RDL	0.020	B540291

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWJ885				CWJ886			
Sampling Date		2024/09/25 11:50				2024/09/25 12:28			
COC Number		1OF1				1OF1			
	UNITS	WS81-01	MU	RDL	QC Batch	WS81-02	MU	RDL	QC Batch
Dissolved Calcium (Ca)	mg/L	52	+/- 5.2	0.30	B540291	100	+/- 10	0.30	B540291
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	0.0010	B540233	<0.0010	N/A	0.0010	B540233
Dissolved Cobalt (Co)	mg/L	<0.00030	N/A	0.00030	B540233	<0.00030	N/A	0.00030	B540233
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	0.0010	B540233	0.0044	+/- 0.0012	0.0010	B540233
Dissolved Iron (Fe)	mg/L	<0.060	N/A	0.060	B540291	<0.060	N/A	0.060	B540291
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	0.00020	B540233	0.00022	+/- <RDL	0.00020	B540233
Dissolved Lithium (Li)	mg/L	0.032	+/- <RDL	0.020	B540291	0.022	+/- <RDL	0.020	B540291
Dissolved Magnesium (Mg)	mg/L	25	+/- 1.6	0.20	B540291	57	+/- 3.7	0.20	B540291
Dissolved Manganese (Mn)	mg/L	0.010	+/- <RDL	0.0040	B540291	<0.0040	N/A	0.0040	B540291
Dissolved Molybdenum (Mo)	mg/L	0.0024	+/- 0.00064	0.00020	B540233	0.0037	+/- 0.00095	0.00020	B540233
Dissolved Nickel (Ni)	mg/L	0.00051	+/- <RDL	0.00050	B540233	0.00083	+/- <RDL	0.00050	B540233
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	0.10	B540291	<0.10	N/A	0.10	B540291
Dissolved Potassium (K)	mg/L	1.7	+/- <RDL	0.30	B540291	2.3	+/- <RDL	0.30	B540291
Dissolved Selenium (Se)	mg/L	0.0022	+/- 0.00021	0.00020	B540233	0.0022	+/- 0.00021	0.00020	B540233
Dissolved Silicon (Si)	mg/L	2.8	+/- 0.54	0.50	B540291	3.3	+/- 0.63	0.50	B540291
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	0.00010	B540233	<0.00010	N/A	0.00010	B540233
Dissolved Sodium (Na)	mg/L	280	+/- 27	0.50	B540291	110	+/- 11	0.50	B540291
Dissolved Strontium (Sr)	mg/L	0.89	+/- 0.087	0.020	B540291	1.3	+/- 0.13	0.020	B540291
Dissolved Sulphur (S)	mg/L	71	+/- 4.8	0.20	B540291	46	+/- 3.1	0.20	B540291
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	0.00020	B540233	<0.00020	N/A	0.00020	B540233
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	0.0010	B540233	<0.0010	N/A	0.0010	B540233
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	0.0010	B540233	<0.0010	N/A	0.0010	B540233
Dissolved Uranium (U)	mg/L	0.0059	+/- 0.00053	0.00010	B540233	0.0036	+/- 0.00034	0.00010	B540233
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	0.0010	B540233	<0.0010	N/A	0.0010	B540233
Dissolved Zinc (Zn)	mg/L	<0.0030	N/A	0.0030	B540233	0.0056	+/- <RDL	0.0030	B540233

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N/A = Not Applicable

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWJ887		CWJ887			
Sampling Date		2024/09/25 14:28		2024/09/25 14:28			
COC Number		1OF1		1OF1			
	UNITS	NE7-R3-01	MU	NE7-R3-01 Lab-Dup	MU	RDL	QC Batch
Calculated Parameters							
Anion Sum	meq/L	6.2	N/A	N/A	N/A	N/A	B537671
Cation Sum	meq/L	6.1	N/A	N/A	N/A	N/A	B537671
Hardness (CaCO3)	mg/L	280	N/A	N/A	N/A	0.50	B537669
Ion Balance (% Difference)	%	0.60	N/A	N/A	N/A	N/A	B537670
Nitrate (N)	mg/L	0.62	N/A	N/A	N/A	0.010	B537584
Nitrate (NO3)	mg/L	2.7	N/A	N/A	N/A	0.044	B537580
Nitrite (NO2)	mg/L	<0.033	N/A	N/A	N/A	0.033	B537580
Calculated Total Dissolved Solids	mg/L	320	N/A	N/A	N/A	10	B537672
Elements							
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	N/A	N/A	0.020	B537622
Misc. Inorganics							
Conductivity	uS/cm	560	+/- 15	N/A	N/A	2.0	B542754
pH	pH	8.29	+/- 0.0822	N/A	N/A	N/A	B542753
Anions							
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	N/A	N/A	1.0	B542752
Alkalinity (Total as CaCO3)	mg/L	230	+/- 17	N/A	N/A	1.0	B542752
Bicarbonate (HCO3)	mg/L	280	+/- 4.5	N/A	N/A	1.0	B542752
Carbonate (CO3)	mg/L	<1.0	N/A	N/A	N/A	1.0	B542752
Hydroxide (OH)	mg/L	<1.0	N/A	N/A	N/A	1.0	B542752
Chloride (Cl)	mg/L	8.4	+/- 1.4	N/A	N/A	1.0	B539285
Sulphate (SO4)	mg/L	60	+/- 4.1	N/A	N/A	1.0	B539285
Nutrients							
Nitrite (N)	mg/L	<0.010	N/A	N/A	N/A	0.010	B539212
Nitrate plus Nitrite (N)	mg/L	0.62	+/- 0.058	N/A	N/A	0.010	B539212
Lab Filtered Elements							
Dissolved Aluminum (Al)	mg/L	0.0056	+/- <RDL	N/A	N/A	0.0030	B540233
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	N/A	N/A	0.00060	B540233
Dissolved Arsenic (As)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B540233
Dissolved Barium (Ba)	mg/L	0.14	+/- 0.012	0.14	+/- 0.012	0.010	B540291
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B540233

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWJ887		CWJ887			
Sampling Date		2024/09/25 14:28		2024/09/25 14:28			
COC Number		1OF1		1OF1			
	UNITS	NE7-R3-01	MU	NE7-R3-01 Lab-Dup	MU	RDL	QC Batch
Dissolved Boron (B)	mg/L	<0.020	N/A	<0.020	N/A	0.020	B540291
Dissolved Calcium (Ca)	mg/L	79	+/- 8.0	79	+/- 8.0	0.30	B540291
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B540233
Dissolved Cobalt (Co)	mg/L	<0.00030	N/A	N/A	N/A	0.00030	B540233
Dissolved Copper (Cu)	mg/L	0.0011	+/- <RDL	N/A	N/A	0.0010	B540233
Dissolved Iron (Fe)	mg/L	<0.060	N/A	<0.060	N/A	0.060	B540291
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B540233
Dissolved Lithium (Li)	mg/L	<0.020	N/A	<0.020	N/A	0.020	B540291
Dissolved Magnesium (Mg)	mg/L	21	+/- 1.3	21	+/- 1.3	0.20	B540291
Dissolved Manganese (Mn)	mg/L	<0.0040	N/A	<0.0040	N/A	0.0040	B540291
Dissolved Molybdenum (Mo)	mg/L	0.00074	+/- 0.00030	N/A	N/A	0.00020	B540233
Dissolved Nickel (Ni)	mg/L	<0.00050	N/A	N/A	N/A	0.00050	B540233
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	<0.10	N/A	0.10	B540291
Dissolved Potassium (K)	mg/L	4.2	+/- <RDL	4.2	+/- <RDL	0.30	B540291
Dissolved Selenium (Se)	mg/L	0.00055	+/- <RDL	N/A	N/A	0.00020	B540233
Dissolved Silicon (Si)	mg/L	3.2	+/- 0.61	3.2	+/- 0.61	0.50	B540291
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	N/A	N/A	0.00010	B540233
Dissolved Sodium (Na)	mg/L	7.8	+/- 0.84	7.8	+/- 0.84	0.50	B540291
Dissolved Strontium (Sr)	mg/L	0.39	+/- 0.038	0.39	+/- 0.038	0.020	B540291
Dissolved Sulphur (S)	mg/L	17	+/- 1.2	18	+/- 1.2	0.20	B540291
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B540233
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B540233
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B540233
Dissolved Uranium (U)	mg/L	0.00081	+/- <RDL	N/A	N/A	0.00010	B540233
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B540233
Dissolved Zinc (Zn)	mg/L	0.0079	+/- <RDL	N/A	N/A	0.0030	B540233

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWJ888				CWJ889			
Sampling Date		2024/09/25 15:28				2024/09/25 17:05			
COC Number		1OF1				1OF1			
	UNITS	WS62-01	MU	RDL	QC Batch	NE20-R3-01	MU	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	7.4	N/A	N/A	B537671	17	N/A	N/A	B537671
Cation Sum	meq/L	7.3	N/A	N/A	B537671	18	N/A	N/A	B537671
Hardness (CaCO3)	mg/L	340	N/A	0.50	B537669	570	N/A	0.50	B537669
Ion Balance (% Difference)	%	1.2	N/A	N/A	B537670	2.1	N/A	N/A	B537670
Nitrate (N)	mg/L	0.044	N/A	0.010	B537584	0.44	N/A	0.010	B537584
Nitrate (NO3)	mg/L	0.19	N/A	0.044	B537580	1.9	N/A	0.044	B537580
Nitrite (NO2)	mg/L	<0.033	N/A	0.033	B537580	0.32	N/A	0.033	B537580
Calculated Total Dissolved Solids	mg/L	390	N/A	10	B537672	960	N/A	10	B537672
Elements									
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	0.020	B537622	0.043	+/- 0.022	0.020	B537622
Misc. Inorganics									
Conductivity	uS/cm	670	+/- 18	2.0	B542754	1500	+/- 39	2.0	B542754
pH	pH	8.18	+/- 0.0811	N/A	B542753	8.00	+/- 0.0793	N/A	B542753
Anions									
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	1.0	B542752	<1.0	N/A	1.0	B542752
Alkalinity (Total as CaCO3)	mg/L	270	+/- 20	1.0	B542752	460	+/- 34	1.0	B542752
Bicarbonate (HCO3)	mg/L	330	+/- 5.2	1.0	B542752	560	+/- 8.5	1.0	B542752
Carbonate (CO3)	mg/L	<1.0	N/A	1.0	B542752	<1.0	N/A	1.0	B542752
Hydroxide (OH)	mg/L	<1.0	N/A	1.0	B542752	<1.0	N/A	1.0	B542752
Chloride (Cl)	mg/L	8.0	+/- 1.3	1.0	B539887	64	+/- 5.0	1.0	B539285
Sulphate (SO4)	mg/L	88	+/- 5.9	1.0	B539887	280	+/- 18	5.0	B539285
Nutrients									
Nitrite (N)	mg/L	<0.010	N/A	0.010	B539208	0.096	+/- <RDL	0.010	B539212
Nitrate plus Nitrite (N)	mg/L	0.044	+/- 0.013	0.010	B539208	0.53	+/- 0.051	0.010	B539212
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	0.0066	+/- <RDL	0.0030	B540242	0.0054	+/- <RDL	0.0030	B540233
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	0.00060	B540242	<0.00060	N/A	0.00060	B540233
Dissolved Arsenic (As)	mg/L	<0.00020	N/A	0.00020	B540242	<0.00020	N/A	0.00020	B540233
Dissolved Barium (Ba)	mg/L	0.080	+/- <RDL	0.010	B540291	0.018	+/- <RDL	0.010	B540291
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	0.0010	B540242	<0.0010	N/A	0.0010	B540233
Dissolved Boron (B)	mg/L	<0.020	N/A	0.020	B540291	0.055	+/- <RDL	0.020	B540291

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWJ888				CWJ889			
Sampling Date		2024/09/25 15:28				2024/09/25 17:05			
COC Number		1OF1				1OF1			
	UNITS	WS62-01	MU	RDL	QC Batch	NE20-R3-01	MU	RDL	QC Batch
Dissolved Calcium (Ca)	mg/L	96	+/- 9.7	0.30	B540291	130	+/- 13	0.30	B540291
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	0.0010	B540242	<0.0010	N/A	0.0010	B540233
Dissolved Cobalt (Co)	mg/L	<0.00030	N/A	0.00030	B540242	<0.00030	N/A	0.00030	B540233
Dissolved Copper (Cu)	mg/L	0.040	+/- 0.011	0.0010	B540242	0.0024	+/- <RDL	0.0010	B540233
Dissolved Iron (Fe)	mg/L	<0.060	N/A	0.060	B540291	<0.060	N/A	0.060	B540291
Dissolved Lead (Pb)	mg/L	0.00025	+/- <RDL	0.00020	B540242	<0.00020	N/A	0.00020	B540233
Dissolved Lithium (Li)	mg/L	<0.020	N/A	0.020	B540291	0.030	+/- <RDL	0.020	B540291
Dissolved Magnesium (Mg)	mg/L	25	+/- 1.6	0.20	B540291	63	+/- 4.1	0.20	B540291
Dissolved Manganese (Mn)	mg/L	<0.0040	N/A	0.0040	B540291	0.033	+/- <RDL	0.0040	B540291
Dissolved Molybdenum (Mo)	mg/L	0.00052	+/- 0.00026	0.00020	B540242	0.00082	+/- 0.00031	0.00020	B540233
Dissolved Nickel (Ni)	mg/L	<0.00050	N/A	0.00050	B540242	0.0018	+/- <RDL	0.00050	B540233
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	0.10	B540291	<0.10	N/A	0.10	B540291
Dissolved Potassium (K)	mg/L	2.3	+/- <RDL	0.30	B540291	6.6	+/- 0.35	0.30	B540291
Dissolved Selenium (Se)	mg/L	0.00059	+/- <RDL	0.00020	B540242	0.00030	+/- <RDL	0.00020	B540233
Dissolved Silicon (Si)	mg/L	3.2	+/- 0.61	0.50	B540291	3.9	+/- 0.74	0.50	B540291
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	0.00010	B540242	<0.00010	N/A	0.00010	B540233
Dissolved Sodium (Na)	mg/L	8.3	+/- 0.89	0.50	B540291	140	+/- 13	0.50	B540291
Dissolved Strontium (Sr)	mg/L	0.49	+/- 0.048	0.020	B540291	1.8	+/- 0.17	0.020	B540291
Dissolved Sulphur (S)	mg/L	27	+/- 1.8	0.20	B540291	85	+/- 5.7	0.20	B540291
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	0.00020	B540242	<0.00020	N/A	0.00020	B540233
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	0.0010	B540242	<0.0010	N/A	0.0010	B540233
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	0.0010	B540242	<0.0010	N/A	0.0010	B540233
Dissolved Uranium (U)	mg/L	0.00085	+/- 0.00010	0.00010	B540242	0.0029	+/- 0.00027	0.00010	B540233
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	0.0010	B540242	<0.0010	N/A	0.0010	B540233
Dissolved Zinc (Zn)	mg/L	0.061	+/- 0.0054	0.0030	B540242	0.017	+/- <RDL	0.0030	B540233

RDL = Reportable Detection Limit
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N/A = Not Applicable

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWJ890			
Sampling Date		2024/09/25 17:11			
COC Number		1OF1			
	UNITS	SR24-09	MU	RDL	QC Batch
Calculated Parameters					
Anion Sum	meq/L	7.4	N/A	N/A	B537671
Cation Sum	meq/L	7.2	N/A	N/A	B537671
Hardness (CaCO3)	mg/L	340	N/A	0.50	B537669
Ion Balance (% Difference)	%	1.4	N/A	N/A	B537670
Nitrate (N)	mg/L	0.050	N/A	0.010	B537584
Nitrate (NO3)	mg/L	0.22	N/A	0.044	B537580
Nitrite (NO2)	mg/L	<0.033	N/A	0.033	B537580
Calculated Total Dissolved Solids	mg/L	390	N/A	10	B537672
Elements					
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	0.020	B537622
Misc. Inorganics					
Conductivity	uS/cm	660	+/- 18	2.0	B542754
pH	pH	8.13	+/- 0.0805	N/A	B542753
Anions					
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	1.0	B542752
Alkalinity (Total as CaCO3)	mg/L	270	+/- 20	1.0	B542752
Bicarbonate (HCO3)	mg/L	330	+/- 5.2	1.0	B542752
Carbonate (CO3)	mg/L	<1.0	N/A	1.0	B542752
Hydroxide (OH)	mg/L	<1.0	N/A	1.0	B542752
Chloride (Cl)	mg/L	7.8	+/- 1.3	1.0	B539285
Sulphate (SO4)	mg/L	87	+/- 5.8	1.0	B539285
Nutrients					
Nitrite (N)	mg/L	<0.010	N/A	0.010	B539212
Nitrate plus Nitrite (N)	mg/L	0.050	+/- 0.013	0.010	B539212
Lab Filtered Elements					
Dissolved Aluminum (Al)	mg/L	0.0040	+/- <RDL	0.0030	B540233
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	0.00060	B540233
Dissolved Arsenic (As)	mg/L	<0.00020	N/A	0.00020	B540233
Dissolved Barium (Ba)	mg/L	0.080	+/- <RDL	0.010	B540291
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	0.0010	B540233
Dissolved Boron (B)	mg/L	<0.020	N/A	0.020	B540291

RDL = Reportable Detection Limit
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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWJ890			
Sampling Date		2024/09/25 17:11			
COC Number		1OF1			
	UNITS	SR24-09	MU	RDL	QC Batch
Dissolved Calcium (Ca)	mg/L	96	+/- 9.6	0.30	B540291
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	0.0010	B540233
Dissolved Cobalt (Co)	mg/L	<0.00030	N/A	0.00030	B540233
Dissolved Copper (Cu)	mg/L	0.039	+/- 0.011	0.0010	B540233
Dissolved Iron (Fe)	mg/L	<0.060	N/A	0.060	B540291
Dissolved Lead (Pb)	mg/L	0.00032	+/- <RDL	0.00020	B540233
Dissolved Lithium (Li)	mg/L	<0.020	N/A	0.020	B540291
Dissolved Magnesium (Mg)	mg/L	25	+/- 1.6	0.20	B540291
Dissolved Manganese (Mn)	mg/L	<0.0040	N/A	0.0040	B540291
Dissolved Molybdenum (Mo)	mg/L	0.00046	+/- 0.00025	0.00020	B540233
Dissolved Nickel (Ni)	mg/L	<0.00050	N/A	0.00050	B540233
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	0.10	B540291
Dissolved Potassium (K)	mg/L	2.3	+/- <RDL	0.30	B540291
Dissolved Selenium (Se)	mg/L	0.00059	+/- <RDL	0.00020	B540233
Dissolved Silicon (Si)	mg/L	3.2	+/- 0.61	0.50	B540291
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	0.00010	B540233
Dissolved Sodium (Na)	mg/L	8.3	+/- 0.89	0.50	B540291
Dissolved Strontium (Sr)	mg/L	0.49	+/- 0.048	0.020	B540291
Dissolved Sulphur (S)	mg/L	27	+/- 1.8	0.20	B540291
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	0.00020	B540233
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	0.0010	B540233
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	0.0010	B540233
Dissolved Uranium (U)	mg/L	0.00088	+/- 0.00010	0.00010	B540233
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	0.0010	B540233
Dissolved Zinc (Zn)	mg/L	0.060	+/- 0.0053	0.0030	B540233

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TOTAL KJELDAHL NITROGEN (TOTAL)

Bureau Veritas ID		CWJ883			CWJ884		CWJ885			
Sampling Date		2024/09/25 09:49			2024/09/25 10:43		2024/09/25 11:50			
COC Number		1OF1			1OF1		1OF1			
	UNITS	WS51-01	MU	RDL	MW16-1-15	MU	WS81-01	MU	RDL	QC Batch
Calculated Parameters										
Total Kjeldahl Nitrogen (Calc)	mg/L	0.31	N/A	0.020	<0.20	N/A	<0.20	N/A	0.20	B536999
Nutrients										
Total Nitrogen (N)	mg/L	0.31	+/- 0.060	0.020	<0.20 (1)	N/A	0.91 (2)	+/- <RDL	0.20	B539017

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly. Nitrogen < Ammonia: Both values fall within the method uncertainty for duplicates and are likely equivalent.
(2) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Bureau Veritas ID		CWJ886			CWJ887			CWJ888			
Sampling Date		2024/09/25 12:28			2024/09/25 14:28			2024/09/25 15:28			
COC Number		1OF1			1OF1			1OF1			
	UNITS	WS81-02	MU	RDL	NE7-R3-01	MU	QC Batch	WS62-01	MU	RDL	QC Batch
Calculated Parameters											
Total Kjeldahl Nitrogen (Calc)	mg/L	<0.25	N/A	0.25	0.085	N/A	B536999	0.090	N/A	0.020	B536999
Nutrients											
Total Nitrogen (N)	mg/L	12 (1)	+/- 1.7	0.20	0.71	+/- 0.11	B539017	0.13	+/- 0.041	0.020	B539022

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Nitrogen < Nitrate: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Bureau Veritas ID		CWJ888			CWJ889		CWJ890			
Sampling Date		2024/09/25 15:28			2024/09/25 17:05		2024/09/25 17:11			
COC Number		1OF1			1OF1		1OF1			
	UNITS	WS62-01 Lab-Dup	MU	QC Batch	NE20-R3-01	MU	SR24-09	MU	RDL	QC Batch
Calculated Parameters										
Total Kjeldahl Nitrogen (Calc)	mg/L	N/A	N/A	B536999	0.63	N/A	0.084	N/A	0.020	B536999
Nutrients										
Total Nitrogen (N)	mg/L	0.12	+/- 0.039	B539022	1.2	+/- 0.18	0.13	+/- 0.041	0.020	B539017

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		CWJ883		CWJ883			CWJ884			
Sampling Date		2024/09/25 09:49		2024/09/25 09:49			2024/09/25 10:43			
COC Number		1OF1		1OF1			1OF1			
	UNITS	WS51-01	MU	WS51-01 Lab-Dup	MU	QC Batch	MW16-1-15	MU	RDL	QC Batch
Lab Filtered Inorganics										
Dissolved Organic Carbon (C)	mg/L	0.98	+/- <RDL	N/A	N/A	B540858	2.2	+/- <RDL	0.50	B543507
Microbiological Param.										
E.Coli DST	MPN/100mL	<1.0	N/A	N/A	N/A	B538366	<1.0	N/A	1.0	B538366
Fecal Coliforms	MPN/100mL	<1.0	N/A	N/A	N/A	B538854	<1.0	N/A	1.0	B538854
Heterotrophic DST	MPN/100mL	1.0	N/A	2.0	N/A	B538359	>2400	N/A	1.0	B538359
Total Coliforms DST	MPN/100mL	<1.0	N/A	N/A	N/A	B538366	<1.0	N/A	1.0	B538366
Nutrients										
Total Ammonia (N)	mg/L	0.22	+/- 0.026	0.22	+/- 0.026	B539922	0.030	+/- <RDL	0.015	B539922
Orthophosphate (P)	mg/L	<0.0030	N/A	N/A	N/A	B538956	<0.0030	N/A	0.0030	B539265
Lab Filtered Nutrients										
Dissolved Phosphorus (P)	mg/L	<0.0030	N/A	N/A	N/A	B539678	<0.0030	N/A	0.0030	B539704

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas ID		CWJ884			CWJ885			
Sampling Date		2024/09/25 10:43			2024/09/25 11:50			
COC Number		1OF1			1OF1			
	UNITS	MW16-1-15 Lab-Dup	MU	QC Batch	WS81-01	MU	RDL	QC Batch
Lab Filtered Inorganics								
Dissolved Organic Carbon (C)	mg/L	2.1	+/- <RDL	B543507	2.7	+/- 0.50	0.50	B540858
Microbiological Param.								
E.Coli DST	MPN/100mL	<1.0	N/A	B538366	<1.0	N/A	1.0	B538366
Fecal Coliforms	MPN/100mL	N/A	N/A	B538854	<1.0	N/A	1.0	B538854
Heterotrophic DST	MPN/100mL	N/A	N/A	B538359	170	N/A	1.0	B538359
Total Coliforms DST	MPN/100mL	<1.0	N/A	B538366	<1.0	N/A	1.0	B538366
Nutrients								
Total Ammonia (N)	mg/L	N/A	N/A	B539922	<0.015	N/A	0.015	B539922
Orthophosphate (P)	mg/L	<0.0030	N/A	B539265	<0.0030	N/A	0.0030	B538956
Lab Filtered Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0030	N/A	B539704	<0.0030	N/A	0.0030	B539678

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		CWJ886		CWJ886			CWJ887			
Sampling Date		2024/09/25 12:28		2024/09/25 12:28			2024/09/25 14:28			
COC Number		1OF1		1OF1			1OF1			
	UNITS	WS81-02	MU	WS81-02 Lab-Dup	MU	QC Batch	NE7-R3-01	MU	RDL	QC Batch
Lab Filtered Inorganics										
Dissolved Organic Carbon (C)	mg/L	2.5	+/- <RDL	N/A	N/A	B543507	1.0	+/- <RDL	0.50	B540858
Microbiological Param.										
E.Coli DST	MPN/100mL	<1.0	N/A	N/A	N/A	B538366	2.0	N/A	1.0	B538366
Fecal Coliforms	MPN/100mL	<1.0	N/A	<1.0	N/A	B538854	<1.0	N/A	1.0	B538854
Heterotrophic DST	MPN/100mL	330	N/A	N/A	N/A	B538359	1400	N/A	1.0	B538359
Total Coliforms DST	MPN/100mL	17	N/A	N/A	N/A	B538366	340	N/A	1.0	B538366
Nutrients										
Total Ammonia (N)	mg/L	<0.015	N/A	N/A	N/A	B539922	<0.015	N/A	0.015	B539922
Orthophosphate (P)	mg/L	<0.0030	N/A	N/A	N/A	B539265	<0.0030	N/A	0.0030	B538956
Lab Filtered Nutrients										
Dissolved Phosphorus (P)	mg/L	<0.0030	N/A	N/A	N/A	B539678	<0.0030	N/A	0.0030	B539678

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas ID		CWJ887			CWJ888			
Sampling Date		2024/09/25 14:28			2024/09/25 15:28			
COC Number		1OF1			1OF1			
	UNITS	NE7-R3-01 Lab-Dup	MU	QC Batch	WS62-01	MU	RDL	QC Batch
Lab Filtered Inorganics								
Dissolved Organic Carbon (C)	mg/L	N/A	N/A	B540858	1.2	+/- <RDL	0.50	B543507
Microbiological Param.								
E.Coli DST	MPN/100mL	N/A	N/A	B538366	<1.0	N/A	1.0	B538366
Fecal Coliforms	MPN/100mL	N/A	N/A	B538854	<1.0	N/A	1.0	B538854
Heterotrophic DST	MPN/100mL	N/A	N/A	B538359	65	N/A	1.0	B538359
Total Coliforms DST	MPN/100mL	N/A	N/A	B538366	<1.0	N/A	1.0	B538366
Nutrients								
Total Ammonia (N)	mg/L	N/A	N/A	B539922	<0.015	N/A	0.015	B539922
Orthophosphate (P)	mg/L	N/A	N/A	B538956	<0.0030	N/A	0.0030	B539265
Lab Filtered Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0030	N/A	B539678	<0.0030	N/A	0.0030	B539704

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		CWJ889			CWJ890			
Sampling Date		2024/09/25 17:05			2024/09/25 17:11			
COC Number		1OF1			1OF1			
	UNITS	NE20-R3-01	MU	QC Batch	SR24-09	MU	RDL	QC Batch
Lab Filtered Inorganics								
Dissolved Organic Carbon (C)	mg/L	2.0	+/- <RDL	B540858	1.1	+/- <RDL	0.50	B543507
Microbiological Param.								
E.Coli DST	MPN/100mL	<1.0	N/A	B538366	<1.0	N/A	1.0	B538366
Fecal Coliforms	MPN/100mL	<1.0	N/A	B538854	<1.0	N/A	1.0	B538854
Heterotrophic DST	MPN/100mL	>2400	N/A	B538359	69	N/A	1.0	B538359
Total Coliforms DST	MPN/100mL	<1.0	N/A	B538366	<1.0	N/A	1.0	B538366
Nutrients								
Total Ammonia (N)	mg/L	0.57	+/- 0.062	B539922	<0.015	N/A	0.015	B539922
Orthophosphate (P)	mg/L	<0.0030	N/A	B538956	<0.0030	N/A	0.0030	B538956
Lab Filtered Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0030	N/A	B539678	<0.0030	N/A	0.0030	B539678

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

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MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		CWJ883		CWJ884			CWJ885			
Sampling Date		2024/09/25 09:49		2024/09/25 10:43			2024/09/25 11:50			
COC Number		1OF1		1OF1			1OF1			
	UNITS	WS51-01	MU	MW16-1-15	MU	QC Batch	WS81-01	MU	RDL	QC Batch
Elements										
Total Mercury (Hg)	ug/L	<0.0019	N/A	<0.0019	N/A	B543509	<0.0019	N/A	0.0019	B543483
Lab Filtered Elements										
Dissolved Mercury (Hg)	ug/L	<0.0019	N/A	<0.0019	N/A	B540097	<0.0019	N/A	0.0019	B540097

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas ID		CWJ886		CWJ886		CWJ887		CWJ888			
Sampling Date		2024/09/25 12:28		2024/09/25 12:28		2024/09/25 14:28		2024/09/25 15:28			
COC Number		1OF1		1OF1		1OF1		1OF1			
	UNITS	WS81-02	MU	WS81-02 Lab-Dup	MU	NE7-R3-01	MU	WS62-01	MU	RDL	QC Batch
Elements											
Total Mercury (Hg)	ug/L	<0.0019	N/A	<0.0019	N/A	<0.0019	N/A	<0.0019	N/A	0.0019	B543509
Lab Filtered Elements											
Dissolved Mercury (Hg)	ug/L	<0.0019	N/A	N/A	N/A	<0.0019	N/A	<0.0019	N/A	0.0019	B540097

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas ID		CWJ889		CWJ890			
Sampling Date		2024/09/25 17:05		2024/09/25 17:11			
COC Number		1OF1		1OF1			
	UNITS	NE20-R3-01	MU	SR24-09	MU	RDL	QC Batch
Elements							
Total Mercury (Hg)	ug/L	<0.0019	N/A	<0.0019	N/A	0.0019	B543509
Lab Filtered Elements							
Dissolved Mercury (Hg)	ug/L	<0.0019	N/A	<0.0019	N/A	0.0019	B540097

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.7°C
Package 2	2.3°C

The estimate of uncertainty has been reported as an expanded uncertainty and calculated using a coverage factor of 2, which gives a level of confidence of 95%.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B538359	YYL	Method Blank	Heterotrophic DST	2024/09/28	<1.0		mpn/100mL	
B538359	YYL	RPD [CWJ883-01]	Heterotrophic DST	2024/09/28	NC		%	N/A
B538366	YYL	RPD [CWJ884-01]	E.Coli DST	2024/09/27	NC		%	N/A
			Total Coliforms DST	2024/09/27	NC		%	N/A
B538622	RRA	Spiked Blank	O-TERPHENYL (sur.)	2024/09/30		88	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2024/09/30		85	%	60 - 140
B538622	RRA	Method Blank	O-TERPHENYL (sur.)	2024/09/30		86	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2024/09/30	<0.10		mg/L	
B538854	R4S	RPD [CWJ886-01]	Fecal Coliforms	2024/09/27	NC		%	N/A
B538956	YL7	Matrix Spike	Orthophosphate (P)	2024/09/26		97	%	80 - 120
B538956	YL7	Spiked Blank	Orthophosphate (P)	2024/09/26		98	%	80 - 120
B538956	YL7	Method Blank	Orthophosphate (P)	2024/09/26	<0.0030		mg/L	
B538956	YL7	RPD	Orthophosphate (P)	2024/09/26	2.3		%	20
B539016	RIL	Matrix Spike	1,4-Difluorobenzene (sur.)	2024/09/28		102	%	50 - 140
			4-Bromofluorobenzene (sur.)	2024/09/28		97	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2024/09/28		112	%	50 - 140
			Benzene	2024/09/28		101	%	50 - 140
			Toluene	2024/09/28		97	%	50 - 140
			Ethylbenzene	2024/09/28		102	%	50 - 140
			m & p-Xylene	2024/09/28		96	%	50 - 140
			o-Xylene	2024/09/28		96	%	50 - 140
			F1 (C6-C10)	2024/09/28		87	%	60 - 140
B539016	RIL	Spiked Blank	1,4-Difluorobenzene (sur.)	2024/09/28		103	%	50 - 140
			4-Bromofluorobenzene (sur.)	2024/09/28		97	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2024/09/28		107	%	50 - 140
			Benzene	2024/09/28		101	%	60 - 130
			Toluene	2024/09/28		96	%	60 - 130
			Ethylbenzene	2024/09/28		102	%	60 - 130
			m & p-Xylene	2024/09/28		97	%	60 - 130
			o-Xylene	2024/09/28		96	%	60 - 130
			F1 (C6-C10)	2024/09/28		111	%	60 - 140
B539016	RIL	Method Blank	1,4-Difluorobenzene (sur.)	2024/09/28		104	%	50 - 140
			4-Bromofluorobenzene (sur.)	2024/09/28		99	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2024/09/28		105	%	50 - 140
			Benzene	2024/09/28	<0.00040		mg/L	
			Toluene	2024/09/28	<0.00040		mg/L	
			Ethylbenzene	2024/09/28	<0.00040		mg/L	
			m & p-Xylene	2024/09/28	<0.00080		mg/L	
			o-Xylene	2024/09/28	<0.00040		mg/L	
			F1 (C6-C10)	2024/09/28	<0.10		mg/L	
B539016	RIL	RPD	Benzene	2024/09/28	NC		%	30
			Toluene	2024/09/28	NC		%	30
			Ethylbenzene	2024/09/28	NC		%	30
			m & p-Xylene	2024/09/28	NC		%	30
			o-Xylene	2024/09/28	NC		%	30
			F1 (C6-C10)	2024/09/28	NC		%	30
B539017	YL7	Matrix Spike	Total Nitrogen (N)	2024/09/27		116	%	80 - 120
B539017	YL7	QC Standard	Total Nitrogen (N)	2024/09/27		104	%	80 - 120
B539017	YL7	Spiked Blank	Total Nitrogen (N)	2024/09/27		109	%	80 - 120
B539017	YL7	Method Blank	Total Nitrogen (N)	2024/09/27	<0.020		mg/L	
B539017	YL7	RPD	Total Nitrogen (N)	2024/09/27	3.3		%	20
B539022	YL7	Matrix Spike [CWJ888-04]	Total Nitrogen (N)	2024/09/27		106	%	80 - 120
B539022	YL7	QC Standard	Total Nitrogen (N)	2024/09/27		110	%	80 - 120
B539022	YL7	Spiked Blank	Total Nitrogen (N)	2024/09/27		104	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B539022	YL7	Method Blank	Total Nitrogen (N)	2024/09/27	<0.020		mg/L	
B539022	YL7	RPD [CWJ888-04]	Total Nitrogen (N)	2024/09/27	12		%	20
B539208	AFI	Matrix Spike [CWJ884-02]	Nitrite (N)	2024/09/27		106	%	80 - 120
			Nitrate plus Nitrite (N)	2024/09/27		88	%	80 - 120
B539208	AFI	Spiked Blank	Nitrite (N)	2024/09/26		103	%	80 - 120
			Nitrate plus Nitrite (N)	2024/09/26		104	%	80 - 120
B539208	AFI	Method Blank	Nitrite (N)	2024/09/26	<0.010		mg/L	
			Nitrate plus Nitrite (N)	2024/09/26	<0.010		mg/L	
B539208	AFI	RPD [CWJ884-02]	Nitrite (N)	2024/09/27	NC		%	20
			Nitrate plus Nitrite (N)	2024/09/27	NC		%	20
B539212	AFI	Matrix Spike [CWJ883-02]	Nitrite (N)	2024/09/26		106	%	80 - 120
			Nitrate plus Nitrite (N)	2024/09/26		108	%	80 - 120
B539212	AFI	Spiked Blank	Nitrite (N)	2024/09/27		103	%	80 - 120
			Nitrate plus Nitrite (N)	2024/09/27		108	%	80 - 120
B539212	AFI	Method Blank	Nitrite (N)	2024/09/26	<0.010		mg/L	
			Nitrate plus Nitrite (N)	2024/09/26	<0.010		mg/L	
B539212	AFI	RPD [CWJ883-02]	Nitrite (N)	2024/09/26	NC		%	20
			Nitrate plus Nitrite (N)	2024/09/26	NC		%	20
B539265	YL7	Matrix Spike [CWJ884-02]	Orthophosphate (P)	2024/09/26		104	%	80 - 120
B539265	YL7	Spiked Blank	Orthophosphate (P)	2024/09/26		99	%	80 - 120
B539265	YL7	Method Blank	Orthophosphate (P)	2024/09/26	<0.0030		mg/L	
B539265	YL7	RPD [CWJ884-02]	Orthophosphate (P)	2024/09/26	NC		%	20
B539285	TOR	Matrix Spike	Chloride (Cl)	2024/09/26		97	%	80 - 120
			Sulphate (SO4)	2024/09/26		114	%	80 - 120
B539285	TOR	Spiked Blank	Chloride (Cl)	2024/09/26		97	%	80 - 120
			Sulphate (SO4)	2024/09/26		100	%	80 - 120
B539285	TOR	Method Blank	Chloride (Cl)	2024/09/26	<1.0		mg/L	
			Sulphate (SO4)	2024/09/26	<1.0		mg/L	
B539285	TOR	RPD	Chloride (Cl)	2024/09/26	2.3		%	20
			Sulphate (SO4)	2024/09/26	1.4		%	20
B539678	MAP	Matrix Spike [CWJ887-02]	Dissolved Phosphorus (P)	2024/09/27		99	%	80 - 120
B539678	MAP	QC Standard	Dissolved Phosphorus (P)	2024/09/27		89	%	80 - 120
B539678	MAP	Spiked Blank	Dissolved Phosphorus (P)	2024/09/27		97	%	80 - 120
B539678	MAP	Method Blank	Dissolved Phosphorus (P)	2024/09/27	<0.0030		mg/L	
B539678	MAP	RPD [CWJ887-02]	Dissolved Phosphorus (P)	2024/09/27	NC		%	20
B539704	MAP	Matrix Spike [CWJ884-02]	Dissolved Phosphorus (P)	2024/09/30		98	%	80 - 120
B539704	MAP	QC Standard	Dissolved Phosphorus (P)	2024/09/30		87	%	80 - 120
B539704	MAP	Spiked Blank	Dissolved Phosphorus (P)	2024/09/30		96	%	80 - 120
B539704	MAP	Method Blank	Dissolved Phosphorus (P)	2024/09/30	<0.0030		mg/L	
B539704	MAP	RPD [CWJ884-02]	Dissolved Phosphorus (P)	2024/09/30	NC		%	20
B539887	HAP	Matrix Spike	Chloride (Cl)	2024/09/27		99	%	80 - 120
			Sulphate (SO4)	2024/09/27		119	%	80 - 120
B539887	HAP	Spiked Blank	Chloride (Cl)	2024/09/27		98	%	80 - 120
			Sulphate (SO4)	2024/09/27		103	%	80 - 120
B539887	HAP	Method Blank	Chloride (Cl)	2024/09/27	<1.0		mg/L	
			Sulphate (SO4)	2024/09/27	<1.0		mg/L	
B539887	HAP	RPD	Chloride (Cl)	2024/09/27	0.37		%	20
			Sulphate (SO4)	2024/09/27	2.5		%	20
B539922	SKM	Matrix Spike [CWJ883-09]	Total Ammonia (N)	2024/09/27		104	%	80 - 120
B539922	SKM	Spiked Blank	Total Ammonia (N)	2024/09/27		104	%	80 - 120
B539922	SKM	Method Blank	Total Ammonia (N)	2024/09/27	<0.015		mg/L	
B539922	SKM	RPD [CWJ883-09]	Total Ammonia (N)	2024/09/27	0.26		%	20
B540097	KHU	Matrix Spike	Dissolved Mercury (Hg)	2024/09/27		102	%	80 - 120
B540097	KHU	Spiked Blank	Dissolved Mercury (Hg)	2024/09/27		92	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B540097	KHU	Method Blank	Dissolved Mercury (Hg)	2024/09/27	<0.0019		ug/L	
B540097	KHU	RPD	Dissolved Mercury (Hg)	2024/09/27	NC		%	20
B540233	JAB	Matrix Spike	Dissolved Aluminum (Al)	2024/09/28		87	%	80 - 120
			Dissolved Antimony (Sb)	2024/09/28		102	%	80 - 120
			Dissolved Arsenic (As)	2024/09/28		109	%	80 - 120
			Dissolved Beryllium (Be)	2024/09/28		97	%	80 - 120
			Dissolved Chromium (Cr)	2024/09/28		102	%	80 - 120
			Dissolved Cobalt (Co)	2024/09/28		100	%	80 - 120
			Dissolved Copper (Cu)	2024/09/28		94	%	80 - 120
			Dissolved Lead (Pb)	2024/09/28		91	%	80 - 120
			Dissolved Molybdenum (Mo)	2024/09/28		114	%	80 - 120
			Dissolved Nickel (Ni)	2024/09/28		98	%	80 - 120
			Dissolved Selenium (Se)	2024/09/28		115	%	80 - 120
			Dissolved Silver (Ag)	2024/09/28		96	%	80 - 120
			Dissolved Thallium (Tl)	2024/09/28		93	%	80 - 120
			Dissolved Tin (Sn)	2024/09/28		107	%	80 - 120
			Dissolved Titanium (Ti)	2024/09/28		110	%	80 - 120
			Dissolved Uranium (U)	2024/09/28		97	%	80 - 120
			Dissolved Vanadium (V)	2024/09/28		106	%	80 - 120
			Dissolved Zinc (Zn)	2024/09/28		94	%	80 - 120
B540233	JAB	Spiked Blank	Dissolved Aluminum (Al)	2024/09/28		103	%	80 - 120
			Dissolved Antimony (Sb)	2024/09/28		101	%	80 - 120
			Dissolved Arsenic (As)	2024/09/28		102	%	80 - 120
			Dissolved Beryllium (Be)	2024/09/28		98	%	80 - 120
			Dissolved Chromium (Cr)	2024/09/28		101	%	80 - 120
			Dissolved Cobalt (Co)	2024/09/28		102	%	80 - 120
			Dissolved Copper (Cu)	2024/09/28		103	%	80 - 120
			Dissolved Lead (Pb)	2024/09/28		100	%	80 - 120
			Dissolved Molybdenum (Mo)	2024/09/28		103	%	80 - 120
			Dissolved Nickel (Ni)	2024/09/28		102	%	80 - 120
			Dissolved Selenium (Se)	2024/09/28		101	%	80 - 120
			Dissolved Silver (Ag)	2024/09/28		101	%	80 - 120
			Dissolved Thallium (Tl)	2024/09/28		100	%	80 - 120
			Dissolved Tin (Sn)	2024/09/28		100	%	80 - 120
			Dissolved Titanium (Ti)	2024/09/28		94	%	80 - 120
			Dissolved Uranium (U)	2024/09/28		100	%	80 - 120
			Dissolved Vanadium (V)	2024/09/28		102	%	80 - 120
			Dissolved Zinc (Zn)	2024/09/28		100	%	80 - 120
B540233	JAB	Method Blank	Dissolved Aluminum (Al)	2024/09/28	<0.0030		mg/L	
			Dissolved Antimony (Sb)	2024/09/28	<0.00060		mg/L	
			Dissolved Arsenic (As)	2024/09/28	<0.00020		mg/L	
			Dissolved Beryllium (Be)	2024/09/28	<0.0010		mg/L	
			Dissolved Chromium (Cr)	2024/09/28	<0.0010		mg/L	
			Dissolved Cobalt (Co)	2024/09/28	<0.00030		mg/L	
			Dissolved Copper (Cu)	2024/09/28	<0.0010		mg/L	
			Dissolved Lead (Pb)	2024/09/28	<0.00020		mg/L	
			Dissolved Molybdenum (Mo)	2024/09/28	<0.00020		mg/L	
			Dissolved Nickel (Ni)	2024/09/28	<0.00050		mg/L	
			Dissolved Selenium (Se)	2024/09/28	<0.00020		mg/L	
			Dissolved Silver (Ag)	2024/09/28	<0.00010		mg/L	
			Dissolved Thallium (Tl)	2024/09/28	<0.00020		mg/L	
			Dissolved Tin (Sn)	2024/09/28	<0.0010		mg/L	
			Dissolved Titanium (Ti)	2024/09/28	<0.0010		mg/L	
			Dissolved Uranium (U)	2024/09/28	<0.00010		mg/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Vanadium (V)	2024/09/28	<0.0010		mg/L	
			Dissolved Zinc (Zn)	2024/09/28	<0.0030		mg/L	
B540233	JAB	RPD	Dissolved Aluminum (Al)	2024/09/28	NC		%	20
			Dissolved Antimony (Sb)	2024/09/28	NC		%	20
			Dissolved Arsenic (As)	2024/09/28	16		%	20
			Dissolved Beryllium (Be)	2024/09/28	NC		%	20
			Dissolved Chromium (Cr)	2024/09/28	NC		%	20
			Dissolved Cobalt (Co)	2024/09/28	2.8		%	20
			Dissolved Copper (Cu)	2024/09/28	4.5		%	20
			Dissolved Lead (Pb)	2024/09/28	NC		%	20
			Dissolved Molybdenum (Mo)	2024/09/28	8.1		%	20
			Dissolved Nickel (Ni)	2024/09/28	0.71		%	20
			Dissolved Selenium (Se)	2024/09/28	NC		%	20
			Dissolved Silver (Ag)	2024/09/28	NC		%	20
			Dissolved Thallium (Tl)	2024/09/28	NC		%	20
			Dissolved Tin (Sn)	2024/09/28	NC		%	20
			Dissolved Titanium (Ti)	2024/09/28	NC		%	20
			Dissolved Uranium (U)	2024/09/28	1.8		%	20
			Dissolved Vanadium (V)	2024/09/28	NC		%	20
			Dissolved Zinc (Zn)	2024/09/28	0.18		%	20
B540242	JAB	Matrix Spike	Dissolved Aluminum (Al)	2024/09/28		98	%	80 - 120
			Dissolved Antimony (Sb)	2024/09/28		105	%	80 - 120
			Dissolved Arsenic (As)	2024/09/28		109	%	80 - 120
			Dissolved Beryllium (Be)	2024/09/28		105	%	80 - 120
			Dissolved Chromium (Cr)	2024/09/28		101	%	80 - 120
			Dissolved Cobalt (Co)	2024/09/28		100	%	80 - 120
			Dissolved Copper (Cu)	2024/09/28		97	%	80 - 120
			Dissolved Lead (Pb)	2024/09/28		97	%	80 - 120
			Dissolved Molybdenum (Mo)	2024/09/28		109	%	80 - 120
			Dissolved Nickel (Ni)	2024/09/28		98	%	80 - 120
			Dissolved Selenium (Se)	2024/09/28		111	%	80 - 120
			Dissolved Silver (Ag)	2024/09/28		101	%	80 - 120
			Dissolved Thallium (Tl)	2024/09/28		98	%	80 - 120
			Dissolved Tin (Sn)	2024/09/28		105	%	80 - 120
			Dissolved Titanium (Ti)	2024/09/28		104	%	80 - 120
			Dissolved Uranium (U)	2024/09/28		100	%	80 - 120
			Dissolved Vanadium (V)	2024/09/28		105	%	80 - 120
			Dissolved Zinc (Zn)	2024/09/28		104	%	80 - 120
B540242	JAB	Spiked Blank	Dissolved Aluminum (Al)	2024/09/28		114	%	80 - 120
			Dissolved Antimony (Sb)	2024/09/28		98	%	80 - 120
			Dissolved Arsenic (As)	2024/09/28		104	%	80 - 120
			Dissolved Beryllium (Be)	2024/09/28		103	%	80 - 120
			Dissolved Chromium (Cr)	2024/09/28		101	%	80 - 120
			Dissolved Cobalt (Co)	2024/09/28		103	%	80 - 120
			Dissolved Copper (Cu)	2024/09/28		102	%	80 - 120
			Dissolved Lead (Pb)	2024/09/28		98	%	80 - 120
			Dissolved Molybdenum (Mo)	2024/09/28		102	%	80 - 120
			Dissolved Nickel (Ni)	2024/09/28		103	%	80 - 120
			Dissolved Selenium (Se)	2024/09/28		99	%	80 - 120
			Dissolved Silver (Ag)	2024/09/28		101	%	80 - 120
			Dissolved Thallium (Tl)	2024/09/28		97	%	80 - 120
			Dissolved Tin (Sn)	2024/09/28		101	%	80 - 120
			Dissolved Titanium (Ti)	2024/09/28		101	%	80 - 120
			Dissolved Uranium (U)	2024/09/28		100	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Vanadium (V)	2024/09/28		104	%	80 - 120
			Dissolved Zinc (Zn)	2024/09/28		101	%	80 - 120
B540242	JAB	Method Blank	Dissolved Aluminum (Al)	2024/09/28	<0.0030		mg/L	
			Dissolved Antimony (Sb)	2024/09/28	<0.00060		mg/L	
			Dissolved Arsenic (As)	2024/09/28	<0.00020		mg/L	
			Dissolved Beryllium (Be)	2024/09/28	<0.0010		mg/L	
			Dissolved Chromium (Cr)	2024/09/28	<0.0010		mg/L	
			Dissolved Cobalt (Co)	2024/09/28	<0.00030		mg/L	
			Dissolved Copper (Cu)	2024/09/28	<0.0010		mg/L	
			Dissolved Lead (Pb)	2024/09/28	<0.00020		mg/L	
			Dissolved Molybdenum (Mo)	2024/09/28	<0.00020		mg/L	
			Dissolved Nickel (Ni)	2024/09/28	<0.00050		mg/L	
			Dissolved Selenium (Se)	2024/09/28	<0.00020		mg/L	
			Dissolved Silver (Ag)	2024/09/28	<0.00010		mg/L	
			Dissolved Thallium (Tl)	2024/09/28	<0.00020		mg/L	
			Dissolved Tin (Sn)	2024/09/28	<0.0010		mg/L	
			Dissolved Titanium (Ti)	2024/09/28	<0.0010		mg/L	
			Dissolved Uranium (U)	2024/09/28	<0.00010		mg/L	
			Dissolved Vanadium (V)	2024/09/28	<0.0010		mg/L	
			Dissolved Zinc (Zn)	2024/09/28	<0.0030		mg/L	
B540242	JAB	RPD	Dissolved Aluminum (Al)	2024/09/28	NC		%	20
			Dissolved Antimony (Sb)	2024/09/28	NC		%	20
			Dissolved Arsenic (As)	2024/09/28	14		%	20
			Dissolved Beryllium (Be)	2024/09/28	NC		%	20
			Dissolved Chromium (Cr)	2024/09/28	NC		%	20
			Dissolved Cobalt (Co)	2024/09/28	NC		%	20
			Dissolved Copper (Cu)	2024/09/28	8.9		%	20
			Dissolved Lead (Pb)	2024/09/28	NC		%	20
			Dissolved Molybdenum (Mo)	2024/09/28	2.4		%	20
			Dissolved Nickel (Ni)	2024/09/28	16		%	20
			Dissolved Selenium (Se)	2024/09/28	0.19		%	20
			Dissolved Silver (Ag)	2024/09/28	NC		%	20
			Dissolved Thallium (Tl)	2024/09/28	NC		%	20
			Dissolved Tin (Sn)	2024/09/28	NC		%	20
			Dissolved Titanium (Ti)	2024/09/28	NC		%	20
			Dissolved Uranium (U)	2024/09/28	0.29		%	20
			Dissolved Vanadium (V)	2024/09/28	NC		%	20
			Dissolved Zinc (Zn)	2024/09/28	NC		%	20
B540291	S1D	Matrix Spike [CWJ887-02]	Dissolved Barium (Ba)	2024/09/28		99	%	80 - 120
			Dissolved Boron (B)	2024/09/28		98	%	80 - 120
			Dissolved Calcium (Ca)	2024/09/28		94	%	80 - 120
			Dissolved Iron (Fe)	2024/09/28		103	%	80 - 120
			Dissolved Lithium (Li)	2024/09/28		102	%	80 - 120
			Dissolved Magnesium (Mg)	2024/09/28		97	%	80 - 120
			Dissolved Manganese (Mn)	2024/09/28		99	%	80 - 120
			Dissolved Phosphorus (P)	2024/09/28		99	%	80 - 120
			Dissolved Potassium (K)	2024/09/28		96	%	80 - 120
			Dissolved Silicon (Si)	2024/09/28		92	%	80 - 120
			Dissolved Sodium (Na)	2024/09/28		94	%	80 - 120
			Dissolved Strontium (Sr)	2024/09/28		95	%	80 - 120
			Dissolved Sulphur (S)	2024/09/28		100	%	80 - 120
B540291	S1D	Spiked Blank	Dissolved Barium (Ba)	2024/09/28		100	%	80 - 120
			Dissolved Boron (B)	2024/09/28		98	%	80 - 120
			Dissolved Calcium (Ca)	2024/09/28		98	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Iron (Fe)	2024/09/28		104	%	80 - 120
			Dissolved Lithium (Li)	2024/09/28		102	%	80 - 120
			Dissolved Magnesium (Mg)	2024/09/28		98	%	80 - 120
			Dissolved Manganese (Mn)	2024/09/28		100	%	80 - 120
			Dissolved Phosphorus (P)	2024/09/28		99	%	80 - 120
			Dissolved Potassium (K)	2024/09/28		97	%	80 - 120
			Dissolved Silicon (Si)	2024/09/28		95	%	80 - 120
			Dissolved Sodium (Na)	2024/09/28		97	%	80 - 120
			Dissolved Strontium (Sr)	2024/09/28		96	%	80 - 120
			Dissolved Sulphur (S)	2024/09/28		97	%	80 - 120
B540291	S1D	Method Blank	Dissolved Barium (Ba)	2024/09/28	<0.010		mg/L	
			Dissolved Boron (B)	2024/09/28	<0.020		mg/L	
			Dissolved Calcium (Ca)	2024/09/28	<0.30		mg/L	
			Dissolved Iron (Fe)	2024/09/28	<0.060		mg/L	
			Dissolved Lithium (Li)	2024/09/28	<0.020		mg/L	
			Dissolved Magnesium (Mg)	2024/09/28	<0.20		mg/L	
			Dissolved Manganese (Mn)	2024/09/28	<0.0040		mg/L	
			Dissolved Phosphorus (P)	2024/09/28	<0.10		mg/L	
			Dissolved Potassium (K)	2024/09/28	<0.30		mg/L	
			Dissolved Silicon (Si)	2024/09/28	<0.50		mg/L	
			Dissolved Sodium (Na)	2024/09/28	<0.50		mg/L	
			Dissolved Strontium (Sr)	2024/09/28	<0.020		mg/L	
			Dissolved Sulphur (S)	2024/09/28	<0.20		mg/L	
B540291	S1D	RPD [CWJ887-02]	Dissolved Barium (Ba)	2024/09/28	1.8		%	20
			Dissolved Boron (B)	2024/09/28	NC		%	20
			Dissolved Calcium (Ca)	2024/09/28	0.14		%	20
			Dissolved Iron (Fe)	2024/09/28	NC		%	20
			Dissolved Lithium (Li)	2024/09/28	NC		%	20
			Dissolved Magnesium (Mg)	2024/09/28	0.40		%	20
			Dissolved Manganese (Mn)	2024/09/28	NC		%	20
			Dissolved Phosphorus (P)	2024/09/28	NC		%	20
			Dissolved Potassium (K)	2024/09/28	0.20		%	20
			Dissolved Silicon (Si)	2024/09/28	0.62		%	20
			Dissolved Sodium (Na)	2024/09/28	0.097		%	20
			Dissolved Strontium (Sr)	2024/09/28	0.56		%	20
			Dissolved Sulphur (S)	2024/09/28	1.3		%	20
B540858	JYU	Matrix Spike	Dissolved Organic Carbon (C)	2024/09/28		102	%	75 - 125
B540858	JYU	Spiked Blank	Dissolved Organic Carbon (C)	2024/09/28		100	%	80 - 120
B540858	JYU	Method Blank	Dissolved Organic Carbon (C)	2024/09/28	<0.50		mg/L	
B540858	JYU	RPD	Dissolved Organic Carbon (C)	2024/09/28	0.30		%	20
B542752	AYE	Spiked Blank	Alkalinity (Total as CaCO3)	2024/09/30		99	%	80 - 120
B542752	AYE	Method Blank	Alkalinity (PP as CaCO3)	2024/09/30	<1.0		mg/L	
			Alkalinity (Total as CaCO3)	2024/09/30	<1.0		mg/L	
			Bicarbonate (HCO3)	2024/09/30	<1.0		mg/L	
			Carbonate (CO3)	2024/09/30	<1.0		mg/L	
			Hydroxide (OH)	2024/09/30	<1.0		mg/L	
B542752	AYE	RPD	Alkalinity (PP as CaCO3)	2024/09/30	NC		%	20
			Alkalinity (Total as CaCO3)	2024/09/30	0.59		%	20
			Bicarbonate (HCO3)	2024/09/30	0.59		%	20
			Carbonate (CO3)	2024/09/30	NC		%	20
			Hydroxide (OH)	2024/09/30	NC		%	20
B542753	AYE	Spiked Blank	pH	2024/09/30		100	%	97 - 103
B542753	AYE	RPD	pH	2024/09/30	1.1		%	N/A
B542754	AYE	Spiked Blank	Conductivity	2024/09/30		100	%	90 - 110

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B542754	AYE	Method Blank	Conductivity	2024/09/30	<2.0		uS/cm	
B542754	AYE	RPD	Conductivity	2024/09/30	1.7		%	10
B543483	KHU	Matrix Spike	Total Mercury (Hg)	2024/10/02		96	%	80 - 120
B543483	KHU	Spiked Blank	Total Mercury (Hg)	2024/10/02		103	%	80 - 120
B543483	KHU	Method Blank	Total Mercury (Hg)	2024/10/02	<0.0019		ug/L	
B543483	KHU	RPD	Total Mercury (Hg)	2024/10/02	NC		%	20
B543507	MDO	Matrix Spike [CWJ884-02]	Dissolved Organic Carbon (C)	2024/09/30		99	%	75 - 125
B543507	MDO	Spiked Blank	Dissolved Organic Carbon (C)	2024/09/30		100	%	80 - 120
B543507	MDO	Method Blank	Dissolved Organic Carbon (C)	2024/09/30	<0.50		mg/L	
B543507	MDO	RPD [CWJ884-02]	Dissolved Organic Carbon (C)	2024/09/30	7.6		%	20
B543509	KHU	Matrix Spike [CWJ889-08]	Total Mercury (Hg)	2024/10/02		98	%	80 - 120
B543509	KHU	Spiked Blank	Total Mercury (Hg)	2024/10/02		102	%	80 - 120
B543509	KHU	Method Blank	Total Mercury (Hg)	2024/10/02	<0.0019		ug/L	
B543509	KHU	RPD [CWJ886-08]	Total Mercury (Hg)	2024/10/02	NC		%	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

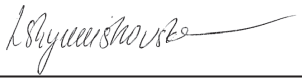
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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:



Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics



Luba Shymushovska, B.Sc., QP, Senior Analyst, Organics



Rahul Suryawanshi, Senior Analyst



Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist

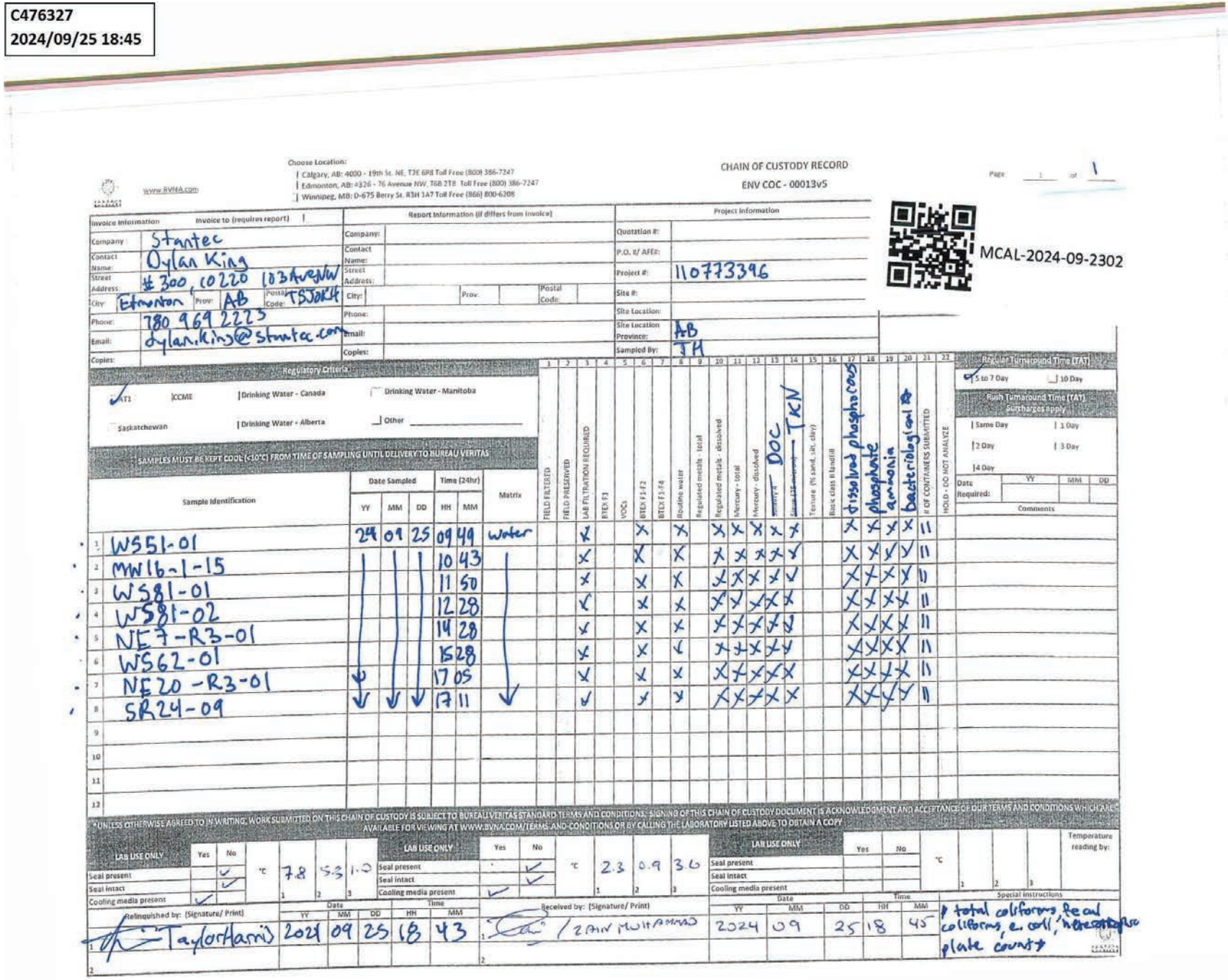


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CHAIN OF CUSTODY RECORD
ENV COC - 00013v5

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MCAL-2024-09-2302

Invoice Information	Invoice to (requires report)	Report Information (if differs from Invoice)	Project Information
Company:	Stantec		Quotation #:
Contact Name:	Dylan King		P.O. #/ AFE#:
Street Address:	#300, 10220 103 Ave NW		Project #: 110773396
City:	Edmonton Prov: AB Postal Code: T5J0K4	Prov: Postal Code:	Site #:
Phone:	780 969 2223		Site Location:
Email:	dylan.king@stantec.com		Site Location Province: AB
Copies:			Sampled By: JH

Regulatory Criteria
☑ AT1 ☐ CCME ☐ Drinking Water - Canada ☐ Drinking Water - Manitoba
☐ Saskatchewan ☐ Drinking Water - Alberta ☐ Other _____

Regular Turnaround Time (TAT)
☑ 5 to 7 Day ☐ 10 Day

Rush Turnaround Time (TAT) Surcharges apply
☐ Same Day ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ 4 Day
Date Required: YY MM DD

Comments

SAMPLES MUST BE KEPT COOL (<10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

	Sample Identification	Date Sampled YY	MM	DD	Time (24hr) HH	MM	Matrix	FIELD FILTERED	FIELD PRESERVED	LAB FILTRATION REQUIRED	BTEX F1-F2	BTEX F3-F4	VOCs	BTEX F1-F2	BTEX F3-F4	Routine water	Regulated metals - total	Regulated metals - dissolved	Mercury - total	Mercury - dissolved	Mercury - DOC	Texture (% sand, silt, clay)	Black class in landfill	dissolved phosphorous	phosphate	ammonia	bacteriological tests	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	WS51-01	24	09	25	09	49	water			X				X			X		X	X	X	X			X	X	X	11	
2	MW16-1-15				10	43				X				X			X		X	X	X	X			X	X	X	11	
3	WS81-01				11	50				X				X			X		X	X	X	X			X	X	X	11	
4	WS81-02				12	28				X				X			X		X	X	X	X			X	X	X	11	
5	NE7-R3-01				14	28				X				X			X		X	X	X	X			X	X	X	11	
6	WS62-01				15	28				X				X			X		X	X	X	X			X	X	X	11	
7	NE20-R3-01				17	05				X				X			X		X	X	X	X			X	X	X	11	
8	SR24-09				17	11				X				X			X		X	X	X	X			X	X	X	11	
9																													
10																													
11																													
12																													

*UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS AND CONDITIONS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS OR BY CALLING THE LABORATORY LISTED ABOVE TO OBTAIN A COPY

LAB USE ONLY	Yes	No	°C	1	2	3
Seal present		✓				
Seal intact		✓				
Cooling media present	✓			7.8	5.3	1.0

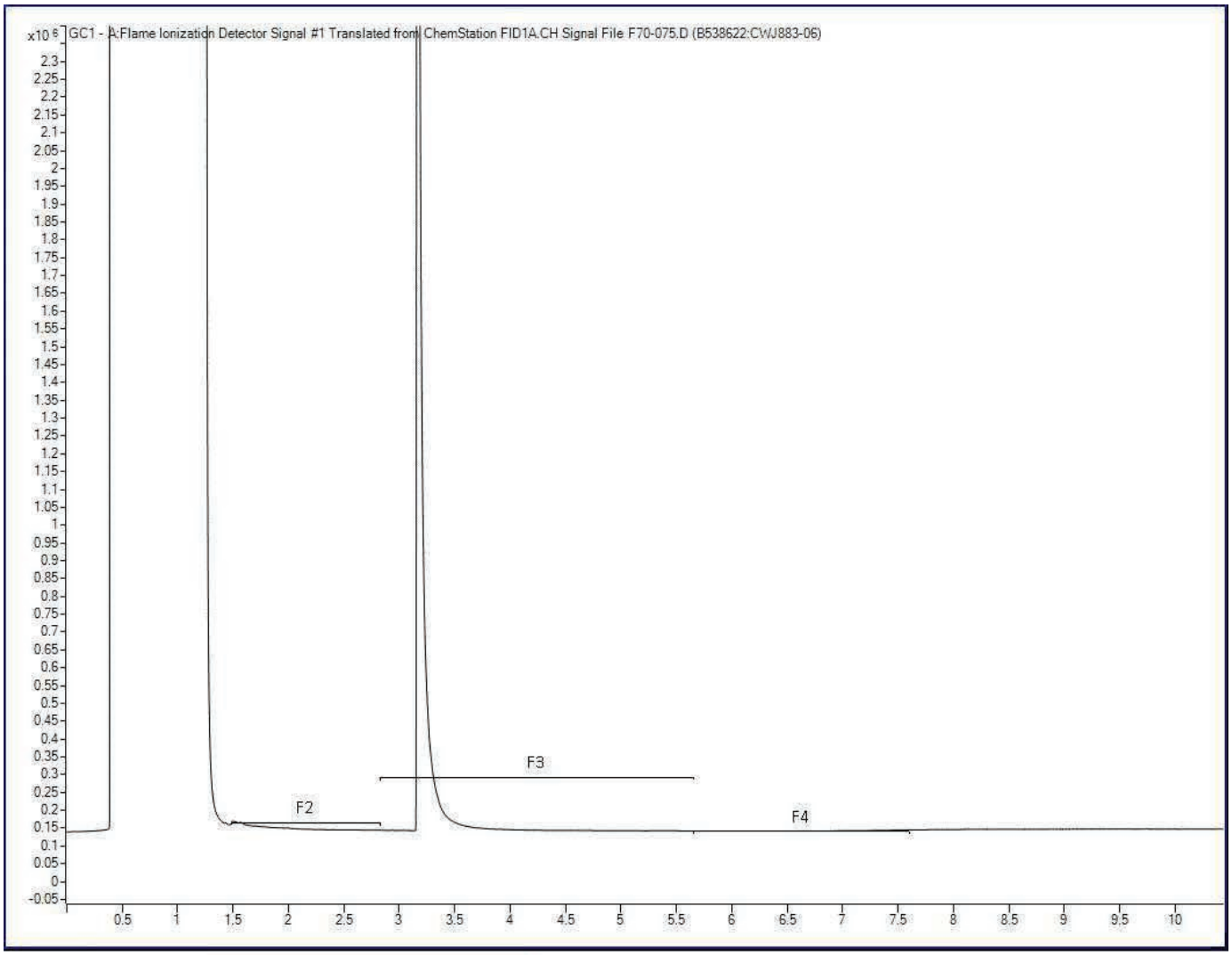
LAB USE ONLY	Yes	No	°C	1	2	3
Seal present		✓				
Seal intact		✓				
Cooling media present	✓			2.3	0.9	3.6

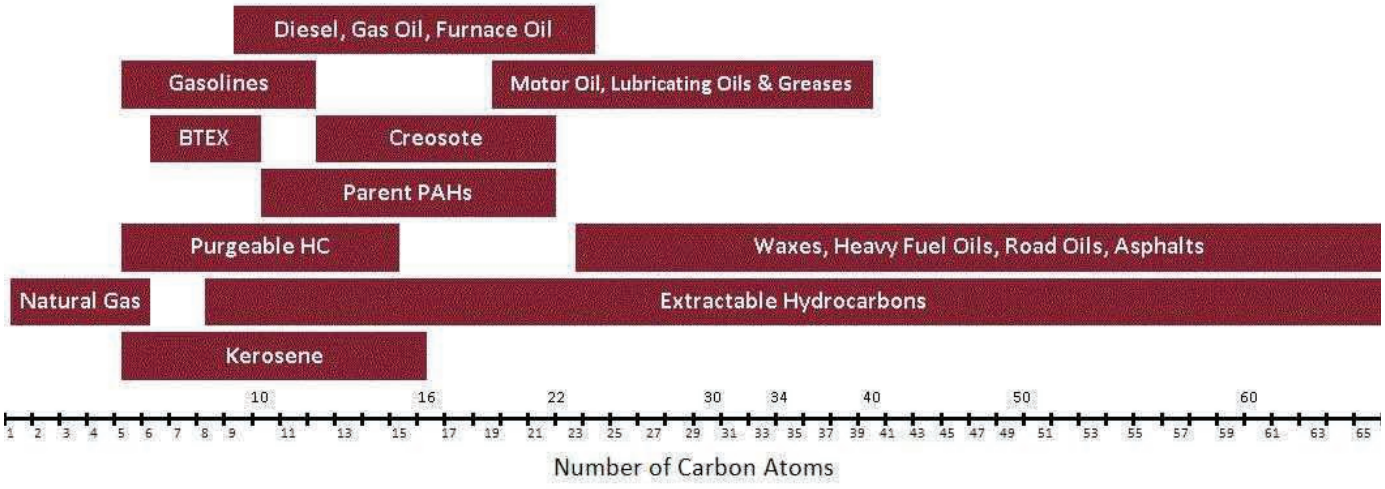
LAB USE ONLY	Yes	No	°C	1	2	3	Temperature reading by:
Seal present							
Seal intact							
Cooling media present							

Relinquished by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM	Received by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM
1 Taylor Harris	2024	09	25	18	43	1 ZAIN MUHAMMAD	2024	09	25	18	45
2						2					

Special Instructions
total coliforms, fecal coliforms, e. coli, heterotrophic plate count

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

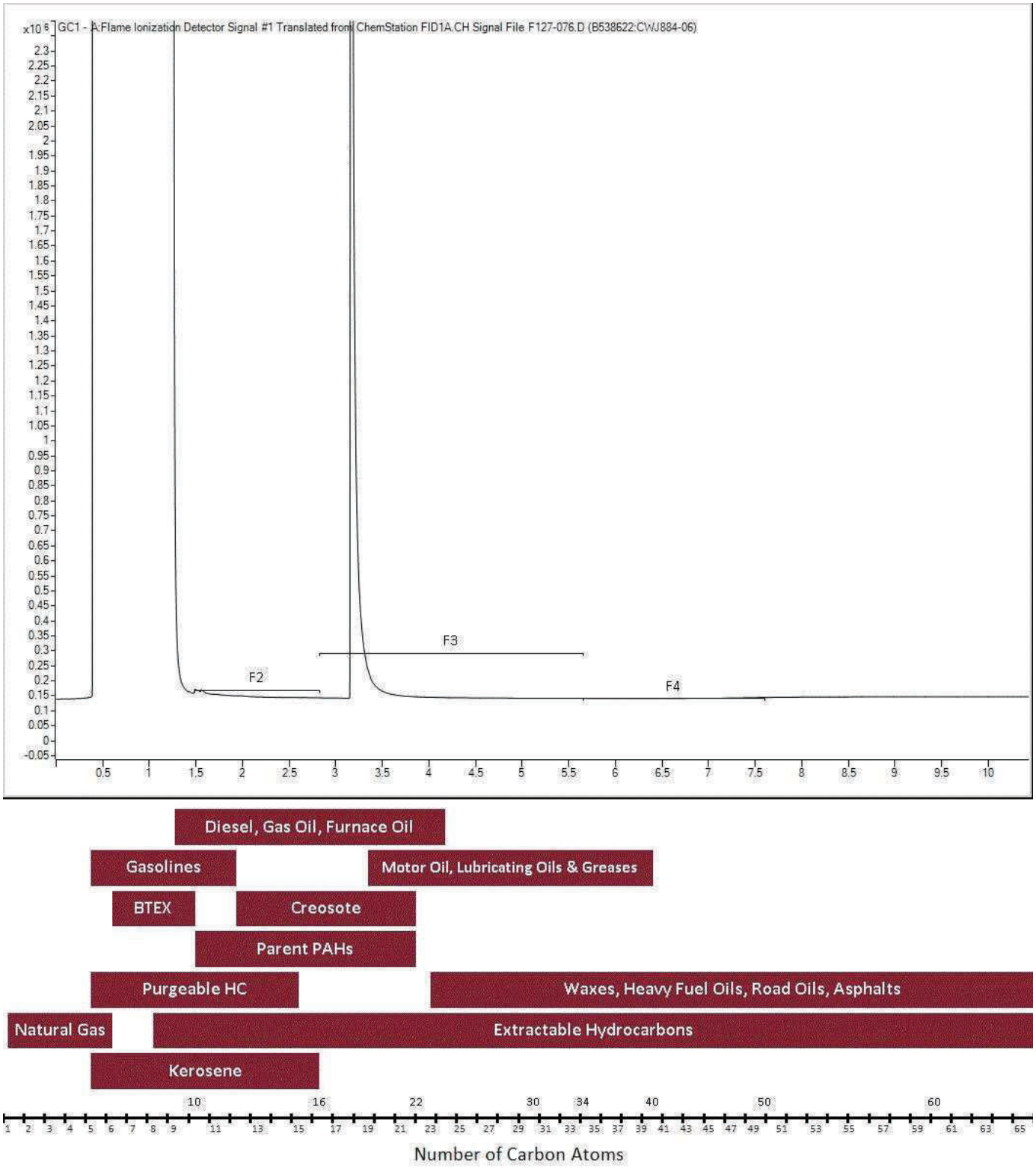




hpchem23\HPchem\1\DATA\2024\09\0929

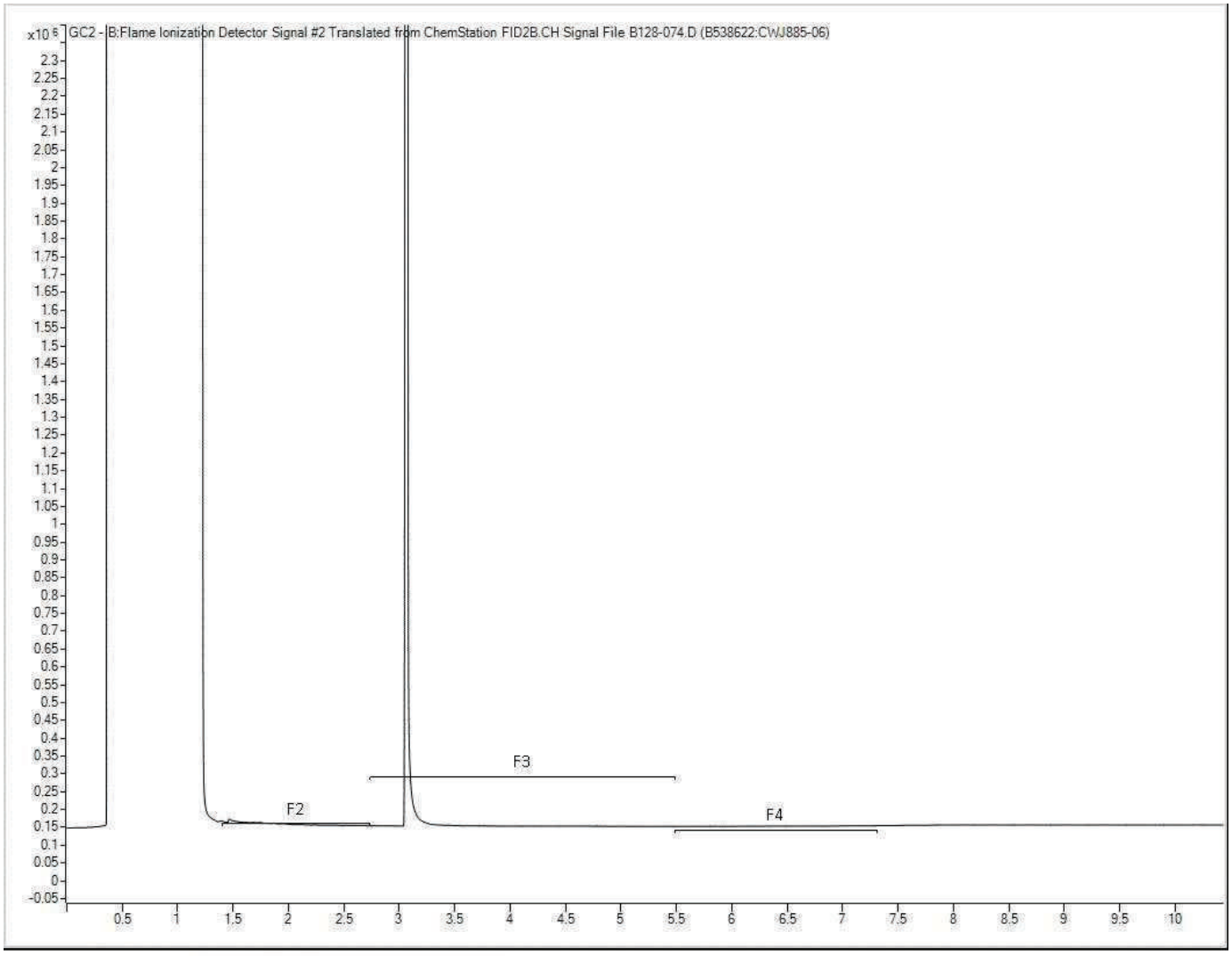
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

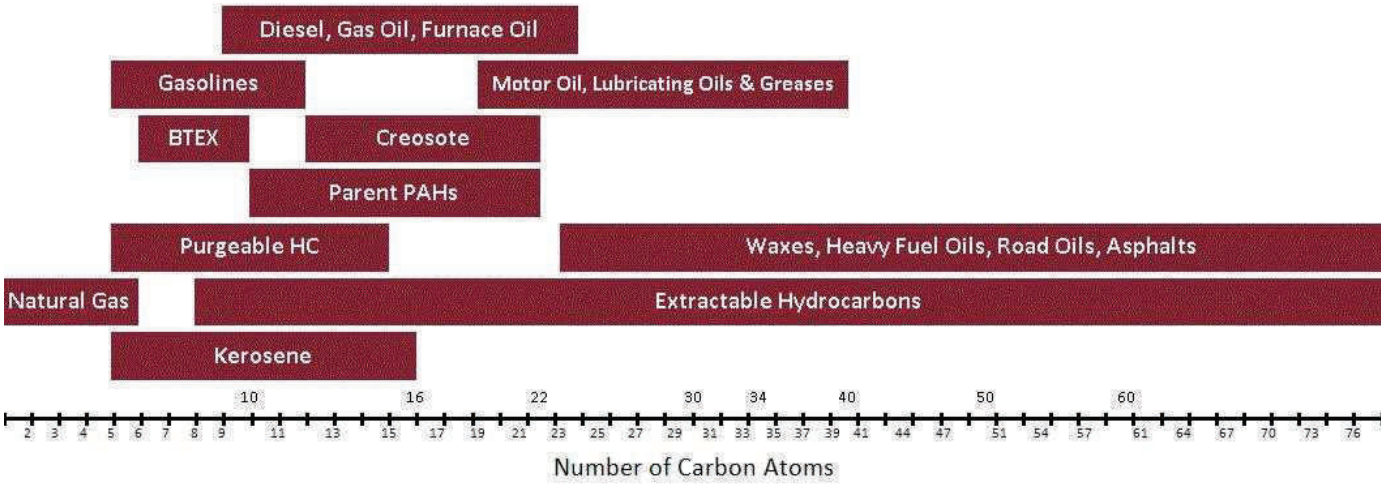
CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

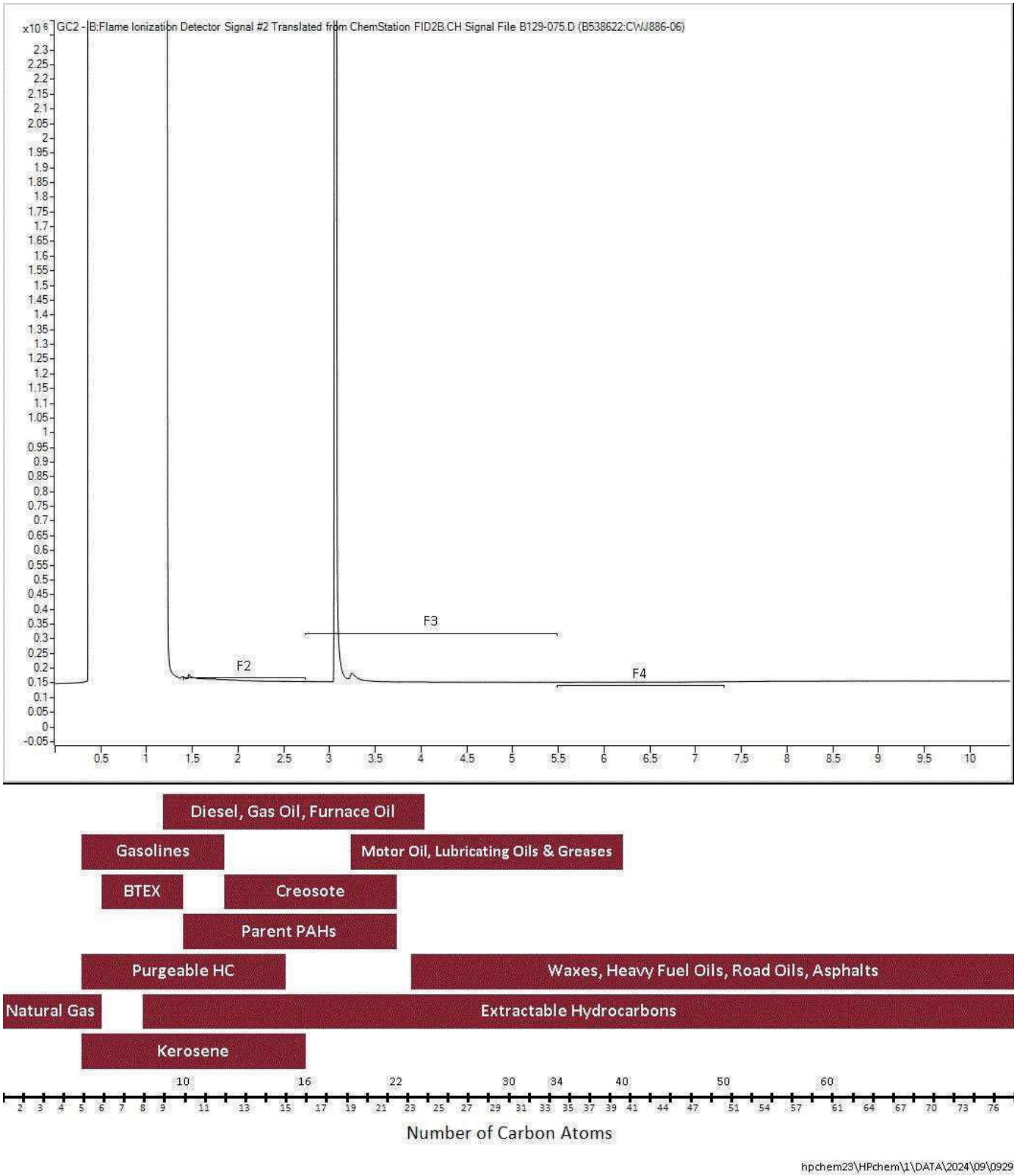




hpchem23\HPchem\1\DATA\2024\09\0929

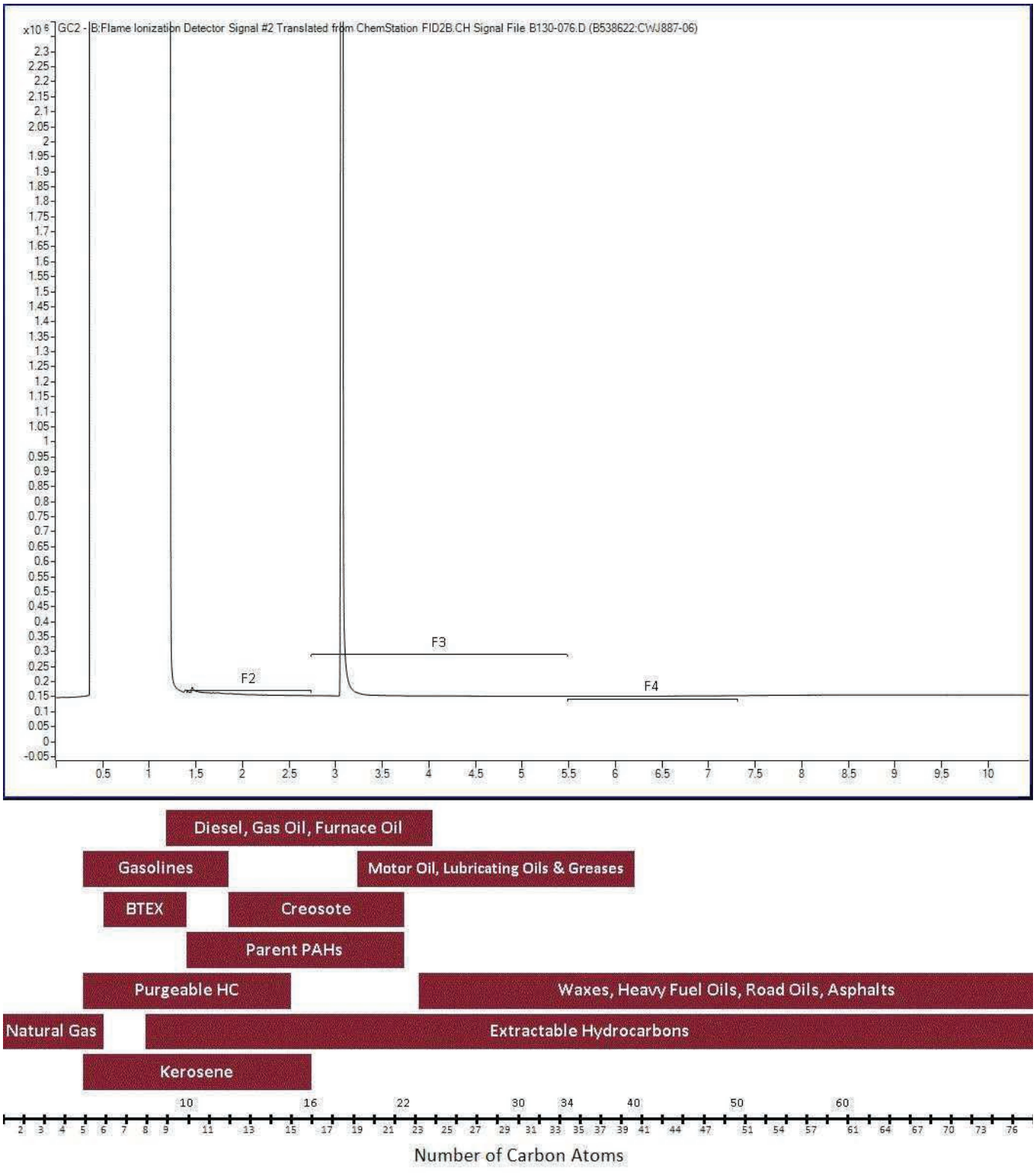
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

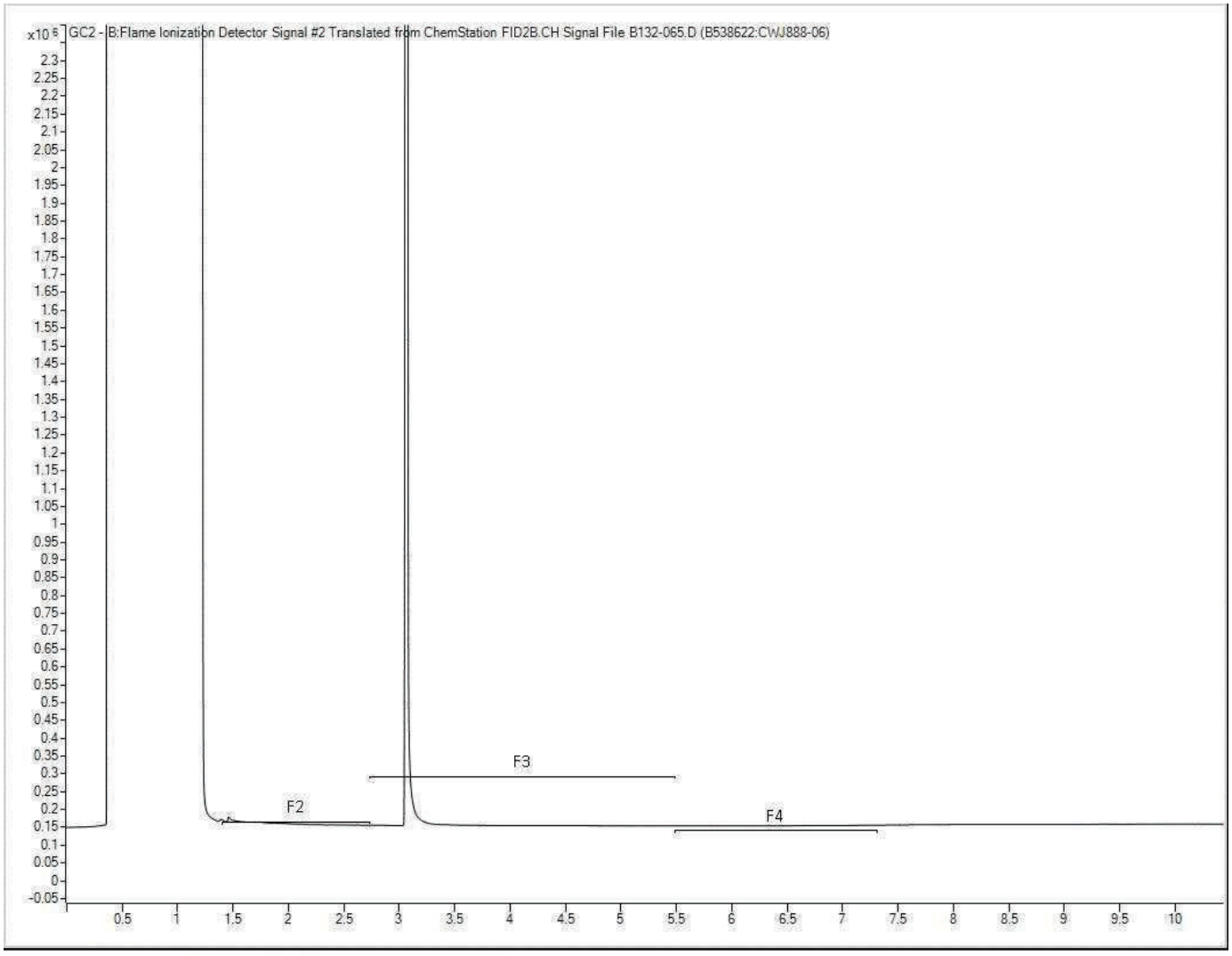


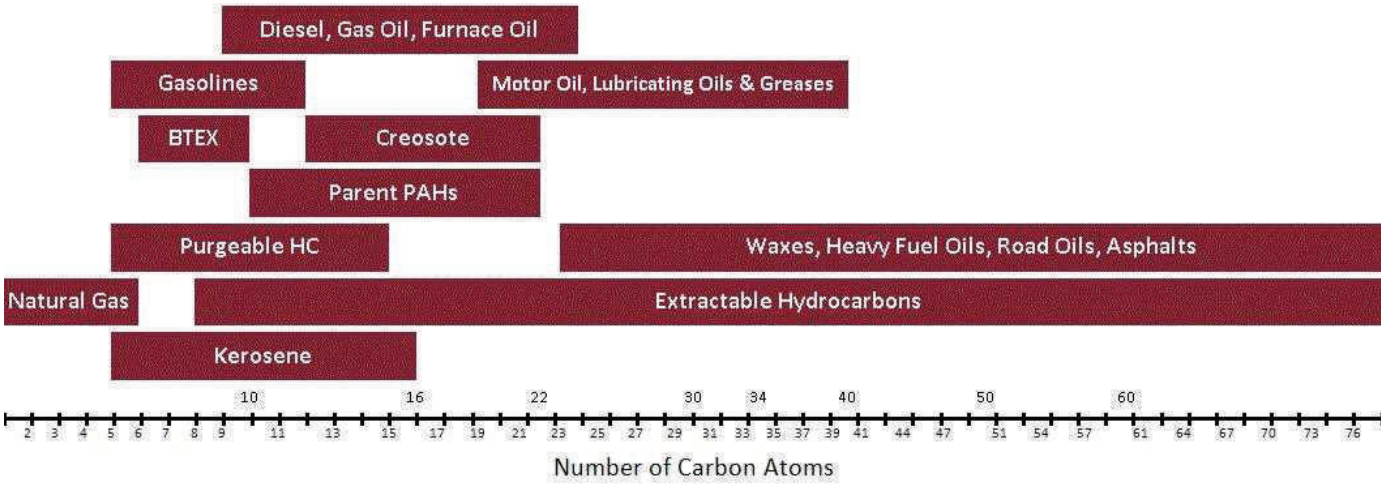
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C476327
Report Date: 2024/10/03
Bureau Veritas Sample: CWJ888

STANTEC CONSULTING LTD
Client Project #: 110773396
Client ID: WS62-01

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

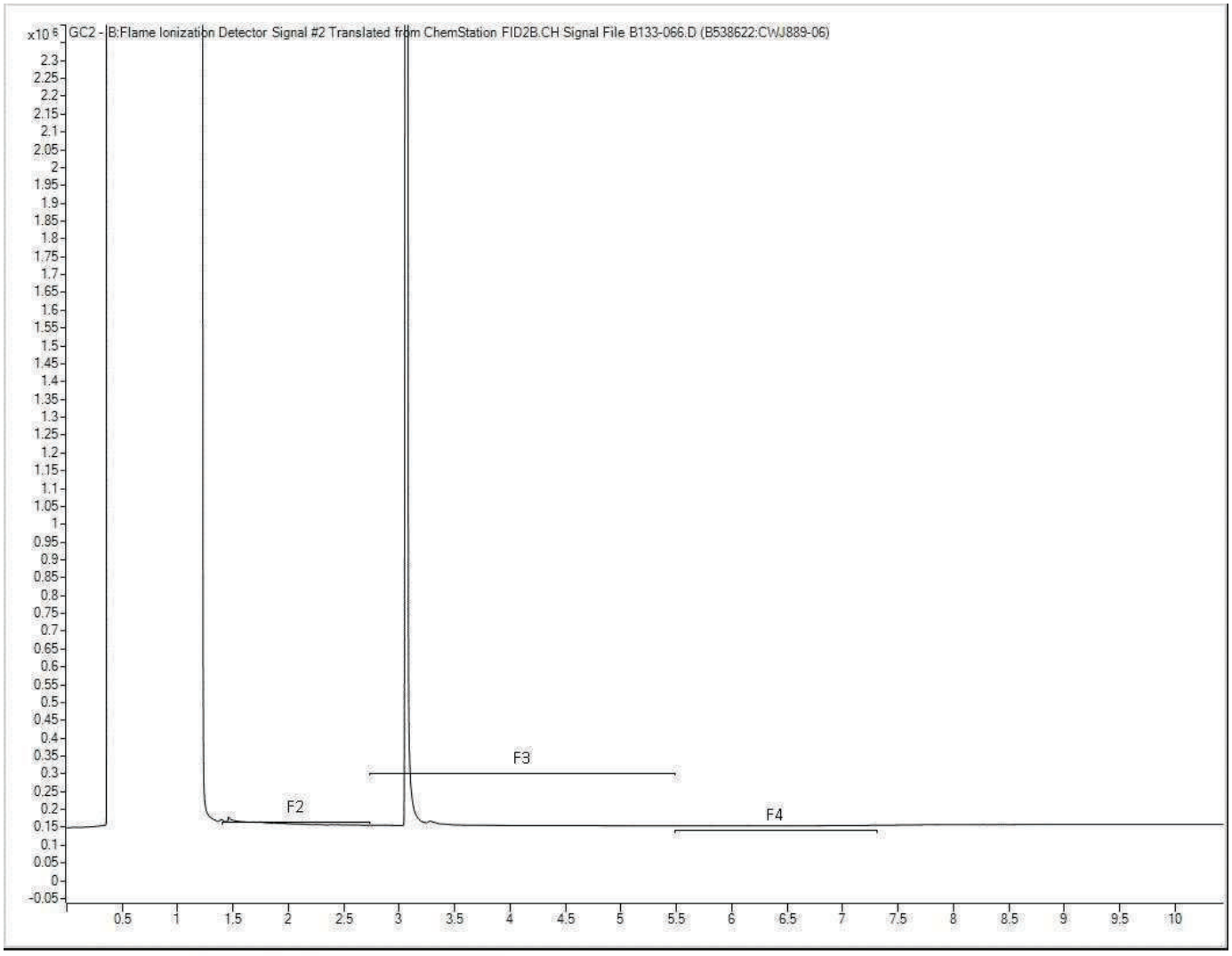


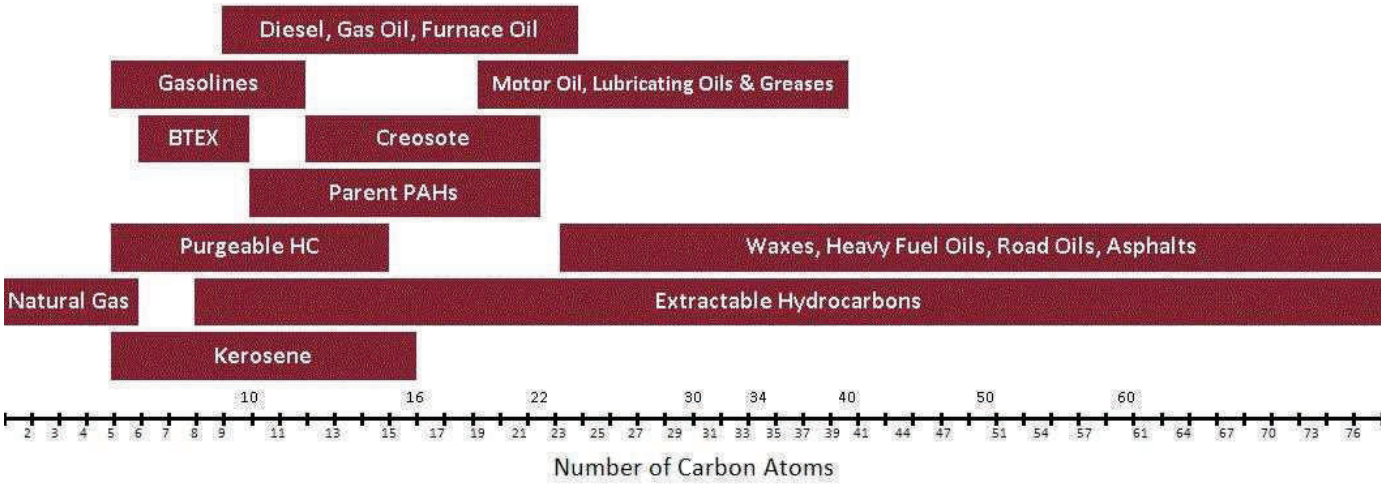


hpchem23\HPchem\1\DATA\2024\09\0929

Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

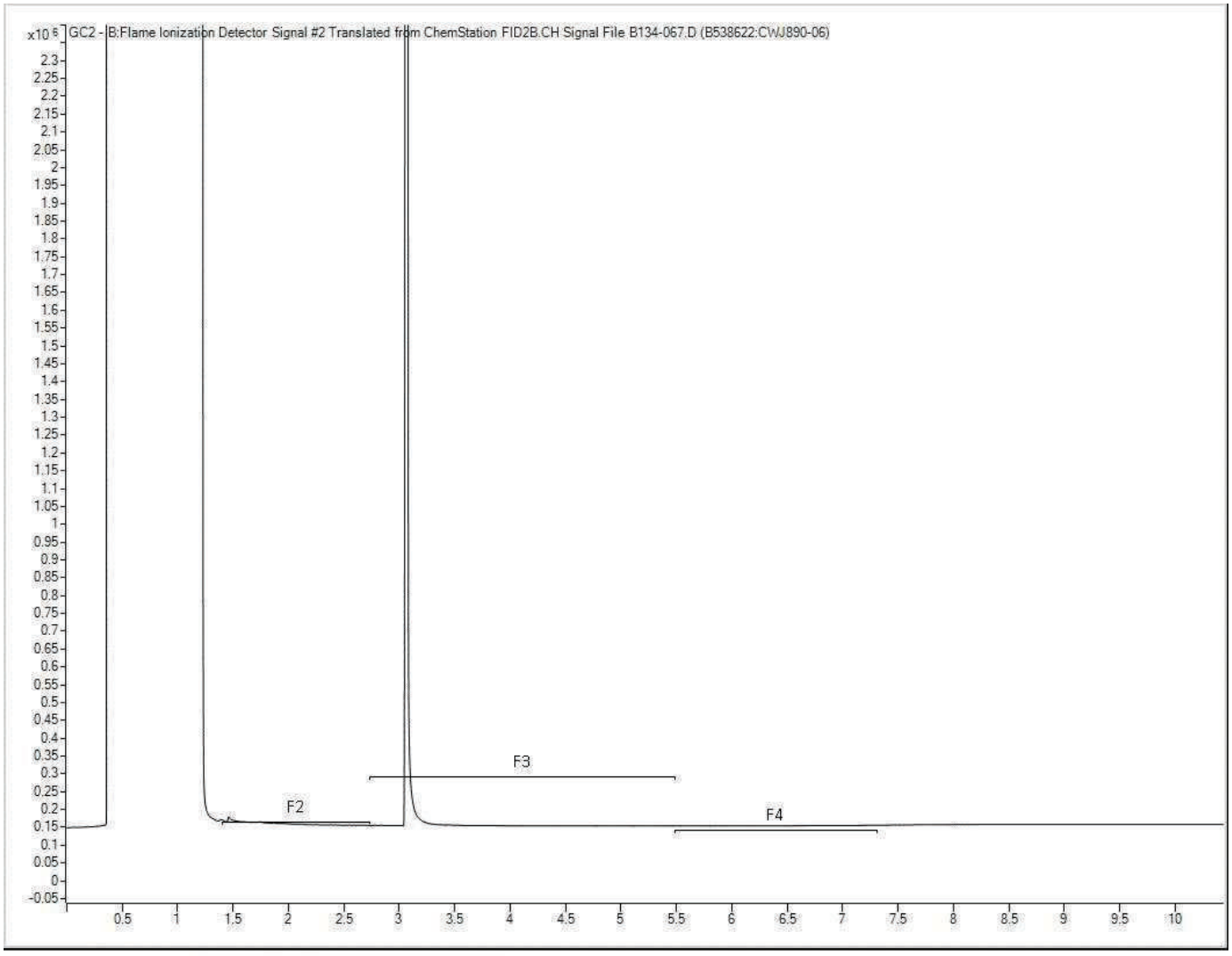


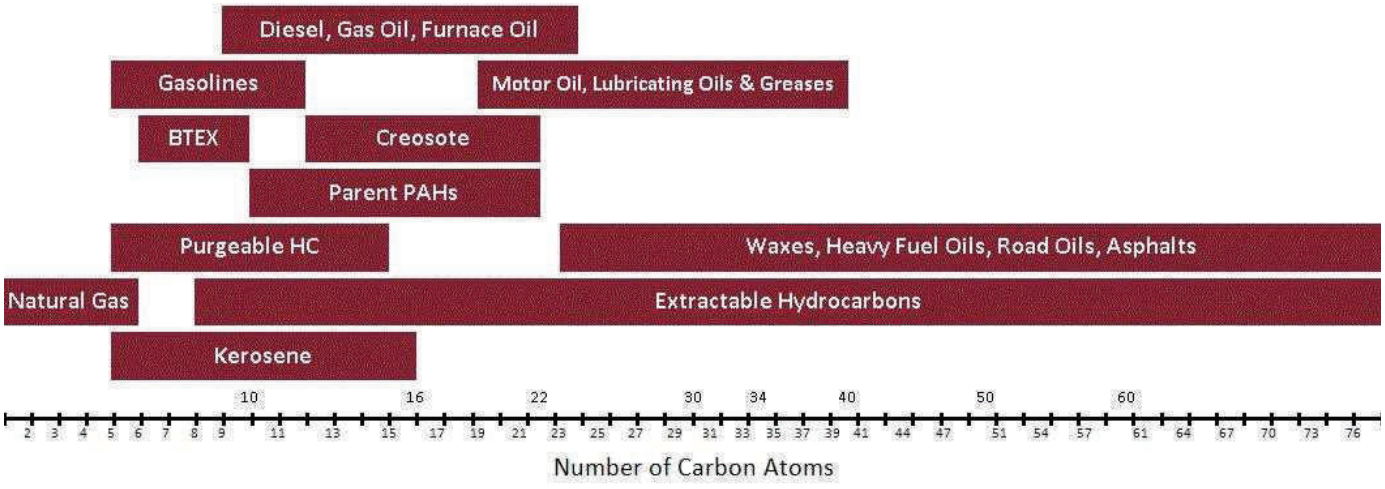


hpchem23\HPchem\1\DATA\2024\09\0929

Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





hpchem23\HPchem\1\DATA\2024\09\0929

Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your Project #: 110773396
Your C.O.C. #: 1OF1

Attention: DYLAN KING

STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
EDMONTON, AB
CANADA T5J 0K4

Report Date: 2024/10/04
Report #: R3567000
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C476935
Received: 2024/09/26, 18:45

Sample Matrix: Water
Samples Received: 11

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH	7	N/A	2024/10/02	AB SOP-00005	SM 24 2320 B m
Alkalinity @25C (pp, total), CO3,HCO3,OH	1	N/A	2024/09/28	AB SOP-00005	SM 24 2320 B m
Alkalinity @25C (pp, total), CO3,HCO3,OH	3	N/A	2024/09/30	AB SOP-00005	SM 24 2320 B m
BTEX/F1 in Water by HS GC/MS/FID	11	N/A	2024/09/29	AB SOP-00039	CCME CWS/EPA 8260d m
F1-BTEX	11	N/A	2024/09/30		Auto Calc
Cadmium - low level CCME - Dissolved	11	N/A	2024/10/01		Auto Calc
Chloride/Sulphate by Auto Colourimetry	2	N/A	2024/09/27	AB SOP-00020	SM24-4500-Cl/SO4-E m
Chloride/Sulphate by Auto Colourimetry	7	N/A	2024/09/28	AB SOP-00020	SM24-4500-Cl/SO4-E m
Chloride/Sulphate by Auto Colourimetry	2	N/A	2024/09/29	AB SOP-00020	SM24-4500-Cl/SO4-E m
Fecal Coliforms (MPN/100mL)	11	2024/09/27	2024/09/28	AB SOP-00089	SM 24 9223 A,B m
Heterotrophic Plate Count Quant	11	2024/09/27	2024/09/29	CAL SOP-00012	SM 24 9215 A, E m
Total Coliforms and E.Coli	11	2024/09/27	2024/09/28	AB SOP-00089	SM 24 9223 A,B m
Carbon (DOC) -Lab Filtered (1)	1	N/A	2024/10/01	AB SOP-00087	MMCW 119 1996 m
Carbon (DOC) -Lab Filtered (1)	10	N/A	2024/10/02	AB SOP-00087	MMCW 119 1996 m
Conductivity @25C	7	N/A	2024/10/02	AB SOP-00005	SM 24 2510 B m
Conductivity @25C	1	N/A	2024/09/28	AB SOP-00005	SM 24 2510 B m
Conductivity @25C	3	N/A	2024/09/30	AB SOP-00005	SM 24 2510 B m
CCME Hydrocarbons in Water (F2; C10-C16) (2)	11	2024/09/30	2024/10/01	AB SOP-00037 AB SOP-00040	CCME PHC-CWS m
Hardness	3	N/A	2024/10/02		Auto Calc
Hardness	8	N/A	2024/09/30		Auto Calc
Mercury (Dissolved) by CV-Lab Filtered	8	2024/10/01	2024/10/01	AB SOP-00084	BCMOE BCLM Oct2013 m
Mercury (Dissolved) by CV-Lab Filtered	2	2024/10/01	2024/10/02	AB SOP-00084	BCMOE BCLM Oct2013 m
Mercury (Dissolved) by CV-Lab Filtered	1	2024/10/01	2024/10/04	AB SOP-00084	BCMOE BCLM Oct2013 m
Mercury (Total) by CV	2	2024/10/01	2024/10/02	AB SOP-00084	BCMOE BCLM Oct2013 m
Mercury (Total) by CV	9	2024/10/01	2024/10/03	AB SOP-00084	BCMOE BCLM Oct2013 m
Elements by ICP-Dissolved-Lab Filtered (3)	6	N/A	2024/09/29	AB SOP-00042	EPA 6010d R5 m
Elements by ICP-Dissolved-Lab Filtered (3)	5	N/A	2024/09/30	AB SOP-00042	EPA 6010d R5 m
Elements by ICPMS-Dissolved-Lab Filtered (4)	11	N/A	2024/09/30	AB SOP-00043	EPA 6020b R2 m
Ion Balance	1	N/A	2024/10/01		Auto Calc
Ion Balance	3	N/A	2024/10/02		Auto Calc
Ion Balance	7	N/A	2024/10/03		Auto Calc

Your Project #: 110773396
Your C.O.C. #: 1OF1

Attention: DYLAN KING

STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
EDMONTON, AB
CANADA T5J 0K4

Report Date: 2024/10/04
Report #: R3567000
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C476935
Received: 2024/09/26, 18:45

Sample Matrix: Water
Samples Received: 11

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Sum of cations, anions	3	N/A	2024/10/02		Auto Calc
Sum of cations, anions	8	N/A	2024/09/30		Auto Calc
Ammonia-N (Total)	11	N/A	2024/10/01	AB SOP-00007	SM 24 4500 NH3 A G m
Nitrate and Nitrite	11	N/A	2024/09/28		Auto Calc
NO2 (N); NO2 (N) + NO3 (N) in Water	11	N/A	2024/09/28	AB SOP-00091	SM 24 4500 NO3m
Nitrate (as N)	11	2024/09/26	2024/09/28		Auto Calc
pH @25°C (5)	7	N/A	2024/10/02	AB SOP-00005	SM 24 4500-H+B m
pH @25°C (5)	1	N/A	2024/09/28	AB SOP-00005	SM 24 4500-H+B m
pH @25°C (5)	3	N/A	2024/09/30	AB SOP-00005	SM 24 4500-H+B m
Orthophosphate by Automated Analyzer (6)	1	N/A	2024/09/27	AB SOP-00025	SM 24 4500-P A,F m
Orthophosphate by Automated Analyzer (6)	10	N/A	2024/09/30	AB SOP-00025	SM 24 4500-P A,F m
Total Dissolved Solids (Calculated)	1	N/A	2024/10/01		Auto Calc
Total Dissolved Solids (Calculated)	3	N/A	2024/10/02		Auto Calc
Total Dissolved Solids (Calculated)	7	N/A	2024/10/03		Auto Calc
Total Kjeldahl Nitrogen (Total)	11	N/A	2024/10/01	BBY WI-00033	Auto Calc
Nitrogen (Total)	11	2024/09/28	2024/10/01	AB SOP-00093	SM 24 4500-N C m
Total Phosphorus-Dissolved-Lab Filtered (7)	11	2024/09/29	2024/10/01	AB SOP-00024	SM 24 4500-P A,B,F m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Your Project #: 110773396
Your C.O.C. #: 1OF1

Attention: DYLAN KING

STANTEC CONSULTING LTD
#400, 10220 - 103 Avenue NW
EDMONTON, AB
CANADA T5J 0K4

Report Date: 2024/10/04
Report #: R3567000
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C476935

Received: 2024/09/26, 18:45

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(2) Silica gel clean up employed.
(3) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(4) Samples were filtered and preserved at the lab. Values may not reflect concentrations at the time of sampling. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(5) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.
(6) Orthophosphate > Total Phosphorus Imbalance: When applicable, Orthophosphate, Total Phosphorus and dissolved Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.
(7) Dissolved Phosphorus > Total Phosphorus Imbalance: When applicable, Dissolved Phosphorus and Total Phosphorus results were reviewed and data quality meets acceptable levels unless otherwise noted.

Encryption Key



Bureau Veritas
04 Oct 2024 13:19:51

Please direct all questions regarding this Certificate of Analysis to:
Geraldlyn Gouthro, Key Account Specialist
Email: geraldlyn.gouthro@bureauveritas.com
Phone# (403) 291-3077

==========

This report has been generated and distributed using a secure automated process.
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Bureau Veritas Job #: C476935
Report Date: 2024/10/04

STANTEC CONSULTING LTD
Client Project #: 110773396
Sampler Initials: TH

AT1 BTEX AND F1-F2 IN WATER (WATER)

Bureau Veritas ID		CWM894		CWM894		CWM895		CWM896			
Sampling Date		2024/09/26 09:57		2024/09/26 09:57		2024/09/26 10:04		2024/09/26 12:06			
COC Number		1OF1		1OF1		1OF1		1OF1			
	UNITS	RMW16-18-5	MU	RMW16-18-5 Lab-Dup	MU	RMW16-18-13	MU	RMW16-22-26	MU	RDL	QC Batch
Ext. Pet. Hydrocarbon											
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	N/A	N/A	N/A	<0.10	N/A	<0.10	N/A	0.10	B541234
Volatiles											
Benzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B540439
Toluene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B540439
Ethylbenzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B540439
m & p-Xylene	mg/L	<0.00080	N/A	<0.00080	N/A	<0.00080	N/A	<0.00080	N/A	0.00080	B540439
o-Xylene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B540439
Xylenes (Total)	mg/L	<0.00089	N/A	N/A	N/A	<0.00089	N/A	<0.00089	N/A	0.00089	B539369
F1 (C6-C10) - BTEX	mg/L	<0.10	N/A	N/A	N/A	<0.10	N/A	<0.10	N/A	0.10	B539369
F1 (C6-C10)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B540439
Surrogate Recovery (%)											
1,4-Difluorobenzene (sur.)	%	100	N/A	99	N/A	99	N/A	99	N/A	N/A	B540439
4-Bromofluorobenzene (sur.)	%	102	N/A	99	N/A	98	N/A	99	N/A	N/A	B540439
D4-1,2-Dichloroethane (sur.)	%	94	N/A	94	N/A	96	N/A	93	N/A	N/A	B540439
O-TERPHENYL (sur.)	%	92	N/A	N/A	N/A	92	N/A	89	N/A	N/A	B541234

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

AT1 BTEX AND F1-F2 IN WATER (WATER)

Bureau Veritas ID		CWM897		CWM898		CWM899		CWM900			
Sampling Date		2024/09/26 13:32		2024/09/26 13:11		2024/09/26 15:29		2024/09/26 16:12			
COC Number		1OF1		1OF1		1OF1		1OF1			
	UNITS	RMW16-19-10	MU	RMW16-19-19	MU	RMW16-23-7	MU	RMW16-23-14	MU	RDL	QC Batch
Ext. Pet. Hydrocarbon											
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B541234
Volatiles											
Benzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B540439
Toluene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B540439
Ethylbenzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B540439
m & p-Xylene	mg/L	<0.00080	N/A	<0.00080	N/A	<0.00080	N/A	<0.00080	N/A	0.00080	B540439
o-Xylene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B540439
Xylenes (Total)	mg/L	<0.00089	N/A	<0.00089	N/A	<0.00089	N/A	<0.00089	N/A	0.00089	B539369
F1 (C6-C10) - BTEX	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B539369
F1 (C6-C10)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B540439
Surrogate Recovery (%)											
1,4-Difluorobenzene (sur.)	%	101	N/A	100	N/A	101	N/A	100	N/A	N/A	B540439
4-Bromofluorobenzene (sur.)	%	103	N/A	97	N/A	99	N/A	101	N/A	N/A	B540439
D4-1,2-Dichloroethane (sur.)	%	92	N/A	94	N/A	92	N/A	94	N/A	N/A	B540439
O-TERPHENYL (sur.)	%	90	N/A	90	N/A	89	N/A	88	N/A	N/A	B541234

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

AT1 BTEX AND F1-F2 IN WATER (WATER)

Bureau Veritas ID		CWM901		CWM902		CWM903		CWM904			
Sampling Date		2024/09/26 15:54		2024/09/26 16:18		2024/09/26 16:22		2024/09/26			
COC Number		1OF1		1OF1		1OF1		1OF1			
	UNITS	RMW16-23-32	MU	SR24-10	MU	SR24-11	MU	SR24-12	MU	RDL	QC Batch
Ext. Pet. Hydrocarbon											
F2 (C10-C16 Hydrocarbons)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B541234
Volatiles											
Benzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B540439
Toluene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B540439
Ethylbenzene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B540439
m & p-Xylene	mg/L	<0.00080	N/A	<0.00080	N/A	<0.00080	N/A	<0.00080	N/A	0.00080	B540439
o-Xylene	mg/L	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	<0.00040	N/A	0.00040	B540439
Xylenes (Total)	mg/L	<0.00089	N/A	<0.00089	N/A	<0.00089	N/A	<0.00089	N/A	0.00089	B539369
F1 (C6-C10) - BTEX	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B539369
F1 (C6-C10)	mg/L	<0.10	N/A	<0.10	N/A	<0.10	N/A	<0.10	N/A	0.10	B540439
Surrogate Recovery (%)											
1,4-Difluorobenzene (sur.)	%	100	N/A	100	N/A	100	N/A	102	N/A	N/A	B540439
4-Bromofluorobenzene (sur.)	%	96	N/A	102	N/A	101	N/A	102	N/A	N/A	B540439
D4-1,2-Dichloroethane (sur.)	%	91	N/A	95	N/A	95	N/A	95	N/A	N/A	B540439
O-TERPHENYL (sur.)	%	88	N/A	87	N/A	87	N/A	88	N/A	N/A	B541234

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWM894			CWM895			
Sampling Date		2024/09/26 09:57			2024/09/26 10:04			
COC Number		1OF1			1OF1			
	UNITS	RMW16-18-5	MU	QC Batch	RMW16-18-13	MU	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	12	N/A	B539171	12	N/A	N/A	B539171
Cation Sum	meq/L	13	N/A	B539171	12	N/A	N/A	B539171
Hardness (CaCO3)	mg/L	270	N/A	B539556	150	N/A	0.50	B539557
Ion Balance (% Difference)	%	2.0	N/A	B539162	0.021	N/A	N/A	B539162
Nitrate (N)	mg/L	0.51	N/A	B539499	0.21	N/A	0.010	B539499
Nitrate (NO3)	mg/L	2.3	N/A	B539498	0.92	N/A	0.044	B539498
Nitrite (NO2)	mg/L	<0.033	N/A	B539498	<0.033	N/A	0.033	B539498
Calculated Total Dissolved Solids	mg/L	670	N/A	B539197	650	N/A	10	B539197
Elements								
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	B539114	<0.020	N/A	0.020	B539114
Misc. Inorganics								
Conductivity	uS/cm	1100	+/- 30	B542751	1100	+/- 30	2.0	B545241
pH	pH	8.18	+/- 0.0811	B542750	8.32	+/- 0.0824	N/A	B545236
Anions								
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	B542749	<1.0	N/A	1.0	B545229
Alkalinity (Total as CaCO3)	mg/L	410	+/- 30	B542749	400	+/- 30	1.0	B545229
Bicarbonate (HCO3)	mg/L	500	+/- 7.6	B542749	490	+/- 7.5	1.0	B545229
Carbonate (CO3)	mg/L	<1.0	N/A	B542749	<1.0	N/A	1.0	B545229
Hydroxide (OH)	mg/L	<1.0	N/A	B542749	<1.0	N/A	1.0	B545229
Chloride (Cl)	mg/L	87	+/- 6.7	B541101	86	+/- 6.6	1.0	B541109
Sulphate (SO4)	mg/L	81	+/- 5.5	B541101	71	+/- 4.8	1.0	B541109
Nutrients								
Nitrite (N)	mg/L	<0.010	N/A	B541763	<0.010	N/A	0.010	B541721
Nitrate plus Nitrite (N)	mg/L	0.51	+/- 0.049	B541763	0.21	+/- 0.024	0.010	B541721
Lab Filtered Elements								
Dissolved Aluminum (Al)	mg/L	0.0079	+/- <RDL	B541837	0.0050	+/- <RDL	0.0030	B541837
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	B541837	<0.00060	N/A	0.00060	B541837
Dissolved Arsenic (As)	mg/L	0.00020	+/- <RDL	B541837	<0.00020	N/A	0.00020	B541837
Dissolved Barium (Ba)	mg/L	0.072	+/- <RDL	B542078	0.035	+/- <RDL	0.010	B542078
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	B541837	<0.0010	N/A	0.0010	B541837
Dissolved Boron (B)	mg/L	0.12	+/- <RDL	B542078	0.13	+/- <RDL	0.020	B542078

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWM894			CWM895			
Sampling Date		2024/09/26 09:57			2024/09/26 10:04			
COC Number		1OF1			1OF1			
	UNITS	RMW16-18-5	MU	QC Batch	RMW16-18-13	MU	RDL	QC Batch
Dissolved Calcium (Ca)	mg/L	53	+/- 5.3	B542078	32	+/- 3.3	0.30	B542078
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	B541837	<0.0010	N/A	0.0010	B541837
Dissolved Cobalt (Co)	mg/L	<0.00030	N/A	B541837	<0.00030	N/A	0.00030	B541837
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	B541837	<0.0010	N/A	0.0010	B541837
Dissolved Iron (Fe)	mg/L	<0.060	N/A	B542078	<0.060	N/A	0.060	B542078
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	B541837	<0.00020	N/A	0.00020	B541837
Dissolved Lithium (Li)	mg/L	0.058	+/- <RDL	B542078	0.023	+/- <RDL	0.020	B542078
Dissolved Magnesium (Mg)	mg/L	32	+/- 2.1	B542078	17	+/- 1.1	0.20	B542078
Dissolved Manganese (Mn)	mg/L	0.0057	+/- <RDL	B542078	0.13	+/- 0.0087	0.0040	B542078
Dissolved Molybdenum (Mo)	mg/L	0.0028	+/- 0.00074	B541837	0.0038	+/- 0.00096	0.00020	B541837
Dissolved Nickel (Ni)	mg/L	<0.00050	N/A	B541837	<0.00050	N/A	0.00050	B541837
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	B542078	<0.10	N/A	0.10	B542078
Dissolved Potassium (K)	mg/L	2.7	+/- <RDL	B542078	1.3	+/- <RDL	0.30	B542078
Dissolved Selenium (Se)	mg/L	0.0019	+/- <RDL	B541837	0.00088	+/- <RDL	0.00020	B541837
Dissolved Silicon (Si)	mg/L	4.1	+/- 0.78	B542078	2.8	+/- 0.54	0.50	B542078
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	B541837	<0.00010	N/A	0.00010	B541837
Dissolved Sodium (Na)	mg/L	170	+/- 17	B542078	200	+/- 20	0.50	B542078
Dissolved Strontium (Sr)	mg/L	0.43	+/- 0.042	B542078	0.24	+/- 0.023	0.020	B542078
Dissolved Sulphur (S)	mg/L	22	+/- 1.4	B542078	22	+/- 1.5	0.20	B542078
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	B541837	<0.00020	N/A	0.00020	B541837
Dissolved Tin (Sn)	mg/L	0.0025	+/- <RDL	B541837	<0.0010	N/A	0.0010	B541837
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	B541837	<0.0010	N/A	0.0010	B541837
Dissolved Uranium (U)	mg/L	0.0082	+/- 0.00074	B541837	0.0061	+/- 0.00055	0.00010	B541837
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	B541837	<0.0010	N/A	0.0010	B541837
Dissolved Zinc (Zn)	mg/L	<0.0030	N/A	B541837	<0.0030	N/A	0.0030	B541837

RDL = Reportable Detection Limit
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Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWM896				CWM897			
Sampling Date		2024/09/26 12:06				2024/09/26 13:32			
COC Number		1OF1				1OF1			
	UNITS	RMW16-22-26	MU	RDL	QC Batch	RMW16-19-10	MU	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	24	N/A	N/A	B539171	46	N/A	N/A	B539171
Cation Sum	meq/L	24	N/A	N/A	B539171	45	N/A	N/A	B539171
Hardness (CaCO3)	mg/L	690	N/A	0.50	B539557	1300	N/A	0.50	B539557
Ion Balance (% Difference)	%	0.70	N/A	N/A	B539162	1.4	N/A	N/A	B539162
Nitrate (N)	mg/L	0.060	N/A	0.010	B539499	<0.050	N/A	0.050	B539499
Nitrate (NO3)	mg/L	0.27	N/A	0.044	B539498	<0.22	N/A	0.22	B539498
Nitrite (NO2)	mg/L	<0.033	N/A	0.033	B539498	<0.033	N/A	0.033	B539498
Calculated Total Dissolved Solids	mg/L	1600	N/A	25	B539197	2900	N/A	25	B539197
Elements									
Dissolved Cadmium (Cd)	ug/L	0.027	+/- <RDL	0.020	B539114	0.19	+/- 0.077	0.020	B539114
Misc. Inorganics									
Conductivity	uS/cm	2000	+/- 53	2.0	B545241	3400	+/- 90	2.0	B542757
pH	pH	8.02	+/- 0.0795	N/A	B545236	7.87	+/- 0.0780	N/A	B542756
Anions									
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	1.0	B545229	<1.0	N/A	1.0	B542755
Alkalinity (Total as CaCO3)	mg/L	180	+/- 13	1.0	B545229	470	+/- 35	1.0	B542755
Bicarbonate (HCO3)	mg/L	220	+/- 3.6	1.0	B545229	570	+/- 8.7	1.0	B542755
Carbonate (CO3)	mg/L	<1.0	N/A	1.0	B545229	<1.0	N/A	1.0	B542755
Hydroxide (OH)	mg/L	<1.0	N/A	1.0	B545229	<1.0	N/A	1.0	B542755
Chloride (Cl)	mg/L	2.8	+/- 1.2	1.0	B541677	1.8	+/- 1.2	1.0	B541699
Sulphate (SO4)	mg/L	990	+/- 63	25	B541677	1800	+/- 110	25	B541699
Nutrients									
Nitrite (N)	mg/L	<0.010	N/A	0.010	B541721	<0.010	N/A	0.010	B541763
Nitrate plus Nitrite (N)	mg/L	0.060	+/- 0.014	0.010	B541721	<0.050 (1)	N/A	0.050	B541763
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	0.0045	+/- <RDL	0.0030	B541837	0.0038	+/- <RDL	0.0030	B541837
Dissolved Antimony (Sb)	mg/L	0.0012	+/- <RDL	0.00060	B541837	<0.00060	N/A	0.00060	B541837
Dissolved Arsenic (As)	mg/L	0.00044	+/- <RDL	0.00020	B541837	0.00024	+/- <RDL	0.00020	B541837
Dissolved Barium (Ba)	mg/L	0.019	+/- <RDL	0.010	B542086	<0.010	N/A	0.010	B542078
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	0.0010	B541837	<0.0010	N/A	0.0010	B541837

RDL = Reportable Detection Limit
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N/A = Not Applicable
(1) Detection limits raised due to matrix interference.

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWM896				CWM897			
Sampling Date		2024/09/26 12:06				2024/09/26 13:32			
COC Number		1OF1				1OF1			
	UNITS	RMW16-22-26	MU	RDL	QC Batch	RMW16-19-10	MU	RDL	QC Batch
Dissolved Boron (B)	mg/L	0.12	+/- <RDL	0.020	B542086	0.11	+/- <RDL	0.020	B542078
Dissolved Calcium (Ca)	mg/L	180	+/- 18	0.30	B542086	340	+/- 34	0.30	B542078
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	0.0010	B541837	<0.0010	N/A	0.0010	B541837
Dissolved Cobalt (Co)	mg/L	0.00043	+/- <RDL	0.00030	B541837	0.00082	+/- <RDL	0.00030	B541837
Dissolved Copper (Cu)	mg/L	0.12	+/- 0.032	0.0010	B541837	<0.0010	N/A	0.0010	B541837
Dissolved Iron (Fe)	mg/L	<0.060	N/A	0.060	B542086	<0.060	N/A	0.060	B542078
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	0.00020	B541837	<0.00020	N/A	0.00020	B541837
Dissolved Lithium (Li)	mg/L	0.052	+/- <RDL	0.020	B542086	0.041	+/- <RDL	0.020	B542078
Dissolved Magnesium (Mg)	mg/L	60	+/- 3.9	0.20	B542086	120	+/- 7.5	0.20	B542078
Dissolved Manganese (Mn)	mg/L	0.39	+/- 0.026	0.0040	B542086	1.0	+/- 0.067	0.0040	B542078
Dissolved Molybdenum (Mo)	mg/L	0.0030	+/- 0.00078	0.00020	B541837	0.00066	+/- 0.00028	0.00020	B541837
Dissolved Nickel (Ni)	mg/L	0.00084	+/- <RDL	0.00050	B541837	0.0019	+/- <RDL	0.00050	B541837
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	0.10	B542086	<0.10	N/A	0.10	B542078
Dissolved Potassium (K)	mg/L	6.8	+/- 0.36	0.30	B542086	6.8	+/- 0.36	0.30	B542078
Dissolved Selenium (Se)	mg/L	<0.00020	N/A	0.00020	B541837	0.0012	+/- <RDL	0.00020	B541837
Dissolved Silicon (Si)	mg/L	3.7	+/- 0.72	0.50	B542086	3.9	+/- 0.75	0.50	B542078
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	0.00010	B541837	<0.00010	N/A	0.00010	B541837
Dissolved Sodium (Na)	mg/L	230	+/- 23	0.50	B542086	410	+/- 40	0.50	B542078
Dissolved Strontium (Sr)	mg/L	3.0	+/- 0.29	0.020	B542086	2.2	+/- 0.21	0.020	B542078
Dissolved Sulphur (S)	mg/L	280	+/- 19	0.20	B542086	550	+/- 37	1.0	B542078
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	0.00020	B541837	<0.00020	N/A	0.00020	B541837
Dissolved Tin (Sn)	mg/L	0.012	+/- 0.0032	0.0010	B541837	0.0018	+/- <RDL	0.0010	B541837
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	0.0010	B541837	<0.0010	N/A	0.0010	B541837
Dissolved Uranium (U)	mg/L	0.0011	+/- 0.00012	0.00010	B541837	0.013	+/- 0.0012	0.00010	B541837
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	0.0010	B541837	<0.0010	N/A	0.0010	B541837
Dissolved Zinc (Zn)	mg/L	0.0096	+/- <RDL	0.0030	B541837	<0.0030	N/A	0.0030	B541837

RDL = Reportable Detection Limit
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N/A = Not Applicable

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWM898		CWM898			
Sampling Date		2024/09/26 13:11		2024/09/26 13:11			
COC Number		1OF1		1OF1			
	UNITS	RMW16-19-19	MU	RMW16-19-19 Lab-Dup	MU	RDL	QC Batch
Calculated Parameters							
Anion Sum	meq/L	36	N/A	N/A	N/A	N/A	B539171
Cation Sum	meq/L	33	N/A	N/A	N/A	N/A	B539171
Hardness (CaCO3)	mg/L	550	N/A	N/A	N/A	0.50	B539557
Ion Balance (% Difference)	%	3.9	N/A	N/A	N/A	N/A	B539162
Nitrate (N)	mg/L	<0.010	N/A	N/A	N/A	0.010	B539499
Nitrate (NO3)	mg/L	<0.044	N/A	N/A	N/A	0.044	B539498
Nitrite (NO2)	mg/L	<0.033	N/A	N/A	N/A	0.033	B539498
Calculated Total Dissolved Solids	mg/L	2200	N/A	N/A	N/A	25	B539197
Elements							
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	N/A	N/A	0.020	B539114
Misc. Inorganics							
Conductivity	uS/cm	2900	+/- 76	N/A	N/A	2.0	B542751
pH	pH	7.97	+/- 0.0790	N/A	N/A	N/A	B542750
Anions							
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	N/A	N/A	1.0	B542749
Alkalinity (Total as CaCO3)	mg/L	580	+/- 43	N/A	N/A	1.0	B542749
Bicarbonate (HCO3)	mg/L	710	+/- 11	N/A	N/A	1.0	B542749
Carbonate (CO3)	mg/L	<1.0	N/A	N/A	N/A	1.0	B542749
Hydroxide (OH)	mg/L	<1.0	N/A	N/A	N/A	1.0	B542749
Chloride (Cl)	mg/L	<1.0	N/A	<1.0	N/A	1.0	B541699
Sulphate (SO4)	mg/L	1200	+/- 74	1100	+/- 68	25	B541699
Nutrients							
Nitrite (N)	mg/L	<0.010	N/A	N/A	N/A	0.010	B541763
Nitrate plus Nitrite (N)	mg/L	<0.010	N/A	N/A	N/A	0.010	B541763
Lab Filtered Elements							
Dissolved Aluminum (Al)	mg/L	0.0045	+/- <RDL	N/A	N/A	0.0030	B541837
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	N/A	N/A	0.00060	B541837
Dissolved Arsenic (As)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B541837
Dissolved Barium (Ba)	mg/L	<0.010	N/A	N/A	N/A	0.010	B542078
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B541837

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWM898		CWM898			
Sampling Date		2024/09/26 13:11		2024/09/26 13:11			
COC Number		1OF1		1OF1			
	UNITS	RMW16-19-19	MU	RMW16-19-19 Lab-Dup	MU	RDL	QC Batch
Dissolved Boron (B)	mg/L	0.13	+/- <RDL	N/A	N/A	0.020	B542078
Dissolved Calcium (Ca)	mg/L	130	+/- 13	N/A	N/A	0.30	B542078
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B541837
Dissolved Cobalt (Co)	mg/L	<0.00030	N/A	N/A	N/A	0.00030	B541837
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B541837
Dissolved Iron (Fe)	mg/L	<0.060	N/A	N/A	N/A	0.060	B542078
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B541837
Dissolved Lithium (Li)	mg/L	0.069	+/- <RDL	N/A	N/A	0.020	B542078
Dissolved Magnesium (Mg)	mg/L	56	+/- 3.6	N/A	N/A	0.20	B542078
Dissolved Manganese (Mn)	mg/L	0.35	+/- 0.024	N/A	N/A	0.0040	B542078
Dissolved Molybdenum (Mo)	mg/L	0.0012	+/- 0.00039	N/A	N/A	0.00020	B541837
Dissolved Nickel (Ni)	mg/L	<0.00050	N/A	N/A	N/A	0.00050	B541837
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	N/A	N/A	0.10	B542078
Dissolved Potassium (K)	mg/L	5.5	+/- 0.30	N/A	N/A	0.30	B542078
Dissolved Selenium (Se)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B541837
Dissolved Silicon (Si)	mg/L	3.4	+/- 0.65	N/A	N/A	0.50	B542078
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	N/A	N/A	0.00010	B541837
Dissolved Sodium (Na)	mg/L	500	+/- 49	N/A	N/A	2.5	B542078
Dissolved Strontium (Sr)	mg/L	2.1	+/- 0.20	N/A	N/A	0.020	B542078
Dissolved Sulphur (S)	mg/L	340	+/- 23	N/A	N/A	0.20	B542078
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B541837
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B541837
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B541837
Dissolved Uranium (U)	mg/L	0.00089	+/- 0.00010	N/A	N/A	0.00010	B541837
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B541837
Dissolved Zinc (Zn)	mg/L	<0.0030	N/A	N/A	N/A	0.0030	B541837

RDL = Reportable Detection Limit
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MU = Measurement Uncertainty
N/A = Not Applicable

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWM899			CWM900			
Sampling Date		2024/09/26 15:29			2024/09/26 16:12			
COC Number		1OF1			1OF1			
	UNITS	RMW16-23-7	MU	RDL	RMW16-23-14	MU	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	11	N/A	N/A	13	N/A	N/A	B539171
Cation Sum	meq/L	12	N/A	N/A	13	N/A	N/A	B539171
Hardness (CaCO3)	mg/L	480	N/A	0.50	390	N/A	0.50	B539557
Ion Balance (% Difference)	%	3.1	N/A	N/A	1.7	N/A	N/A	B539162
Nitrate (N)	mg/L	<0.050	N/A	0.050	0.031	N/A	0.010	B539499
Nitrate (NO3)	mg/L	<0.22	N/A	0.22	0.14	N/A	0.044	B539498
Nitrite (NO2)	mg/L	<0.033	N/A	0.033	<0.033	N/A	0.033	B539498
Calculated Total Dissolved Solids	mg/L	610	N/A	10	730	N/A	10	B539197
Elements								
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	0.020	<0.020	N/A	0.020	B539114
Misc. Inorganics								
Conductivity	uS/cm	990	+/- 26	2.0	1100	+/- 30	2.0	B545241
pH	pH	7.93	+/- 0.0786	N/A	8.04	+/- 0.0797	N/A	B545236
Anions								
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	1.0	<1.0	N/A	1.0	B545229
Alkalinity (Total as CaCO3)	mg/L	340	+/- 25	1.0	380	+/- 28	1.0	B545229
Bicarbonate (HCO3)	mg/L	410	+/- 6.4	1.0	460	+/- 7.2	1.0	B545229
Carbonate (CO3)	mg/L	<1.0	N/A	1.0	<1.0	N/A	1.0	B545229
Hydroxide (OH)	mg/L	<1.0	N/A	1.0	<1.0	N/A	1.0	B545229
Chloride (Cl)	mg/L	50	+/- 4.0	1.0	26	+/- 2.3	1.0	B541677
Sulphate (SO4)	mg/L	140	+/- 9.3	5.0	210	+/- 14	5.0	B541677
Nutrients								
Nitrite (N)	mg/L	<0.010	N/A	0.010	<0.010	N/A	0.010	B541721
Nitrate plus Nitrite (N)	mg/L	<0.050 (1)	N/A	0.050	0.031	+/- 0.012	0.010	B541721
Lab Filtered Elements								
Dissolved Aluminum (Al)	mg/L	0.0066	+/- <RDL	0.0030	0.0034	+/- <RDL	0.0030	B541837
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	0.00060	<0.00060	N/A	0.00060	B541837
Dissolved Arsenic (As)	mg/L	<0.00020	N/A	0.00020	<0.00020	N/A	0.00020	B541837
Dissolved Barium (Ba)	mg/L	0.047	+/- <RDL	0.010	0.014	+/- <RDL	0.010	B542086
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B541837

RDL = Reportable Detection Limit
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N/A = Not Applicable
(1) Detection limits raised due to matrix interference.

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWM899			CWM900			
Sampling Date		2024/09/26 15:29			2024/09/26 16:12			
COC Number		1OF1			1OF1			
	UNITS	RMW16-23-7	MU	RDL	RMW16-23-14	MU	RDL	QC Batch
Dissolved Boron (B)	mg/L	0.031	+/- <RDL	0.020	0.053	+/- <RDL	0.020	B542086
Dissolved Calcium (Ca)	mg/L	120	+/- 12	0.30	93	+/- 9.4	0.30	B542086
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B541837
Dissolved Cobalt (Co)	mg/L	0.00056	+/- <RDL	0.00030	<0.00030	N/A	0.00030	B541837
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B541837
Dissolved Iron (Fe)	mg/L	<0.060	N/A	0.060	<0.060	N/A	0.060	B542086
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	0.00020	<0.00020	N/A	0.00020	B541837
Dissolved Lithium (Li)	mg/L	<0.020	N/A	0.020	0.030	+/- <RDL	0.020	B542086
Dissolved Magnesium (Mg)	mg/L	47	+/- 3.0	0.20	38	+/- 2.4	0.20	B542086
Dissolved Manganese (Mn)	mg/L	0.40	+/- 0.027	0.0040	0.13	+/- 0.0086	0.0040	B542086
Dissolved Molybdenum (Mo)	mg/L	0.0011	+/- 0.00038	0.00020	0.0013	+/- 0.00041	0.00020	B541837
Dissolved Nickel (Ni)	mg/L	0.0012	+/- <RDL	0.00050	<0.00050	N/A	0.00050	B541837
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	0.10	<0.10	N/A	0.10	B542086
Dissolved Potassium (K)	mg/L	5.0	+/- <RDL	0.30	4.5	+/- <RDL	0.30	B542086
Dissolved Selenium (Se)	mg/L	<0.00020	N/A	0.00020	<0.00020	N/A	0.00020	B541837
Dissolved Silicon (Si)	mg/L	3.5	+/- 0.68	0.50	4.0	+/- 0.76	0.50	B542086
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	0.00010	<0.00010	N/A	0.00010	B541837
Dissolved Sodium (Na)	mg/L	47	+/- 4.6	0.50	120	+/- 12	0.50	B542086
Dissolved Strontium (Sr)	mg/L	0.73	+/- 0.071	0.020	0.99	+/- 0.096	0.020	B542086
Dissolved Sulphur (S)	mg/L	40	+/- 2.7	0.20	63	+/- 4.2	0.20	B542086
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	0.00020	<0.00020	N/A	0.00020	B541837
Dissolved Tin (Sn)	mg/L	0.0041	+/- 0.0011	0.0010	<0.0010	N/A	0.0010	B541837
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B541837
Dissolved Uranium (U)	mg/L	0.0021	+/- 0.00020	0.00010	0.00052	+/- <RDL	0.00010	B541837
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	0.0010	<0.0010	N/A	0.0010	B541837
Dissolved Zinc (Zn)	mg/L	<0.0030	N/A	0.0030	<0.0030	N/A	0.0030	B541837

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N/A = Not Applicable

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWM901		CWM901			
Sampling Date		2024/09/26 15:54		2024/09/26 15:54			
COC Number		1OF1		1OF1			
	UNITS	RMW16-23-32	MU	RMW16-23-32 Lab-Dup	MU	RDL	QC Batch
Calculated Parameters							
Anion Sum	meq/L	14	N/A	N/A	N/A	N/A	B539171
Cation Sum	meq/L	14	N/A	N/A	N/A	N/A	B539171
Hardness (CaCO3)	mg/L	69	N/A	N/A	N/A	0.50	B539557
Ion Balance (% Difference)	%	0.94	N/A	N/A	N/A	N/A	B539560
Nitrate (N)	mg/L	<0.010	N/A	N/A	N/A	0.010	B539499
Nitrate (NO3)	mg/L	<0.044	N/A	N/A	N/A	0.044	B539498
Nitrite (NO2)	mg/L	<0.033	N/A	N/A	N/A	0.033	B539498
Calculated Total Dissolved Solids	mg/L	760	N/A	N/A	N/A	10	B539197
Elements							
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	N/A	N/A	0.020	B539114
Misc. Inorganics							
Conductivity	uS/cm	1200	+/- 31	N/A	N/A	2.0	B545241
pH	pH	8.39	+/- 0.0832	N/A	N/A	N/A	B545236
Anions							
Alkalinity (PP as CaCO3)	mg/L	6.3	+/- <RDL	N/A	N/A	1.0	B545229
Alkalinity (Total as CaCO3)	mg/L	590	+/- 44	N/A	N/A	1.0	B545229
Bicarbonate (HCO3)	mg/L	700	+/- 11	N/A	N/A	1.0	B545229
Carbonate (CO3)	mg/L	7.6	N/A	N/A	N/A	1.0	B545229
Hydroxide (OH)	mg/L	<1.0	N/A	N/A	N/A	1.0	B545229
Chloride (Cl)	mg/L	<1.0	N/A	N/A	N/A	1.0	B541677
Sulphate (SO4)	mg/L	100	+/- 6.8	N/A	N/A	1.0	B541677
Nutrients							
Nitrite (N)	mg/L	<0.010	N/A	<0.010	N/A	0.010	B541763
Nitrate plus Nitrite (N)	mg/L	<0.010	N/A	<0.010	N/A	0.010	B541763
Lab Filtered Elements							
Dissolved Aluminum (Al)	mg/L	<0.0030	N/A	N/A	N/A	0.0030	B541837
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	N/A	N/A	0.00060	B541837
Dissolved Arsenic (As)	mg/L	0.00058	+/- <RDL	N/A	N/A	0.00020	B541837
Dissolved Barium (Ba)	mg/L	0.017	+/- <RDL	N/A	N/A	0.010	B542086
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B541837

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWM901		CWM901			
Sampling Date		2024/09/26 15:54		2024/09/26 15:54			
COC Number		1OF1		1OF1			
	UNITS	RMW16-23-32	MU	RMW16-23-32 Lab-Dup	MU	RDL	QC Batch
Dissolved Boron (B)	mg/L	0.081	+/- <RDL	N/A	N/A	0.020	B542086
Dissolved Calcium (Ca)	mg/L	18	+/- 1.8	N/A	N/A	0.30	B542086
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B541837
Dissolved Cobalt (Co)	mg/L	<0.00030	N/A	N/A	N/A	0.00030	B541837
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B541837
Dissolved Iron (Fe)	mg/L	<0.060	N/A	N/A	N/A	0.060	B542086
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B541837
Dissolved Lithium (Li)	mg/L	0.054	+/- <RDL	N/A	N/A	0.020	B542086
Dissolved Magnesium (Mg)	mg/L	5.7	+/- 0.37	N/A	N/A	0.20	B542086
Dissolved Manganese (Mn)	mg/L	0.020	+/- <RDL	N/A	N/A	0.0040	B542086
Dissolved Molybdenum (Mo)	mg/L	0.0020	+/- 0.00056	N/A	N/A	0.00020	B541837
Dissolved Nickel (Ni)	mg/L	<0.00050	N/A	N/A	N/A	0.00050	B541837
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	N/A	N/A	0.10	B542086
Dissolved Potassium (K)	mg/L	2.7	+/- <RDL	N/A	N/A	0.30	B542086
Dissolved Selenium (Se)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B541837
Dissolved Silicon (Si)	mg/L	3.2	+/- 0.62	N/A	N/A	0.50	B542086
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	N/A	N/A	0.00010	B541837
Dissolved Sodium (Na)	mg/L	280	+/- 27	N/A	N/A	0.50	B542086
Dissolved Strontium (Sr)	mg/L	0.32	+/- 0.031	N/A	N/A	0.020	B542086
Dissolved Sulphur (S)	mg/L	34	+/- 2.3	N/A	N/A	0.20	B542086
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B541837
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B541837
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B541837
Dissolved Uranium (U)	mg/L	0.00017	+/- <RDL	N/A	N/A	0.00010	B541837
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B541837
Dissolved Zinc (Zn)	mg/L	<0.0030	N/A	N/A	N/A	0.0030	B541837

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWM902		CWM902			
Sampling Date		2024/09/26 16:18		2024/09/26 16:18			
COC Number		1OF1		1OF1			
	UNITS	SR24-10	MU	SR24-10 Lab-Dup	MU	RDL	QC Batch
Calculated Parameters							
Anion Sum	meq/L	37	N/A	N/A	N/A	N/A	B539171
Cation Sum	meq/L	34	N/A	N/A	N/A	N/A	B539171
Hardness (CaCO3)	mg/L	560	N/A	N/A	N/A	0.50	B539557
Ion Balance (% Difference)	%	4.3	N/A	N/A	N/A	N/A	B539560
Nitrate (N)	mg/L	<0.010	N/A	N/A	N/A	0.010	B539499
Nitrate (NO3)	mg/L	<0.044	N/A	N/A	N/A	0.044	B539498
Nitrite (NO2)	mg/L	<0.033	N/A	N/A	N/A	0.033	B539498
Calculated Total Dissolved Solids	mg/L	2300	N/A	N/A	N/A	25	B539197
Elements							
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	N/A	N/A	0.020	B539114
Misc. Inorganics							
Conductivity	uS/cm	2900	+/- 77	2900	+/- 76	2.0	B541645
pH	pH	7.36	+/- 0.0730	7.38	+/- 0.0732	N/A	B541643
Anions							
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	<1.0	N/A	1.0	B541637
Alkalinity (Total as CaCO3)	mg/L	570	+/- 42	570	+/- 43	1.0	B541637
Bicarbonate (HCO3)	mg/L	700	+/- 11	700	+/- 11	1.0	B541637
Carbonate (CO3)	mg/L	<1.0	N/A	<1.0	N/A	1.0	B541637
Hydroxide (OH)	mg/L	<1.0	N/A	<1.0	N/A	1.0	B541637
Chloride (Cl)	mg/L	<1.0	N/A	N/A	N/A	1.0	B541109
Sulphate (SO4)	mg/L	1200	+/- 78	N/A	N/A	25	B541109
Nutrients							
Nitrite (N)	mg/L	<0.010	N/A	N/A	N/A	0.010	B541763
Nitrate plus Nitrite (N)	mg/L	<0.010	N/A	N/A	N/A	0.010	B541763
Lab Filtered Elements							
Dissolved Aluminum (Al)	mg/L	0.018	+/- 0.0043	N/A	N/A	0.0030	B541837
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	N/A	N/A	0.00060	B541837
Dissolved Arsenic (As)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B541837
Dissolved Barium (Ba)	mg/L	<0.010	N/A	N/A	N/A	0.010	B542078
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B541837

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Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWM902		CWM902			
Sampling Date		2024/09/26 16:18		2024/09/26 16:18			
COC Number		1OF1		1OF1			
	UNITS	SR24-10	MU	SR24-10 Lab-Dup	MU	RDL	QC Batch
Dissolved Boron (B)	mg/L	0.13	+/- <RDL	N/A	N/A	0.020	B542078
Dissolved Calcium (Ca)	mg/L	130	+/- 13	N/A	N/A	0.30	B542078
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B541837
Dissolved Cobalt (Co)	mg/L	<0.00030	N/A	N/A	N/A	0.00030	B541837
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B541837
Dissolved Iron (Fe)	mg/L	<0.060	N/A	N/A	N/A	0.060	B542078
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B541837
Dissolved Lithium (Li)	mg/L	0.093	+/- <RDL	N/A	N/A	0.020	B542078
Dissolved Magnesium (Mg)	mg/L	56	+/- 3.6	N/A	N/A	0.20	B542078
Dissolved Manganese (Mn)	mg/L	0.35	+/- 0.024	N/A	N/A	0.0040	B542078
Dissolved Molybdenum (Mo)	mg/L	0.0012	+/- 0.00039	N/A	N/A	0.00020	B541837
Dissolved Nickel (Ni)	mg/L	<0.00050	N/A	N/A	N/A	0.00050	B541837
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	N/A	N/A	0.10	B542078
Dissolved Potassium (K)	mg/L	5.5	+/- 0.30	N/A	N/A	0.30	B542078
Dissolved Selenium (Se)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B541837
Dissolved Silicon (Si)	mg/L	3.4	+/- 0.65	N/A	N/A	0.50	B542078
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	N/A	N/A	0.00010	B541837
Dissolved Sodium (Na)	mg/L	520	+/- 51	N/A	N/A	2.5	B542078
Dissolved Strontium (Sr)	mg/L	2.1	+/- 0.20	N/A	N/A	0.020	B542078
Dissolved Sulphur (S)	mg/L	340	+/- 23	N/A	N/A	0.20	B542078
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	N/A	N/A	0.00020	B541837
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B541837
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B541837
Dissolved Uranium (U)	mg/L	0.00089	+/- 0.00010	N/A	N/A	0.00010	B541837
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	N/A	N/A	0.0010	B541837
Dissolved Zinc (Zn)	mg/L	<0.0030	N/A	N/A	N/A	0.0030	B541837

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWM903		CWM904		CWM904			
Sampling Date		2024/09/26 16:22		2024/09/26		2024/09/26			
COC Number		1OF1		1OF1		1OF1			
	UNITS	SR24-11	MU	SR24-12	MU	SR24-12 Lab-Dup	MU	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	0.0000	N/A	0.0000	N/A	N/A	N/A	N/A	B539171
Cation Sum	meq/L	0.0060	N/A	0.0070	N/A	N/A	N/A	N/A	B539171
Hardness (CaCO3)	mg/L	<0.50	N/A	<0.50	N/A	N/A	N/A	0.50	B539557
Ion Balance (% Difference)	%	NC	N/A	NC	N/A	N/A	N/A	N/A	B539560
Nitrate (N)	mg/L	<0.010	N/A	<0.010	N/A	N/A	N/A	0.010	B539499
Nitrate (NO3)	mg/L	<0.044	N/A	<0.044	N/A	N/A	N/A	0.044	B539498
Nitrite (NO2)	mg/L	<0.033	N/A	<0.033	N/A	N/A	N/A	0.033	B539498
Calculated Total Dissolved Solids	mg/L	<10	N/A	<10	N/A	N/A	N/A	10	B539197
Elements									
Dissolved Cadmium (Cd)	ug/L	<0.020	N/A	<0.020	N/A	N/A	N/A	0.020	B539114
Misc. Inorganics									
Conductivity	uS/cm	<2.0	N/A	<2.0	N/A	N/A	N/A	2.0	B545241
pH	pH	5.19	+/- 0.0514	5.16	+/- 0.0511	N/A	N/A	N/A	B545236
Anions									
Alkalinity (PP as CaCO3)	mg/L	<1.0	N/A	<1.0	N/A	N/A	N/A	1.0	B545229
Alkalinity (Total as CaCO3)	mg/L	<1.0	N/A	<1.0	N/A	N/A	N/A	1.0	B545229
Bicarbonate (HCO3)	mg/L	<1.0	N/A	<1.0	N/A	N/A	N/A	1.0	B545229
Carbonate (CO3)	mg/L	<1.0	N/A	<1.0	N/A	N/A	N/A	1.0	B545229
Hydroxide (OH)	mg/L	<1.0	N/A	<1.0	N/A	N/A	N/A	1.0	B545229
Chloride (Cl)	mg/L	<1.0	N/A	<1.0	N/A	<1.0	N/A	1.0	B541677
Sulphate (SO4)	mg/L	<1.0	N/A	<1.0	N/A	<1.0	N/A	1.0	B541677
Nutrients									
Nitrite (N)	mg/L	<0.010	N/A	<0.010	N/A	N/A	N/A	0.010	B541721
Nitrate plus Nitrite (N)	mg/L	<0.010	N/A	<0.010	N/A	N/A	N/A	0.010	B541721
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	0.0034	+/- <RDL	<0.0030	N/A	N/A	N/A	0.0030	B541837
Dissolved Antimony (Sb)	mg/L	<0.00060	N/A	<0.00060	N/A	N/A	N/A	0.00060	B541837
Dissolved Arsenic (As)	mg/L	<0.00020	N/A	<0.00020	N/A	N/A	N/A	0.00020	B541837
Dissolved Barium (Ba)	mg/L	<0.010	N/A	<0.010	N/A	N/A	N/A	0.010	B542086
Dissolved Beryllium (Be)	mg/L	<0.0010	N/A	<0.0010	N/A	N/A	N/A	0.0010	B541837

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

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ROUTINE + DISS. REG. METALS – LAB FILT (WATER)

Bureau Veritas ID		CWM903		CWM904		CWM904			
Sampling Date		2024/09/26 16:22		2024/09/26		2024/09/26			
COC Number		1OF1		1OF1		1OF1			
	UNITS	SR24-11	MU	SR24-12	MU	SR24-12 Lab-Dup	MU	RDL	QC Batch
Dissolved Boron (B)	mg/L	<0.020	N/A	<0.020	N/A	N/A	N/A	0.020	B542086
Dissolved Calcium (Ca)	mg/L	<0.30	N/A	<0.30	N/A	N/A	N/A	0.30	B542086
Dissolved Chromium (Cr)	mg/L	<0.0010	N/A	<0.0010	N/A	N/A	N/A	0.0010	B541837
Dissolved Cobalt (Co)	mg/L	<0.00030	N/A	<0.00030	N/A	N/A	N/A	0.00030	B541837
Dissolved Copper (Cu)	mg/L	<0.0010	N/A	<0.0010	N/A	N/A	N/A	0.0010	B541837
Dissolved Iron (Fe)	mg/L	<0.060	N/A	<0.060	N/A	N/A	N/A	0.060	B542086
Dissolved Lead (Pb)	mg/L	<0.00020	N/A	<0.00020	N/A	N/A	N/A	0.00020	B541837
Dissolved Lithium (Li)	mg/L	<0.020	N/A	<0.020	N/A	N/A	N/A	0.020	B542086
Dissolved Magnesium (Mg)	mg/L	<0.20	N/A	<0.20	N/A	N/A	N/A	0.20	B542086
Dissolved Manganese (Mn)	mg/L	<0.0040	N/A	<0.0040	N/A	N/A	N/A	0.0040	B542086
Dissolved Molybdenum (Mo)	mg/L	<0.00020	N/A	<0.00020	N/A	N/A	N/A	0.00020	B541837
Dissolved Nickel (Ni)	mg/L	<0.00050	N/A	<0.00050	N/A	N/A	N/A	0.00050	B541837
Dissolved Phosphorus (P)	mg/L	<0.10	N/A	<0.10	N/A	N/A	N/A	0.10	B542086
Dissolved Potassium (K)	mg/L	<0.30	N/A	<0.30	N/A	N/A	N/A	0.30	B542086
Dissolved Selenium (Se)	mg/L	<0.00020	N/A	<0.00020	N/A	N/A	N/A	0.00020	B541837
Dissolved Silicon (Si)	mg/L	<0.50	N/A	<0.50	N/A	N/A	N/A	0.50	B542086
Dissolved Silver (Ag)	mg/L	<0.00010	N/A	<0.00010	N/A	N/A	N/A	0.00010	B541837
Dissolved Sodium (Na)	mg/L	<0.50	N/A	<0.50	N/A	N/A	N/A	0.50	B542086
Dissolved Strontium (Sr)	mg/L	<0.020	N/A	<0.020	N/A	N/A	N/A	0.020	B542086
Dissolved Sulphur (S)	mg/L	<0.20	N/A	<0.20	N/A	N/A	N/A	0.20	B542086
Dissolved Thallium (Tl)	mg/L	<0.00020	N/A	<0.00020	N/A	N/A	N/A	0.00020	B541837
Dissolved Tin (Sn)	mg/L	<0.0010	N/A	<0.0010	N/A	N/A	N/A	0.0010	B541837
Dissolved Titanium (Ti)	mg/L	<0.0010	N/A	<0.0010	N/A	N/A	N/A	0.0010	B541837
Dissolved Uranium (U)	mg/L	<0.00010	N/A	<0.00010	N/A	N/A	N/A	0.00010	B541837
Dissolved Vanadium (V)	mg/L	<0.0010	N/A	<0.0010	N/A	N/A	N/A	0.0010	B541837
Dissolved Zinc (Zn)	mg/L	<0.0030	N/A	<0.0030	N/A	N/A	N/A	0.0030	B541837

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
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N/A = Not Applicable

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TOTAL KJELDAHL NITROGEN (TOTAL)

Bureau Veritas ID		CWM894			CWM895		CWM896			
Sampling Date		2024/09/26 09:57			2024/09/26 10:04		2024/09/26 12:06			
COC Number		1OF1			1OF1		1OF1			
	UNITS	RMW16-18-5	MU	RDL	RMW16-18-13	MU	RMW16-22-26	MU	RDL	QC Batch
Calculated Parameters										
Total Kjeldahl Nitrogen (Calc)	mg/L	1.9	N/A	0.40	0.085	N/A	0.86	N/A	0.020	B539489
Nutrients										
Total Nitrogen (N)	mg/L	2.4 (1)	+/- <RDL	0.40	0.29	+/- 0.057	0.92	+/- 0.14	0.020	B541518

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Bureau Veritas ID		CWM897			CWM898			CWM899			
Sampling Date		2024/09/26 13:32			2024/09/26 13:11			2024/09/26 15:29			
COC Number		1OF1			1OF1			1OF1			
	UNITS	RMW16-19-10	MU	RDL	RMW16-19-19	MU	RDL	RMW16-23-7	MU	RDL	QC Batch
Calculated Parameters											
Total Kjeldahl Nitrogen (Calc)	mg/L	0.70	N/A	0.20	1.3	N/A	0.020	0.28	N/A	0.20	B539489
Nutrients											
Total Nitrogen (N)	mg/L	0.70 (1)	+/- <RDL	0.20	1.3	+/- 0.20	0.020	0.28 (1)	+/- <RDL	0.20	B541518

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Bureau Veritas ID		CWM900		CWM901		CWM902		CWM903			
Sampling Date		2024/09/26 16:12		2024/09/26 15:54		2024/09/26 16:18		2024/09/26 16:22			
COC Number		1OF1		1OF1		1OF1		1OF1			
	UNITS	RMW16-23-14	MU	RMW16-23-32	MU	SR24-10	MU	SR24-11	MU	RDL	QC Batch
Calculated Parameters											
Total Kjeldahl Nitrogen (Calc)	mg/L	0.51	N/A	0.89	N/A	1.3	N/A	<0.020	N/A	0.020	B539489
Nutrients											
Total Nitrogen (N)	mg/L	0.54	+/- 0.089	0.89	+/- 0.14	1.3	+/- 0.19	<0.020	N/A	0.020	B541518

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

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TOTAL KJELDAHL NITROGEN (TOTAL)

Bureau Veritas ID		CWM904			
Sampling Date		2024/09/26			
COC Number		1OF1			
	UNITS	**SR24-12**	**MU**	**RDL**	**QC Batch**
Calculated Parameters					
Total Kjeldahl Nitrogen (Calc)	mg/L	<0.020	N/A	0.020	B539489
Nutrients					
Total Nitrogen (N)	mg/L	<0.020	N/A	0.020	B541518

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		CWM894				CWM895			
Sampling Date		2024/09/26 09:57				2024/09/26 10:04			
COC Number		1OF1				1OF1			
	UNITS	RMW16-18-5	MU	RDL	QC Batch	RMW16-18-13	MU	RDL	QC Batch
Lab Filtered Inorganics									
Dissolved Organic Carbon (C)	mg/L	2.2	+/- <RDL	0.50	B545717	1.5	+/- <RDL	0.50	B546470
Microbiological Param.									
E.Coli DST	MPN/100mL	<1.0	N/A	1.0	B540246	<1.0	N/A	1.0	B540246
Fecal Coliforms	MPN/100mL	<2.0 (1)	N/A	2.0	B540446	<1.0	N/A	1.0	B540446
Heterotrophic DST	MPN/100mL	>2400	N/A	1.0	B539888	>2400	N/A	1.0	B539888
Total Coliforms DST	MPN/100mL	<1.0	N/A	1.0	B540246	<1.0	N/A	1.0	B540246
Nutrients									
Total Ammonia (N)	mg/L	<0.015	N/A	0.015	B544287	<0.015	N/A	0.015	B544287
Orthophosphate (P)	mg/L	<0.0030	N/A	0.0030	B541049	<0.0030	N/A	0.0030	B544234
Lab Filtered Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0030	N/A	0.0030	B542670	<0.0030	N/A	0.0030	B542670

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Detection limit raised due to matrix interference.

Bureau Veritas ID		CWM895		CWM896		CWM896			
Sampling Date		2024/09/26 10:04		2024/09/26 12:06		2024/09/26 12:06			
COC Number		1OF1		1OF1		1OF1			
	UNITS	RMW16-18-13 Lab-Dup	MU	RMW16-22-26	MU	RMW16-22-26 Lab-Dup	MU	RDL	QC Batch
Lab Filtered Inorganics									
Dissolved Organic Carbon (C)	mg/L	N/A	N/A	1.3	+/- <RDL	N/A	N/A	0.50	B546470
Microbiological Param.									
E.Coli DST	MPN/100mL	N/A	N/A	<1.0	N/A	N/A	N/A	1.0	B540246
Fecal Coliforms	MPN/100mL	N/A	N/A	<1.0	N/A	N/A	N/A	1.0	B540446
Heterotrophic DST	MPN/100mL	>2400	N/A	>2400	N/A	N/A	N/A	1.0	B539888
Total Coliforms DST	MPN/100mL	N/A	N/A	8.5	N/A	N/A	N/A	1.0	B540246
Nutrients									
Total Ammonia (N)	mg/L	N/A	N/A	0.56	+/- 0.062	N/A	N/A	0.015	B544287
Orthophosphate (P)	mg/L	<0.0030	N/A	<0.0030	N/A	N/A	N/A	0.0030	B544234
Lab Filtered Nutrients									
Dissolved Phosphorus (P)	mg/L	N/A	N/A	<0.0030	N/A	<0.0030	N/A	0.0030	B542670

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		CWM897			CWM898			
Sampling Date		2024/09/26 13:32			2024/09/26 13:11			
COC Number		1OF1			1OF1			
	UNITS	RMW16-19-10	MU	RDL	RMW16-19-19	MU	RDL	QC Batch
Lab Filtered Inorganics								
Dissolved Organic Carbon (C)	mg/L	5.3	+/- 0.73	0.50	3.6	+/- 0.57	0.50	B546470
Microbiological Param.								
E.Coli DST	MPN/100mL	<10 (1)	N/A	10	<1.0	N/A	1.0	B540246
Fecal Coliforms	MPN/100mL	<10 (1)	N/A	10	<1.0	N/A	1.0	B540446
Heterotrophic DST	MPN/100mL	>2400	N/A	1.0	820	N/A	1.0	B539888
Total Coliforms DST	MPN/100mL	<10 (1)	N/A	10	<1.0	N/A	1.0	B540246
Nutrients								
Total Ammonia (N)	mg/L	0.070	+/- <RDL	0.015	1.1	+/- 0.12	0.015	B544287
Orthophosphate (P)	mg/L	<0.0030	N/A	0.0030	<0.0030	N/A	0.0030	B544228
Lab Filtered Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0030	N/A	0.0030	<0.0030	N/A	0.0030	B542670

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Detection limit raised due to matrix interference.

Bureau Veritas ID		CWM899				CWM900			
Sampling Date		2024/09/26 15:29				2024/09/26 16:12			
COC Number		1OF1				1OF1			
	UNITS	RMW16-23-7	MU	RDL	QC Batch	RMW16-23-14	MU	RDL	QC Batch
Lab Filtered Inorganics									
Dissolved Organic Carbon (C)	mg/L	1.2	+/- <RDL	0.50	B546470	1.2	+/- <RDL	0.50	B546470
Microbiological Param.									
E.Coli DST	MPN/100mL	<1.0	N/A	1.0	B540246	<1.0	N/A	1.0	B540246
Fecal Coliforms	MPN/100mL	<1.1 (1)	N/A	1.1	B540446	<1.0	N/A	1.0	B540446
Heterotrophic DST	MPN/100mL	>2400	N/A	1.0	B539888	980	N/A	1.0	B539888
Total Coliforms DST	MPN/100mL	25	N/A	1.0	B540246	<1.0	N/A	1.0	B540246
Nutrients									
Total Ammonia (N)	mg/L	0.046	+/- <RDL	0.015	B544287	0.46	+/- 0.051	0.015	B544301
Orthophosphate (P)	mg/L	<0.0030	N/A	0.0030	B544228	<0.0030	N/A	0.0030	B544228
Lab Filtered Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0030	N/A	0.0030	B542670	<0.0030	N/A	0.0030	B542670

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Detection limit raised based on limited sample volume available for analysis.

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		CWM900			CWM901		CWM902			
Sampling Date		2024/09/26 16:12			2024/09/26 15:54		2024/09/26 16:18			
COC Number		1OF1			1OF1		1OF1			
	UNITS	RMW16-23-14 Lab-Dup	MU	QC Batch	RMW16-23-32	MU	SR24-10	MU	RDL	QC Batch
Lab Filtered Inorganics										
Dissolved Organic Carbon (C)	mg/L	N/A	N/A	B546470	0.99	+/- <RDL	3.3	+/- 0.55	0.50	B546470
Microbiological Param.										
E.Coli DST	MPN/100mL	N/A	N/A	B540246	<1.0	N/A	<1.0	N/A	1.0	B540246
Fecal Coliforms	MPN/100mL	N/A	N/A	B540446	<1.0	N/A	<1.0	N/A	1.0	B540446
Heterotrophic DST	MPN/100mL	N/A	N/A	B539888	>2400	N/A	820	N/A	1.0	B539888
Total Coliforms DST	MPN/100mL	N/A	N/A	B540246	<1.0	N/A	<1.0	N/A	1.0	B540246
Nutrients										
Total Ammonia (N)	mg/L	0.46	+/- 0.051	B544301	0.79	+/- 0.087	1.1	+/- 0.12	0.015	B544287
Orthophosphate (P)	mg/L	N/A	N/A	B544228	0.0088	+/- 0.0036	<0.0030	N/A	0.0030	B544228
Lab Filtered Nutrients										
Dissolved Phosphorus (P)	mg/L	N/A	N/A	B542670	0.0054 (1)	+/- 0.0048	<0.0030	N/A	0.0030	B542670

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Phosphorus < Orthophosphate: Both values fall within the method uncertainty for duplicates and are likely equivalent.

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		CWM902		CWM903		CWM903			
Sampling Date		2024/09/26 16:18		2024/09/26 16:22		2024/09/26 16:22			
COC Number		1OF1		1OF1		1OF1			
	UNITS	SR24-10 Lab-Dup	MU	SR24-11	MU	SR24-11 Lab-Dup	MU	RDL	QC Batch
Lab Filtered Inorganics									
Dissolved Organic Carbon (C)	mg/L	3.8	+/- 0.59	<0.50	N/A	N/A	N/A	0.50	B546470
Microbiological Param.									
E.Coli DST	MPN/100mL	N/A	N/A	<1.0	N/A	N/A	N/A	1.0	B540246
Fecal Coliforms	MPN/100mL	N/A	N/A	<1.0	N/A	N/A	N/A	1.0	B540446
Heterotrophic DST	MPN/100mL	N/A	N/A	1.0	N/A	N/A	N/A	1.0	B539888
Total Coliforms DST	MPN/100mL	N/A	N/A	<1.0	N/A	N/A	N/A	1.0	B540246
Nutrients									
Total Ammonia (N)	mg/L	N/A	N/A	<0.015	N/A	<0.015	N/A	0.015	B544287
Orthophosphate (P)	mg/L	N/A	N/A	<0.0030	N/A	N/A	N/A	0.0030	B544228
Lab Filtered Nutrients									
Dissolved Phosphorus (P)	mg/L	N/A	N/A	<0.0030	N/A	N/A	N/A	0.0030	B542670

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas ID		CWM904			
Sampling Date		2024/09/26			
COC Number		1OF1			
	UNITS	SR24-12	MU	RDL	QC Batch
Lab Filtered Inorganics					
Dissolved Organic Carbon (C)	mg/L	<0.50	N/A	0.50	B546470
Microbiological Param.					
E.Coli DST	MPN/100mL	<1.0	N/A	1.0	B540246
Fecal Coliforms	MPN/100mL	<1.0	N/A	1.0	B540446
Heterotrophic DST	MPN/100mL	<1.0	N/A	1.0	B539888
Total Coliforms DST	MPN/100mL	<1.0	N/A	1.0	B540246
Nutrients					
Total Ammonia (N)	mg/L	<0.015	N/A	0.015	B544301
Orthophosphate (P)	mg/L	<0.0030	N/A	0.0030	B544228
Lab Filtered Nutrients					
Dissolved Phosphorus (P)	mg/L	<0.0030	N/A	0.0030	B542670

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

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MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		CWM894				CWM895			
Sampling Date		2024/09/26 09:57				2024/09/26 10:04			
COC Number		1OF1				1OF1			
	UNITS	RMW16-18-5	MU	RDL	QC Batch	RMW16-18-13	MU	RDL	QC Batch
Elements									
Total Mercury (Hg)	ug/L	0.253 (1)	+/- 0.043	0.019	B544790	0.0044	+/- 0.0020	0.0019	B544790
Lab Filtered Elements									
Dissolved Mercury (Hg)	ug/L	<0.0019	N/A	0.0019	B544843	<0.0019	N/A	0.0019	B544870

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Bureau Veritas ID		CWM896			CWM897			CWM898			
Sampling Date		2024/09/26 12:06			2024/09/26 13:32			2024/09/26 13:11			
COC Number		1OF1			1OF1			1OF1			
	UNITS	RMW16-22-26	MU	RDL	RMW16-19-10	MU	RDL	RMW16-19-19	MU	RDL	QC Batch
Elements											
Total Mercury (Hg)	ug/L	<0.0019	N/A	0.0019	0.206 (1)	+/- 0.035	0.019	<0.0019	N/A	0.0019	B544790
Lab Filtered Elements											
Dissolved Mercury (Hg)	ug/L	<0.0019	N/A	0.0019	<0.0019	N/A	0.0019	<0.0019	N/A	0.0019	B544843

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Bureau Veritas ID		CWM899		CWM899				CWM900			
Sampling Date		2024/09/26 15:29		2024/09/26 15:29				2024/09/26 16:12			
COC Number		1OF1		1OF1				1OF1			
	UNITS	RMW16-23-7	MU	RMW16-23-7 Lab-Dup	MU	RDL	QC Batch	RMW16-23-14	MU	RDL	QC Batch
Elements											
Total Mercury (Hg)	ug/L	0.058 (1)	+/- <RDL	N/A	N/A	0.019	B544968	<0.0019	N/A	0.0019	B544790
Lab Filtered Elements											
Dissolved Mercury (Hg)	ug/L	<0.0019	N/A	<0.0019	N/A	0.0019	B546239	<0.0019	N/A	0.0019	B544843

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID		CWM901		CWM902		CWM903			CWM904			
Sampling Date		2024/09/26 15:54		2024/09/26 16:18		2024/09/26 16:22			2024/09/26			
COC Number		1OF1		1OF1		1OF1			1OF1			
	UNITS	RMW16-23-32	MU	SR24-10	MU	SR24-11	MU	QC Batch	SR24-12	MU	RDL	QC Batch
Elements												
Total Mercury (Hg)	ug/L	<0.0019	N/A	<0.0019	N/A	<0.0019	N/A	B544790	<0.0019	N/A	0.0019	B544968
Lab Filtered Elements												
Dissolved Mercury (Hg)	ug/L	<0.0019	N/A	<0.0019	N/A	<0.0019	N/A	B544843	<0.0019	N/A	0.0019	B546239

RDL = Reportable Detection Limit
MU = Measurement Uncertainty
N/A = Not Applicable

Bureau Veritas ID		CWM904			
Sampling Date		2024/09/26			
COC Number		1OF1			
	UNITS	SR24-12 Lab-Dup	MU	RDL	QC Batch
Elements					
Total Mercury (Hg)	ug/L	<0.0019	N/A	0.0019	B544968

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
MU = Measurement Uncertainty
N/A = Not Applicable

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	8.6°C
Package 2	1.0°C

Sample CWM895 [RMW16-18-13] : Orthophosphate by Automated Analyzer completed within five days of sampling. Data is satisfactory for compliance purposes.

Sample CWM896 [RMW16-22-26] : Orthophosphate by Automated Analyzer completed within five days of sampling. Data is satisfactory for compliance purposes.

Sample CWM897 [RMW16-19-10] : Orthophosphate by Automated Analyzer completed within five days of sampling. Data is satisfactory for compliance purposes.

Sample CWM898 [RMW16-19-19] : Orthophosphate by Automated Analyzer completed within five days of sampling. Data is satisfactory for compliance purposes.

Sample CWM899 [RMW16-23-7] : Orthophosphate by Automated Analyzer completed within five days of sampling. Data is satisfactory for compliance purposes.

Sample CWM900 [RMW16-23-14] : Orthophosphate by Automated Analyzer completed within five days of sampling. Data is satisfactory for compliance purposes.

Sample CWM901 [RMW16-23-32] : Orthophosphate by Automated Analyzer completed within five days of sampling. Data is satisfactory for compliance purposes.

Sample CWM902 [SR24-10] : Orthophosphate by Automated Analyzer completed within five days of sampling. Data is satisfactory for compliance purposes.

Sample CWM903 [SR24-11] : Orthophosphate by Automated Analyzer completed within five days of sampling. Data is satisfactory for compliance purposes.

Sample CWM904 [SR24-12] : Orthophosphate by Automated Analyzer completed within five days of sampling. Data is satisfactory for compliance purposes.

The estimate of uncertainty has been reported as an expanded uncertainty and calculated using a coverage factor of 2, which gives a level of confidence of 95%.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B539888	YYL	Method Blank	Heterotrophic DST	2024/09/29	<1.0		mpn/100mL	
B539888	YYL	RPD [CWM895-03]	Heterotrophic DST	2024/09/29	NC		%	N/A
B540246	YYL	Method Blank	E.Coli DST	2024/09/28	<1.0		mpn/100mL	
			Total Coliforms DST	2024/09/28	<1.0		mpn/100mL	
B540246	YYL	RPD	E.Coli DST	2024/09/28	NC		%	N/A
			Total Coliforms DST	2024/09/28	NC		%	N/A
B540439	WPK	Matrix Spike [CWM895-11]	1,4-Difluorobenzene (sur.)	2024/09/29		99	%	50 - 140
			4-Bromofluorobenzene (sur.)	2024/09/29		103	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2024/09/29		93	%	50 - 140
			Benzene	2024/09/29		89	%	50 - 140
			Toluene	2024/09/29		92	%	50 - 140
			Ethylbenzene	2024/09/29		94	%	50 - 140
			m & p-Xylene	2024/09/29		94	%	50 - 140
			o-Xylene	2024/09/29		100	%	50 - 140
			F1 (C6-C10)	2024/09/29		97	%	60 - 140
B540439	WPK	Spiked Blank	1,4-Difluorobenzene (sur.)	2024/09/29		100	%	50 - 140
			4-Bromofluorobenzene (sur.)	2024/09/29		102	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2024/09/29		90	%	50 - 140
			Benzene	2024/09/29		90	%	60 - 130
			Toluene	2024/09/29		94	%	60 - 130
			Ethylbenzene	2024/09/29		97	%	60 - 130
			m & p-Xylene	2024/09/29		98	%	60 - 130
			o-Xylene	2024/09/29		101	%	60 - 130
			F1 (C6-C10)	2024/09/29		100	%	60 - 140
B540439	WPK	Method Blank	1,4-Difluorobenzene (sur.)	2024/09/29		102	%	50 - 140
			4-Bromofluorobenzene (sur.)	2024/09/29		100	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2024/09/29		91	%	50 - 140
			Benzene	2024/09/29	<0.00040		mg/L	
			Toluene	2024/09/29	<0.00040		mg/L	
			Ethylbenzene	2024/09/29	<0.00040		mg/L	
			m & p-Xylene	2024/09/29	<0.00080		mg/L	
			o-Xylene	2024/09/29	<0.00040		mg/L	
			F1 (C6-C10)	2024/09/29	<0.10		mg/L	
B540439	WPK	RPD [CWM894-11]	Benzene	2024/09/29	NC		%	30
			Toluene	2024/09/29	NC		%	30
			Ethylbenzene	2024/09/29	NC		%	30
			m & p-Xylene	2024/09/29	NC		%	30
			o-Xylene	2024/09/29	NC		%	30
			F1 (C6-C10)	2024/09/29	NC		%	30
B540446	R4S	Method Blank	Fecal Coliforms	2024/09/28	<1.0		MPN/100mL	
B540446	R4S	RPD	Fecal Coliforms	2024/09/28	NC		%	N/A
B541049	YL7	Matrix Spike	Orthophosphate (P)	2024/09/27		NC	%	80 - 120
B541049	YL7	Spiked Blank	Orthophosphate (P)	2024/09/27		101	%	80 - 120
B541049	YL7	Method Blank	Orthophosphate (P)	2024/09/27	<0.0030		mg/L	
B541049	YL7	RPD	Orthophosphate (P)	2024/09/27	7.4		%	20
B541101	HAP	Matrix Spike	Chloride (Cl)	2024/09/28		NC	%	80 - 120
			Sulphate (SO4)	2024/09/28		NC	%	80 - 120
B541101	HAP	Spiked Blank	Chloride (Cl)	2024/09/28		99	%	80 - 120
			Sulphate (SO4)	2024/09/28		100	%	80 - 120
B541101	HAP	Method Blank	Chloride (Cl)	2024/09/28	<1.0		mg/L	
			Sulphate (SO4)	2024/09/28	<1.0		mg/L	
B541101	HAP	RPD	Sulphate (SO4)	2024/09/28	3.8		%	20
B541109	HAP	Matrix Spike	Chloride (Cl)	2024/09/27		98	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Sulphate (SO4)	2024/09/27		100	%	80 - 120
B541109	HAP	Spiked Blank	Chloride (Cl)	2024/09/27		97	%	80 - 120
			Sulphate (SO4)	2024/09/27		97	%	80 - 120
B541109	HAP	Method Blank	Chloride (Cl)	2024/09/27	<1.0		mg/L	
			Sulphate (SO4)	2024/09/27	<1.0		mg/L	
B541109	HAP	RPD	Chloride (Cl)	2024/09/27	1.4		%	20
			Sulphate (SO4)	2024/09/27	12		%	20
B541234	RRA	Spiked Blank	O-TERPHENYL (sur.)	2024/09/30		92	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2024/09/30		95	%	60 - 140
B541234	RRA	Method Blank	O-TERPHENYL (sur.)	2024/10/01		91	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2024/10/01	<0.10		mg/L	
B541518	YL7	Matrix Spike	Total Nitrogen (N)	2024/10/01		108	%	80 - 120
B541518	YL7	QC Standard	Total Nitrogen (N)	2024/10/01		104	%	80 - 120
B541518	YL7	Spiked Blank	Total Nitrogen (N)	2024/10/01		106	%	80 - 120
B541518	YL7	Method Blank	Total Nitrogen (N)	2024/10/01	<0.020		mg/L	
B541518	YL7	RPD	Total Nitrogen (N)	2024/10/01	8.5		%	20
B541637	AYE	Spiked Blank	Alkalinity (Total as CaCO3)	2024/09/28		97	%	80 - 120
B541637	AYE	Method Blank	Alkalinity (PP as CaCO3)	2024/09/28	<1.0		mg/L	
			Alkalinity (Total as CaCO3)	2024/09/28	<1.0		mg/L	
			Bicarbonate (HCO3)	2024/09/28	<1.0		mg/L	
			Carbonate (CO3)	2024/09/28	<1.0		mg/L	
			Hydroxide (OH)	2024/09/28	<1.0		mg/L	
B541637	AYE	RPD [CWM902-01]	Alkalinity (PP as CaCO3)	2024/09/28	NC		%	20
			Alkalinity (Total as CaCO3)	2024/09/28	0.30		%	20
			Bicarbonate (HCO3)	2024/09/28	0.30		%	20
			Carbonate (CO3)	2024/09/28	NC		%	20
			Hydroxide (OH)	2024/09/28	NC		%	20
B541643	AYE	Spiked Blank	pH	2024/09/28		100	%	97 - 103
B541643	AYE	RPD [CWM902-01]	pH	2024/09/28	0.28		%	N/A
B541645	AYE	Spiked Blank	Conductivity	2024/09/28		100	%	90 - 110
B541645	AYE	Method Blank	Conductivity	2024/09/28	<2.0		uS/cm	
B541645	AYE	RPD [CWM902-01]	Conductivity	2024/09/28	0.36		%	10
B541677	HAP	Matrix Spike [CWM904-01]	Chloride (Cl)	2024/09/29		103	%	80 - 120
			Sulphate (SO4)	2024/09/29		96	%	80 - 120
B541677	HAP	Spiked Blank	Chloride (Cl)	2024/09/29		99	%	80 - 120
			Sulphate (SO4)	2024/09/29		97	%	80 - 120
B541677	HAP	Method Blank	Chloride (Cl)	2024/09/29	<1.0		mg/L	
			Sulphate (SO4)	2024/09/29	<1.0		mg/L	
B541677	HAP	RPD [CWM904-01]	Chloride (Cl)	2024/09/29	NC		%	20
			Sulphate (SO4)	2024/09/29	NC		%	20
B541699	HAP	Matrix Spike [CWM898-01]	Chloride (Cl)	2024/09/28		102	%	80 - 120
			Sulphate (SO4)	2024/09/28		NC	%	80 - 120
B541699	HAP	Spiked Blank	Chloride (Cl)	2024/09/28		99	%	80 - 120
			Sulphate (SO4)	2024/09/28		106	%	80 - 120
B541699	HAP	Method Blank	Chloride (Cl)	2024/09/28	<1.0		mg/L	
			Sulphate (SO4)	2024/09/28	<1.0		mg/L	
B541699	HAP	RPD [CWM898-01]	Chloride (Cl)	2024/09/28	NC		%	20
			Sulphate (SO4)	2024/09/28	8.7		%	20
B541721	ISW	Matrix Spike	Nitrite (N)	2024/09/28		103	%	80 - 120
			Nitrate plus Nitrite (N)	2024/09/28		130 (1)	%	80 - 120
B541721	ISW	Spiked Blank	Nitrite (N)	2024/09/28		104	%	80 - 120
			Nitrate plus Nitrite (N)	2024/09/28		109	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B541721	ISW	Method Blank	Nitrite (N)	2024/09/28	<0.010		mg/L	
			Nitrate plus Nitrite (N)	2024/09/28	<0.010		mg/L	
B541721	ISW	RPD	Nitrite (N)	2024/09/28	NC		%	20
			Nitrate plus Nitrite (N)	2024/09/28	NC		%	20
B541763	ISW	Matrix Spike [CWM901-01]	Nitrite (N)	2024/09/28		102	%	80 - 120
			Nitrate plus Nitrite (N)	2024/09/28		108	%	80 - 120
B541763	ISW	Spiked Blank	Nitrite (N)	2024/09/28		102	%	80 - 120
			Nitrate plus Nitrite (N)	2024/09/28		104	%	80 - 120
B541763	ISW	Method Blank	Nitrite (N)	2024/09/28	<0.010		mg/L	
			Nitrate plus Nitrite (N)	2024/09/28	<0.010		mg/L	
B541763	ISW	RPD [CWM901-01]	Nitrite (N)	2024/09/28	NC		%	20
			Nitrate plus Nitrite (N)	2024/09/28	NC		%	20
B541837	JAB	Matrix Spike	Dissolved Aluminum (Al)	2024/09/30		108	%	80 - 120
			Dissolved Antimony (Sb)	2024/09/30		96	%	80 - 120
			Dissolved Arsenic (As)	2024/09/30		89	%	80 - 120
			Dissolved Beryllium (Be)	2024/09/30		95	%	80 - 120
			Dissolved Chromium (Cr)	2024/09/30		91	%	80 - 120
			Dissolved Cobalt (Co)	2024/09/30		93	%	80 - 120
			Dissolved Copper (Cu)	2024/09/30		88	%	80 - 120
			Dissolved Lead (Pb)	2024/09/30		90	%	80 - 120
			Dissolved Molybdenum (Mo)	2024/09/30		97	%	80 - 120
			Dissolved Nickel (Ni)	2024/09/30		90	%	80 - 120
			Dissolved Selenium (Se)	2024/09/30		88	%	80 - 120
			Dissolved Silver (Ag)	2024/09/30		93	%	80 - 120
			Dissolved Thallium (Tl)	2024/09/30		91	%	80 - 120
			Dissolved Tin (Sn)	2024/09/30		102	%	80 - 120
			Dissolved Titanium (Ti)	2024/09/30		91	%	80 - 120
			Dissolved Uranium (U)	2024/09/30		93	%	80 - 120
			Dissolved Vanadium (V)	2024/09/30		94	%	80 - 120
			Dissolved Zinc (Zn)	2024/09/30		90	%	80 - 120
B541837	JAB	Spiked Blank	Dissolved Aluminum (Al)	2024/09/30		114	%	80 - 120
			Dissolved Antimony (Sb)	2024/09/30		102	%	80 - 120
			Dissolved Arsenic (As)	2024/09/30		92	%	80 - 120
			Dissolved Beryllium (Be)	2024/09/30		98	%	80 - 120
			Dissolved Chromium (Cr)	2024/09/30		95	%	80 - 120
			Dissolved Cobalt (Co)	2024/09/30		99	%	80 - 120
			Dissolved Copper (Cu)	2024/09/30		94	%	80 - 120
			Dissolved Lead (Pb)	2024/09/30		97	%	80 - 120
			Dissolved Molybdenum (Mo)	2024/09/30		98	%	80 - 120
			Dissolved Nickel (Ni)	2024/09/30		95	%	80 - 120
			Dissolved Selenium (Se)	2024/09/30		91	%	80 - 120
			Dissolved Silver (Ag)	2024/09/30		98	%	80 - 120
			Dissolved Thallium (Tl)	2024/09/30		96	%	80 - 120
			Dissolved Tin (Sn)	2024/09/30		101	%	80 - 120
			Dissolved Titanium (Ti)	2024/09/30		95	%	80 - 120
			Dissolved Uranium (U)	2024/09/30		97	%	80 - 120
			Dissolved Vanadium (V)	2024/09/30		98	%	80 - 120
			Dissolved Zinc (Zn)	2024/09/30		86	%	80 - 120
B541837	JAB	Method Blank	Dissolved Aluminum (Al)	2024/09/30	<0.0030		mg/L	
			Dissolved Antimony (Sb)	2024/09/30	<0.00060		mg/L	
			Dissolved Arsenic (As)	2024/09/30	<0.00020		mg/L	
			Dissolved Beryllium (Be)	2024/09/30	<0.0010		mg/L	
			Dissolved Chromium (Cr)	2024/09/30	<0.0010		mg/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Cobalt (Co)	2024/09/30	<0.00030		mg/L	
			Dissolved Copper (Cu)	2024/09/30	<0.0010		mg/L	
			Dissolved Lead (Pb)	2024/09/30	<0.00020		mg/L	
			Dissolved Molybdenum (Mo)	2024/09/30	<0.00020		mg/L	
			Dissolved Nickel (Ni)	2024/09/30	<0.00050		mg/L	
			Dissolved Selenium (Se)	2024/09/30	<0.00020		mg/L	
			Dissolved Silver (Ag)	2024/09/30	<0.00010		mg/L	
			Dissolved Thallium (Tl)	2024/09/30	<0.00020		mg/L	
			Dissolved Tin (Sn)	2024/09/30	<0.0010		mg/L	
			Dissolved Titanium (Ti)	2024/09/30	<0.0010		mg/L	
			Dissolved Uranium (U)	2024/09/30	<0.00010		mg/L	
			Dissolved Vanadium (V)	2024/09/30	<0.0010		mg/L	
			Dissolved Zinc (Zn)	2024/09/30	<0.0030		mg/L	
B541837	JAB	RPD	Dissolved Aluminum (Al)	2024/09/30	18		%	20
			Dissolved Antimony (Sb)	2024/09/30	NC		%	20
			Dissolved Arsenic (As)	2024/09/30	2.9		%	20
			Dissolved Beryllium (Be)	2024/09/30	NC		%	20
			Dissolved Chromium (Cr)	2024/09/30	NC		%	20
			Dissolved Cobalt (Co)	2024/09/30	1.7		%	20
			Dissolved Copper (Cu)	2024/09/30	1.3		%	20
			Dissolved Lead (Pb)	2024/09/30	NC		%	20
			Dissolved Molybdenum (Mo)	2024/09/30	0.17		%	20
			Dissolved Nickel (Ni)	2024/09/30	5.1		%	20
			Dissolved Selenium (Se)	2024/09/30	6.2		%	20
			Dissolved Silver (Ag)	2024/09/30	NC		%	20
			Dissolved Thallium (Tl)	2024/09/30	NC		%	20
			Dissolved Tin (Sn)	2024/09/30	NC		%	20
			Dissolved Titanium (Ti)	2024/09/30	16		%	20
			Dissolved Uranium (U)	2024/09/30	1.6		%	20
			Dissolved Vanadium (V)	2024/09/30	15		%	20
			Dissolved Zinc (Zn)	2024/09/30	1.1		%	20
B542078	JAB	Matrix Spike	Dissolved Barium (Ba)	2024/09/30		99	%	80 - 120
			Dissolved Boron (B)	2024/09/30		98	%	80 - 120
			Dissolved Calcium (Ca)	2024/09/30		97	%	80 - 120
			Dissolved Iron (Fe)	2024/09/30		104	%	80 - 120
			Dissolved Lithium (Li)	2024/09/30		93	%	80 - 120
			Dissolved Magnesium (Mg)	2024/09/30		99	%	80 - 120
			Dissolved Manganese (Mn)	2024/09/30		101	%	80 - 120
			Dissolved Phosphorus (P)	2024/09/30		97	%	80 - 120
			Dissolved Potassium (K)	2024/09/30		98	%	80 - 120
			Dissolved Silicon (Si)	2024/09/30		92	%	80 - 120
			Dissolved Sodium (Na)	2024/09/30		91	%	80 - 120
			Dissolved Strontium (Sr)	2024/09/30		98	%	80 - 120
			Dissolved Sulphur (S)	2024/09/30		99	%	80 - 120
B542078	JAB	Spiked Blank	Dissolved Barium (Ba)	2024/09/30		101	%	80 - 120
			Dissolved Boron (B)	2024/09/30		98	%	80 - 120
			Dissolved Calcium (Ca)	2024/09/30		99	%	80 - 120
			Dissolved Iron (Fe)	2024/09/30		106	%	80 - 120
			Dissolved Lithium (Li)	2024/09/30		99	%	80 - 120
			Dissolved Magnesium (Mg)	2024/09/30		103	%	80 - 120
			Dissolved Manganese (Mn)	2024/09/30		103	%	80 - 120
			Dissolved Phosphorus (P)	2024/09/30		100	%	80 - 120
			Dissolved Potassium (K)	2024/09/30		101	%	80 - 120
			Dissolved Silicon (Si)	2024/09/30		97	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Sodium (Na)	2024/09/30		97	%	80 - 120
			Dissolved Strontium (Sr)	2024/09/30		100	%	80 - 120
			Dissolved Sulphur (S)	2024/09/30		99	%	80 - 120
B542078	JAB	Method Blank	Dissolved Barium (Ba)	2024/09/30	<0.010		mg/L	
			Dissolved Boron (B)	2024/09/30	<0.020		mg/L	
			Dissolved Calcium (Ca)	2024/09/30	<0.30		mg/L	
			Dissolved Iron (Fe)	2024/09/30	<0.060		mg/L	
			Dissolved Lithium (Li)	2024/09/30	<0.020		mg/L	
			Dissolved Magnesium (Mg)	2024/09/30	<0.20		mg/L	
			Dissolved Manganese (Mn)	2024/09/30	<0.0040		mg/L	
			Dissolved Phosphorus (P)	2024/09/30	<0.10		mg/L	
			Dissolved Potassium (K)	2024/09/30	<0.30		mg/L	
			Dissolved Silicon (Si)	2024/09/30	<0.50		mg/L	
			Dissolved Sodium (Na)	2024/09/30	<0.50		mg/L	
			Dissolved Strontium (Sr)	2024/09/30	<0.020		mg/L	
			Dissolved Sulphur (S)	2024/09/30	<0.20		mg/L	
B542078	JAB	RPD	Dissolved Calcium (Ca)	2024/09/30	0.50		%	20
			Dissolved Iron (Fe)	2024/09/30	NC		%	20
			Dissolved Magnesium (Mg)	2024/09/30	2.3		%	20
			Dissolved Manganese (Mn)	2024/09/30	NC		%	20
			Dissolved Sodium (Na)	2024/09/30	1.6		%	20
B542086	VSC	Matrix Spike	Dissolved Barium (Ba)	2024/09/29		107	%	80 - 120
			Dissolved Boron (B)	2024/09/29		103	%	80 - 120
			Dissolved Calcium (Ca)	2024/09/29		106	%	80 - 120
			Dissolved Iron (Fe)	2024/09/29		112	%	80 - 120
			Dissolved Lithium (Li)	2024/09/29		106	%	80 - 120
			Dissolved Magnesium (Mg)	2024/09/29		109	%	80 - 120
			Dissolved Manganese (Mn)	2024/09/29		112	%	80 - 120
			Dissolved Phosphorus (P)	2024/09/29		109	%	80 - 120
			Dissolved Potassium (K)	2024/09/29		108	%	80 - 120
			Dissolved Silicon (Si)	2024/09/29		101	%	80 - 120
			Dissolved Sodium (Na)	2024/09/29		106	%	80 - 120
			Dissolved Strontium (Sr)	2024/09/29		103	%	80 - 120
			Dissolved Sulphur (S)	2024/09/29		97	%	80 - 120
B542086	VSC	Spiked Blank	Dissolved Barium (Ba)	2024/09/29		103	%	80 - 120
			Dissolved Boron (B)	2024/09/29		98	%	80 - 120
			Dissolved Calcium (Ca)	2024/09/29		103	%	80 - 120
			Dissolved Iron (Fe)	2024/09/29		109	%	80 - 120
			Dissolved Lithium (Li)	2024/09/29		103	%	80 - 120
			Dissolved Magnesium (Mg)	2024/09/29		106	%	80 - 120
			Dissolved Manganese (Mn)	2024/09/29		108	%	80 - 120
			Dissolved Phosphorus (P)	2024/09/29		105	%	80 - 120
			Dissolved Potassium (K)	2024/09/29		104	%	80 - 120
			Dissolved Silicon (Si)	2024/09/29		100	%	80 - 120
			Dissolved Sodium (Na)	2024/09/29		103	%	80 - 120
			Dissolved Strontium (Sr)	2024/09/29		100	%	80 - 120
			Dissolved Sulphur (S)	2024/09/29		99	%	80 - 120
B542086	VSC	Method Blank	Dissolved Barium (Ba)	2024/09/29	<0.010		mg/L	
			Dissolved Boron (B)	2024/09/29	<0.020		mg/L	
			Dissolved Calcium (Ca)	2024/09/29	<0.30		mg/L	
			Dissolved Iron (Fe)	2024/09/29	<0.060		mg/L	
			Dissolved Lithium (Li)	2024/09/29	<0.020		mg/L	
			Dissolved Magnesium (Mg)	2024/09/29	<0.20		mg/L	
			Dissolved Manganese (Mn)	2024/09/29	<0.0040		mg/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Phosphorus (P)	2024/09/29	<0.10		mg/L	
			Dissolved Potassium (K)	2024/09/29	<0.30		mg/L	
			Dissolved Silicon (Si)	2024/09/29	<0.50		mg/L	
			Dissolved Sodium (Na)	2024/09/29	<0.50		mg/L	
			Dissolved Strontium (Sr)	2024/09/29	<0.020		mg/L	
			Dissolved Sulphur (S)	2024/09/29	<0.20		mg/L	
B542086	VSC	RPD	Dissolved Calcium (Ca)	2024/09/29	0.80		%	20
			Dissolved Iron (Fe)	2024/09/29	NC		%	20
			Dissolved Magnesium (Mg)	2024/09/29	0.025		%	20
			Dissolved Manganese (Mn)	2024/09/29	NC		%	20
			Dissolved Potassium (K)	2024/09/29	0.25		%	20
			Dissolved Sodium (Na)	2024/09/29	0.77		%	20
B542670	MAP	Matrix Spike [CWM896-01]	Dissolved Phosphorus (P)	2024/10/01		95	%	80 - 120
B542670	MAP	QC Standard	Dissolved Phosphorus (P)	2024/10/01		87	%	80 - 120
B542670	MAP	Spiked Blank	Dissolved Phosphorus (P)	2024/10/01		94	%	80 - 120
B542670	MAP	Method Blank	Dissolved Phosphorus (P)	2024/10/01	<0.0030		mg/L	
B542670	MAP	RPD [CWM896-01]	Dissolved Phosphorus (P)	2024/10/01	NC		%	20
B542749	AYE	Spiked Blank	Alkalinity (Total as CaCO3)	2024/09/30		97	%	80 - 120
B542749	AYE	Method Blank	Alkalinity (PP as CaCO3)	2024/09/30	<1.0		mg/L	
			Alkalinity (Total as CaCO3)	2024/09/30	<1.0		mg/L	
			Bicarbonate (HCO3)	2024/09/30	<1.0		mg/L	
			Carbonate (CO3)	2024/09/30	<1.0		mg/L	
			Hydroxide (OH)	2024/09/30	<1.0		mg/L	
B542749	AYE	RPD	Alkalinity (PP as CaCO3)	2024/09/30	NC		%	20
			Alkalinity (Total as CaCO3)	2024/09/30	0.28		%	20
			Bicarbonate (HCO3)	2024/09/30	0.28		%	20
			Carbonate (CO3)	2024/09/30	NC		%	20
			Hydroxide (OH)	2024/09/30	NC		%	20
B542750	AYE	Spiked Blank	pH	2024/09/30		100	%	97 - 103
B542750	AYE	RPD	pH	2024/09/30	0.26		%	N/A
B542751	AYE	Spiked Blank	Conductivity	2024/09/30		101	%	90 - 110
B542751	AYE	Method Blank	Conductivity	2024/09/30	<2.0		uS/cm	
B542751	AYE	RPD	Conductivity	2024/09/30	0.32		%	10
B542755	AYE	Spiked Blank	Alkalinity (Total as CaCO3)	2024/09/30		100	%	80 - 120
B542755	AYE	Method Blank	Alkalinity (PP as CaCO3)	2024/09/30	<1.0		mg/L	
			Alkalinity (Total as CaCO3)	2024/09/30	<1.0		mg/L	
			Bicarbonate (HCO3)	2024/09/30	<1.0		mg/L	
			Carbonate (CO3)	2024/09/30	<1.0		mg/L	
			Hydroxide (OH)	2024/09/30	<1.0		mg/L	
B542755	AYE	RPD	Alkalinity (PP as CaCO3)	2024/09/30	NC		%	20
			Alkalinity (Total as CaCO3)	2024/09/30	0.76		%	20
			Bicarbonate (HCO3)	2024/09/30	0.76		%	20
			Carbonate (CO3)	2024/09/30	NC		%	20
			Hydroxide (OH)	2024/09/30	NC		%	20
B542756	AYE	Spiked Blank	pH	2024/09/30		100	%	97 - 103
B542756	AYE	RPD	pH	2024/09/30	0.62		%	N/A
B542757	AYE	Spiked Blank	Conductivity	2024/09/30		105	%	90 - 110
B542757	AYE	Method Blank	Conductivity	2024/09/30	<2.0		uS/cm	
B542757	AYE	RPD	Conductivity	2024/09/30	0.27		%	10
B544228	YL7	Matrix Spike	Orthophosphate (P)	2024/09/30		92	%	80 - 120
B544228	YL7	Spiked Blank	Orthophosphate (P)	2024/09/30		98	%	80 - 120
B544228	YL7	Method Blank	Orthophosphate (P)	2024/09/30	<0.0030		mg/L	
B544228	YL7	RPD	Orthophosphate (P)	2024/09/30	NC		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B544234	YL7	Matrix Spike [CWM895-01]	Orthophosphate (P)	2024/09/30		100	%	80 - 120
B544234	YL7	Spiked Blank	Orthophosphate (P)	2024/09/30		101	%	80 - 120
B544234	YL7	Method Blank	Orthophosphate (P)	2024/09/30	<0.0030		mg/L	
B544234	YL7	RPD [CWM895-01]	Orthophosphate (P)	2024/09/30	NC		%	20
B544287	AFI	Matrix Spike [CWM903-07]	Total Ammonia (N)	2024/10/01		110	%	80 - 120
B544287	AFI	Spiked Blank	Total Ammonia (N)	2024/10/01		103	%	80 - 120
B544287	AFI	Method Blank	Total Ammonia (N)	2024/10/01	<0.015		mg/L	
B544287	AFI	RPD [CWM903-07]	Total Ammonia (N)	2024/10/01	NC		%	20
B544301	AFI	Matrix Spike [CWM900-07]	Total Ammonia (N)	2024/10/01		103	%	80 - 120
B544301	AFI	Spiked Blank	Total Ammonia (N)	2024/10/01		103	%	80 - 120
B544301	AFI	Method Blank	Total Ammonia (N)	2024/10/01	<0.015		mg/L	
B544301	AFI	RPD [CWM900-07]	Total Ammonia (N)	2024/10/01	0.87		%	20
B544790	KHU	Matrix Spike	Total Mercury (Hg)	2024/10/03		100	%	80 - 120
B544790	KHU	Spiked Blank	Total Mercury (Hg)	2024/10/03		102	%	80 - 120
B544790	KHU	Method Blank	Total Mercury (Hg)	2024/10/03	<0.0019		ug/L	
B544790	KHU	RPD	Total Mercury (Hg)	2024/10/03	6.5		%	20
B544843	KHU	Matrix Spike	Dissolved Mercury (Hg)	2024/10/01		100	%	80 - 120
B544843	KHU	Spiked Blank	Dissolved Mercury (Hg)	2024/10/01		104	%	80 - 120
B544843	KHU	Method Blank	Dissolved Mercury (Hg)	2024/10/01	<0.0019		ug/L	
B544843	KHU	RPD	Dissolved Mercury (Hg)	2024/10/01	NC		%	20
B544870	KHU	Matrix Spike	Dissolved Mercury (Hg)	2024/10/04		103	%	80 - 120
B544870	KHU	Spiked Blank	Dissolved Mercury (Hg)	2024/10/04		107	%	80 - 120
B544870	KHU	Method Blank	Dissolved Mercury (Hg)	2024/10/04	<0.0019		ug/L	
B544870	KHU	RPD	Dissolved Mercury (Hg)	2024/10/04	NC		%	20
B544968	KHU	Matrix Spike	Total Mercury (Hg)	2024/10/02		NC	%	80 - 120
B544968	KHU	Spiked Blank	Total Mercury (Hg)	2024/10/02		98	%	80 - 120
B544968	KHU	Method Blank	Total Mercury (Hg)	2024/10/02	<0.0019		ug/L	
B544968	KHU	RPD [CWM904-09]	Total Mercury (Hg)	2024/10/02	NC		%	20
B545229	JVM	Spiked Blank	Alkalinity (Total as CaCO3)	2024/10/02		104	%	80 - 120
B545229	JVM	Method Blank	Alkalinity (PP as CaCO3)	2024/10/02	<1.0		mg/L	
			Alkalinity (Total as CaCO3)	2024/10/02	<1.0		mg/L	
			Bicarbonate (HCO3)	2024/10/02	<1.0		mg/L	
			Carbonate (CO3)	2024/10/02	<1.0		mg/L	
			Hydroxide (OH)	2024/10/02	<1.0		mg/L	
B545229	JVM	RPD	Alkalinity (PP as CaCO3)	2024/10/02	NC		%	20
			Alkalinity (Total as CaCO3)	2024/10/02	0.096		%	20
			Bicarbonate (HCO3)	2024/10/02	0.096		%	20
			Carbonate (CO3)	2024/10/02	NC		%	20
			Hydroxide (OH)	2024/10/02	NC		%	20
B545236	JVM	Spiked Blank	pH	2024/10/02		100	%	97 - 103
B545236	JVM	RPD	pH	2024/10/02	1.1		%	N/A
B545241	JVM	Spiked Blank	Conductivity	2024/10/02		103	%	90 - 110
B545241	JVM	Method Blank	Conductivity	2024/10/02	<2.0		uS/cm	
B545241	JVM	RPD	Conductivity	2024/10/02	0.35		%	10
B545717	MDO	Matrix Spike	Dissolved Organic Carbon (C)	2024/10/01		NC	%	75 - 125
B545717	MDO	Spiked Blank	Dissolved Organic Carbon (C)	2024/10/01		107	%	80 - 120
B545717	MDO	Method Blank	Dissolved Organic Carbon (C)	2024/10/01	<0.50		mg/L	
B545717	MDO	RPD	Dissolved Organic Carbon (C)	2024/10/01	2.8		%	20
B546239	KHU	Matrix Spike [CWM904-10]	Dissolved Mercury (Hg)	2024/10/02		100	%	80 - 120
B546239	KHU	Spiked Blank	Dissolved Mercury (Hg)	2024/10/02		105	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
B546239	KHU	Method Blank	Dissolved Mercury (Hg)	2024/10/02	<0.0019		ug/L	
B546239	KHU	RPD [CWM899-10]	Dissolved Mercury (Hg)	2024/10/02	NC		%	20
B546470	JYU	Matrix Spike [CWM902-01]	Dissolved Organic Carbon (C)	2024/10/02		113	%	75 - 125
B546470	JYU	Spiked Blank	Dissolved Organic Carbon (C)	2024/10/02		112	%	80 - 120
B546470	JYU	Method Blank	Dissolved Organic Carbon (C)	2024/10/02	<0.50		mg/L	
B546470	JYU	RPD [CWM902-01]	Dissolved Organic Carbon (C)	2024/10/02	15		%	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

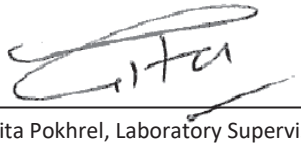
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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:



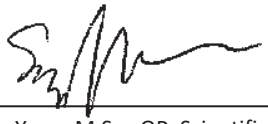
Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics



Gita Pokhrel, Laboratory Supervisor



Rahul Suryawanshi, Senior Analyst



Sandy Yuan, M.Sc., QP, Scientific Specialist



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CHAIN OF CUSTODY RECORD
ENV COC - 00013v5

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MCAL-2024-09-2446

Invoice information	Invoice to (requires report)	Report information (if differs from invoice)	Project information
Company:	Stantec	Company:	Quotation #:
Contact Name:	Dylan King	Contact Name:	P.O. #/ AFE#:
Street Address:	#300, 10220 103 Ave NW	Street Address:	Project #: 110773396
City:	Edmonton Prov: AB Postal Code: T5J0K4	City: Prov: Postal Code:	Site #:
Phone:	780 969 2223	Phone:	Site Location:
Email:	dylan.king@stantec.com	Email:	Site Location Province: AB
Copies:		Copies:	Sampled By: TH

Regulatory Criteria
AT1 | CCME | Drinking Water - Canada | Drinking Water - Manitoba
Saskatchewan | Drinking Water - Alberta | Other

SAMPLES MUST BE KEPT COOL (<10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

Regular Turnaround Time (TAT)
5 to 7 Day | 10 Day

Rush Turnaround Time (TAT) Surcharges apply
Same Day | 1 Day | 2 Day | 3 Day | 4 Day
Date Required: YY MM DD
Comments

	Sample Identification	Date Sampled YY	MM	DD	Time (24hr) HH	MM	Matrix	FIELD FILTERED	FIELD PRESERVED	LAB FILTRATION REQUIRED	BTEX F1	VOCs	BTEX F1-F2	BTEX F1-F4	Routine water	Regulated metals - total	Regulated metals - dissolved	Mercury - total	Mercury - dissolved	Chemistry	Sieve	Texture (% sand, silt, clay)	Basic class B landfill	dissolved phosphorus	phosphate	ammonia	bacteriological *	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	
1	RMW16-18-5	24	09	26	09	57	Water			X			X		X		X	X	X	X	X			X	X	X	X	11		
2	RMW16-18-13				10	04				X			X		X		X	X	X	X	X			X	X	X	X	11		
3	MW16-22-26				12	06				X			X		X		X	X	✓	✓	✓			X	X	X	X	11		
4	RMW16-19-10				13	32				X			X		X		X	X	X	✓	X			X	X	X	X	11		
5	RMW16-19-19				13	11				X			X		X		X	X	X	X	X			X	X	X	X	11		
6	RMW16-23-7				15	29				X			X		X		X	✓	X	X	X			X	✓	X	X	11		
7	RMW16-23-14				16	12				X			X		X		X	X	X	X	X			✓	X	X	✓	11		
8	RMW16-23-32				15	59				X			✓		X		X	X	X	X	X			X	X	X	X	11		
9	SR24-10				16	18				✓			X		X		X	X	X	X	X			X	X	X	X	11		
10	SR24-11				16	22				X			X		X		X	X	X	X	X			X	X	X	X	11		
11	SR24-12												X		†		X	X	X	X	X			X	X	✓	X	11		trip blank
12																														

*UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS AND CONDITIONS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS OR BY CALLING THE LABORATORY LISTED ABOVE TO OBTAIN A COPY

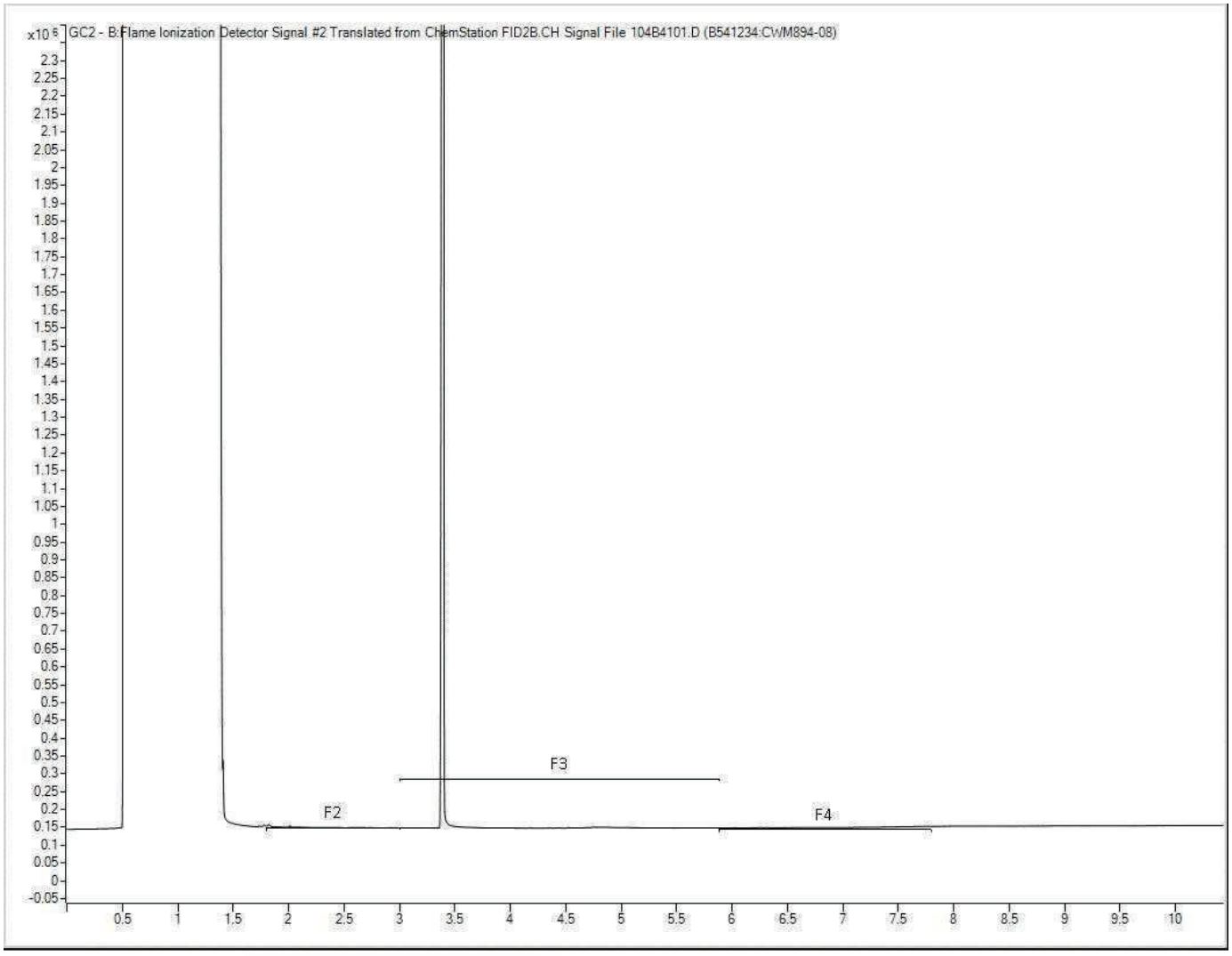
LAB USE ONLY	Yes	No	°C	
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Seal intact		✓		
Cooling media present	✓		9.8	8.6	7.2
			1	2	3

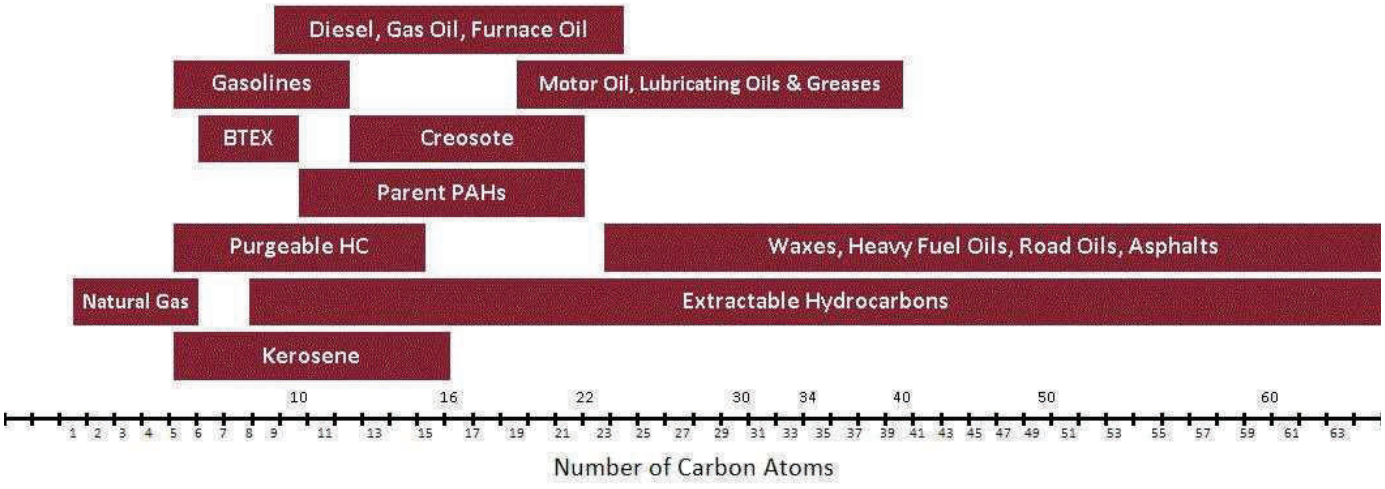
LAB USE ONLY	Yes	No	°C			
Seal present		✓				
Seal intact		✓				
Cooling media present	✓		0.6	1.2	1.2
			1	2	3

LAB USE ONLY	Yes	No	°C				Temperature reading by:
Seal present							
Seal intact							
Cooling media present				1	2	3	

Relinquished by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM	Received by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM	Special Instructions
1 Taylor Farrell	2024	09	26			1 NAUDEEP GILL	2024	09	26	18	45	* total coliforms fecal coliforms, e. coli, heterotrophic plate count
2						2						

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

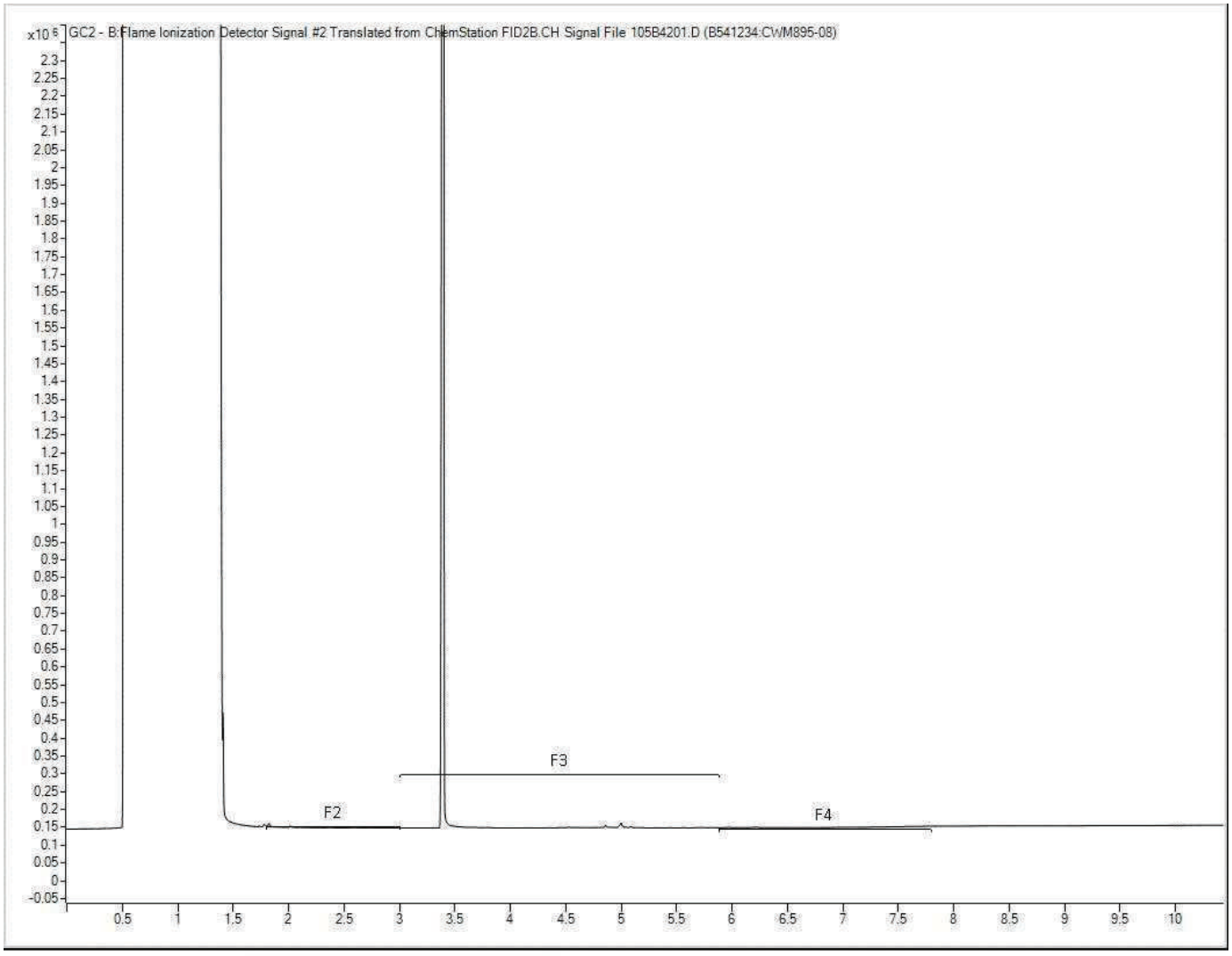


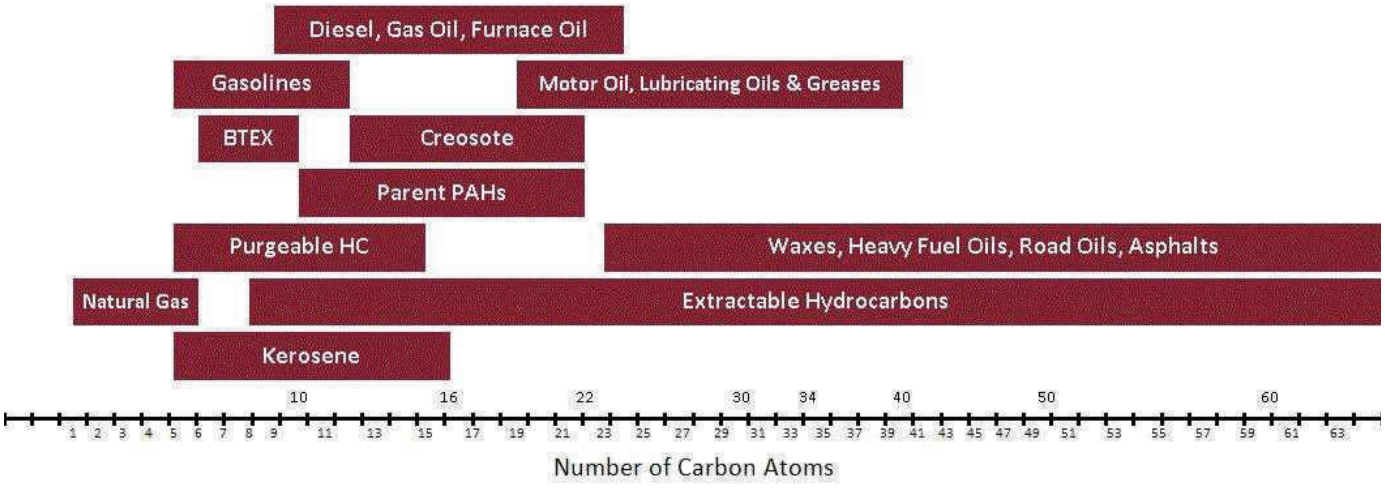


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Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

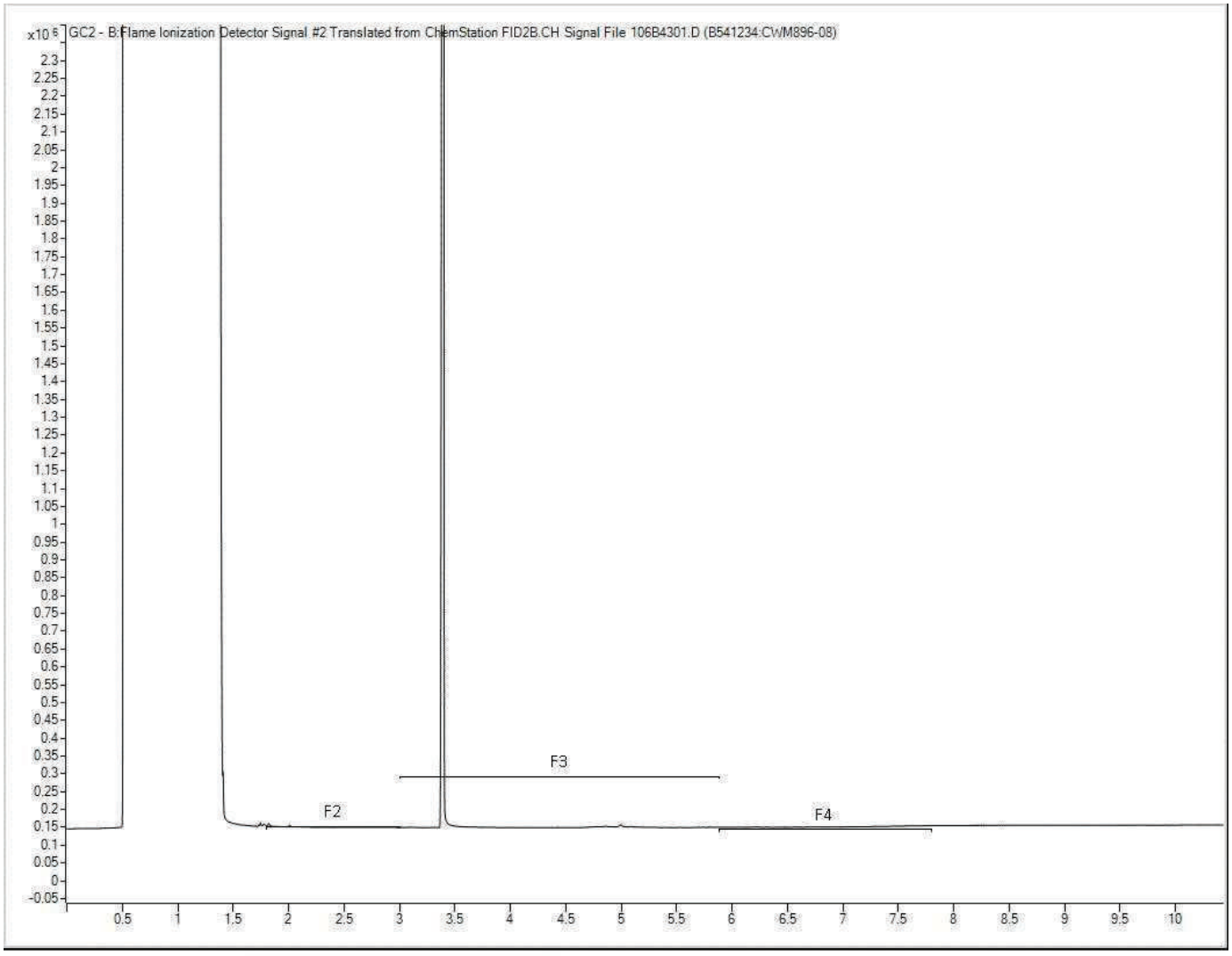


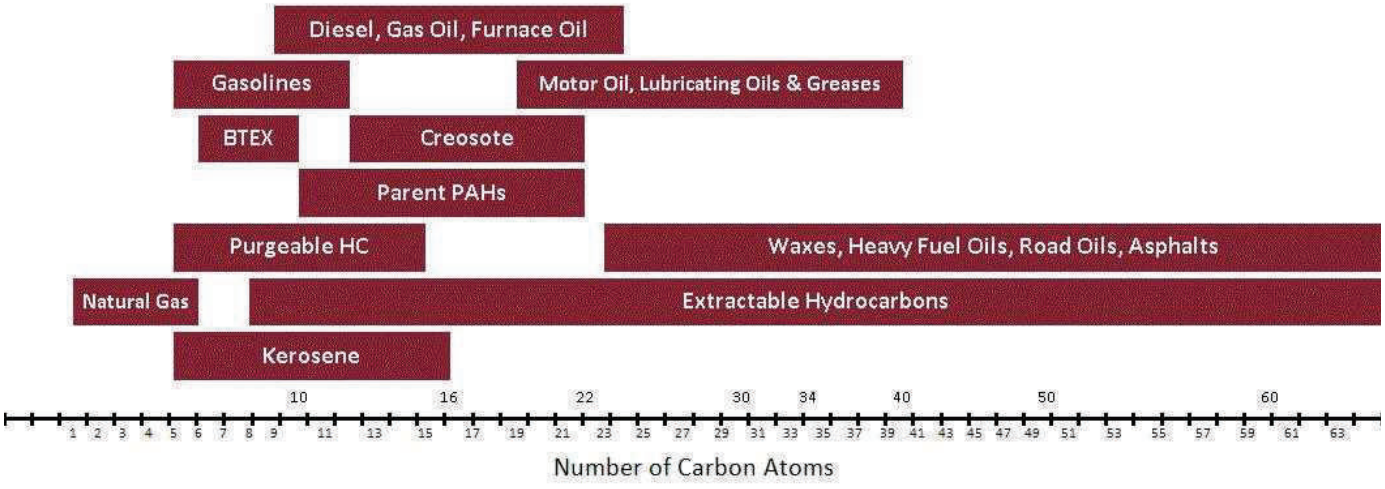


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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

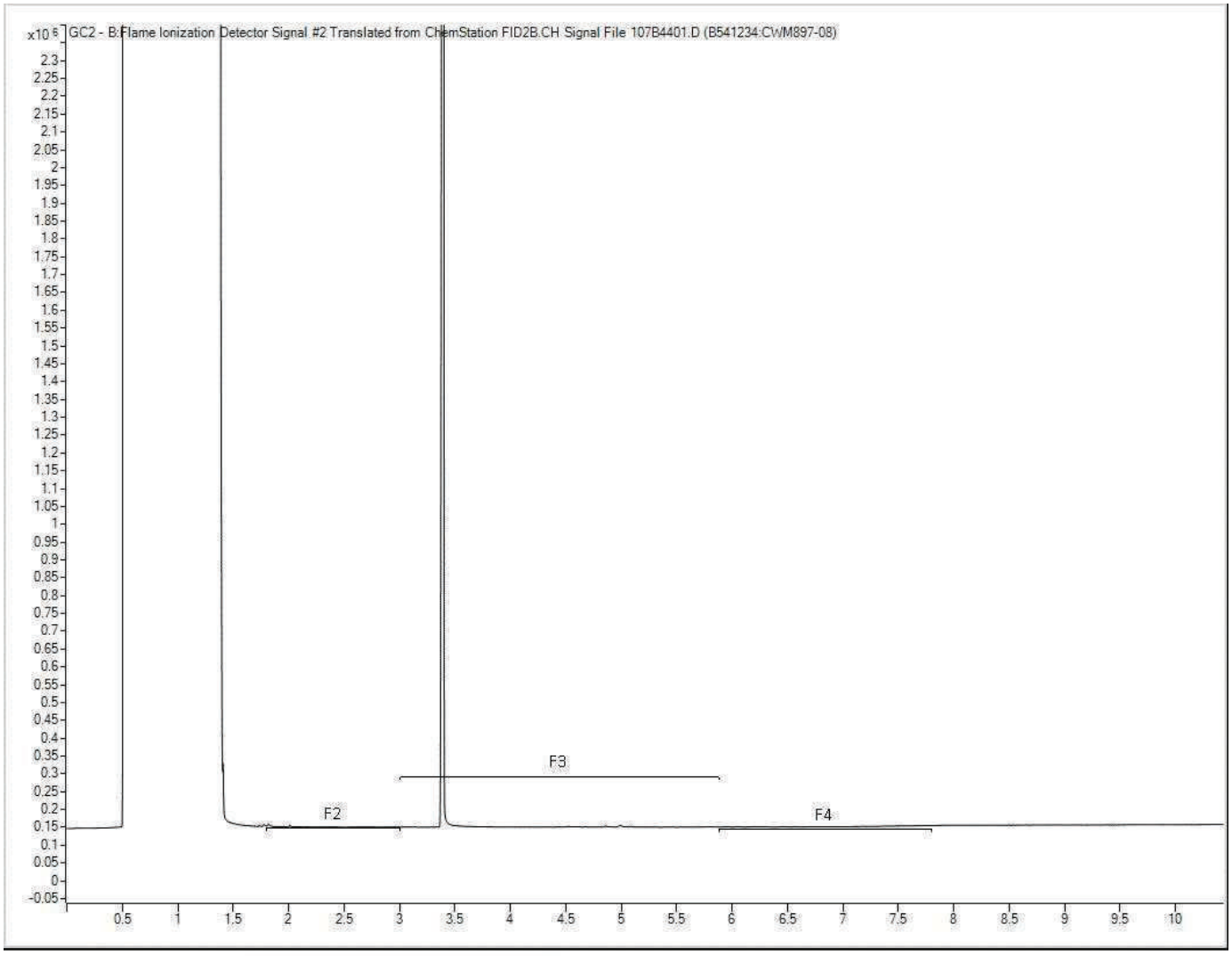


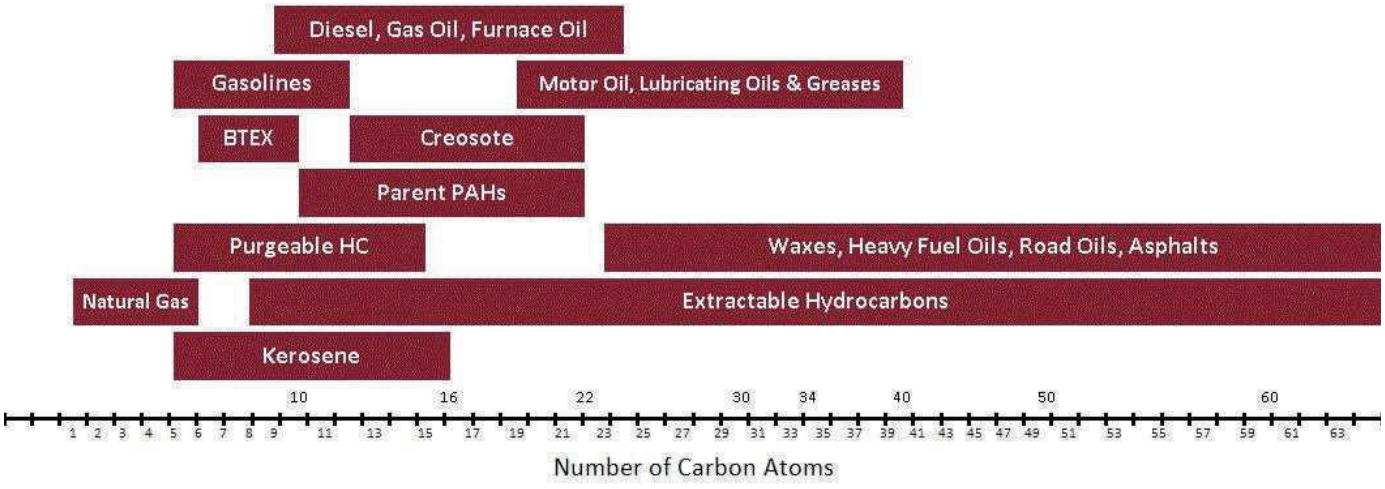


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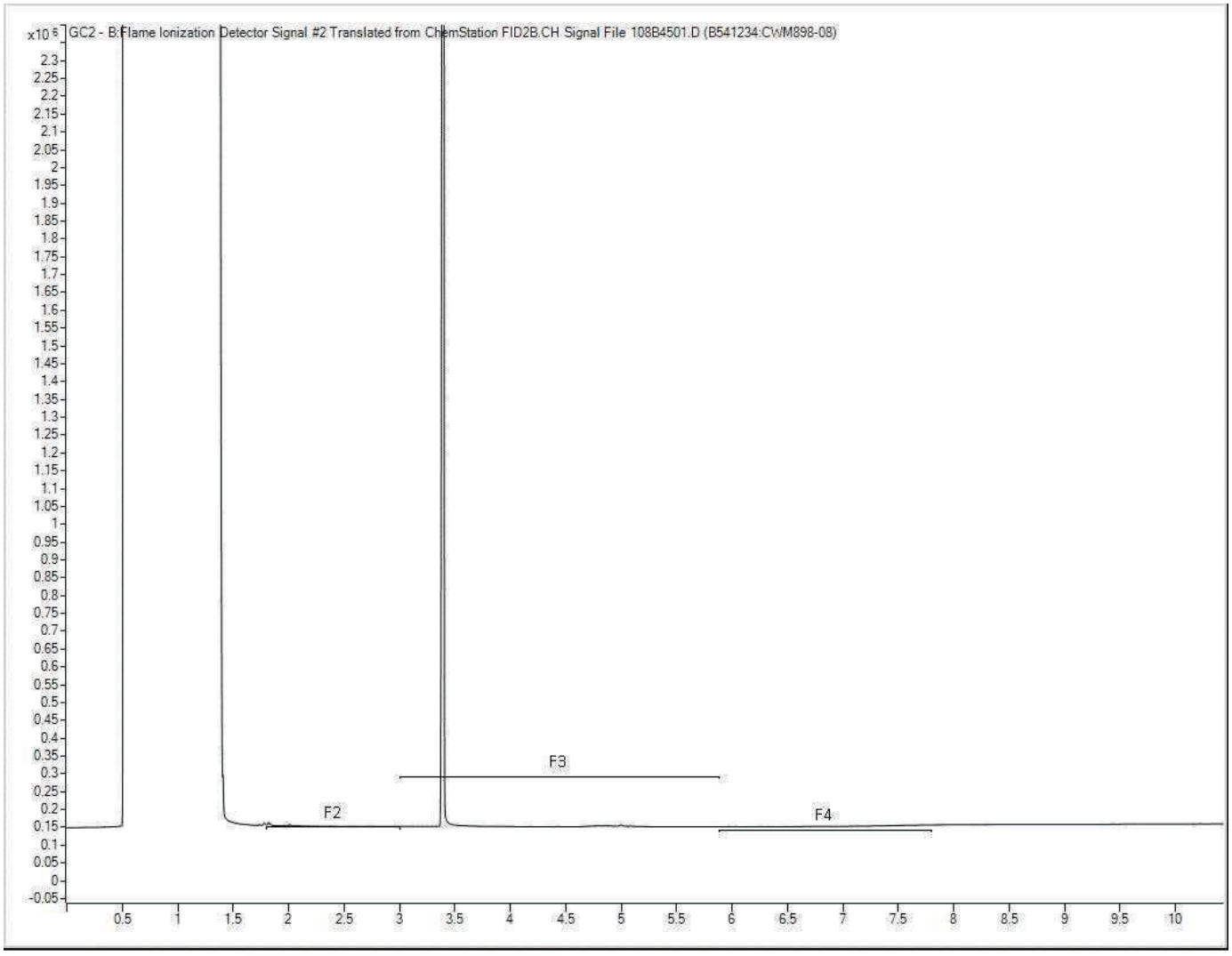


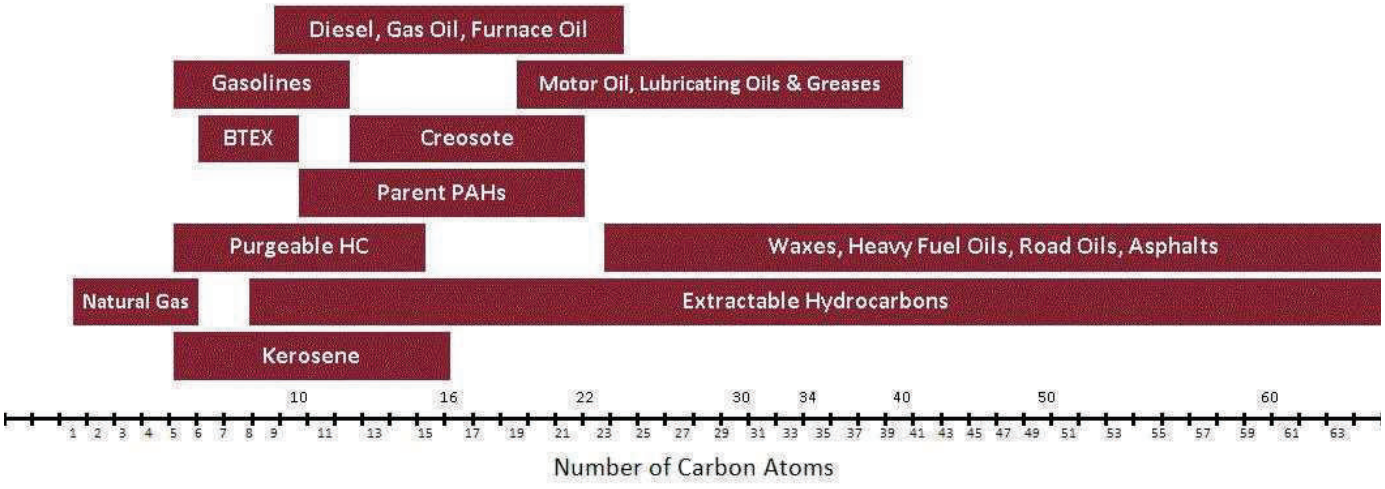


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Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

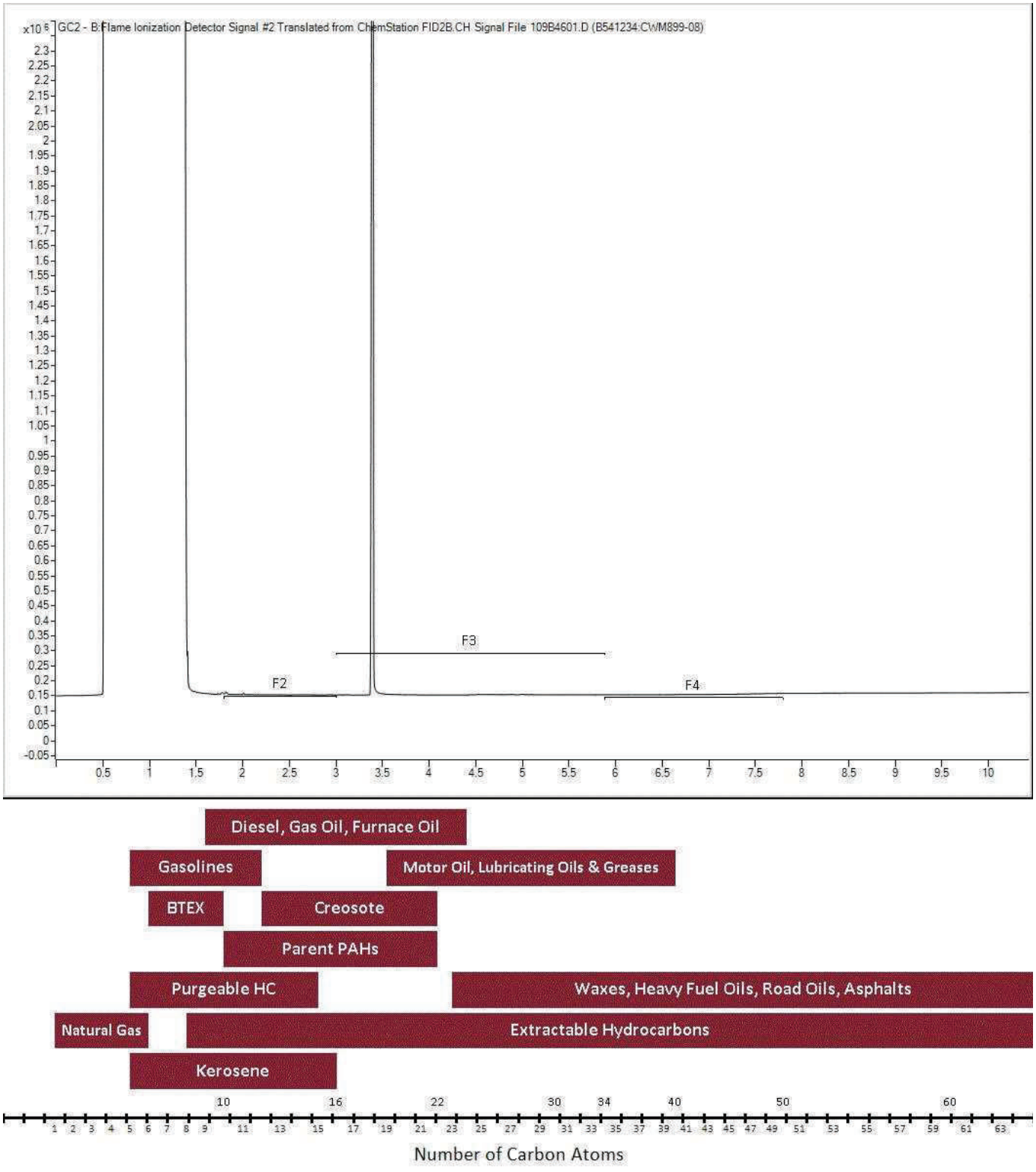




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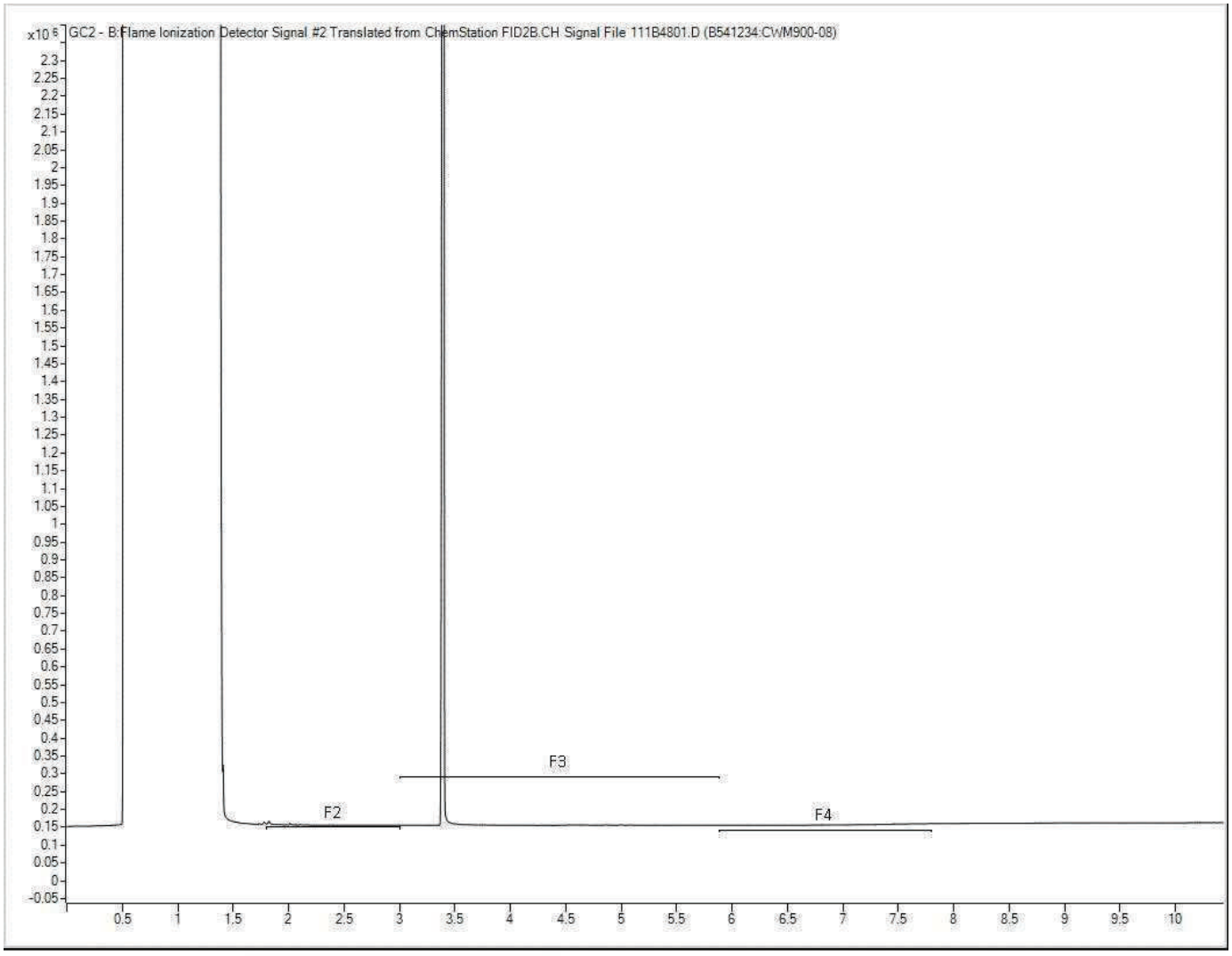
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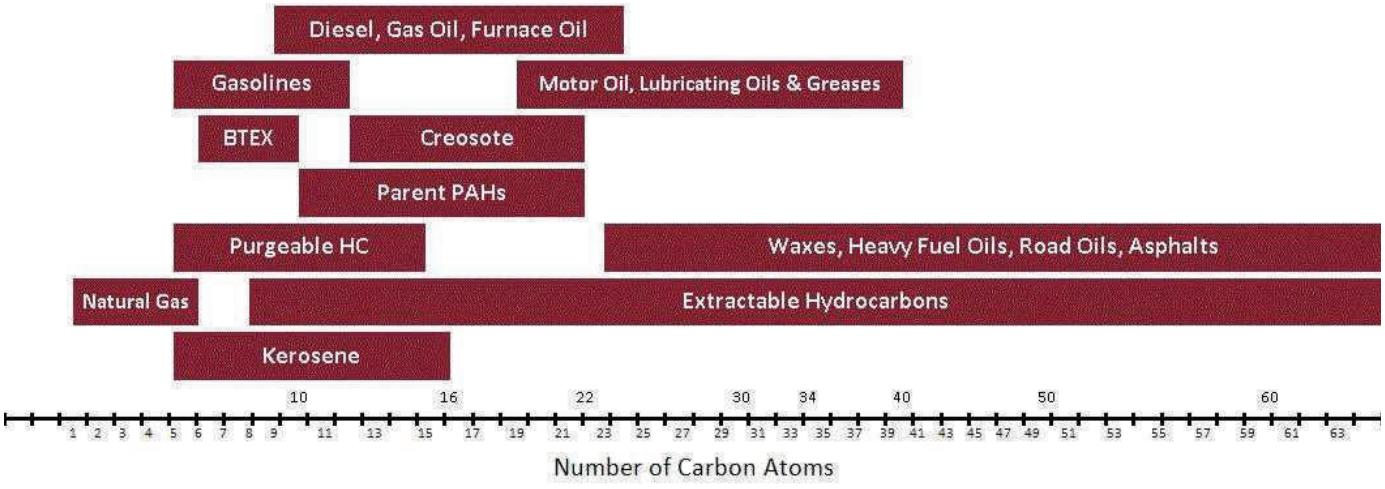
CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

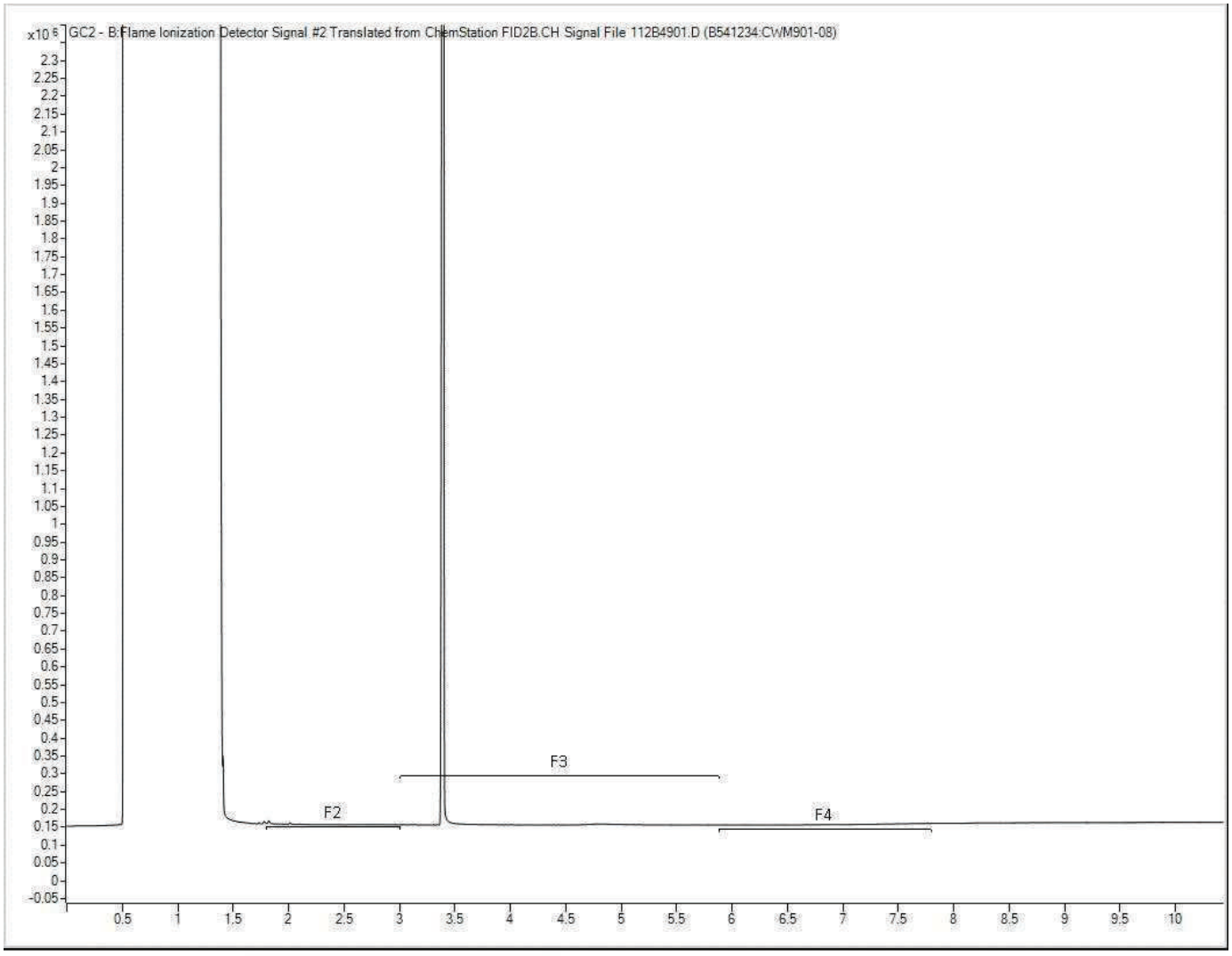


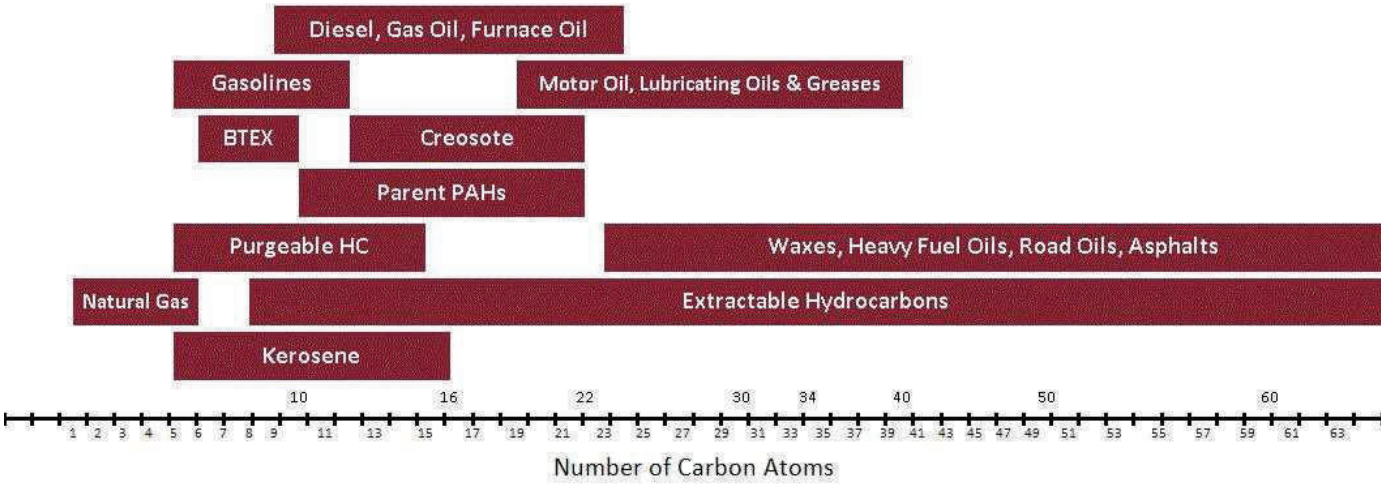


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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

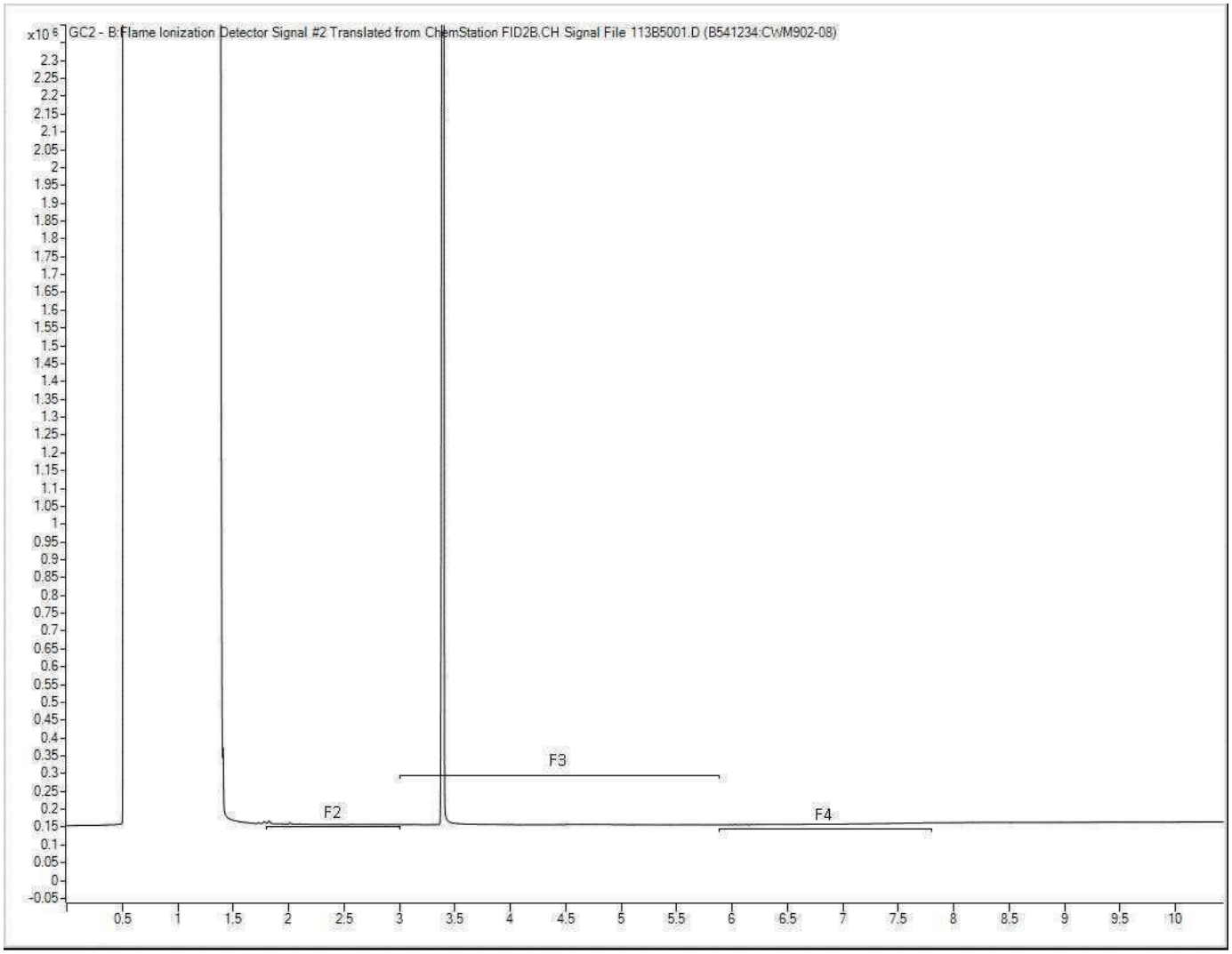


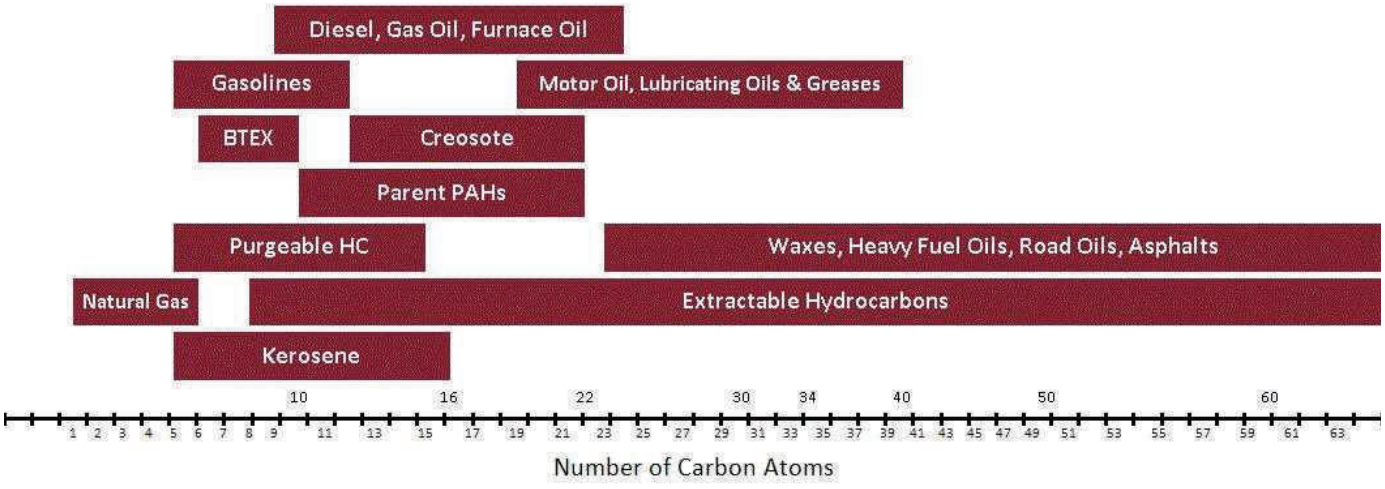


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CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





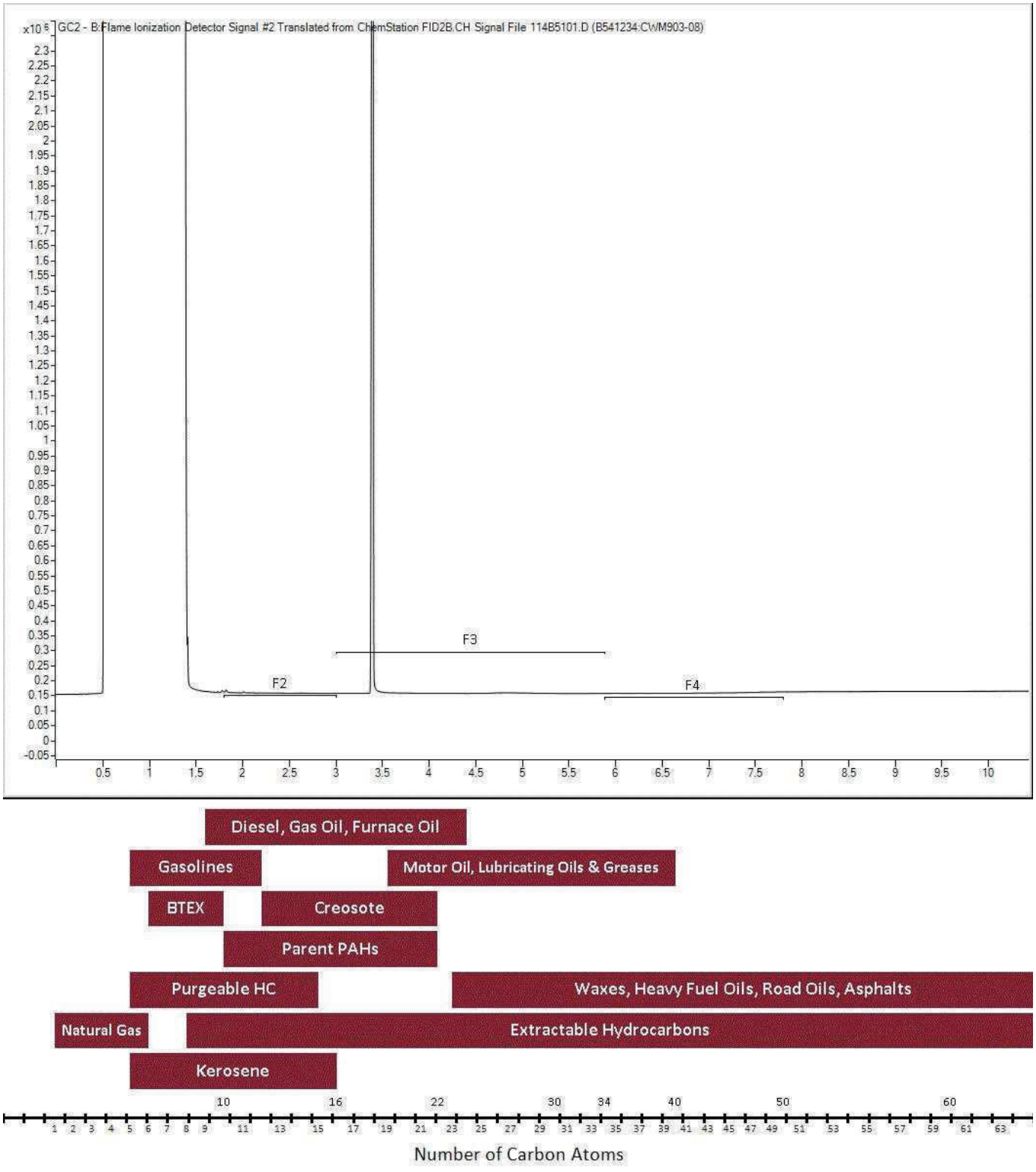
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Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

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Report Date: 2024/10/04
Bureau Veritas Sample: CWM903

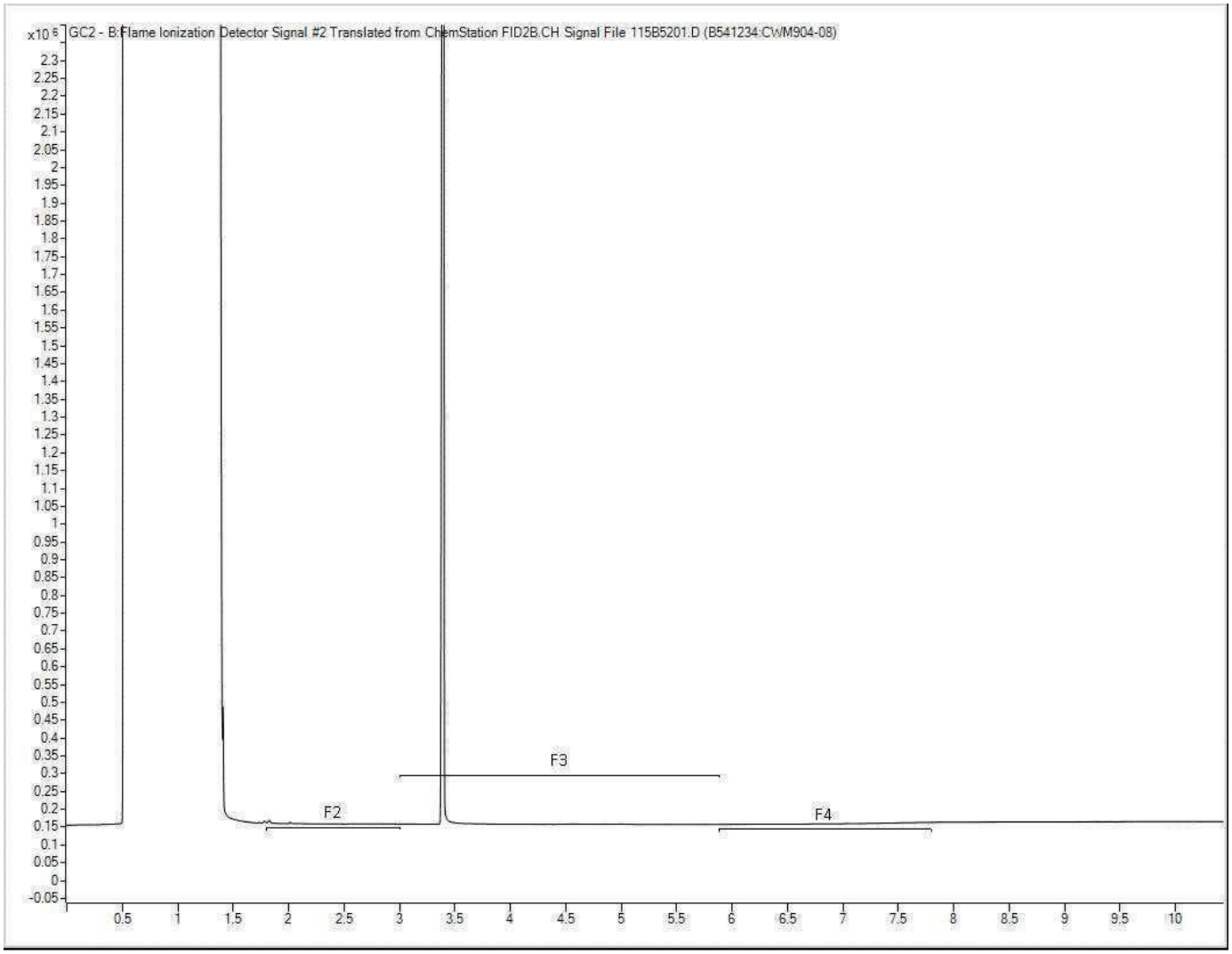
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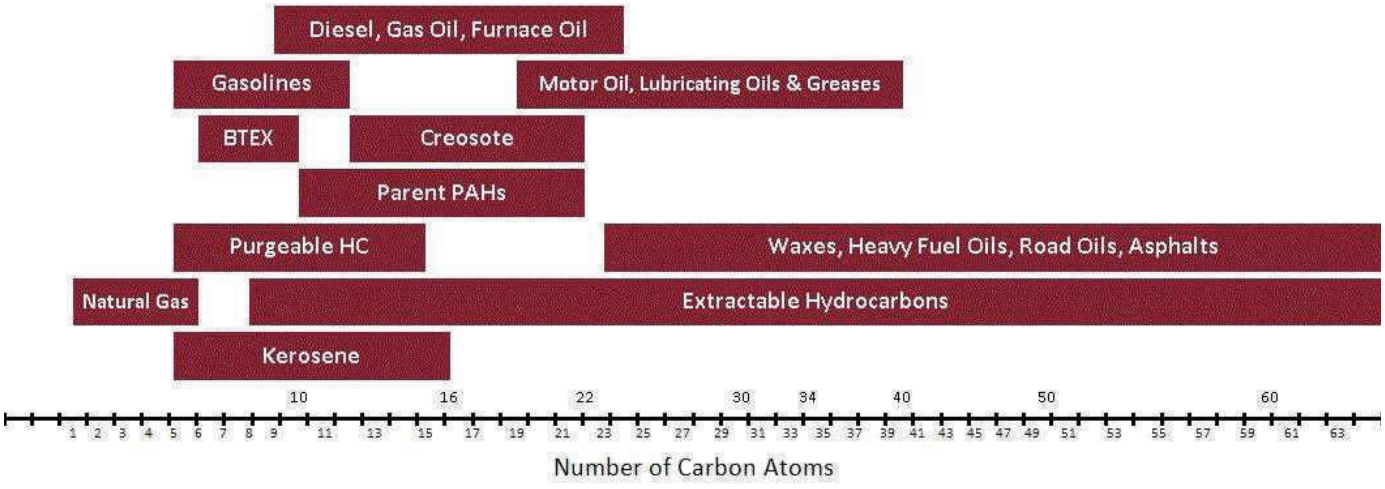
CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram





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Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

B.3
Air Quality
Figures and Tables

Table B.3.1 Summary Statistics of the Measured 1-Hour Average Concentrations of Nitrogen Dioxide at the Springbank Air Quality Monitoring Station and Regional Stations – July 2024 to June 2025

Statistic	Nitrogen Dioxide (NO_2) Concentrations (ppb) [a]						
	SR1	CRAZ					
	AQMS	Airdrie	Calgary-Central (Inglewood)	Calgary-Northwest (Varsity)	Calgary-Southeast	AAAQO [b]	CAAQS [c]
Minimum (Non-Zero)	1.00	0.100	0.400	0.00100	0.100	159	
Annual Average of 1-hour Averages	4.37	5.95	13.8	8.60	12.1	24	17
Median	3.00	3.60	9.60	5.58	8.50	159	—
Maximum	38.0	53.5	72.3	60.0	62.1	159	—
Standard Deviation	4.56	6.86	11.9	9.04	11.3		
98th Percentile of the D1HM	29.0	41.5	51.8	48.4	52.5	—	60
Number of Observations	8,306	8,295	8,270	8,221	8,210		
Expected Observations [d]	8,760	8,760	8,760	8,760	8,760		
% Complete [e]	94.8%	94.7%	94.4%	93.8%	93.7%		
Hours above 1-h Average AAAQO	0	0	0	0	0		

Notes:

[a] ppb is the volume of the substance (parts) per billion volumes of air.

[b] AAAQO (AEPA, 2024)).

[c] CAAQS (CCME, 2025a) for 2020.

[d] Values are based on the number of hours the station was deployed during the year.

[e] Completeness is calculated based on the number of valid observations over the deployment period.

Figure B.3.1 Timeseries of the 1-hour Average Nitrogen Dioxide Concentrations Measured at the Springbank Air Quality Monitoring Station (AQMS) – July 2024 to June 2025

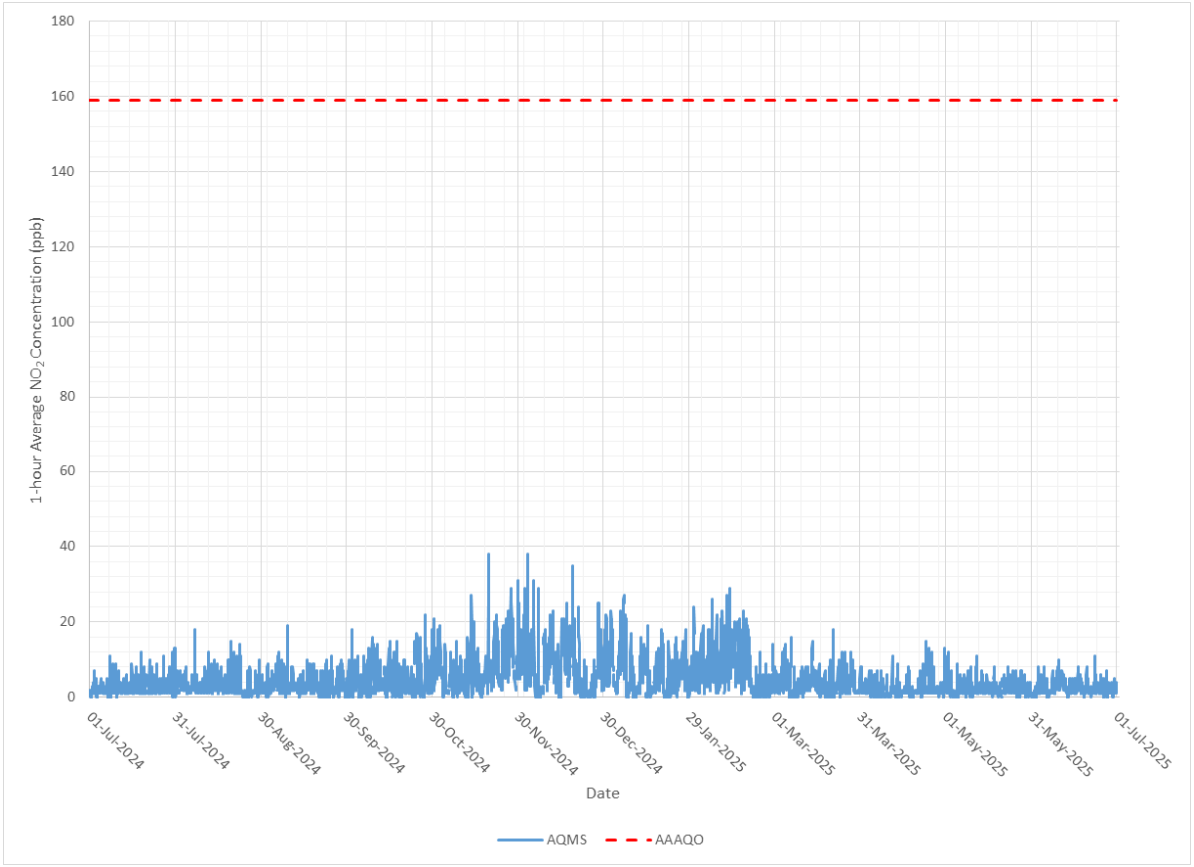


Figure B.3.2 Timeseries of the 1-hour Average Nitrogen Dioxide Concentrations Measured at the Springbank Air Quality Monitoring Station (AQMS) and Regional Air Quality Monitoring Stations – July 2024 to June 2025

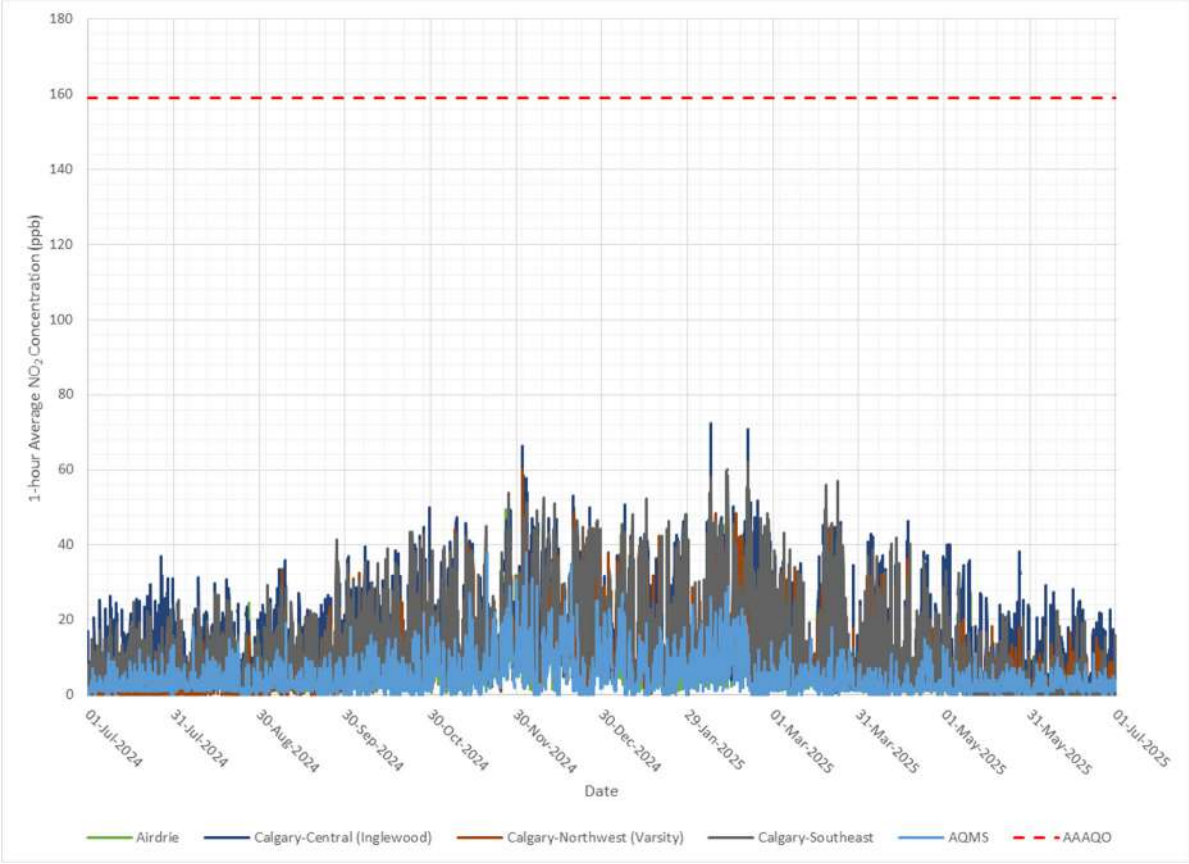


Figure B.3.3 Box-Whisker Plot of the 1-hour Average Nitrogen Dioxide Concentrations Measured at the Springbank Air Quality Monitoring Station (AQMS) and Regional Air Quality Monitoring Stations – July 2024 to June 2025

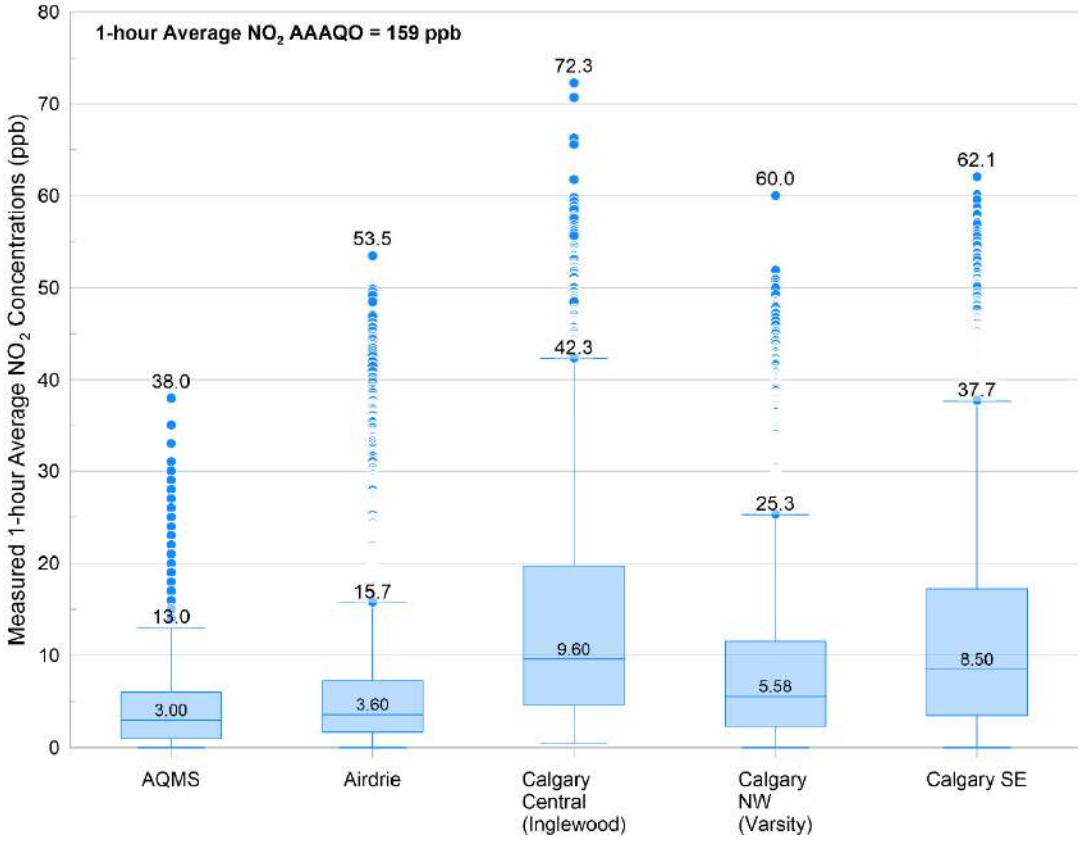


Table B.3.2 Summary Statistics of the Measured 1-Hour Average Concentrations of Fine Particulate Matter at the Springbank Project Air Quality Monitoring Stations – July 2024 to June 2025

Statistic	Fine Particulate Matter ($PM_{2.5}$) Concentrations ($\mu g/m^3$) [a]					
	SR1 Stations					
	Site 1	Site 2	Site 3	Calaway Park [b]	AQMS	AAAQG [c,d]
Minimum (Non-Zero)	1.00	1.00	1.00	1.00	1.00	80
Annual Average of 1-hour Averages	6.76	5.80	6.64	8.01	6.86	—
Median	4.00	4.00	4.00	5.00	4.00	80
Maximum	**113**	**104**	**167**	**212**	**372**	80
Standard Deviation	8.90	8.22	9.08	12.5	11.6	—
Number of Observations	8,346	8,033	8,211	3,364	8,702	
Expected Observations [e]	8,760	8,760	8,760	3,696	8,760	
% Complete [f]	95.3%	91.7%	93.7%	91.0% (38.4%)	99.3%	
Hours above 1-h Average AAAQG	13	10	22	14	26	

Notes:

[a] $\mu g/m^3$ is the mass of the substance in micrograms per cubic meter of air.

[b] Calaway Park was operational from May 2, 2024, to October 15, 2024, and re-deployed on May 15, 20245 and is planned to be decommissioned in October 2025 at the end of the park's operational season.

[c] AAAQG (AEPA, 2024), **BOLD** values indicate measured concentrations above the AAAQG.

[d] Guideline values are used for planning, management, general performance indicators, and to assess local concerns but not for regulatory enforcement.

[e] Values are based on the number of hours the station was deployed during the year.

[f] Completeness is calculated based on the number of valid observations over the deployment period. Values in brackets are the annual completeness. The annual average for the Calaway Park Station is not valid as the station was removed during the off-season (October – April) during July 2024 to June 2025 Period.

Figure B.3.4 Timeseries of the 1-hour Average Fine Particulate Matter Concentrations Measured at the Springbank Project Air Quality Monitoring Stations – July 2024 to June 2025

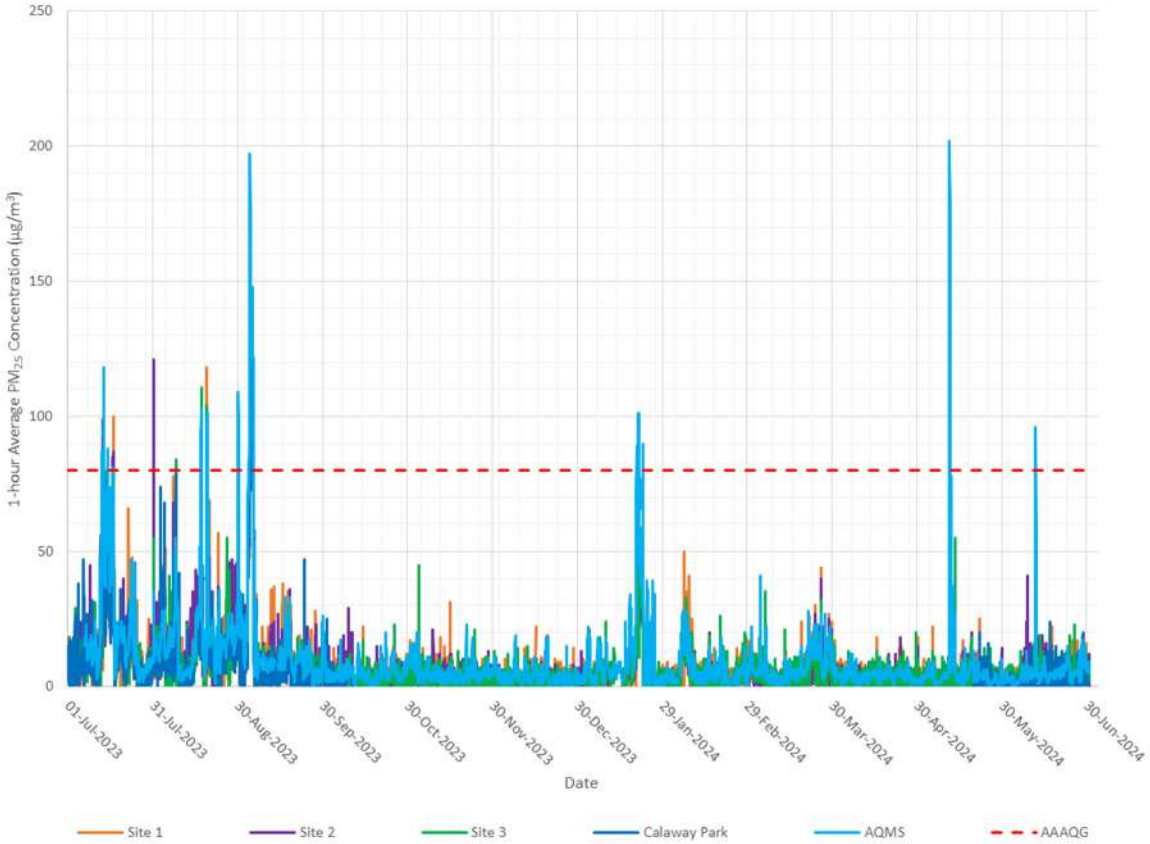


Table B.3.3 Summary Statistics of the Measured 1-Hour Average Concentrations of Fine Particulate Matter at the Regional AEPA and CRAZ Air Quality Monitoring Stations – July 2024 to June 2025

Statistic	Fine Particulate Matter ($PM_{2.5}$) Concentrations (µg/m³) [a]				
	CRAZ				AAAQG [b,c]
	Airdrie	Calgary-Central (Inglewood)	Calgary-Northwest (Varsity)	Calgary-Southeast	
Minimum (Non-Zero)	0.0230	0.273	0.0940	0.121	80
Annual Average of 1-hour Averages	7.68	11.7	9.22	9.91	—
Median	4.57	8.16	5.87	6.70	80
Maximum	**159**	**526**	**557**	**418**	80
Standard Deviation	10.4	15.3	14.5	13.4	—
Number of Observations	7,674	8,712	8,716	8,738	
Expected Observations [d]	8,760	8,760	8,760	8,760	
% Complete [e]	87.6%	99.5%	99.5%	99.7%	
Hours above 1-h Average AAAQG	23	50	35	41	

Notes:

[a] µg/m³ is the mass of the substance in micrograms per cubic meter of air.

[b] AAAQG (AEPA, 2024), **BOLD** values indicate measured concentrations above the AAAQG.

[c] Guideline values are used for planning, management, general performance indicators, and to assess local concerns but not for regulatory enforcement.

[d] Values are based on the number of hours the station was deployed during the year.

[e] Completeness is calculated based on the number of valid observations over the deployment period.

Figure B.3.5 Timeseries of the 1-hour Average Fine Particulate Matter Concentrations Measured at the Springbank Project Air Quality Monitoring Stations and the Regional Air Quality Monitoring Stations – July 2024 to June 2025

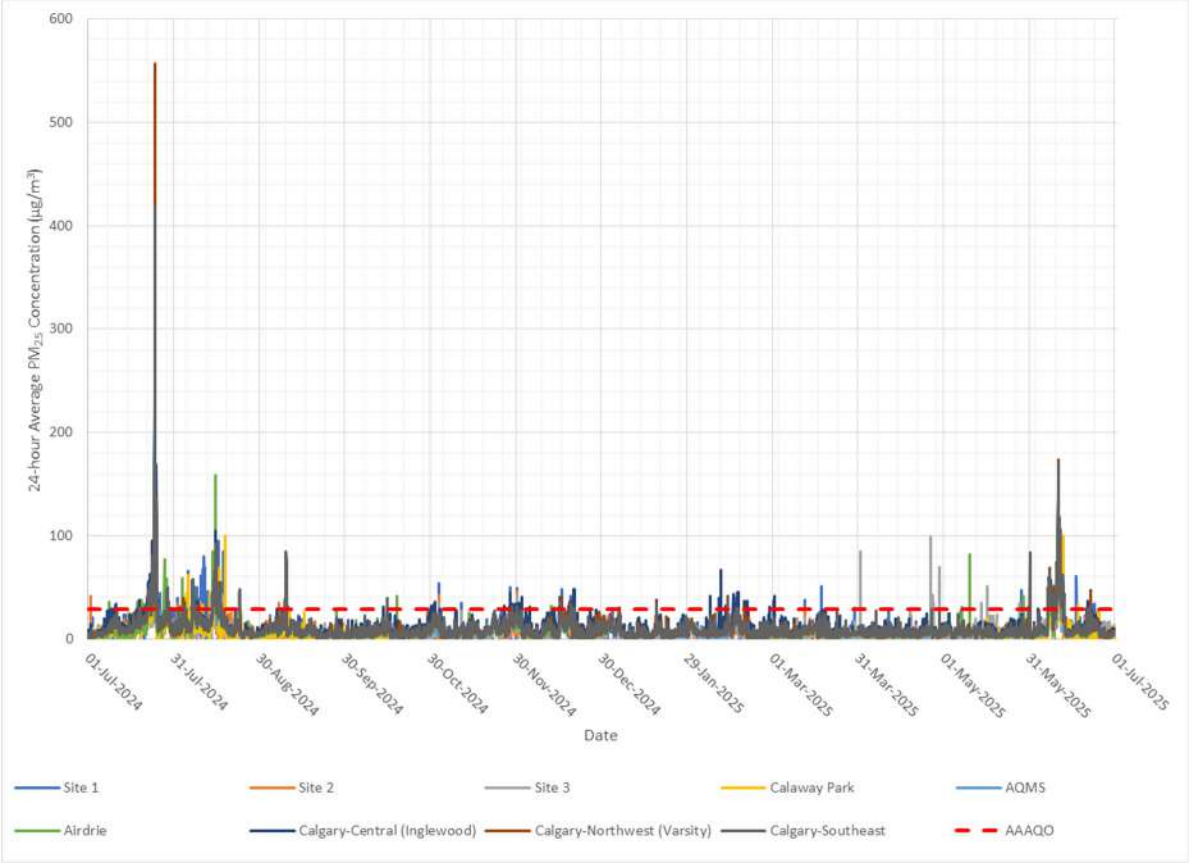


Figure B.3.6 Box-Whisker Plot of the 1-hour Average Fine Particulate Matter Concentrations Measured the Springbank Project Air Quality Monitoring Stations and the Regional Air Quality Monitoring Stations

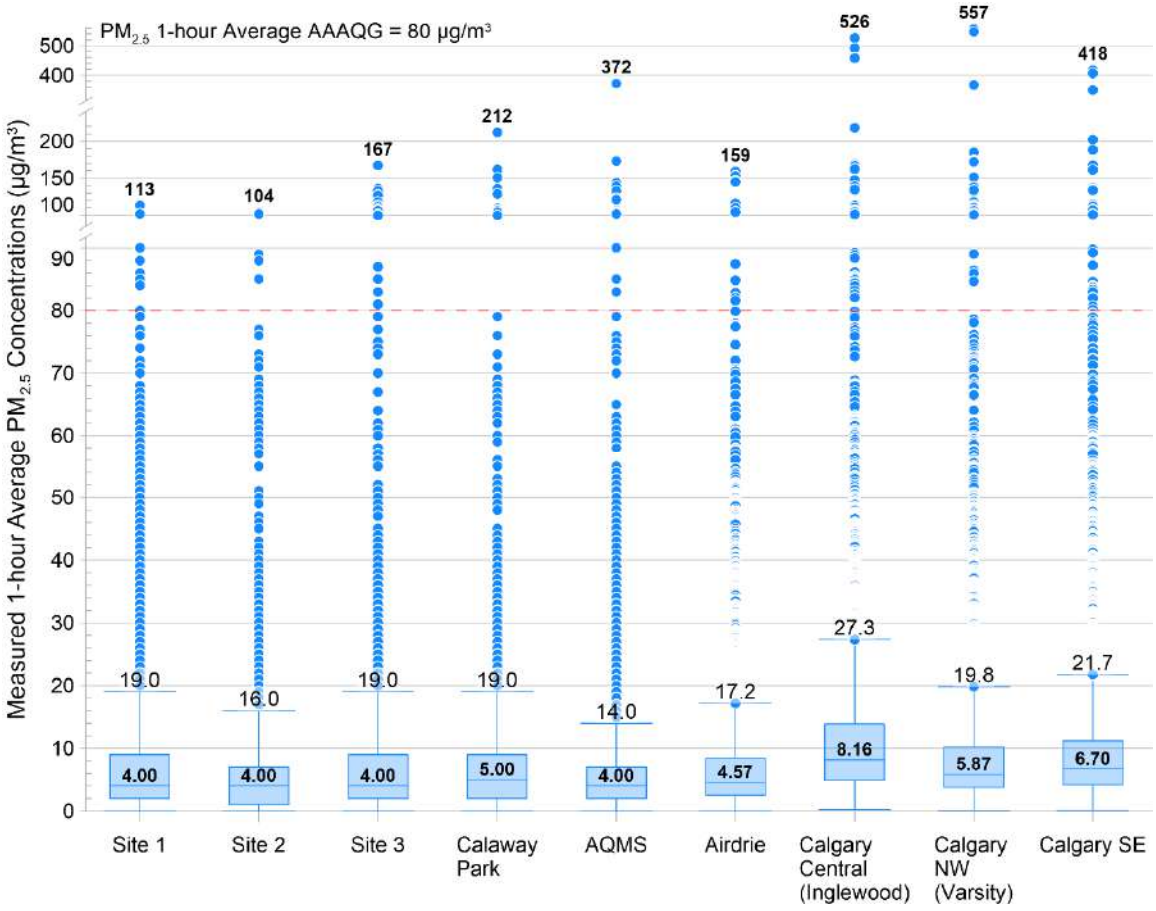


Table B.3.4 Summary Statistics of the Measured 24-Hour Average Concentrations of Fine Particulate Matter at the Springbank Project Air Quality Monitoring Stations – July 2023 – June 2024

Statistic	Fine Particulate Matter ($PM_{2.5}$) Concentrations ($\mu g/m^3$) [a]						
	SR1 Stations						
	Site 1	Site 2	Site 3	Calaway Park [b]	AQMS	AAAQO [c]	CAAQS [d]
Minimum (Non-Zero)	0.833	0.625	1.13	0.545	0.167	29	—
Annual Average of 24-hour Averages	6.75	5.71	6.58	8.15	6.83	—	8.8
Median	4.38	3.46	4.43	4.57	4.04	29	—
Maximum	**64.7**	**66.7**	**80.3**	**74.2**	**117**	29	—
Standard Deviation	6.99	6.85	7.36	10.6	9.68	—	—
98th Percentile 24-hour Average	26.1	25.3	25.6	*34.9*	*32.5*	—	27
Number of Observations	361	341	346	137	363		
Expected Observations [e]	365	365	365	167	365		
% Complete [f]	98.9%	93.4%	94.8%	82.0% (37.5%)	99.5%		
Days above 24-h Average AAAQO	5	4	5	6	12		

Notes:

[a] $\mu g/m^3$ is the mass of the substance in micrograms per cubic meter of air.

[b] Calaway Park was operational from May 3, 2024, to October 15, 2024, and re-deployed on May 15, 20245 and is planned to be decommissioned in October 2025 at the end of the park's operational season.

[c] AAAQO (AEPA, 2024), **BOLD** values indicate measured concentrations above the AAAQO.

[d] CAAQS (CCME, 2025a) for 2020. *Italicized* values indicate measured concentrations are above the CAAQS.

[e] Values are based on the number of hours the station was deployed during the year.

[f] Completeness is calculated based on the number of valid observations over the deployment period. Values in brackets are the annual completeness. The annual average for the Calaway Park Station is not valid as the station was removed during the off-season (October – April) during July 2024 to June 2025 Period.

Figure B.3.7 Timeseries of the 24-hour Average Fine Particulate Matter Concentrations Measured at the Springbank Project Air Quality Monitoring Stations – July 2024 to June 2025

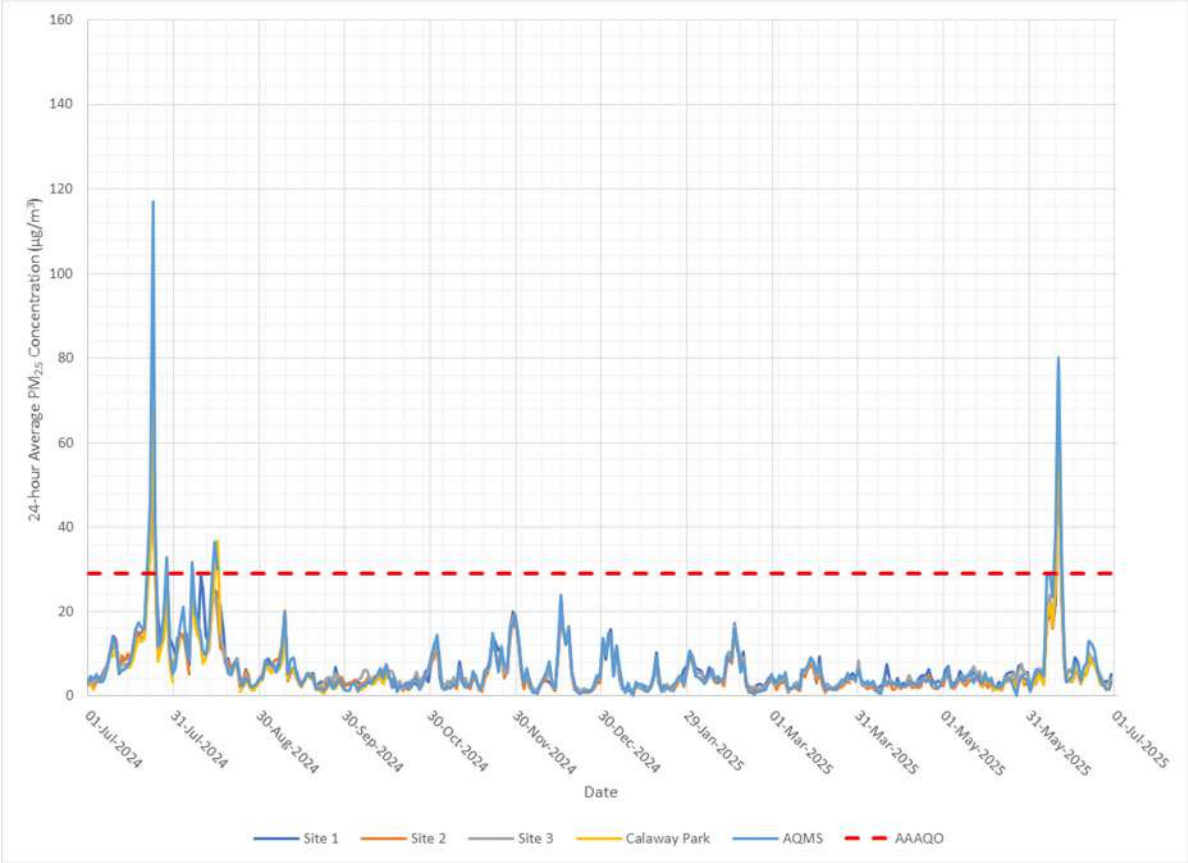


Table B.3.5 Summary Statistics of the Measured 24-Hour Average Concentrations of Fine Particulate Matter at the Regional AEPA and CRAZ Air Quality Monitoring Stations – July 2023 – June 2024

Statistic	Fine Particulate Matter ($PM_{2.5}$) Concentrations (µg/m³) [a]					
	CRAZ				AAAQO [c]	CAAQS [d]
	Airdrie	Calgary-Central (Inglewood)	Calgary-Northwest (Varsity)	Calgary-Southeast		
Minimum (Non-Zero)	0.383	0.922	0.809	1.12	29	—
Annual Average of 24-hour Averages	*7.66*	*11.7*	*9.22*	*9.90*	—	8.8
Median	4.97	8.60	6.04	7.03	29	—
Maximum	**84.0**	**142**	**134**	**120**	29	—
Standard Deviation	8.97	12.1	11.4	11.0	—	—
98th Percentile 24-hour Average	*38.0*	*45.6*	*40.9*	*41.3*	—	27
Number of Observations [e]	320	364	364	365		
Expected Observations	365	365	365	365		
% Complete [f]	87.7%	99.7%	99.7%	100.0%		
Days above 24-h Average AAAQO	13	16	15	15		

Notes:

[a] µg/m³ is the mass of the substance in micrograms per cubic meter of air.

[b] AAAQO (AEPA, 2024), **BOLD** values indicate measured concentrations above the AAAQO.

[c] CAAQS (CCME, 2025a) for 2020. *Italicized* values indicate measured concentrations are above the CAAQS.

[d] Values are based on the number of hours the station was deployed during the year.

[e] Completeness is calculated based on the number of valid observations over the deployment period.

Figure B.3.8 Timeseries of the 24-hour Average Fine Particulate Matter Concentrations Measured at the Springbank Project Air Quality Monitoring Stations and the Regional Air Quality Monitoring Stations – July 2024 to June 2025

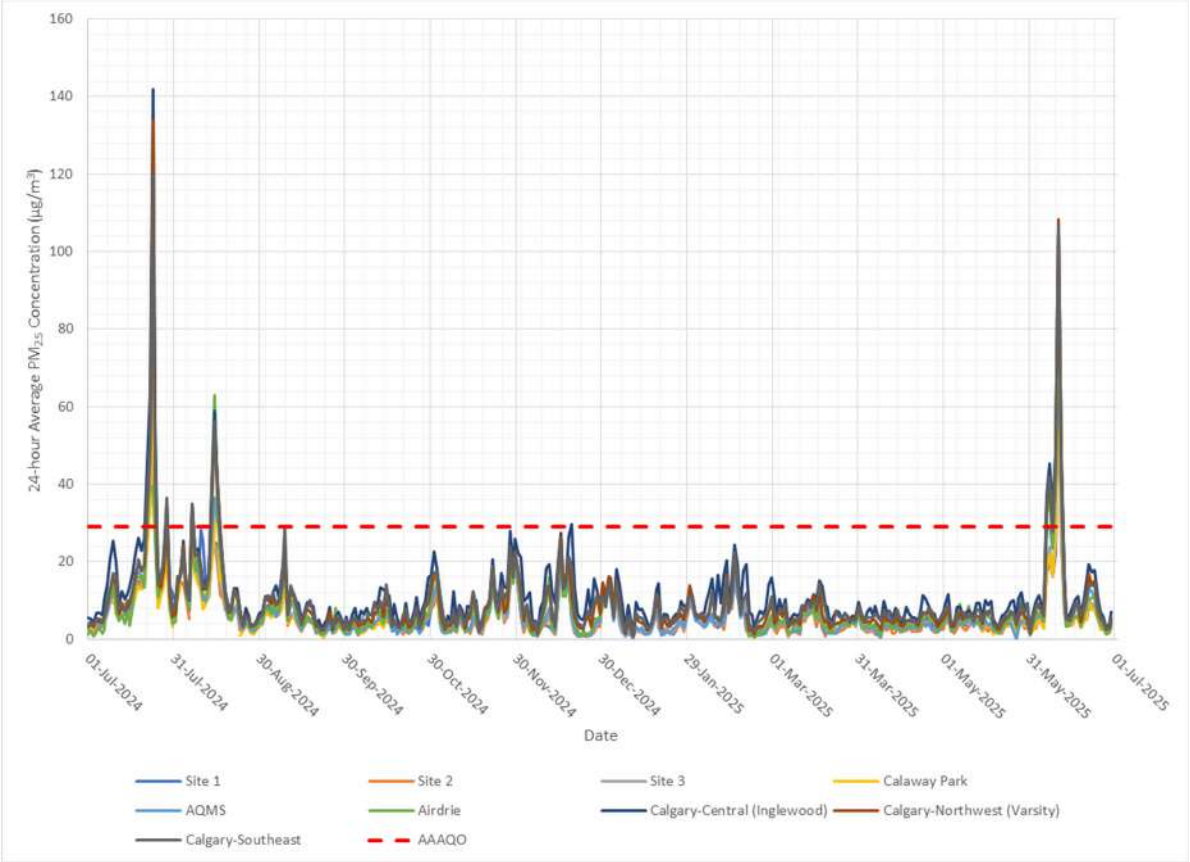


Figure B.3.9 Box-Whisker Plot of the 24-hour Average Fine Particulate Matter Concentrations Measured at the Springbank Project Air Quality Monitoring Stations and Regional Air Quality Monitoring Stations

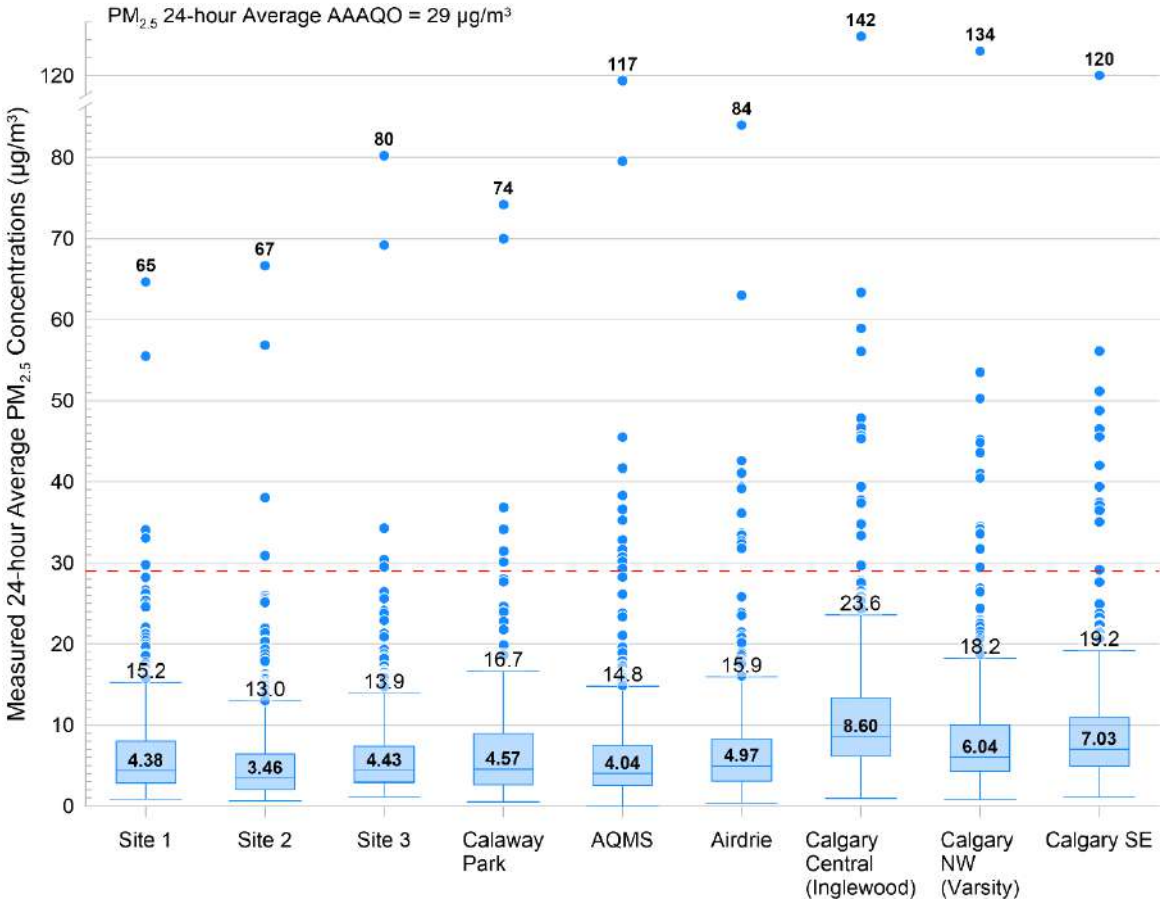


Table B.3.6 Summary Statistics of the Measured 24-Hour Average Concentrations of Coarse Particulate Matter at the Springbank Project Air Quality Monitoring Stations – July 2024 to June 2025

Statistic	Coarse Particulate Matter (PM_{10}) Concentrations ($\mu g/m^3$) [a]			
	SR1 Stations			
	Site 1	Site 2	Site 3	BC AQO [b]
Minimum (Non-Zero)	1.17	0.652	1.58	50
Annual Average of 24-hour Averages	16.0	17.8	14.3	—
Median	10.8	12.4	10.6	50
Maximum	**139**	**93.7**	**87.5**	50
Standard Deviation	16.8	16.0	12.0	—
Number Observations	349	328	343	
Expected Observations	365	365	365	
% Complete	95.6%	89.9%	94.0%	
Hours above 24-h Average BC AQO	16	19	5	

Notes:

[a] $\mu g/m^3$ is the mass of the substance in micrograms per cubic meter of air.

[b] BC AQO (BC ENV, 2019). **BOLD** values indicate measured concentrations above the BC AQO.

Figure B.3.10 Timeseries of the 24-hour Average Coarse Particulate Matter Concentrations Measured at the Springbank Project Air Quality Monitoring Stations – July 2024 to June 2025

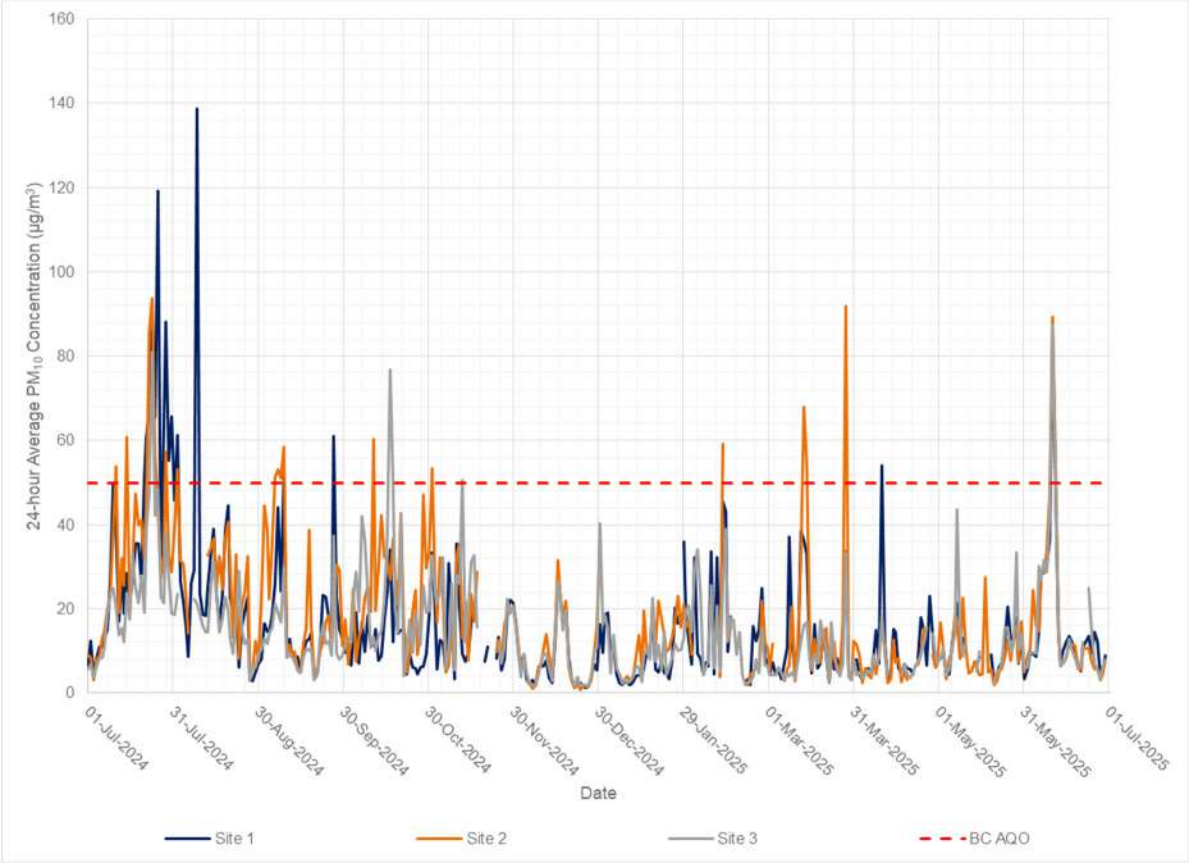


Figure B.3.11 Box-Whisker Plot of the 24-hour Average Coarse Particulate Matter Concentrations Measured at the Springbank Project Air Quality Monitoring Stations – July 2024 to June 2025

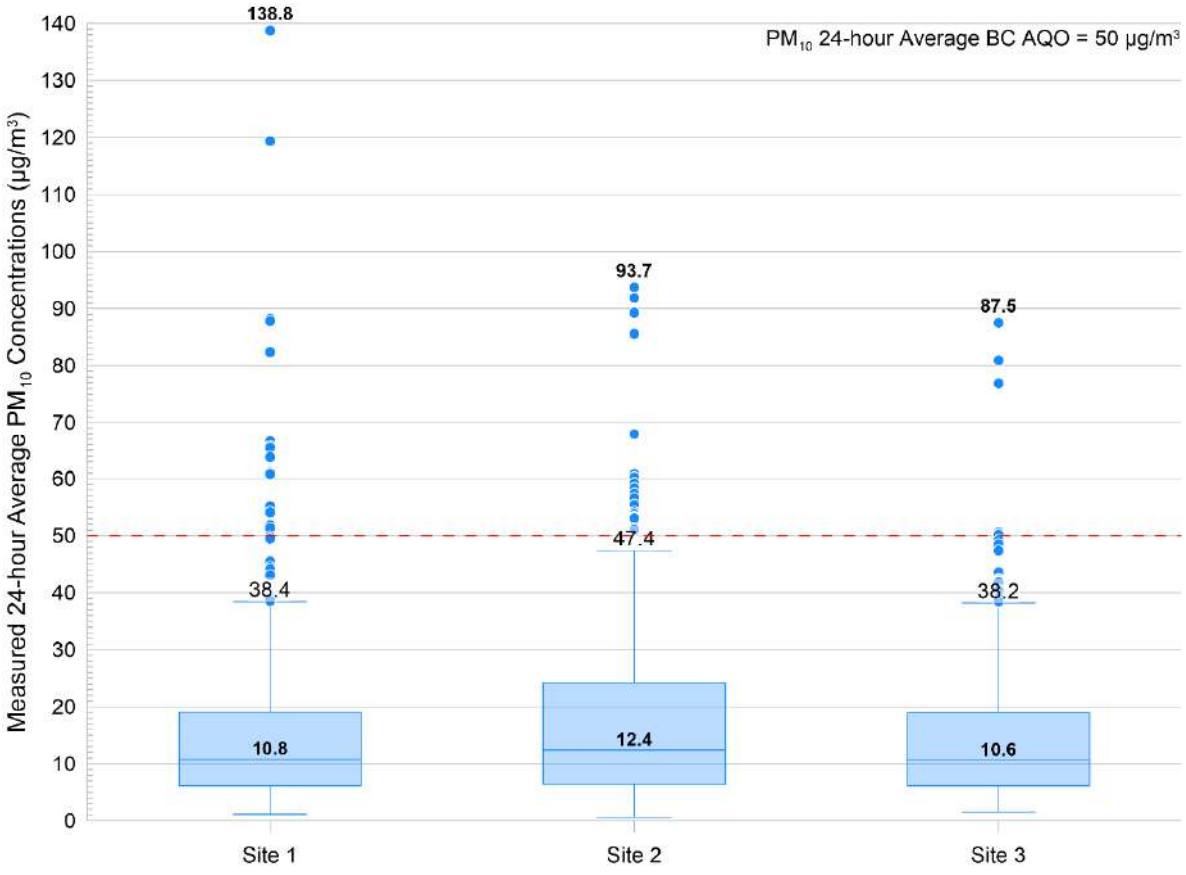


Figure B.3.12 Scatter Plot of the 24-hour Average Coarse Particulate Matter Concentrations and the $PM_{2.5}/PM_{10}$ Ratio at Site 1 – July 2024 to June 2025

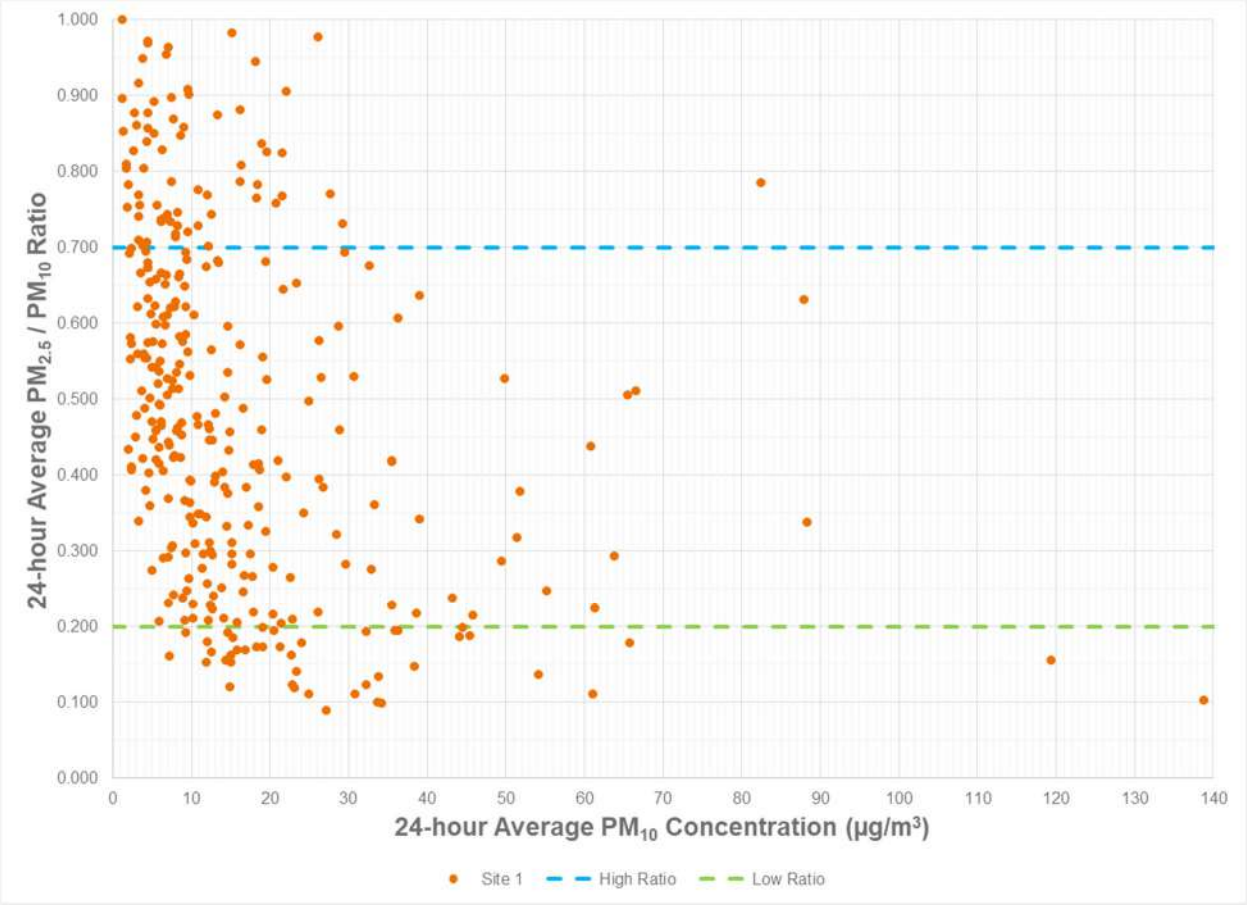


Figure B.3.13 Scatter Plot of the 24-hour Average Coarse Particulate Matter Concentrations and the $PM_{2.5}/PM_{10}$ Ratio at Site 2 – July 2024 to June 2025

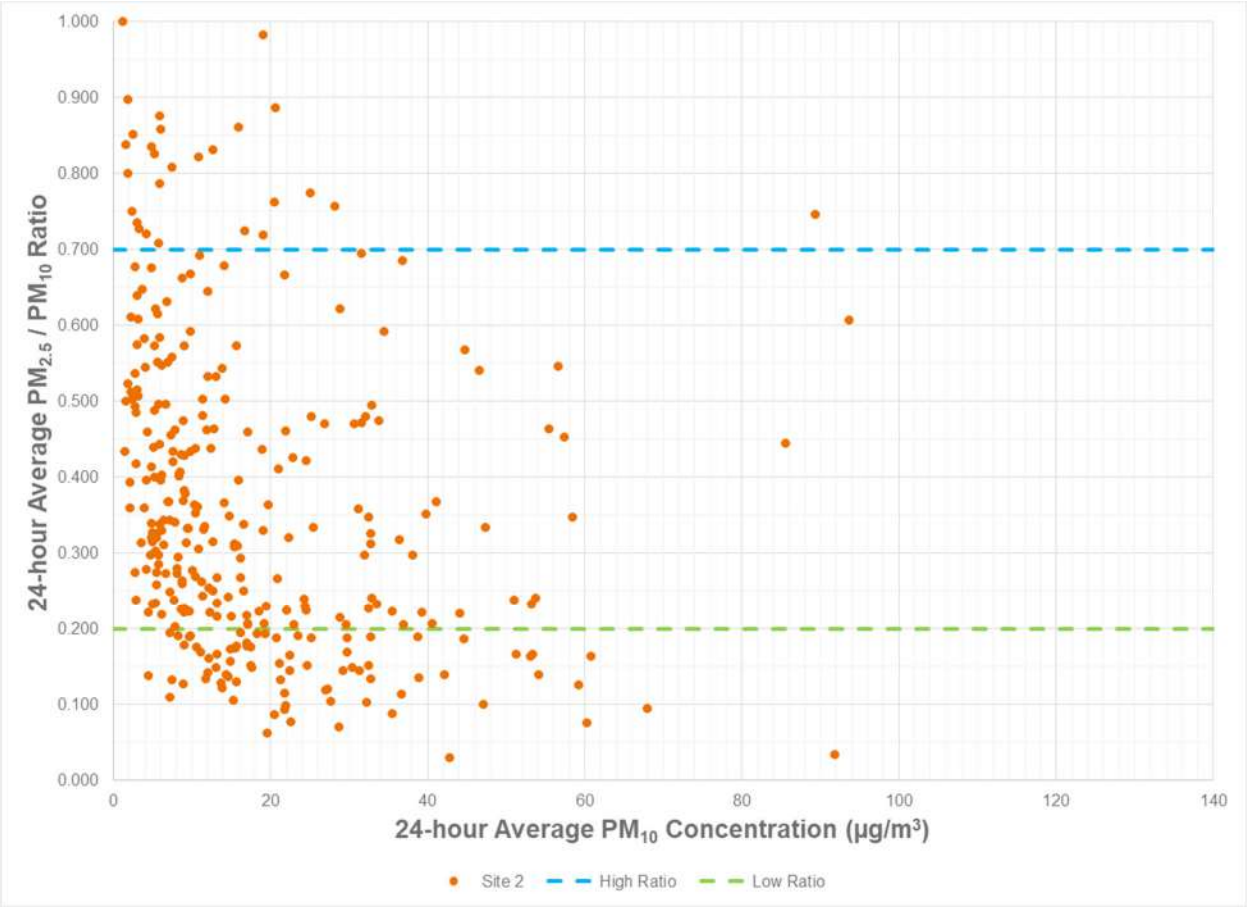


Figure B.3.14 Scatter Plot of the 24-hour Average Coarse Particulate Matter Concentrations and the $PM_{2.5}/PM_{10}$ Ratio at Site 3 – July 2024 to June 2025

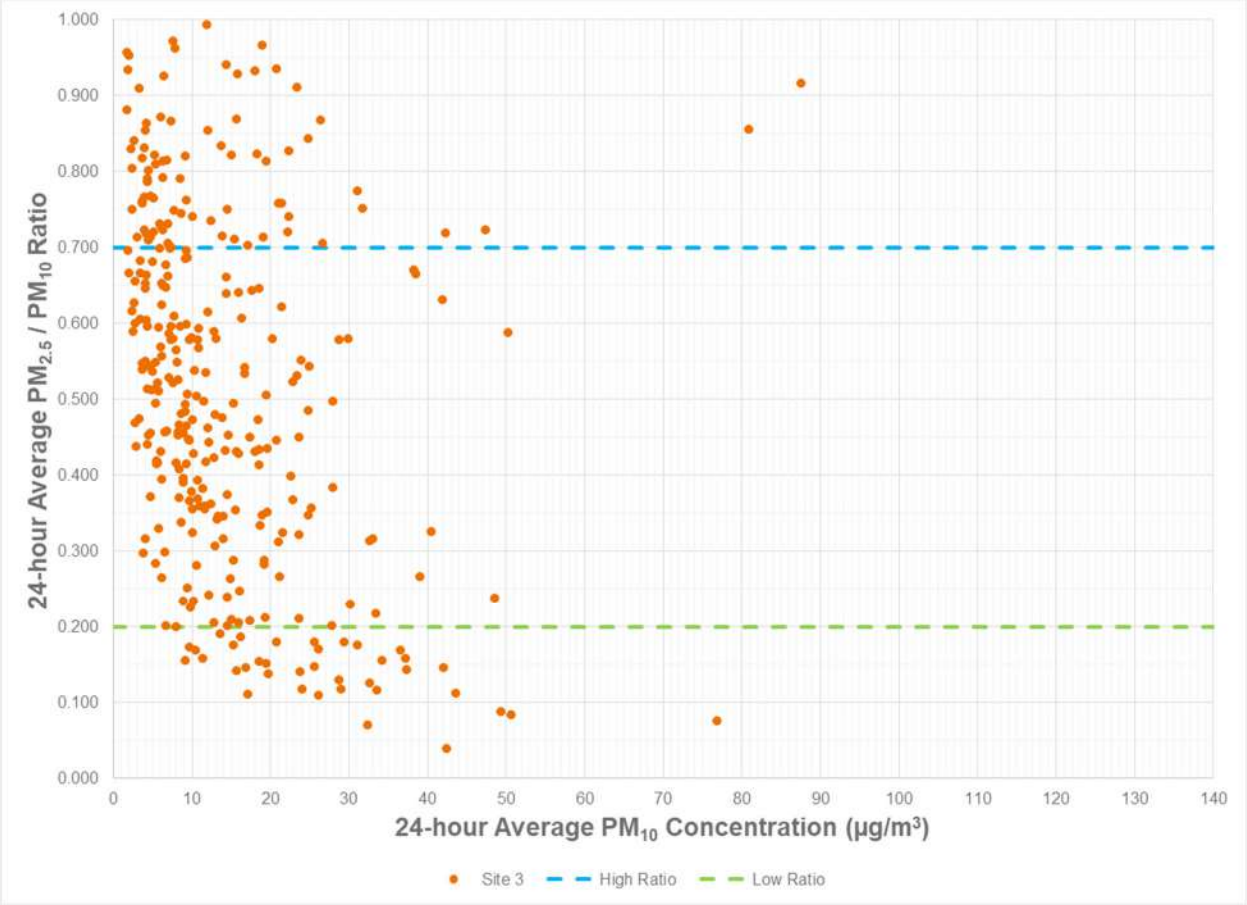


Table B.3.7 Summary Statistics of the Measured 24-Hour Average Concentrations of Total Suspended Particulates at the Springbank Project Air Quality Monitoring Stations – July 2024 to June 2025

Statistic	Total Suspended Particulates (TSP) Concentrations (µg/m³) [a]				
	SR1 Stations				
	Site 1	Site 2	Site 3	Calaway Park [b]	AAAQO [c]
Minimum (Non-Zero)	2.13	2.45	2.14	1.91	100
Annual Average of 1-hour Averages	38.5	46.0	30.0	25.1	60
Median	21.5	32.9	19.6	21.3	100
Maximum	**453**	**282**	**271**	**143**	100
Standard Deviation	47.0	42.9	32.1	18.5	
Number Observations	355	344	347	154	
Expected Observations [d]	365	365	365	167	
% Complete [e]	97.3%	94.2%	95.1%	92.2% (42.2%)	
Hours above 24-h Average AAAQO	27	39	13	1	

Notes:

[a] µg/m³ is the mass of the substance in micrograms per cubic meter of air.

[b] Calaway Park was operational from May 3, 2024, to October 15, 2024, and re-deployed on May 15, 20245 and is planned to be decommissioned in October 2025 at the end of the park's operational season.

[c] AAAQO (AEPA, 2024), **BOLD** values indicate measured concentrations above the AAAQO.

[d] Values are based on the number of hours the station was deployed during the year.

[e] Completeness is calculated based on the number of valid observations over the deployment period. Values in brackets are the annual completeness. The annual average for the Calaway Park Station is not valid as the station was removed during the off-season (October – April) during July 2024 to June 2025 Period.

Figure B.3.15 Timeseries of the 24-hour Average Total Suspended Particulate Concentrations Measured at the Springbank Project Air Quality Monitoring Stations – July 2024 to June 2025

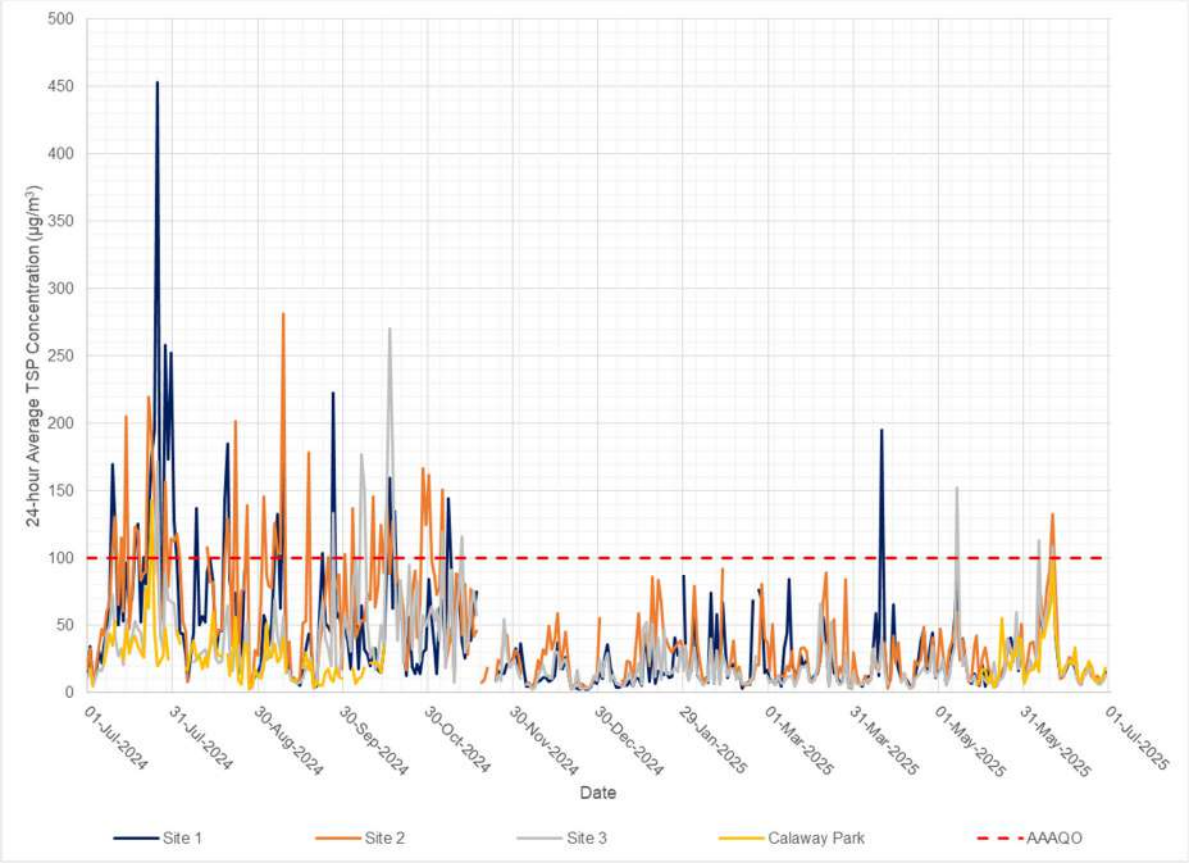


Figure B.3.16 Box-Whisker Plot of the 24-hour Average Total Suspended Particulate Concentrations Measured at the Springbank Project Air Quality Monitoring Stations – July 2024 to June 2025



Figure B.3.17 Timeseries of the 24-hour Average $PM_{2.5}$, PM_{10}, and TSP Concentrations Measured at Site 1 – July 2024 to June 2025

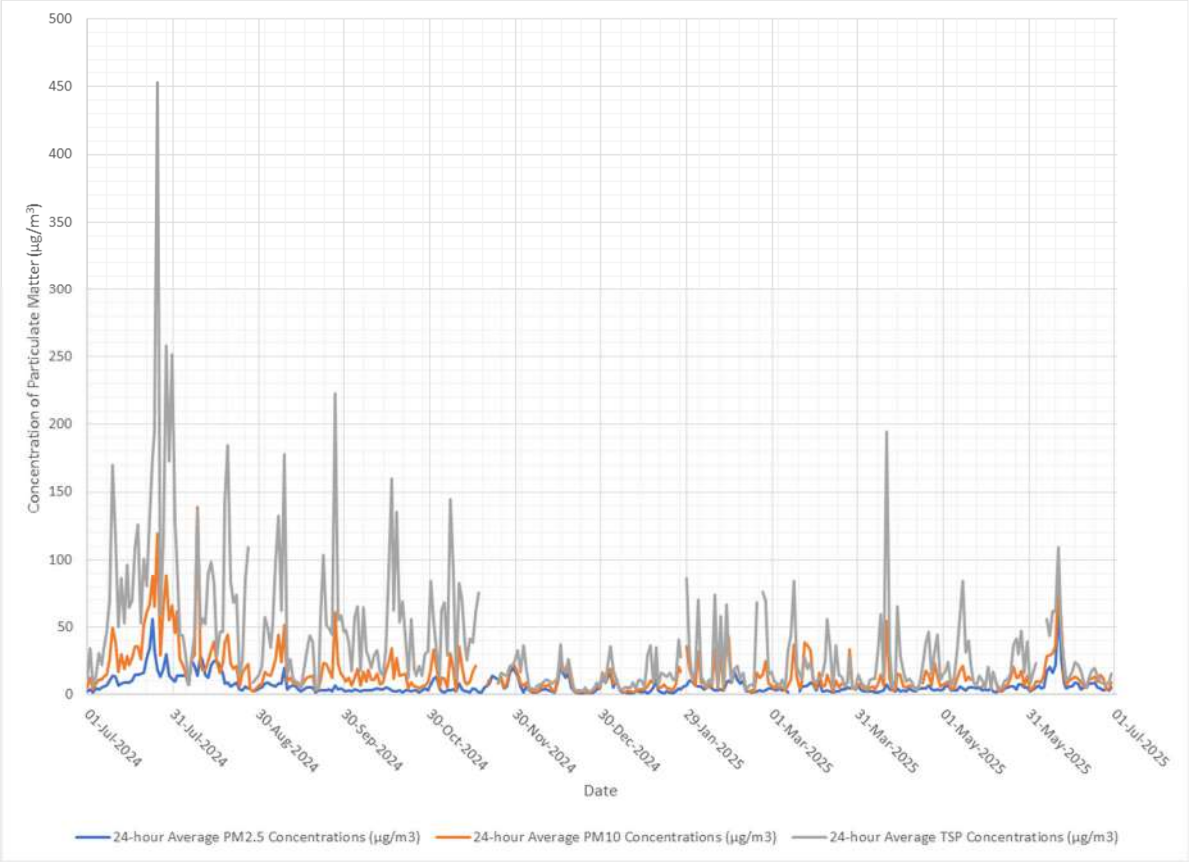


Figure B.3.18 Timeseries of the 24-hour Average $PM_{2.5}$, PM_{10}, and TSP Concentrations Measured at Site 2 – July 2024 to June 2025

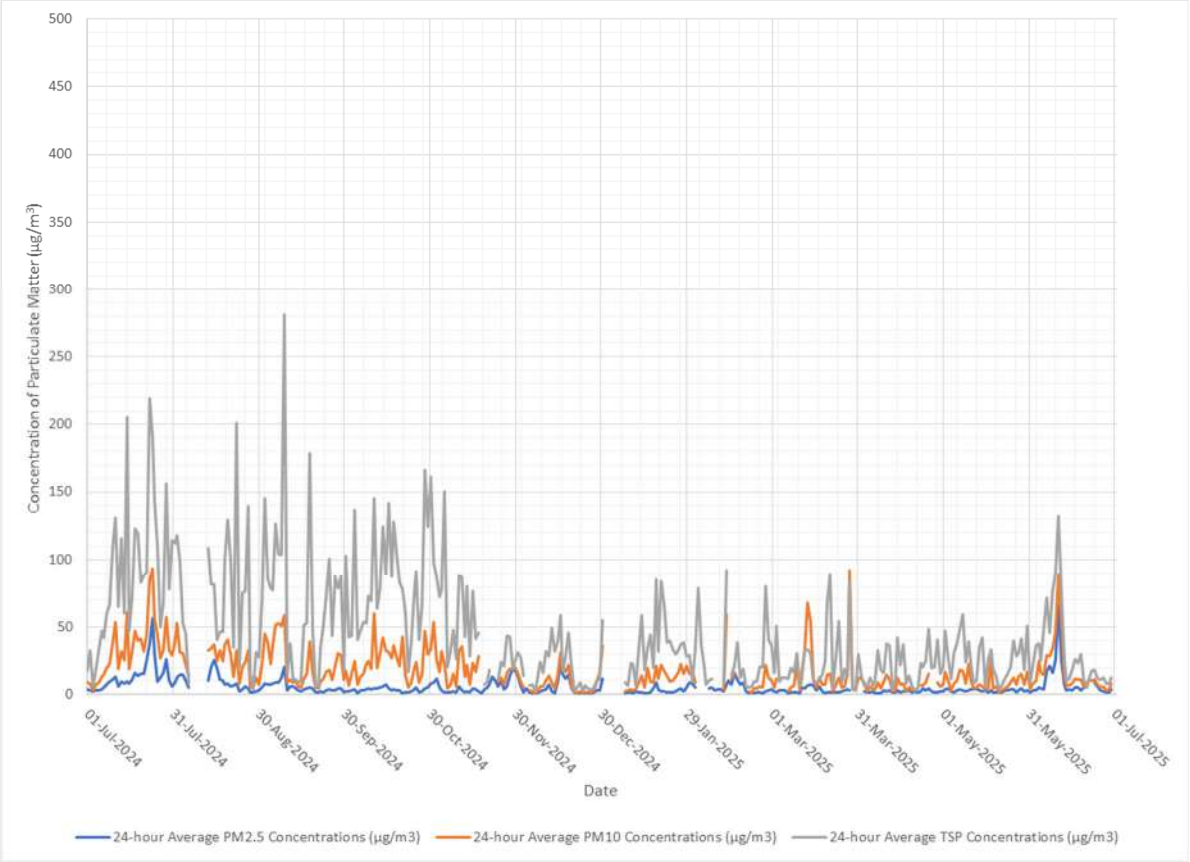


Figure B.3.19 Timeseries of the 24-hour Average $PM_{2.5}$, PM_{10}, and TSP Concentrations Measured at Site 3 – July 2024 to June 2025

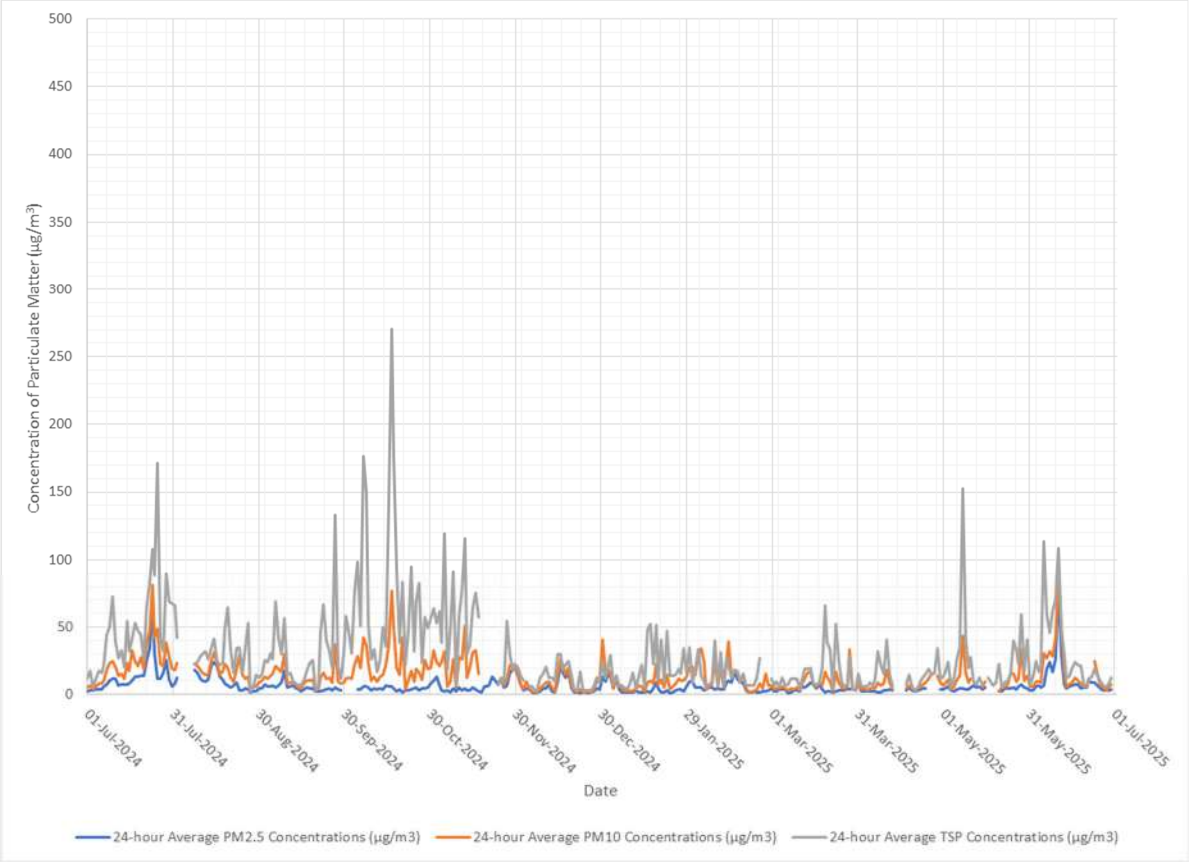


Figure B.3.20 Timeseries of the 24-hour Average $PM_{2.5}$ and TSP Concentrations Measured at Calaway Park – July 2024 to June 2025

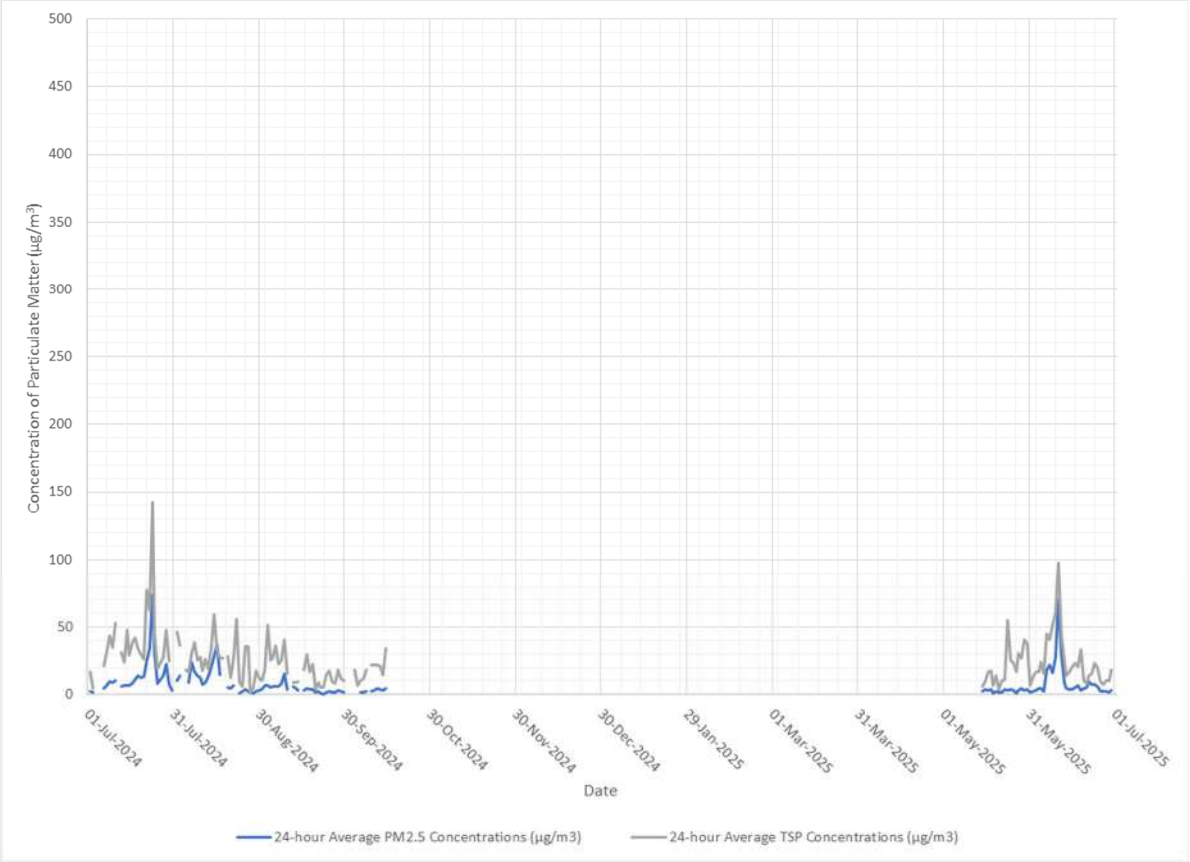


Figure B.3.21 Scatter Plot of the 24-hour Average Total Suspended Particulates Concentrations and the $PM_{2.5}$/TSP and PM_{10}/TSP Ratios at Site 1

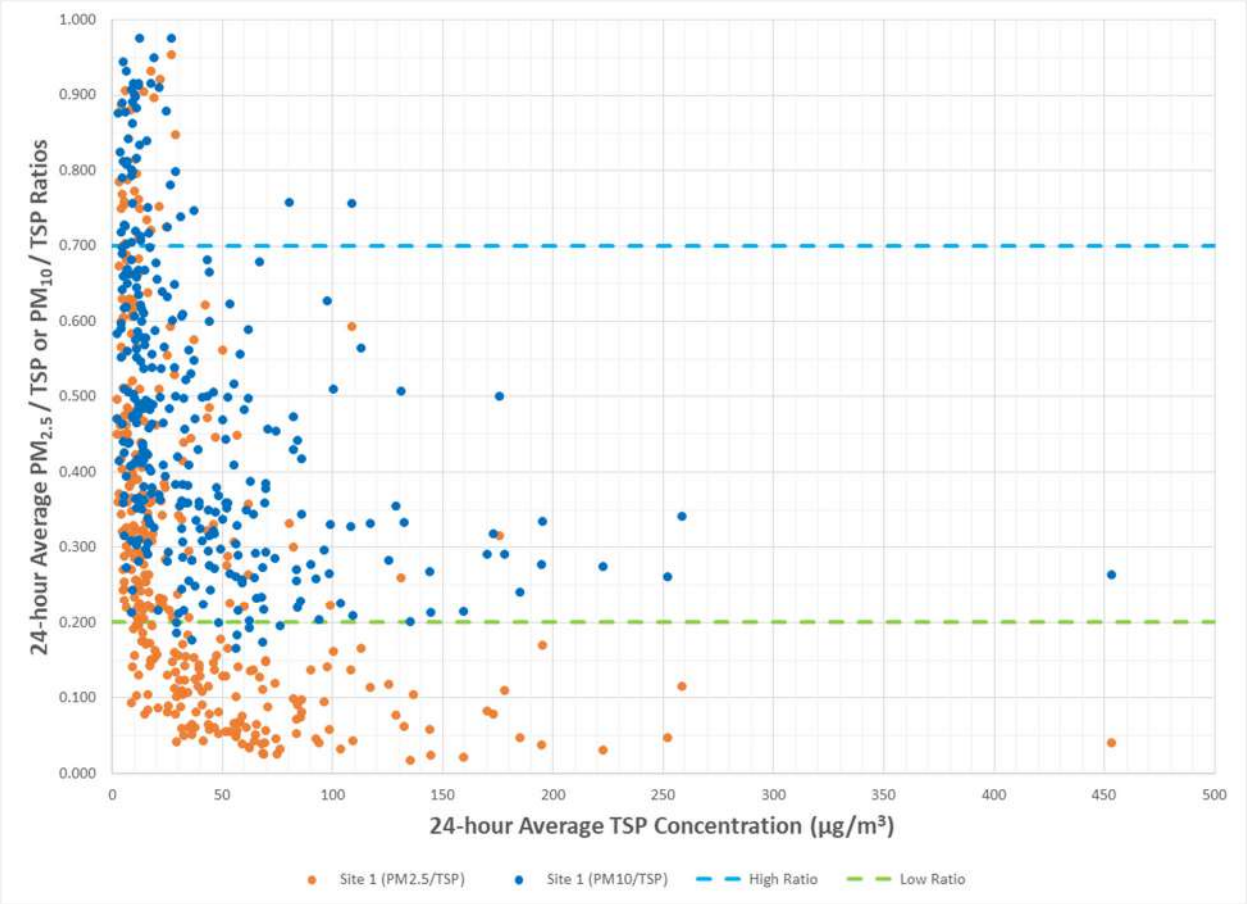


Figure B.3.22 Scatter Plot of the 24-hour Average Total Suspended Particulates Concentrations and the $PM_{2.5}$/TSP and PM_{10}/TSP Ratios at Site 2

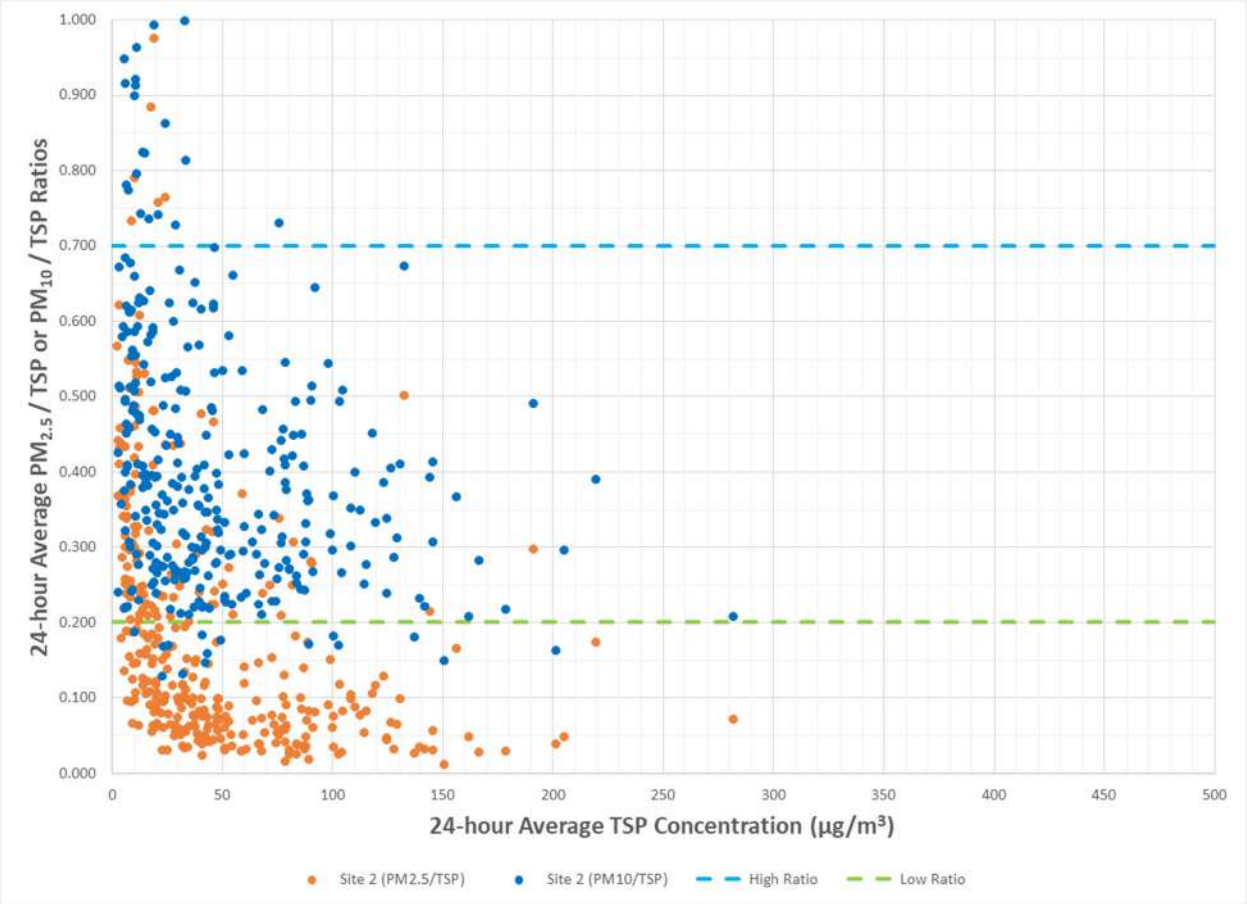


Figure B.3.23 Scatter Plot of the 24-hour Average Total Suspended Particulates Concentrations and the $PM_{2.5}$/TSP and PM_{10}/TSP Ratios at Site 3

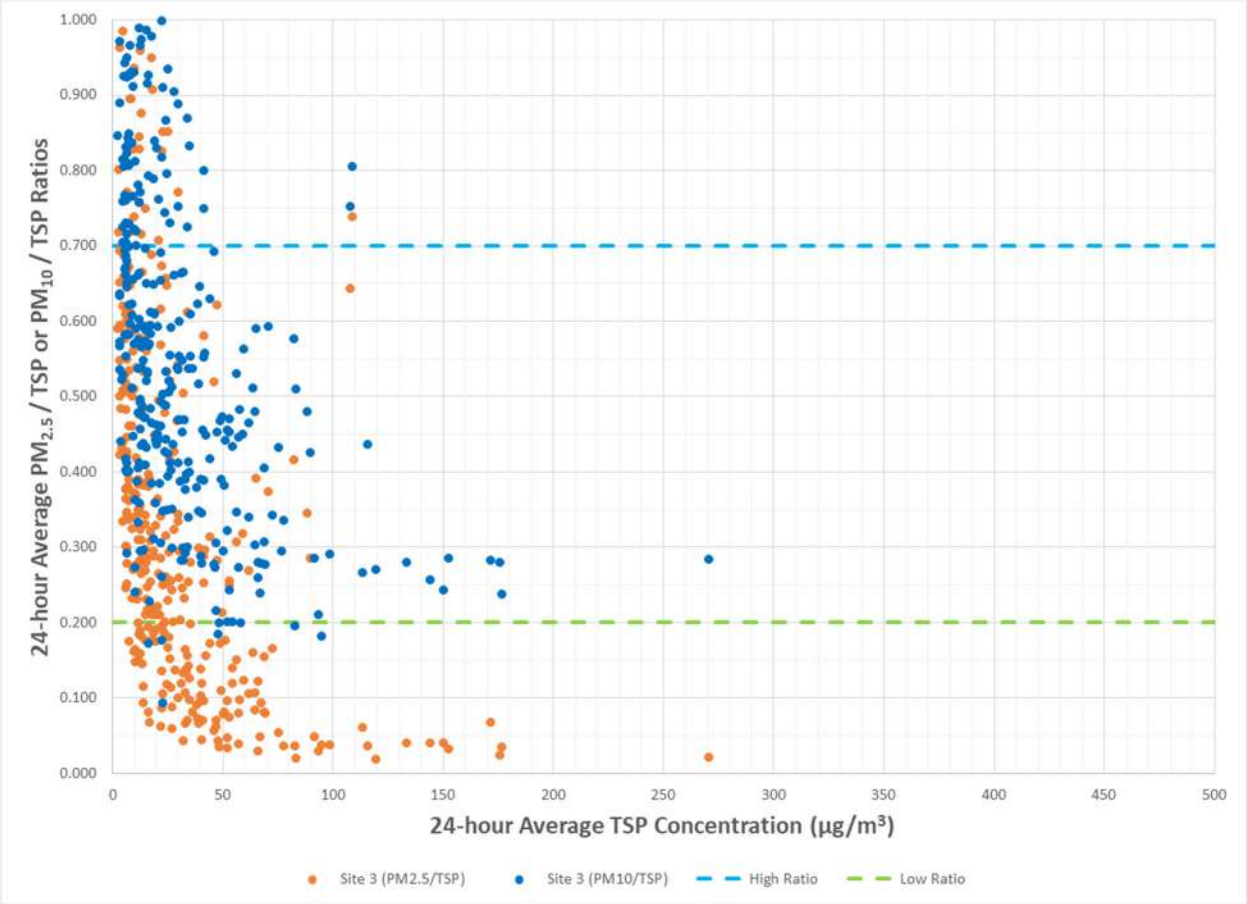


Figure B.3.24 Scatter Plot of the 24-hour Average Total Suspended Particulates Concentrations and the $PM_{2.5}$/TSP Ratio at Calaway Park

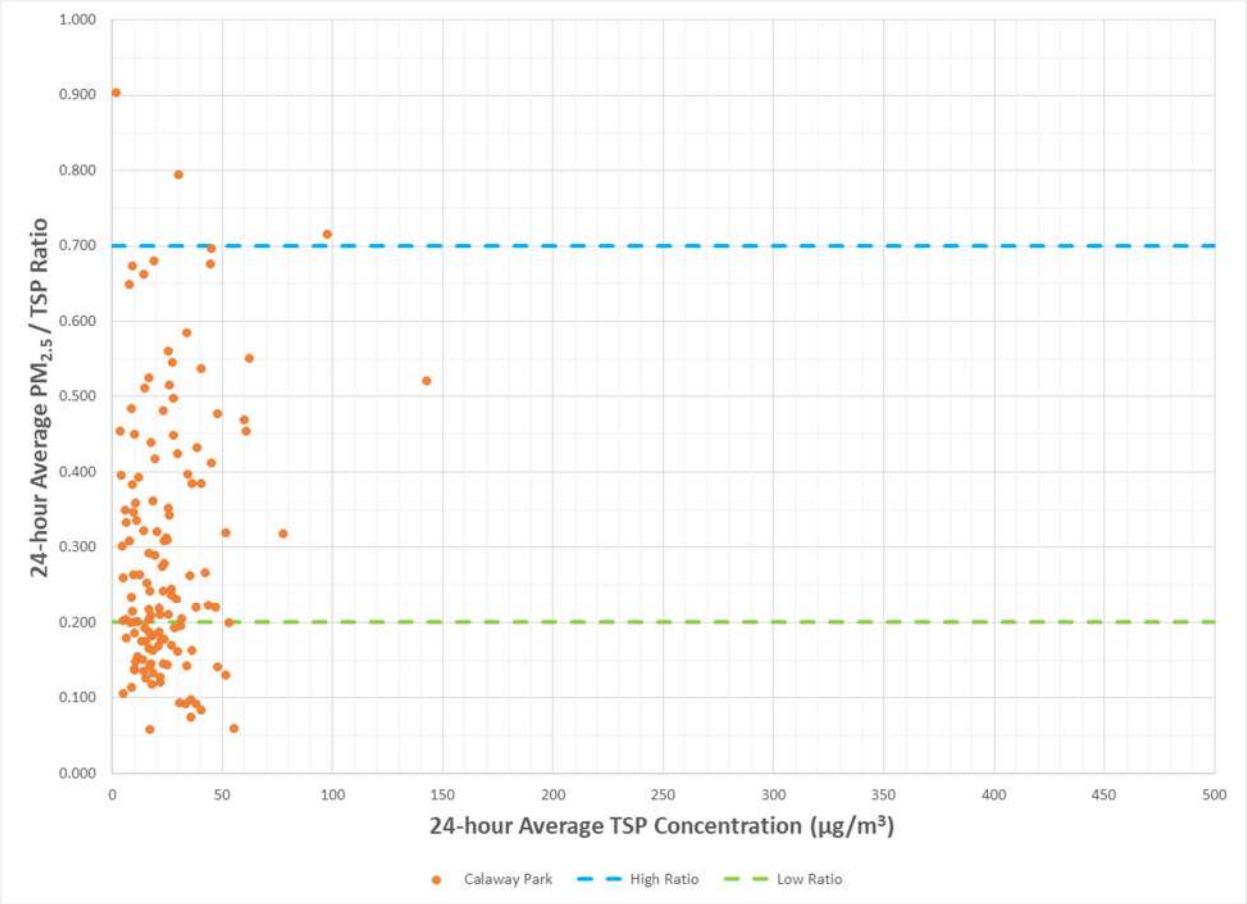


Table B.3.8 Summary Statistics for the Meteorological Parameters Measured at Site 1 – July 2024 to June 2025

Month	Wind Speed (m/s)				Temperature (°C)				Relative Humidity (%)				Barometric Pressure (kPa)			
	n	Min	Max	Avg	n	Min	Max	Avg	n	Min	Max	Avg	n	Min	Max	Avg
July	743	0.028	5.69	1.27	743	5.3	32.9	18.9	743	21	100	63	743	86.7	88.5	87.7
August	737	0.056	6.33	1.21	737	3.9	30.0	15.4	737	25	100	72	737	86.4	88.7	87.8
September	718	0.056	7.33	1.36	720	-1.3	30.6	12.8	720	22	100	69	720	86.0	88.9	87.4
October	744	0.056	6.25	1.41	744	-9.9	24.6	5.7	744	23	99	63	744	85.7	88.4	87.3
November	711	0.028	8.94	1.27	720	-23.3	17.5	-4.5	720	27	100	77	720	85.1	88.1	87.0
December	744	0.000	8.4	1.44	744	-22.4	10.3	-2.9	744	28	99	72	744	85.5	88.5	87.1
January	742	0.028	9.44	1.86	744	-21.6	14.2	-4.3	744	17	97	65	744	85.7	89.2	87.7
February	655	0.056	9.14	1.39	672	-30.3	13.5	-11.2	672	27	96	72	672	85.6	88.9	87.1
March	711	0.056	10.03	1.69	723	-11.1	15.0	0.4	723	24	99	70	723	85.1	88.0	86.7
April	720	0.056	6.36	1.86	720	-8.4	20.3	5.3	720	19	100	57	720	86.0	88.5	87.4
May	742	0.028	6.58	1.84	744	-2.7	30.3	11.2	744	15	100	59	744	86.0	88.4	87.3
June	709	0.028	8.22	1.57	720	2.4	26.9	13.7	720	23	100	63	720	86.8	88.7	87.8
Annual	8,676	0.000	10.0	1.52	8,731	-30.3	32.9	5.2	8,731	15	100	67	8,731	85.1	89.2	87.4

Table B.3.9 Summary Statistics for the Meteorological Parameters Measured at Site 2 – July 2024 to June 2025

Month	Wind Speed (m/s)				Temperature (°C)				Relative Humidity (%)				Barometric Pressure (kPa)			
	n	Min	Max	Avg	n	Min	Max	Avg	n	Min	Max	Avg	n	Min	Max	Avg
July	743	0.056	6.31	1.69	743	5.7	32.6	18.8	743	19	100	62	743	86.9	88.8	87.9
August	622	0.028	6.61	1.51	623	4.3	30.0	15.5	623	25	100	70	623	86.7	88.9	88.0
September	720	0.000	7.03	1.58	720	-0.2	31.4	13.1	720	20	100	68	720	86.0	89.1	87.5
October	743	0.028	7.50	1.66	744	-8.8	23.9	6.1	744	23	97	62	744	85.7	88.5	87.5
November	597	0.028	10.4	1.46	720	-22.7	18.0	-4.4	720	26	99	78	720	85.2	88.4	87.2
December	739	0.028	8.58	1.51	744	-22.5	11.3	-2.8	744	27	98	73	744	85.5	88.8	87.2
January	595	0.028	8.86	2.41	601	-23.1	13.7	-2.1	601	17	97	61	601	86.0	89.5	87.8
February	616	0.028	9.86	1.83	672	-30.4	14.1	-11.5	672	27	95	72	672	85.6	89.2	87.3
March	744	0.028	10.5	2.10	744	-11.5	14.6	0.2	744	23	99	70	744	85.2	88.1	86.8
April	719	0.028	7.94	2.12	719	-8.6	19.4	5.3	719	19	100	57	719	86.1	88.9	87.8
May	719	0.028	7.67	2.10	744	-2.2	30.1	11.5	744	15	100	58	744	86.4	88.8	87.7
June	716	0.028	7.86	1.76	720	2.4	26.4	13.8	720	22	100	62	720	86.8	88.5	87.7
Annual	8,273	0.000	10.5	1.81	8,494	-30.4	32.6	5.4	8,494	15	100	66	8,494	85.2	89.5	87.5

Table B.3.10 Summary Statistics for the Meteorological Parameters Measured at Site 3 – July 2024 to June 2025

Month	Wind Speed (m/s)				Temperature (°C)				Relative Humidity (%)				Barometric Pressure (kPa)			
	n	Min	Max	Avg	n	Min	Max	Avg	n	Min	Max	Avg	n	Min	Max	Avg
July	743	0.083	6.31	1.76	743	3.7	32.5	18.1	743	19	100	63	743	87.2	89.1	88.1
August	651	0.028	6.89	1.64	651	3.5	29.6	15.0	651	25	100	70	651	86.8	89.2	88.1
September	720	0.056	6.64	1.81	720	-1.4	31.3	12.9	720	20	100	69	720	86.3	89.3	87.7
October	743	0.056	7.06	1.82	743	-9.1	23.7	5.4	743	24	98	63	743	86.0	88.8	87.7
November	631	0.083	10.6	1.49	717	-22.5	17.9	-4.7	717	26	99	78	717	85.5	88.5	87.4
December	744	0.056	6.92	1.61	744	-22.9	10.7	-3.1	744	29	99	74	744	85.6	89.1	87.3
January	739	0.056	9.31	2.22	744	-23.6	11.8	-4.8	744	17	97	67	744	86.3	89.6	88.0
February	613	0.111	7.92	1.86	672	-31.0	13.7	-12.1	672	27	95	73	672	85.6	89.5	87.5
March	740	0.028	8.72	2.12	744	-13.7	14.3	-0.4	744	22	99	71	744	85.3	88.4	87.0
April	683	0.056	6.75	2.19	684	-9.3	19.6	5.1	684	18	100	59	684	86.4	88.9	87.9
May	735	0.111	8.06	2.26	743	-3.3	30.0	11.4	743	13	100	59	743	86.7	89.1	87.9
June	720	0.000	7.19	1.94	720	2.0	26.9	13.7	720	22	100	63	720	87.1	88.7	87.9
Annual	8,462	0.000	10.6	1.90	8,625	-31.0	32.5	4.7	8,625	13	100	67	8,625	85.3	89.6	87.7

Table B.3.11 Summary Statistics for the Meteorological Parameters Measured at Calaway Park – July 2024 to June 2025

Month	Wind Speed (m/s)				Temperature (°C)				Relative Humidity (%)				Barometric Pressure (kPa)			
	n	Min	Max	Avg	n	Min	Max	Avg	n	Min	Max	Avg	n	Min	Max	Avg
July	668	0.028	8.31	1.68	671	5.2	33.2	19.5	671	18	99	60	671	87.1	88.9	88.0
August	678	0.028	7.89	1.51	678	4.5	30.8	15.5	678	29	100	69	678	86.7	89.1	88.1
September	677	0.000	8.28	1.61	677	-2.0	31.4	13.1	677	19	99	66	677	86.1	89.2	87.6
October [a]	300	0.083	7.94	1.45	300	-4.2	23.7	8.6	300	24	97	60	300	86.0	88.7	87.8
November	0	—	—	—	0	—	—	—	0	—	—	—	0	—	—	—
December	0	—	—	—	0	—	—	—	0	—	—	—	0	—	—	—
January	0	—	—	—	0	—	—	—	0	—	—	—	0	—	—	—
February	0	—	—	—	0	—	—	—	0	—	—	—	0	—	—	—
March	0	—	—	—	0	—	—	—	0	—	—	—	0	—	—	—
April	0	—	—	—	0	—	—	—	0	—	—	—	0	—	—	—
May [a]	403	0.056	8.92	2.00	408	-0.8	30.1	12.1	408	18	99	64	408	86.7	88.5	87.6
June	720	0.000	8.94	1.67	720	1.4	27.6	14.2	720	22	99	60	720	86.8	88.7	87.8
Annual	3,446	0.000	8.94	1.65	3,454	-4.2	33.2	14.5	3,454	18	100	63	3,454	86.0	89.2	87.8

Note:

[a] Calaway Park was operational from May 3, 2024, to October 15, 2024, and re-deployed on May 15, 20245 and is planned to be decommissioned in October 2025 at the end of the park's operational season.

Table B.3.12 Summary Statistics for the Meteorological Parameters Measured at the Springbank AQMS – July 2024 to June 2025

Month	Wind Speed (m/s)				Temperature (°C)				Relative Humidity (%)				Barometric Pressure (kPa)			
	n	Min	Max	Avg	n	Min	Max	Avg	n	Min	Max	Avg	n	Min	Max	Avg
July [a]	744	0.028	9.19	2.29	744	2.4	32.5	18.6	744	14	98	60	744	87.4	89.3	88.4
August	744	0.028	8.28	1.98	744	2.6	29.6	14.9	744	21	99	69	744	87.0	89.4	88.5
September	720	0.028	9.25	2.01	720	-3.1	30.4	12.0	720	15	99	67	720	86.6	89.6	88.1
October	742	0.028	9.31	2.06	744	-11.0	23.9	4.7	744	19	98	62	744	86.4	89.2	88.1
November	720	0.028	10.1	1.82	720	-24.3	17.9	-5.2	720	21	98	74	720	85.8	88.9	87.8
December	744	0.028	8.86	1.77	744	-25.0	10.6	-4.2	744	25	97	72	744	86.2	89.3	87.9
January	743	0.000	11.8	2.80	743	-25.4	11.2	-5.7	743	13	94	64	743	86.7	90.0	88.5
February	671	0.028	10.8	2.03	671	-34.8	12.8	-13.2	671	22	94	66	671	86.6	89.8	88.2
March	744	0.056	9.39	2.54	744	-15.7	13.6	-1.1	744	17	97	68	744	85.9	88.9	87.6
April	718	0.028	8.58	2.70	718	-10.2	19.1	4.4	718	13	99	55	718	86.8	89.3	88.2
May	744	0.000	9.19	2.73	744	-5.4	29.1	10.9	744	10	99	56	744	86.8	89.2	88.1
June	720	0.028	9.61	2.35	720	0.9	26.4	13.6	720	18	99	58	720	87.4	89.0	88.3
Annual	8,754	0.000	11.8	2.26	8,756	-34.8	32.5	4.3	8,756	10	99	64	8,756	85.8	90.0	88.1

Table B.3.12 Summary Statistics for the Meteorological Parameters Measured at the Springbank AQMS – (cont'd)

Month	Solar Radiation (W/m^2)					Precipitation (millimetre per hour (mm/h))			
	n	Min	Max	Avg inc. 0	Avg ex 0	n	Min	Max	Avg
July	744	0.000	1,006	296	426	744	0.0	1.0	0.010
August	744	0.000	929	216	344	744	0.0	4.6	0.028
September	720	0.000	832	173	317	720	0.0	1.2	0.011
October	744	0.000	624	115	243	742	0.0	0.3	0.001
November	720	0.000	462	54	138	720	0.0	1.0	0.010
December	744	0.000	347	41	109	744	0.0	0.1	0.001
January	743	0.000	425	59	153	743	0.0	0.1	0.000
February	671	0.000	615	107	240	671	0.0	4.4	0.007
March	744	0.000	749	129	249	744	0.0	0.7	0.006
April	718	0.000	929	217	358	718	0.0	1.5	0.012
May	744	0.000	1,037	256	382	744	0.0	2.1	0.029
June	720	0.000	1,036	273	386	720	0.0	6.2	0.118
Annual	8,756	0.000	1,037	162	301	8,754	0.0	6.2	0.019

Table B.3.13 Summary Statistics for the Meteorological Parameters Measured at the Springbank Airport – July 2024 to June 2025

Month	Wind Speed (m/s)				Temperature (°C)				Relative Humidity (%)				Barometric Pressure (kPa)			
	n	Min	Max	Avg	n	Min	Max	Avg	n	Min	Max	Avg	n	Min	Max	Avg
July	704	0.000	12.50	3.77	744	5.5	32.4	18.5	744	15	99	62	744	87.1	88.9	88.0
August	697	0.000	13.33	3.58	741	4.2	30.3	15.0	741	22	99	70	741	86.7	89.0	88.1
September	664	0.000	11.94	3.61	720	-2.8	30.4	12.2	720	17	100	68	720	86.3	89.3	87.7
October	687	0.000	13.33	3.71	744	-9.1	23.3	5.2	744	20	98	62	744	86.0	88.8	87.7
November	673	0.000	13.33	3.28	720	-23.3	17.7	-4.9	720	23	98	75	720	85.4	88.5	87.4
December	704	0.000	12.8	3.37	744	-23.2	9.7	-3.7	744	28	97	72	744	85.8	88.9	87.5
January	719	0.000	16.11	4.34	744	-24.5	12.3	-5.5	744	15	95	66	744	86.3	89.6	88.1
February	634	0.000	13.89	3.50	672	-32.2	13.5	-13.0	672	25	96	69	672	86.2	89.3	87.7
March	712	0.000	14.44	4.06	744	-14.2	13.5	-1.0	744	18	98	69	744	85.5	88.5	87.2
April	665	0.000	12.50	4.10	717	-9.8	19.2	4.5	717	15	98	56	717	86.4	88.9	87.8
May	703	0.000	13.89	4.20	744	-4.9	29.4	10.9	744	11	99	58	744	86.4	88.8	87.7
June	663	0.000	12.50	3.82	720	0.7	26.4	13.2	720	20	99	62	720	87.0	88.6	87.9
Annual	8,225	0.000	16.1	3.78	8,754	-32.2	32.4	4.4	8,754	11	100	66	8,754	85.4	89.6	87.7

Table B.3.13 Summary Statistics for the Meteorological Parameters Measured at the Springbank Airport – (cont'd)

Month	Precipitation (mm/h)			
	n	Min	Max	Avg
July	744	0.0	3.3	0.037
August	741	0.0	10.8	0.090
September	720	0.0	8.0	0.131
October	744	0.0	1.5	0.228
November	720	0.0	0.8	0.014
December	744	0.0	0.2	0.001
January	744	0.0	0.2	0.001
February	672	0.0	0.2	0.004
March	744	0.0	1.5	0.018
April	717	0.0	3.0	0.021
May	744	0.0	3.5	0.038
June	720	0.0	4.2	0.125
Annual	8,754	0.0	10.8	0.059

Table B.3.14 Precipitation Summary Statistics at the Calgary International Airport and Canada Olympic Park Upper Climate Stations

Month	Calgary International Airport – Precipitation (mm/h)					Canada Olympic Park Upper – Precipitation (mm/h)				
	n	Min	Max	Average	Cumul.	n	Min	Max	Average	Cumul.
July	744	0.0	16.8	0.056	41.3	744	0.0	2.6	0.015	10.9
August	744	0.0	33.5	0.109	81.1	744	0.0	17.0	0.092	68.2
September	719	0.0	7.5	0.089	63.8	718	0.0	8.3	0.095	67.9
October	743	0.0	0.6	0.003	2.4	744	0.0	0.9	0.004	3.1
November	720	0.0	2.0	0.040	29.0	720	0.0	3.1	0.045	32.2
December	743	0.0	0.3	0.005	3.4	743	0.0	0.5	0.005	3.7
January	741	0.0	0.3	0.003	2.1	744	0.0	0.3	0.006	4.1
February	672	0.0	0.4	0.007	4.9	672	0.0	0.6	0.015	10.3
March	744	0.0	1.3	0.019	14.1	744	0.0	1.0	0.022	16.6
April	720	0.0	3.2	0.028	20.5	717	0.0	2.3	0.028	20.0
May	739	0.0	9.0	0.067	49.7	743	0.0	3.9	0.064	47.9
June	720	0.0	6.7	0.131	94.6	720	0.0	4.7	0.135	97.2
Annual	8,749	0.0	33.5	0.047	407	8,753	0.0	17.0	0.044	382

Figure B.3.25 Joint Frequency Distribution Plots (Wind Roses) from the Site 1 (Upper Left), Site 2 (Upper Right), Site 3 (Lower Left), and Calaway Park (Lower Right) EBAM Stations – July 2024 to June 2025

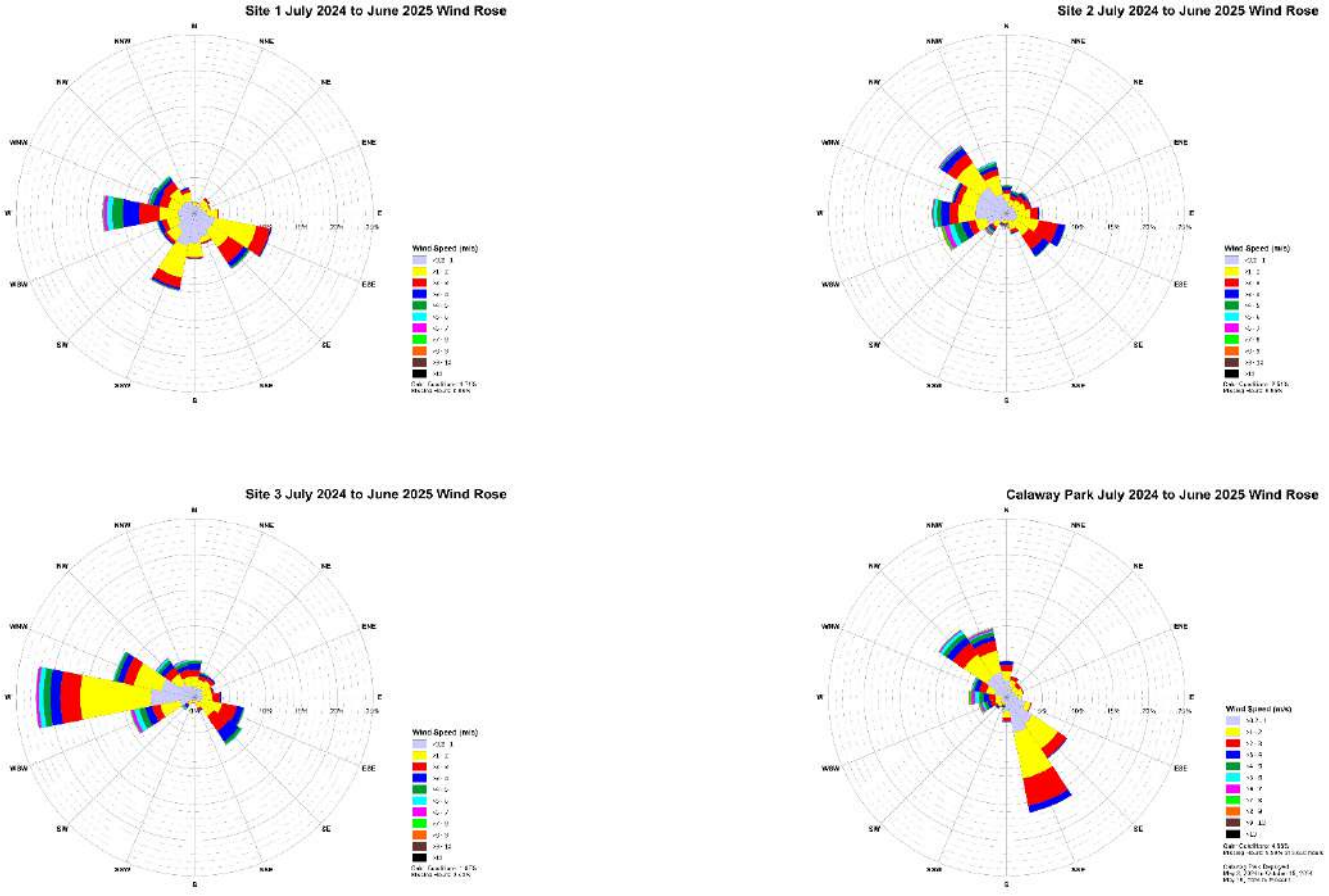


Figure B.3.26 Joint Frequency Distribution Plots (Wind Roses) from the Springbank AQMS (Left) and Springbank Airport (Right) Ambient Air Quality Stations – July 2024 to June 2025

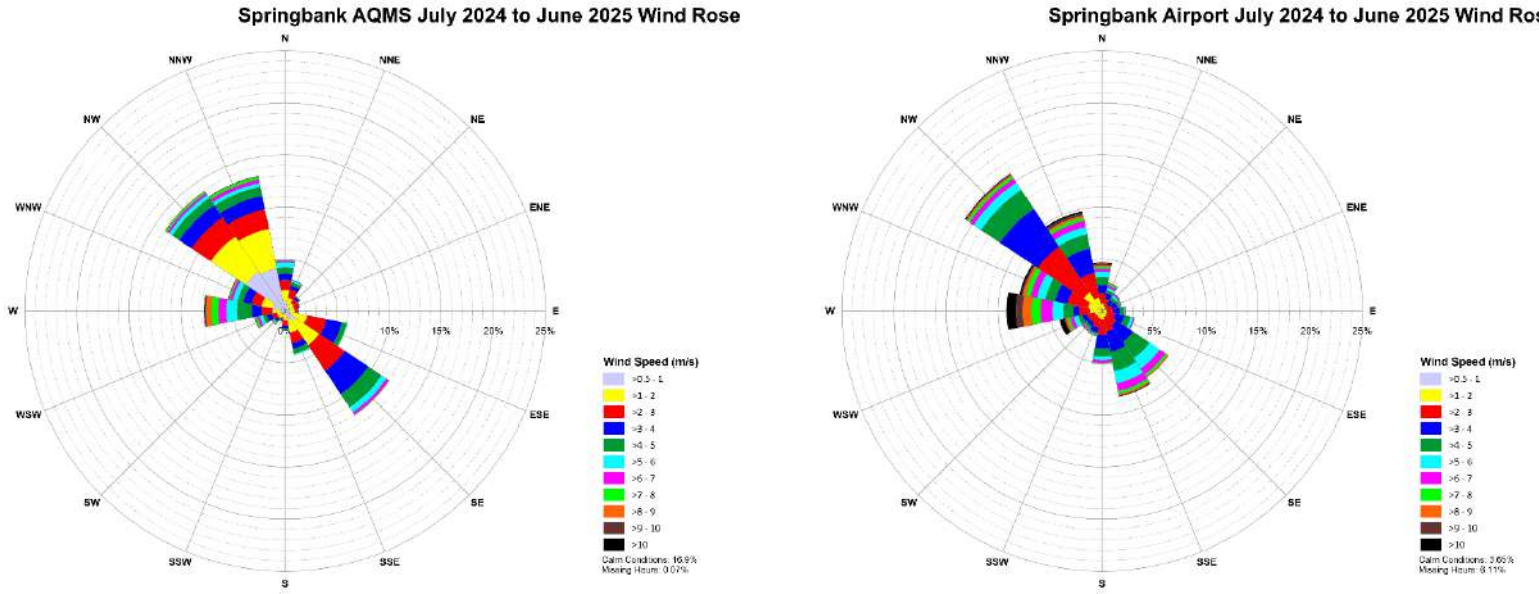


Figure B.3.27 Frequency Histogram of the 1-hour Average Wind Speeds Measured at the SR1 Project Sites and the Springbank Airport – July 2024 to June 2025

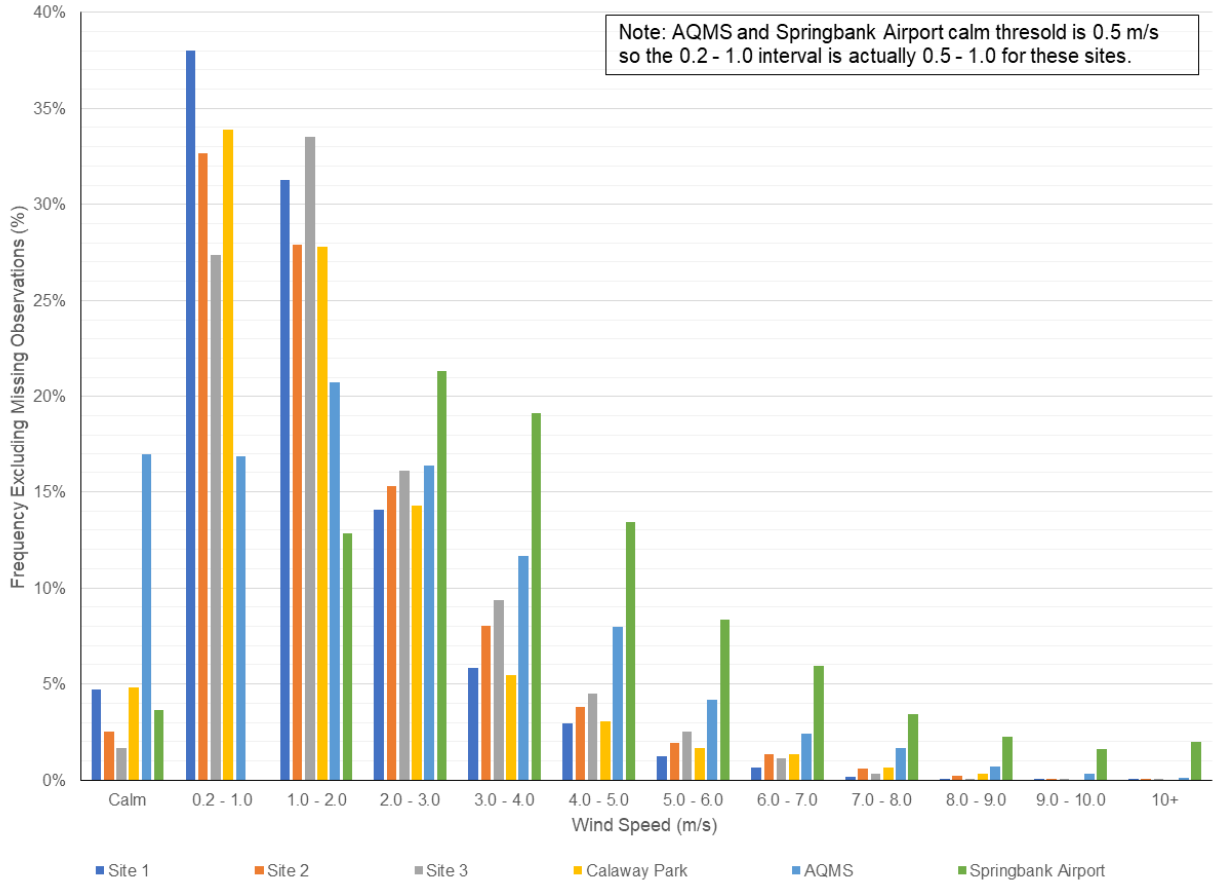


Figure B.3.28 Frequency Histogram of the 1-hour Average Ambient Temperature Measured at the SR1 Project Sites and the Springbank Airport – July 2024 to June 2025

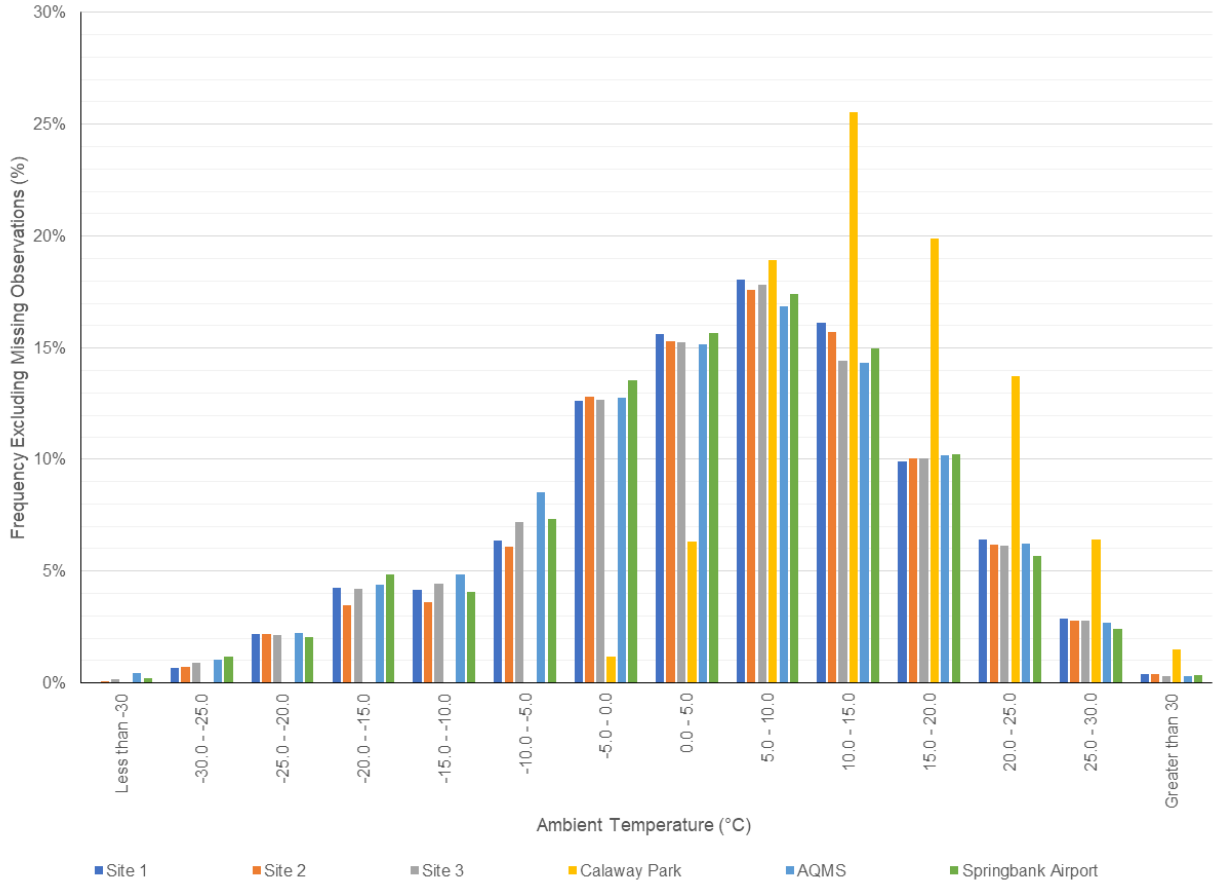


Figure B.3.29 Frequency Histogram of the 1-hour Average Relative Humidity Measured at the SR1 Project Sites and the Springbank Airport – July 2023 to June 2024

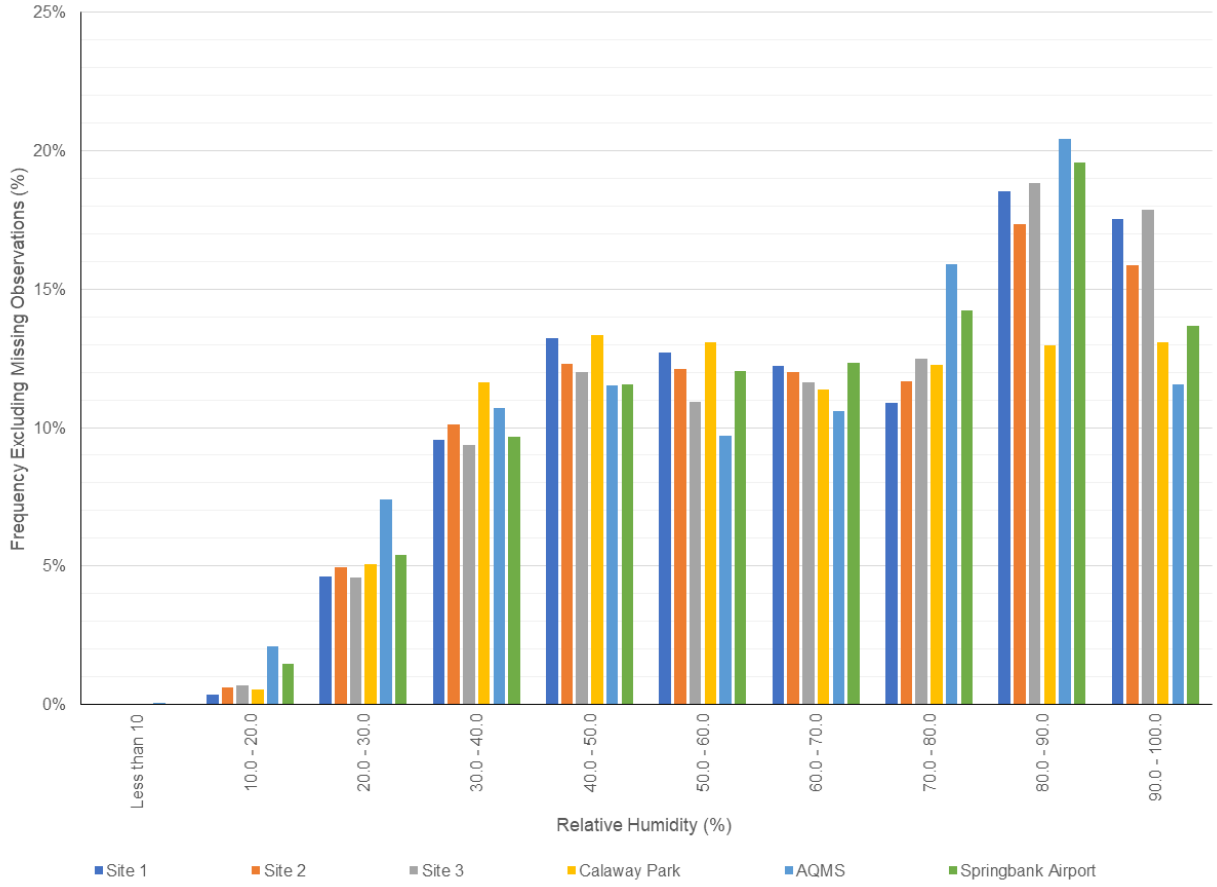


Figure B.3.30 Frequency Histogram of the 1-hour Average Atmospheric Pressure Measured at the SR1 Project Sites and the Springbank Airport – July 2024 to June 2025

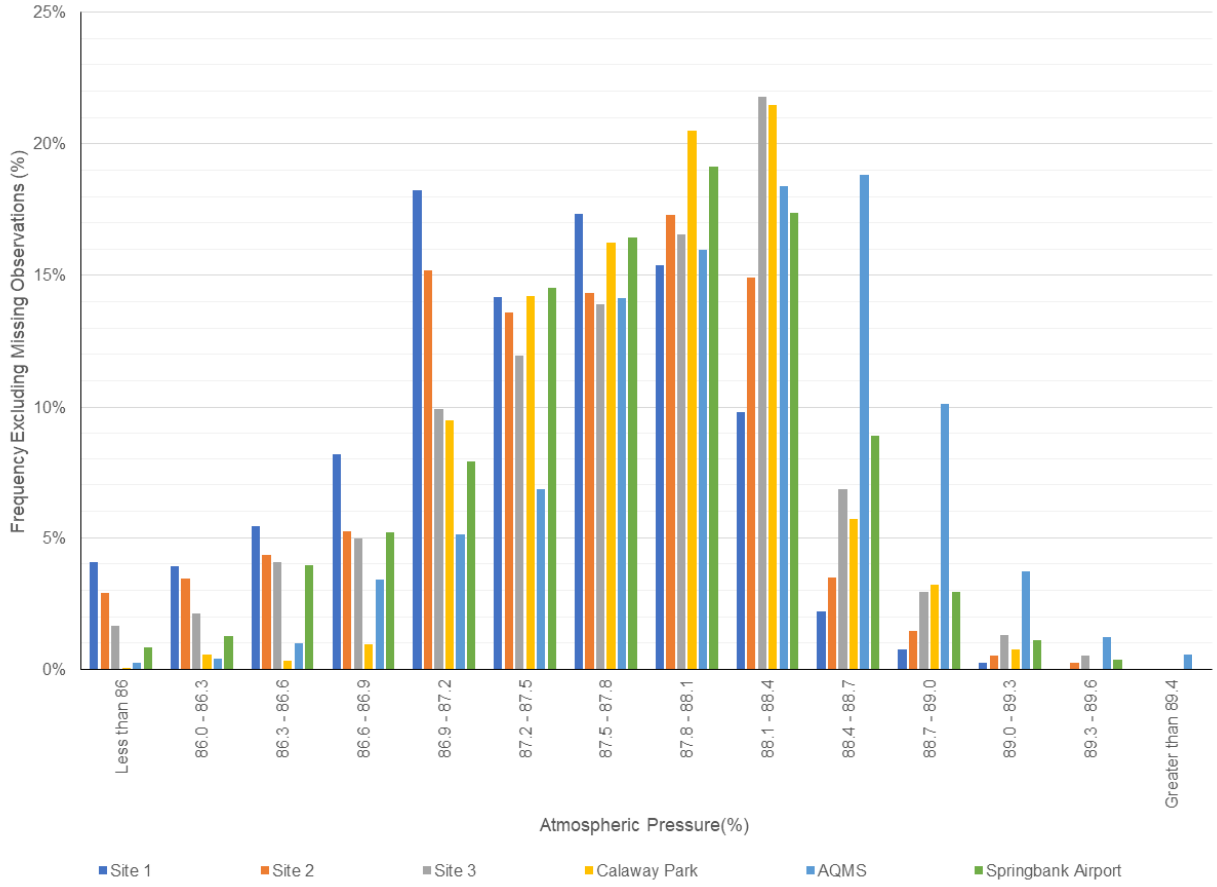


Figure B.3.31 Box-Whisker Plot of the 1-hour Average Solar Radiation Measured at the Springbank AQMS for Each Month – July 2024 to June 2025

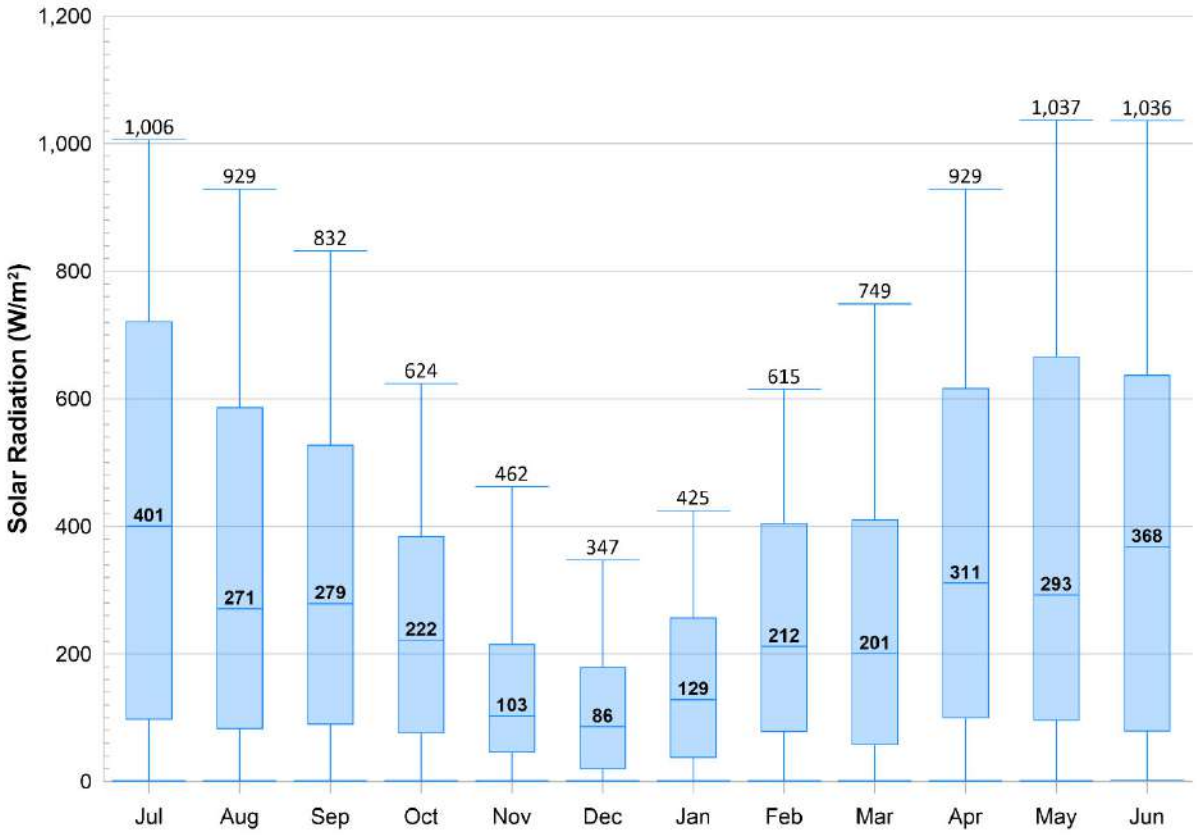


Figure B.3.32 Time Series of the 1-hour Average Precipitation and Cumulative Precipitation Measured at the Springbank AQMS and Springbank Airport – July 2024 to June 2025

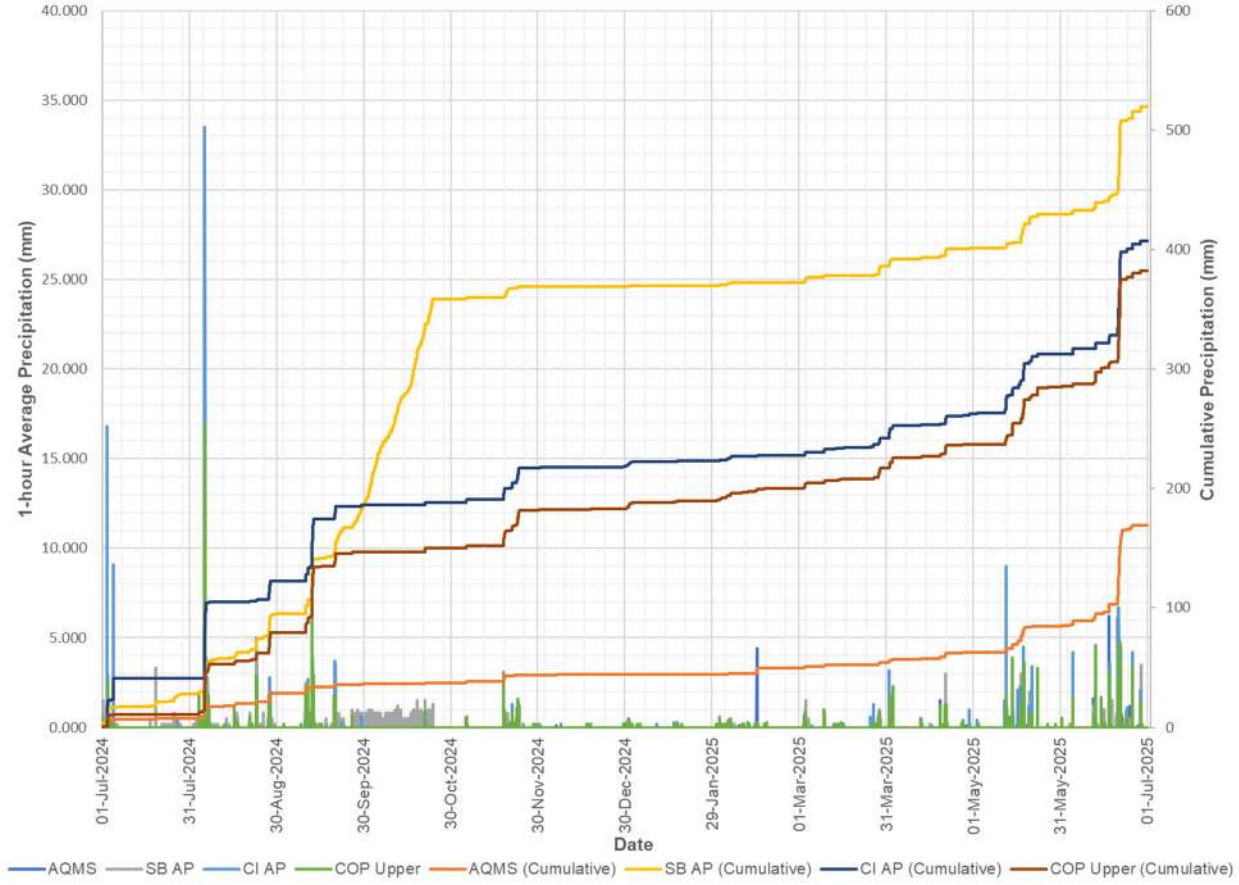


Figure B.3.33 Joint Frequency Distribution Plots of the Wind Direction and $PM_{2.5}$ 1-hour Average Concentrations Above the AAAQG (Left) and a Scatter Plot of the Wind Speed and $PM_{2.5}$ 1-hour Average Concentrations Above the AAAQG (Right) measured at Site 1 – July 2024 to June 2025

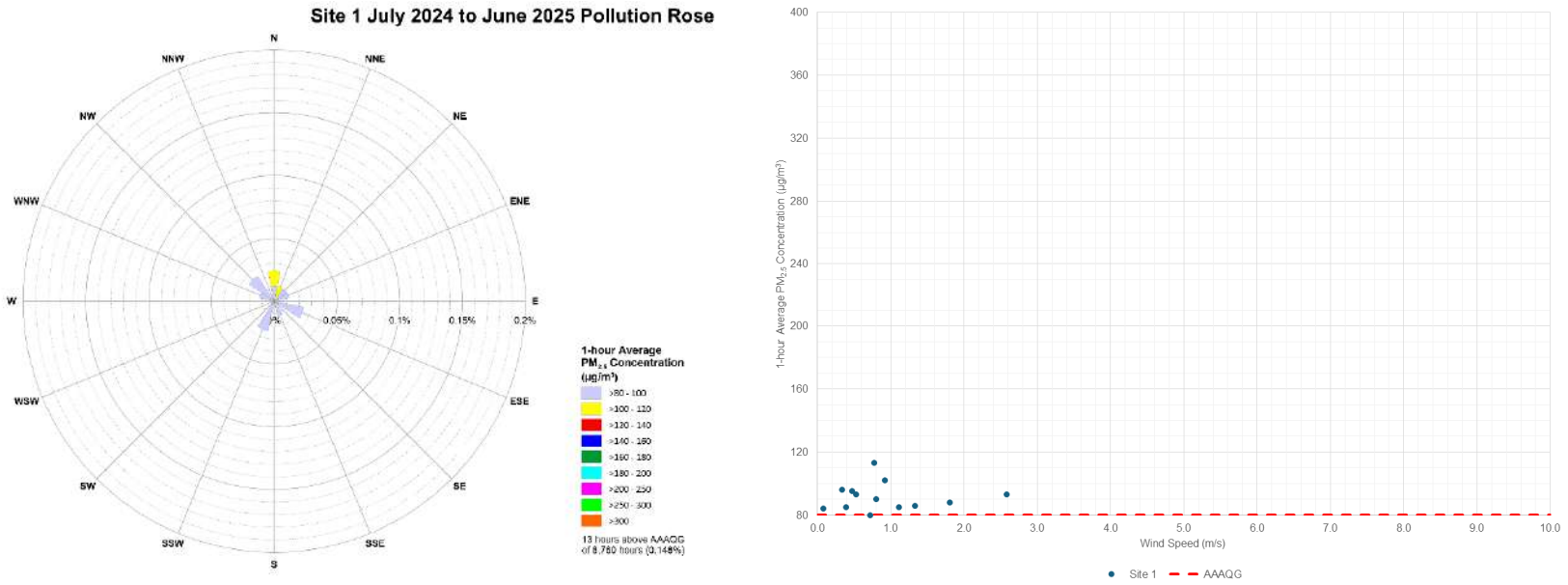


Figure B.3.34 Joint Frequency Distribution Plots of the Wind Direction and $PM_{2.5}$ 1-hour Average Concentrations Above the AAAQG (Left) and a Scatter Plot of the Wind Speed and $PM_{2.5}$ 1-hour Average Concentrations Above the AAAQG (Right) measured at Site 2 – July 2024 to June 2025

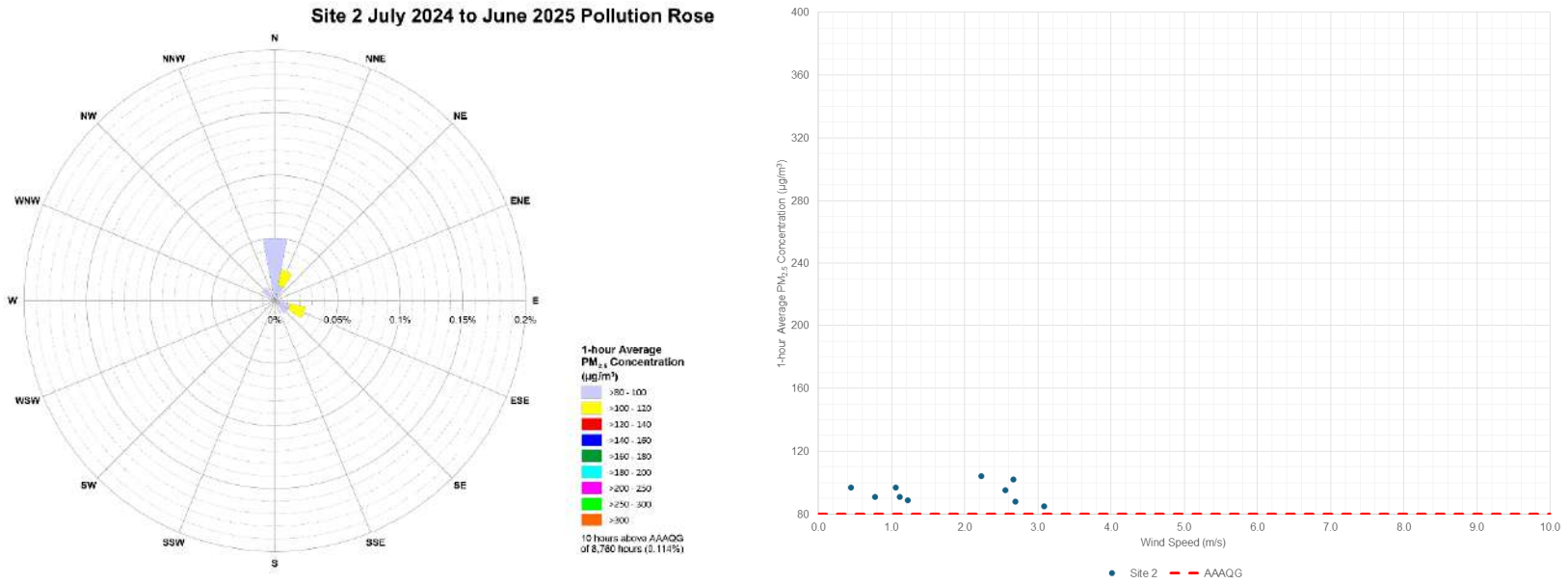


Figure B.3.35 Joint Frequency Distribution Plots of the Wind Direction and $PM_{2.5}$ 1-hour Average Concentrations Above the AAAQG (Left) and a Scatter Plot of the Wind Speed and $PM_{2.5}$ 1-hour Average Concentrations Above the AAAQG (Right) measured at Site 3 – July 2024 to June 2025

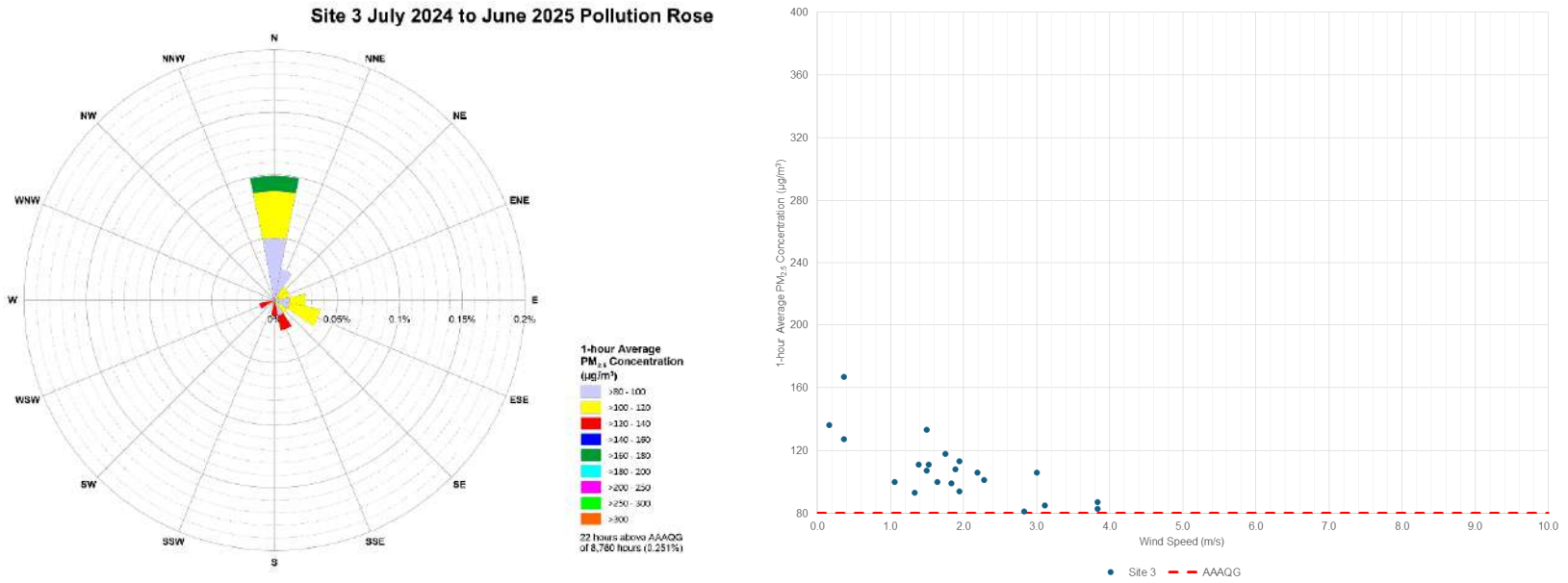


Figure B.3.36 Joint Frequency Distribution Plots of the Wind Direction and $PM_{2.5}$ 1-hour Average Concentrations Above the AAAQG (Left) and a Scatter Plot of the Wind Speed and $PM_{2.5}$ 1-hour Average Concentrations Above the AAAQG (Right) measured at Calaway Park – July 2024 to June 2025

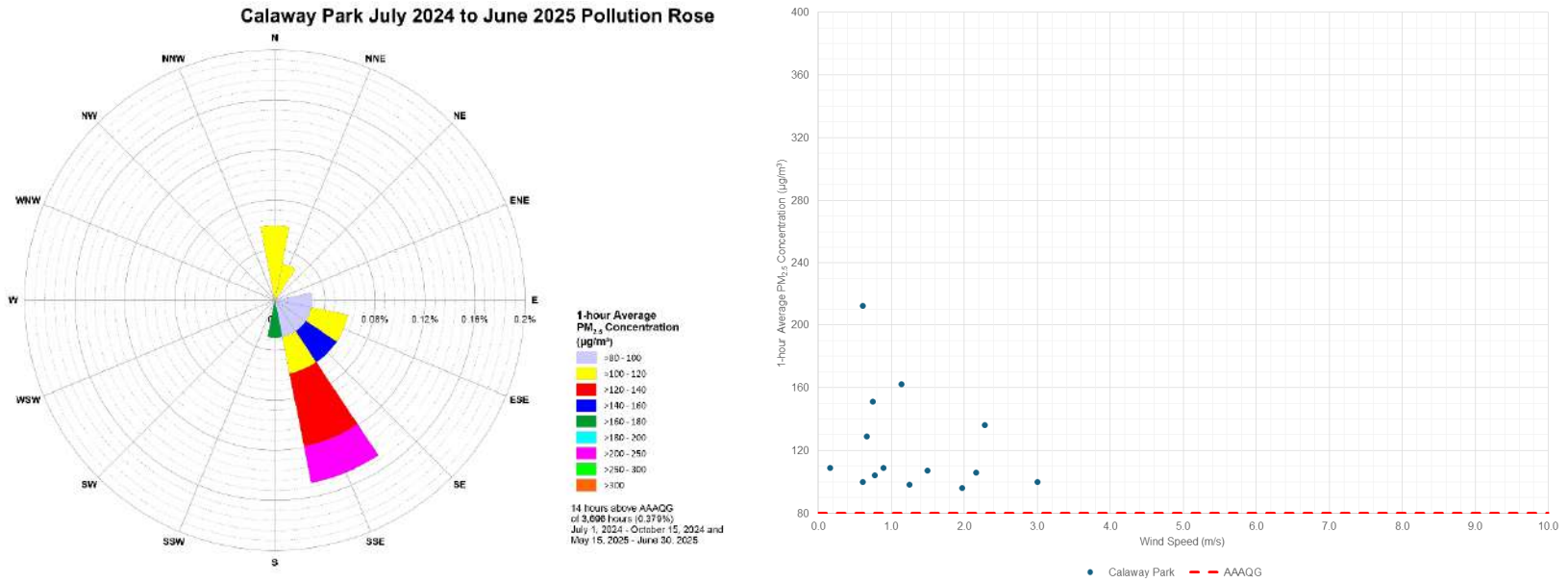
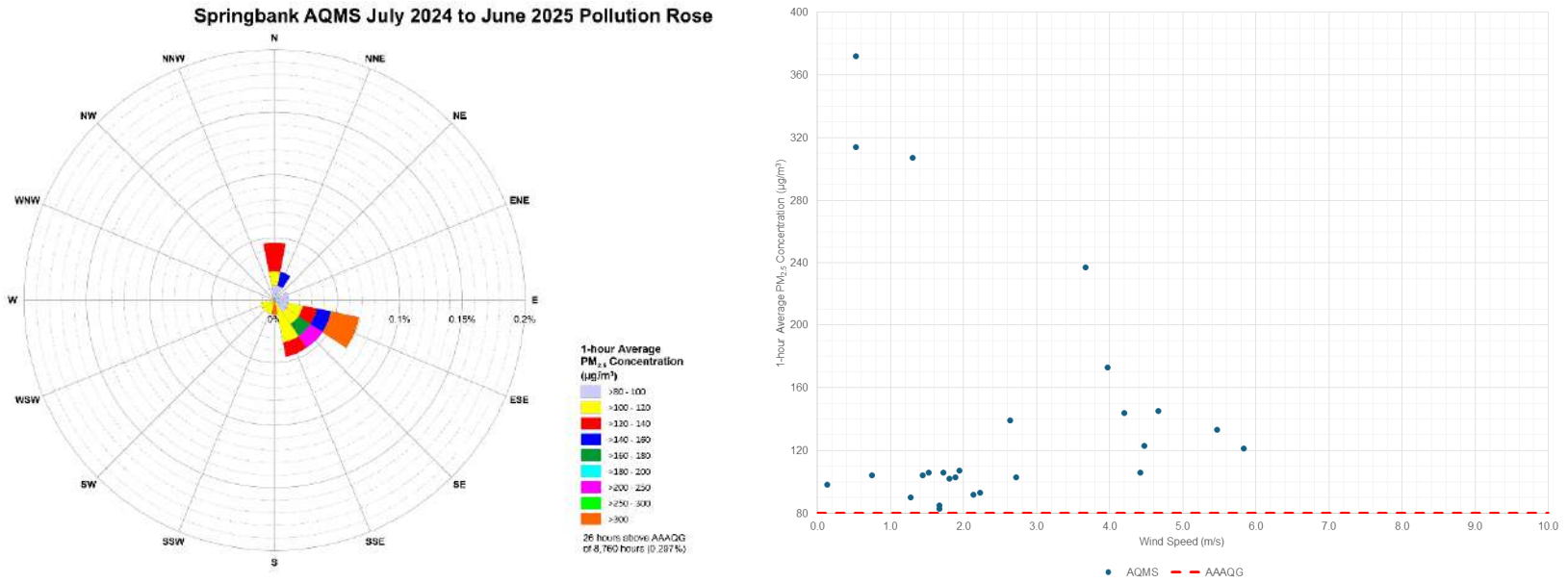


Figure B.3.37 Joint Frequency Distribution Plots of the Wind Direction and $PM_{2.5}$ 1-hour Average Concentrations Above the AAAQG (Left) and a Scatter Plot of the Wind Speed and $PM_{2.5}$ 1-hour Average Concentrations Above the AAAQG (Right) measured at the Springbank AQMS – July 2024 to June 2025



APPENDIX C
IAAC CONDITION 12.1 AND 12.2

IAAC condition 12.1: *The Proponent shall submit to the Agency a schedule for all conditions set out in this Decision Statement no later than 60 days prior to the start of construction. This schedule shall detail all activities planned to fulfill each condition set out in this Decision Statement and the commencement and estimated completion month(s) and year(s) for each of these activities.*
IAAC condition 12.4: *The Proponent shall provide Indigenous groups with the schedules referred to in conditions 12.1 and 12.2, and any update to the initial schedule made pursuant to condition 12.3 at the same time the Proponent provides these documents to the Agency.*

	Condition #	Summary of Condition	Start Date (month and year)	End Date (month and year)
Definitions and General Conditions	**1.1 to 1.37**	Definitions	N/A	N/A
	2.1 to 2.2	General conditions	N/A	N/A
Consultation	**2.3.1, 2.3.3, 2.3.4, 2.4**	Consultation conditions	08-Jul-21	No end date
	2.3.2	Provide all information available and relevant to the scope and subject matter - not to be less than 30 days for consultation pertaining to current use of lands and resources for traditional purposes, physical and cultural heritage and structures, sites or things of historical, archaeological, paleontological or architectural significance, and species at risk, and not less than 15 days for other consultation activities	As required	As required
Follow-up requirements	**2.5,2.6, 2.7,2.8, 2.9**	Follow-up requirements (see conditions)	As required	As required
	2.7	The Proponent shall also provide any update made pursuant to condition 2.6 to the Agency and to the party or parties being consulted during the development of each follow-up program within 30 days of the follow-up program being updated.	within 30 days of the follow-up program being updated	
	2.9	Where consultation with Indigenous groups is a requirement of a follow-up program, the Proponent shall discuss the follow-up program with each group and shall determine, in consultation with each group, opportunities for their participation in the implementation of the follow-up program, including the conduct of monitoring, the analysis and reporting of follow-up results and whether modified or additional mitigation measure(s) are required, as set out in condition 2.8	2019	As required
Annual reporting	**2.10**	The Proponent shall prepare an annual report that sets out, for that reporting year (see sub-sections 2.10.1 - 2.10.7)	Annual report; due by April 30	
	2.11	The first reporting year for which the Proponent shall prepare an annual report pursuant to condition 2.10 shall start on the day the Minister of the Environment issues the Decision Statement to the Proponent pursuant to subsection 54 (1) of the *Canadian Environmental Assessment Act, 2012*.	08-Jul-21	Jun-2022
	2.12	The Proponent shall submit to the Agency and the First Nation Land Use Committee referred to in condition 8.11 the annual report referred to in condition 2.10, including a plain language executive summary in both official languages, no later than April 30 following the reporting year to which the annual report applies.	April 30 of each year	
Information Sharing	**2.13**	The Proponent shall publish on the Internet, or any medium which is publicly available, the annual reports and the executive summaries referred to in conditions 2.10 and 2.12 and the other plans or documents referred to in this condition. The Proponent shall keep these documents publicly available for 15 years following their publication. The Proponent shall notify the Agency, Indigenous groups, the First Nation Land Use Committee referred to in condition 8.11, and potentially affected parties of the availability of these documents within 48 hours of their publication.	15 year period from issue date	
	2.14	When the development of any plan is a requirement of a condition set out in this Decision Statement, the Proponent shall submit the plan to the Agency prior to construction	N/A	Feb-2022
Change in Proponent	**2.15**	The Proponent shall notify the Agency and Indigenous groups in writing no later than 30 days after the day on which there is any transfer of ownership, care, control of Management of the Designated Project in whole or in part	30 days from transfer date	
Change to the Designated Project	**2.16.1 - 2.16.3**	If the Proponent is proposing to carry out the Designated Project in a manner other than described in condition 1.5, the Proponent shall notify the Agency in writing in advance.	As required	
	2.17	The Proponent shall submit to the Agency any additional information required by the Agency about the proposed change(s) referred to in condition 2.16, which may include the results of consultation with Indigenous groups and relevant authorities on the proposed change(s) and environmental effects referred to in condition 2.16.1 and the modified or additional mitigation measures and follow-up requirements referred to in condition 2.16.2	As required	

	Condition #	Summary of Condition	Start Date (month and year)	End Date (month and year)
Fish and fish habitat	**3.1**	The Proponent shall develop, prior to construction, and implement and maintain during all phases of the Designated Project, measures to control erosion and sedimentation within the project development area in a manner consistent with the *Fisheries Act* and its regulations. See 3.1.1 to 3.16 for additional conditions.	Dec-2021	Feb-2022
	3.1.1 - 3.1.6	See specific conditions on what the Proponent shall do in terms of physical structures or activities relating to sediment and erosion protection	Feb-2022	Spring 2026
	3.2	The Proponent shall inspect all erosion and sediment control measures installed within the project development area pursuant to condition 3.1. This includes during flood operation and post flood operation, except when not feasible for safety reasons, and document and repair any defective or damaged control measure as soon as technically feasible such that any impacts to fish and fish habitat resulting from the defective or damaged control measures are minimized or avoided.	As required	
	3.3 – 3.6	See specific conditions on physical activities the Proponent shall do during construction	Feb-2022	Spring 2026
	3.7	The Proponent shall implement measures to allow sediment to settle before releasing dewatering discharge from construction and post-flood maintenance activities into a water body.	Feb-2022	As required
	3.8	The Proponent shall remove, during construction, the topsoil from the diversion channel and store it for later use in the restoration of the diversion channel prior to operation.	April-2022	Dec-2025
	3.9	The Proponent shall finalize, prior to construction, in consultation with Indigenous groups and to the satisfaction of Fisheries and Oceans, an offsetting plan related to the bull trout (*Salvenlinus confluentus*) and the fish population of the Elbow River. When finalizing the plan, the Proponent shall include the adaptive offset measures approach proposed in its Conceptual Offset Measures Plan (Canadian Impact Assessment Registry Reference Number 80123, Document Number 1366). The Proponent shall implement the plan. The Proponent shall submit any approved offsetting plan(s) to the Agency prior to implementation.	Jul-2021	Feb-2022
	3.10	The Proponent shall, for any fish habitat offsetting measure(s) proposed in any offsetting plan(s) referred to in condition 3.9 that may cause adverse environmental effects not considered in the environmental assessment, develop and implement measures to mitigate those effects. The Proponent shall submit these measures to the Agency before implementing them.	Q1 2022	Feb-2022
	3.11 - 3.14	See specific working in water conditions he Proponent shall do or install or do during construction (i.e. debris removal, maintain fish passage, rock v-weir, temporary water intake system, graded drainage)	Feb-2022	As required
	3.15	The Proponent shall construct and maintain graded drainage areas within the reservoir during post-flood operation to prevent stranding of fish during release of stored floodwater from the reservoir. In doing so, the Proponent shall regrade areas of the reservoir during post-flood operation as necessary.	Feb-2022	As required
	3.16	The Proponent shall develop and implement, prior to operation, a protocol to rescue juvenile and adult fish during post-flood operation. See 3.16.1 to 3.16.4 for conditions specific to the protocol.	2020	Oct 2025
	3.17	The Proponent shall develop and implement a follow-up program to verify the accuracy of the environmental assessment and the effectiveness of the mitigation measures as it pertains to fish passage in the Elbow River. See 3.17.1 to 3.17.3 for conditions to be included in the program.	Spring 2021	Jun-2025
	3.18	The Proponent shall develop and implement a follow-up program to verify the accuracy of the environmental assessment and the effectiveness of the mitigation measures as it pertains to fish rescue. See 3.18.1 to 3.18.2 for conditions to be included in the program.	2020	Oct 2025
	3.19	The Proponent shall develop and implement a follow-up program to verify the accuracy of the environmental assessment and the effectiveness of the mitigation measures as it pertains to water quality. See sub-sections 3.19.1 to 3.19.6 for conditions to be included in the program.	2019	As required
	3.20	The Proponent shall develop and implement a follow-up program to verify the accuracy of the environmental assessment and the effectiveness of the mitigation measures as it pertains to channel morphology. As part of the follow-up program, the Proponent shall monitor channel morphology of the Elbow River and outlet channel during post-flood operation.	Fall 2021	As required

	Condition #	Summary of Condition	Start Date (month and year)	End Date (month and year)
Migratory Birds	**4.1 - 4.3**	The Proponent shall carry out the Designated Project in a manner that protects migratory birds and avoids harming, killing or disturbing migratory birds or destroying, disturbing or taking their nests or eggs. In this regard, the Proponent shall take into account Environment and Climate Change Canada's *Guidelines to reduce risk to migratory birds*. The Proponent's actions when carrying out the Designated Project shall be in compliance with the *Migratory Birds Convention Act, 1994, the Migratory Birds Regulations and with the Species at Risk Act.*	Feb-2022	As required
	4.2	The Proponent shall give preference to the use of existing access roads and disturbed areas for temporary workspaces and transportation activities over building new access roads and temporary workspace in undisturbed areas, and shall revegetate any area where native vegetation was removed for temporary workspace.	Feb-2022	Spring-2026
	4.3	The Proponent shall control the lighting required for Designated Project activities throughout all phases of the Designated Project, including its direction, duration of use, intensity, spectrum colour and brightness, to mitigate the adverse effects of the Designated Project on migratory birds and species at risk caused by sensory disturbances due to light, while complying with operational health and safety requirements.	Feb-2022	Oct-2025
	4.4	The Proponent shall identify, in consultation with Indigenous groups and relevant authorities, dates of breeding season for migratory birds and notify the Agency of these dates prior to construction.	Fall 2021	Feb-2022
	4.5	The Proponent shall develop, prior to construction, in consultation with Environment and Climate Change Canada and taking into account Environment and Climate Change Canada's *Description of Residence for bank swallow (Riparia riparia) in Canada*, measures to mitigate the adverse environmental effects on bank swallow (*Riparia riparia*) attributed to the Designated Project. The Proponent shall establish a schedule for the implementation of the measures and shall, as part of these measures: see specific conditions (4.5.1 - 4.5.4)	Fall 2021	Feb-2022
	4.5.1	maintain foraging habitat within 500 metres of bank swallow residences. If it is not technically feasible for the Proponent to maintain a distance of 500 metres, the Proponent shall provide a rationale to relevant authorities and develop and implement additional mitigation measures, in consultation with relevant authorities, to avoid effects on bank swallow. The Proponent shall submit these measures to the Agency prior to implementing them;	Fall 2021	Feb-2022
	4.5.2	install, prior to construction, and in consultation with Environment and Climate Change Canada, artificial nesting structures in suitable habitat to compensate for the loss of nesting sites within the project development area and identified in Appendix H, Figure 3- 1, of the Environmental Impact Statement. The Proponent shall perform maintenance on the nesting structures annually and maintain their accessibility and integrity during all phases of the Designated Project and shall ensure the presence of foraging habitat within 500 metres of the artificial nesting structures. If it is not technically feasible for the Proponent to ensure the presence of foraging habitat within a distance of 500 metres, the Proponent shall provide a rationale to relevant authorities and develop and implement additional mitigation measures, in consultation with relevant authorities, to avoid effects on bank swallow. The Proponent shall submit these measures to the Agency prior to implementing them;	Fall 2021	Feb-2022
	4.5.3	maintain the slope of topsoil, soil and sediment stockpiles located within the project development area and not used as artificial nesting structures in accordance with condition 4.5.2 at less than 70 degrees; and	Feb-2022	Oct-2025
	4.5.4	demonstrate how any other offsetting measures implemented by the Proponent will compensate for the adverse environmental effects on bank swallow (*Riparia riparia*) attributed to the Designated Project in the project development area.	As required	
	4.6	The Proponent shall conduct vegetation removal, and any other activity that could potentially disturb migratory birds, within the project development area outside of the breeding season(s) for migratory birds identified in condition 4.4. If vegetation removal or the conduct of other disturbance activity outside of the breeding season(s) is not technically feasible during any given year, the Proponent shall develop and implement additional mitigation measures, in consultation with relevant authorities, to avoid harm to migratory birds and their nests or eggs. The Proponent shall submit these measures to the Agency prior to implementing them.	Feb-2022	As required
	4.7	The Proponent shall remove debris in the off-stream reservoir within seven days after the draining of the reservoir. If it is not technically feasible for the Proponent to remove debris within seven days after the draining of the reservoir, the Proponent shall provide a rational to Indigenous groups and relevant authorities and develop and implement additional mitigation measures, in consultation with relevant authorities, to avoid harm to migratory birds and their nests or eggs. The Proponent shall submit these measures to the Agency prior to implementing them.	seven days after the draining of the reservoir	
	4.8	For any active migratory bird nests identified during construction or operation, the Proponent shall establish and implement, in consultation with relevant authorities, mitigation measures to avoid destroying, disturbing or taking the nest(s), including by implementing a disturbance setback buffer during construction and dry operation and by following the approach outlined in the Response to Information Request Round 2 Package 4 -01 to -04, IR4-03 (Canadian Impact Assessment Registry Reference Number 80123, Document Number 1311) during flood operation.	Feb-2022	As required

	Condition #	Summary of Condition	Start Date (month and year)	End Date (month and year)
Migratory Birds (cont'd)	**4.9**	The Proponent shall develop and implement, in consultation with Indigenous groups and relevant authorities, a protocol to prevent harm to migratory birds, including migratory birds species at risk identified in Table 3 of the environmental assessment report, within the project development area. The Proponent shall develop the protocol prior to construction and implement it prior to flood operation. The protocol shall include: 4.9.1 flood forecasting undertaken prior to inventories conducted in accordance with condition 4.10; and 4.9.2 measures to rescue migratory birds chicks and eggs.	Fall 2021	Feb-2022
	4.10	The Proponent shall conduct, in consultation with Indigenous groups, inventories of potential migratory bird habitat, including the collection of information on breeding bird densities and the presence of ground nesting birds, as well as mapping of important habitat features, shrub lands, wetlands and grassland within the project development area every five years starting the first year of operation, and update the migratory bird protocol referred to in condition 4.9 based on the results of the inventories.	Fall 2021	every 5 years from the 1st year of operation
	4.11	The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and to determine the effectiveness of all mitigation measures to avoid harm to migratory birds, including migratory birds that are listed species at risk, their eggs and nests. The follow-up program shall include the mitigation measures used to comply with conditions 4.1 to 4.10. As part of the development of the follow-up program, the Proponent shall identify performance indicators that shall be used by the Proponent to evaluate the effectiveness of mitigation measures. The Proponent shall implement the follow-up program during all phases of the Designated Project. As part of the follow-up program, the Proponent shall: 4.11.1 monitor, annually during construction, for the first three years of operation and every five years thereafter, bank swallow use of the project development area.	Jun-2019	Feb-2022 for plan development; first 3 years of operations and every 5 years thereafter
Species at Risk	**5.1**	The Proponent shall conduct pre-construction surveys to determine the presence of little brown myotis (*myotis lucifugus*) roosting sites in the project development area. The Proponent shall establish, in consultation with Indigenous groups and relevant authorities, buffer zones around little brown myotis (*myotis lucifugus*) active roosts identified during the pre-construction surveys or found by the Proponent or brought to the attention of the Proponent by an Indigenous group during any phase of the project. The Proponent shall maintain the buffer zones until it is determined the roosts are no longer active.	late summer 2021	Fall 2021
	5.2	The Proponent shall conduct breeding habitat surveys for the northern leopard frog (*Lithobates pipiens*), western toad (*Anaxyrus boreas*), and western tiger salamander (*Ambystoma mavoritium*) within the project development area.	Summer 2021	Fall 2021
	5.3	For any construction activity within 100 metres of breeding habitat identified under condition 5.2 for the northern leopard frog (*Lithobates pipiens*), western toad (*Anaxyrus boreas*), or western tiger salamander (*Ambystoma mavoritium*) during the breeding season, the Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, measures to prevent northern leopard frog (*Lithobates pipiens*), western toad (*Anaxyrus boreas*), and western tiger salamander (*Ambystoma mavoritium*) from accessing the active construction areas. See 5.3.1 and 5.3.2 for measures.	Fall 2021	Feb-2022
	5.4	If the results of the monitoring conducted in accordance with condition 5.3.2 identify the presence of northern leopard frog (*Lithobates pipiens),* western toad (*Anaxyrus boreas),* or western tiger salamander (*Ambystoma mavoritium)* in active construction areas within 100 metres of their breeding habitat, the Proponent shall implement additional species-specific mitigation measures in consultation with Indigenous groups and relevant authorities.	Fall 2021	As required
	5.5	The Proponent shall develop and implement, in consultation with Indigenous groups and relevant authorities, a protocol to prevent the mortality of amphibians, including northern leopard frog (*Lithobates pipiens*), western toad (*Anaxyrus boreas*), and western tiger salamander (*Ambystoma mavoritium*) during flood operation within the reservoir footprint. The Proponent shall develop the protocol prior to construction, taking into account the flood forecasting undertaken in accordance with condition 4.9.1. The protocol shall include measures to rescue and relocate northern leopard frog (*Lithobates pipiens*), western toad (*Anaxyrus boreas*), and western tiger salamander (*Ambystoma mavoritium*) to suitable habitat outside the reservoir footprint.	Fall 2021	Feb-2022
	5.8	The Proponent shall direct during construction any drainage pathway, constructed or modified as part of the Designated Project, away from wetlands and shall identify prior to construction wetlands where drainage pathway should not be directed during operation. The Proponent shall provide a map of the wetlands to be avoided to the Agency prior to construction.	Dec-2021	Feb-2022

	Condition #	Summary of Condition	Start Date (month and year)	End Date (month and year)
Species at Risk (cont'd)	**5.9**	The Proponent shall submit to the Agency, prior to construction, a map of all wetlands that will be permanently removed for the construction of the Designated Project and shall not grub vegetation when undertaking construction work in wetlands except for those wetlands that will be permanently removed.	Dec-2021	Feb-2022
	5.6; 5.7; 5.10	See specific conditions	As required	
Atmospheric Environment	**6.1**	See specific condition regarding vehicles and emission standards	N/A	
	6.2	The Proponent shall develop, prior to construction, and implement, during construction, a no-idling policy for all vehicles within the project development area. The Proponent shall require that all persons abide by this policy, unless not technically feasible or not feasible for health or safety reasons. The Proponent shall submit the policy to the Agency prior to construction.	Dec-2021	Feb-2022
	6.3	The Proponent shall develop, prior to construction and in consultation with relevant authorities, and implement during all phases of the Designated Project, measures to maintain baseline air quality and prevent exceedance of the Canadian Council of Ministers of the Environment' Canadian Ambient Air Quality Standards.	Jul-2020	Feb-2022
	6.4	The Proponent shall develop, prior to construction, and implement during all phases of the Designated Project, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of mitigation measures as it pertains to adverse changes to air quality attributed to the Designated Project. See 6.4.1 to 6.4.6 for conditions to include in the program.	Jul-2020	As required
	6.5	The Proponent shall provide Indigenous groups with the results of the follow-up program referred to in condition 6.4 in plain language at a minimum twice annually, at a time determined in consultation with Indigenous groups.	Twice annually	
Human Health	**7.1 and 7.2**	See specific condition regarding noise and blasting requirements	As required	
	7.3	The Proponent shall develop, prior to construction and in consultation with Indigenous groups, a protocol for receiving complaints related to exposure to noise attributable to the Designated Project. The Proponent shall provide the protocol to the Agency prior to construction and shall implement it during construction. As part of the implementation of the protocol, the Proponent shall respond to any noise complaint attributed to any component of the Designated Project within 48 hours of the complaint being received and shall implement any corrective action, if required to reduce exposure to noise, in a timely manner.	Dec-2021	Feb-2022
	7.4	The Proponent shall develop a communication plan in consultation with Indigenous groups. The Proponent shall develop the communication plan prior to construction and shall implement and keep it up to date during all phases of the Designated Project. See 7.4.1 - 7.4.3 for conditions to include in the plan.	Dec-2021	As required
	7.5	The Proponent shall implement, during all phases of the Project, measures to mitigate fugitive dust emissions attributable to the Designated Project. As part of the measures, the Proponent shall: 7.5.1 establish speed limits on Designated Project roads during all phases of the Designated Project and require that all persons abide by these speed limits; and 7.5.2 apply dust suppressant on the Designated Project permanent access roads and parking areas during all phases of the Designated Project. The Proponent shall select, in consultation with relevant authorities, dust suppressants with the least potential effects on human health and the environment.	Feb-2022	As required
	7.6	The Proponent shall decommission and plug off water wells located within the project development area that are not used to monitor groundwater quality pursuant to condition 7.9.1, prior to the start of operation.	Feb-2022	May-2025
	7.7	The Proponent shall monitor, at a minimum twice prior to construction and weekly during flood operation, total mercury and methylmercury levels in the Elbow River upstream of the diversion system, in the off-stream reservoir, and in the low-level outlet downstream of the off-stream reservoir outlet gate, unless not feasible for safety reasons.	Twice prior to (Fall 2021 - January 2022)	As required
	7.8	The Proponent shall develop, in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and the effectiveness of the mitigation measures as it pertains to contamination of country food. See 7.8.1 to 7.8.4 for conditions to be included in the program.	June-2021	As required
	7.9	The Proponent shall develop prior to operation, and implement, in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and the effectiveness of the mitigation measures as it pertains to drinking water quality. See 7.9.1 to 7.9.3 for conditions that need to be included in the plan.	Jun-2019	As required

	Condition #	Summary of Condition	Start Date (month and year)	End Date (month and year)
Human Health (cont'd)	**7.10**	The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and to determine the effectiveness of all measures to mitigate fugitive dust emissions attributable to the Designated Project.	Jun-2020	Feb-2022
	7.11*	The Proponent shall provide Indigenous groups with the results of the follow-up program referred to in condition 7.10 in plain language at a minimum twice annually, at a time determined in consultation with Indigenous groups.	Twice annually	
Current use of lands and resources for traditional purposes	**8.1**	The Proponent shall undertake, in consultation with Indigenous groups and relevant authorities, progressive reclamation of areas disturbed by the Designated Project, including bank and riparian areas. See 8.1.1 to 8.1.4 for additional conditions.	Jun-2019	Spring 2026
	8.2	The Proponent shall manage noxious weeds and invasive alien species as necessary to promote successful revegetation that includes traditional plant establishment and growth. In doing so, the Proponent shall not use herbicide within 30 metres of wetlands and waterbodies in the project development area.	Feb-22	As required
	8.3	The Proponent shall conduct pre-construction surveys to determine the presence of grizzly bear (Ursus arctos) western population active dens in the project development area. The Proponent shall establish, in consultation with Indigenous groups and relevant authorities, no-work buffer zones around grizzly bear (*Ursus arctos*) western population active dens identified during the pre- construction surveys or found by the Proponent or brought to the attention of the Proponent by an Indigenous group during any phase of the Designated Project. The Proponent shall maintain the buffer zones from their establishment and until the active den is no longer occupied.	Nov-2021	As required
	8.4	The Proponent shall follow the timing restrictions on industrial activities identified in the Alberta's Recommended Land Use Guidelines: Key Wildlife and Biodiversity Zones when undertaking construction and maintenance activities in the Key Wildlife and Biodiversity Zone identified along the Elbow River. 8.4.1 If it is not economically or technically feasible for the Proponent to follow the timing restrictions on industrial activities identified in the Alberta's *Recommended Land Use Guidelines: Key Wildlife and Biodiversity Zones*, develop and implement additional mitigation measures, in consultation with Environment and Climate change Canada and other relevant authorities. The Proponent shall submit these measures to the Agency prior to implementing them.	As required	
	8.5	The Proponent shall implement measures to mitigate effects of the Designated Project on the movement of grizzly bear western population (*Ursus arctos*) and ungulates, including: 8.5.1 installing and maintaining during construction and operation, an underpass under Highway 22 where it crosses the diversion channel to allow safe passage for grizzly bear western population (*Ursus arctos*) and ungulates; and 8.5.2 utilizing wildlife-friendly fencing for all fencing required for the Designated Project, unless otherwise required for safety reasons or if the fencing is in locations that are not in the care and control of the Proponent, taking into account Alberta Conservation Association *Landholder's Guide to Wildlife Friendly Fencing.* As part of the annual report for the Designated Project referred to in condition 2.10, the Proponent shall provide the Agency with a current map of Designated Project fencing. The Proponent shall maintain the fencing during all phases of the Designated Project.	Spring 2024	As required
	8.6	The Proponent shall maintain navigation on the Elbow River during all phases of the Designated Project. The Proponent shall establish and maintain a portage route around the diversion system gate and the service spillway locations to maintain navigation on the Elbow River during construction of these project components and install safety signage to signal the presence of the diversion system gate and location of the portage route until such time that the portage route is no longer required to maintain navigation on the Elbow River.	Sep-2020	Oct-2025
	8.7	The Proponent shall provide the Agency and Indigenous groups with the final project design within seven days of its finalization and shall consult with Indigenous groups at least 60 days in advance of construction activities to understand locations and timing needed to allow Indigenous groups to catalogue, harvest and transplant traditional and medicinal plants present within the project development area, in a culturally appropriate way.	Jul-2021	Dec-2021
	8.8	The Proponent shall start developing, prior to construction and complete at the latest 1 year prior to start of operation, in consultation with Indigenous groups, a Land Use Plan to support Indigenous groups' use of the project development area, and implement the plan during all phases of the Designated Project. The Proponent shall submit the final plan to the First Nation Land Use Advisory Committee referred to in condition 8.11, First Nations and the Agency within seven days of its finalization. See sub-section 8.8.1 to 8.8.4 for conditions to be captured in the plan.	Dec-2021	Oct-2024

	Condition #	Summary of Condition	Start Date (month and year)	End Date (month and year)
Current use of lands and resources for traditional purposes (cont'd)	**8.9**	The Proponent shall establish, in consultation with First Nations, a staging area for traditional use activities in close proximity to the land use areas identified in condition 8.8. The Proponent shall allow and provide sufficient space within the staging area for the construction of semi-permanent structures. The Proponent shall provide maps to the Agency and First Nations of the staging area prior to construction.	Dec-2021	May-2022
	8.10	The Proponent shall provide unimpeded access for First Nations to the staging area identified in condition 8.9, except during the flood operation, when access to the staging area may be prohibited for safety reasons and if not possible for maintenance purposes. The Proponent shall communicate to First Nations the closure of the staging area when required for safety reasons and during flood season	As required	
	8.11	The Proponent shall establish, prior to construction and in consultation with First Nations, and maintain, throughout construction and operation, a First Nation Land Use Advisory Committee (the committee) to support the development and implementation of the plan identified in condition 8.8. When establishing the committee, the Proponent shall consult with each First Nation with respect to whether they wish to participate as members of the committee and shall prioritize the selection of representatives from First Nations who wish to participate as members in the committee. As part of the establishment of the committee, the Proponent shall co-develop Terms of Reference for the committee with First Nations and update the Terms of Reference every 10 years. The Proponent shall provide the completed Terms of Reference to the Agency prior to construction and any update within 30 days of the Terms of Reference being updated. See sub-sections 8.11.1 - 8.1.11-7 for Terms of Reference conditions.	Nov-2021	As required
	8.12	The Proponent shall include any Indigenous groups for which Aboriginal or Treaty Rights under section 35 of *The Constitution Act, 1982* are recognized by the Government of Alberta after the issuance of this Decision Statement in the Land Use Plan, the staging area and the First Nations Land Use Advisory Committee referred to in conditions 8.9, 8.10 and 8.11.	No date required	
	8.13	The Proponent shall develop, prior to operation, and in consultation with Indigenous groups, a follow-up program to verify the accuracy of the environmental assessment as it pertains to natural re-vegetation of the drained reservoir during post-flood operation. See sub-sections 8.13.1 and 8.13.2 for items to include in the follow up program.	Sep-2021	As required
	8.14	The Proponent shall develop, prior to construction and in consultation with Indigenous groups, a follow-up program to verify the accuracy of the environmental assessment and to determine the effectiveness of mitigation measures as it pertains to the adverse environmental effects of the Designated Project on the current use of lands and resources for traditional purposes. See sub-sections 8.14.1 - 8.14.5 for monitoring conditions.	Fall 2021	As required
Physical and cultural heritage and structures, sites or things of historical, archaeological, paleontological or architectural significance	**9.1**	The Proponent shall retain, prior to construction, the services of Indigenous monitors to observe, record, and report to the Proponent and Indigenous groups on the implementation, throughout construction, of requirements set out in this Decision Statement including the archeological and heritage management plan referred to in condition 9.3. Prior to retaining the services of Indigenous monitors, the Proponent shall consult with each Indigenous group with respect to whether they wish to participate as Indigenous monitor. When retaining the services of Indigenous monitors from each Indigenous group who wishes to participate, the Proponent shall determine, in consultation with these Indigenous groups, the scope, purpose and objectives of the participation of each Indigenous monitor and shall provide that information to the Agency	Dec-2021	Dec-2025
	9.2	The Proponent shall develop and implement, prior to construction and in consultation with Indigenous groups and Alberta Ministry of Culture, Multiculturalism and Status of Women, a historic resource impact assessment of the project development area. The Proponent shall apply the archaeological and heritage management plan pursuant to condition 9.3 to structures, sites, or things of historical, archaeological, paleontological, or architectural significance or physical or cultural heritage resources identified as part of the historic resource impact assessment.	2016	Jan-2024
	9.3	The Proponent shall develop, prior to construction and in consultation with Indigenous groups, Alberta Ministry of Culture, Multiculturalism and Status of Women, and implement, during construction and operation, an archaeological and heritage management plan for any structures, sites, or things of historical, archaeological, paleontological, or architectural significance or physical or cultural heritage resources within the project development area, including, but not limited to sites and things subject to the *Alberta Historical Act*. See sub-sections 9.3.1 - 9.3.4 for conditions to include in the plan.	Sept-2021	Feb-2022
	9.4	The Proponent shall develop, prior to construction and in consultation with Indigenous groups, cultural awareness training for all employees associated with the Designated Project. The Proponent shall implement the training prior to the start of construction and during all phases of the Designated Project.	Fall 2021	As required
	9.5	The Proponent shall, prior to construction and in consultation with Indigenous groups, provide access to Indigenous groups to the project development area for the purpose of conducting ceremonies, to the extent that such access is safe.	Jan-2022	Feb-2022
	9.6	The Proponent shall provide the Agency and Indigenous groups with a map of the final construction site within seven days of its finalization.	within 7 days of finalization	Dec-2021

	Condition #	Summary of Condition	Start Date (month and year)	End Date (month and year)
Physical and cultural heritage and structures, sites or things of historical, archaeological, paleontological or architectural significance (cont'd)	**9.7**	The Proponent shall have a qualified individual conduct paleontological monitoring during construction when: 9.7.1 excavating bedrock for the diversion system; 9.7.2 excavating 4 metres of bedrock or greater, including for the emergency spillway; 9.7.3 excavating bedrock for new road alignments including on Highway 22; and 9.7.4 pipeline operators are using open cut methods for relocation of pipelines and utilities under the diversion channel.	Feb-2022	Oct-2025
	9.8	The Proponent shall strip and stockpile topsoil during construction and shall prevent mixing of topsoil with other soil horizons. The Proponent shall replace the topsoil during progressive reclamation pursuant to condition 8.1.	As required	
	9.9	The Proponent shall develop, prior to construction and in consultation with Indigenous groups and Alberta Ministry of Culture, Multiculturalism and Status of Women, a follow-up program to verify the accuracy of the environmental assessment and to determine the effectiveness of all mitigation measures for effects to any structures, sites, or things of historical, archaeological, paleontological, or architectural significance or physical or cultural heritage resources. The Proponent shall implement the follow-up program during all phases of the Designated Project and submit the results of the follow-up program to Alberta Ministry of Culture, Multiculturalism and Status of Women.	Sept- 2021	As required
Independent Environmental Monitor	**10.1**	The Proponent shall retain, prior to construction, the services of a third-party independent environmental monitor, who is a qualified individual as it pertains to environmental monitoring in Alberta, to independently observe and record on the implementation of the conditions set out in this Decision Statement during construction and to report findings to the Proponent and the Agency.	Dec-2021	Feb-2022
	10.2	The Proponent shall require the independent environmental monitor to report to the Proponent, in writing, about the implementation of any condition set out in this Decision Statement during construction. The Proponent shall also require the independent environmental monitor to recommend to the Proponent, in writing, which action(s) in their view should be taken by the Proponent with respect to the implementation of conditions set out in this Decision Statement during construction	Feb-2022	Dec-2025
	10.3	The Proponent shall require the independent environmental monitor to provide to the Agency, at a frequency to be determined in consultation with the Agency, the information reported to the Proponent pursuant to condition 10.2 at the same time that the Proponent receives that information.	Feb-2022	Dec-2025
	10.4	The Proponent shall require the independent environmental monitor to retain the information reported to the Proponent pursuant to condition 10.2 for five years following submission to the Agency pursuant to condition 10.3.	2022	2030
Accidents and Malfunctions	**11.1**	The Proponent shall take all reasonable measures to prevent accidents and malfunctions that may result in adverse environmental effects and to mitigate any adverse environmental effect from accidents and malfunctions that do occur. See sub-sections 11.1.1 to 11.1.5 for measures.	As required	
	11.2	The Proponent shall consult, prior to construction, Indigenous groups on the measures to be implemented to prevent accidents and malfunctions.	Jan-2022	Apr-2022
	11.3	The Proponent shall develop an accident and malfunction response plan in relation to, and for the construction of the Designated Project and an accident and malfunction response plan in relation to, and for the operation of the Designated Project. The Proponent shall develop the accident and malfunction response plan in relation to, and for construction of the Designated Project prior to construction and the accident and malfunction response plan in relation to, and for the operation of the Designated Project prior to the first flood operation. See 11.3.1 to 11.3.6 for conditions that need to captured in the plan.	Jan-2022	As required
	11.4	The Proponent shall maintain the accident and malfunction response plan referred to in condition 11.3 up-to-date during all phases of the Designated Project. The Proponent shall submit any updated accident and malfunction response plan to the Agency and to the parties being consulted during the development of the plan within 30 days of the plan being updated	within 30 days of the plan being updated	
	11.5	In the event of an accident or malfunction with the potential to cause adverse environmental effects, the Proponent shall immediately implement the measures appropriate to the accident or malfunction referred to in condition 11.3.2. See sub-sections 11.5.1 - 11.5.4 for measures.	As required	
	11.6	The Proponent shall develop, in consultation with Indigenous groups and potentially affected parties, a communication plan for accidents and malfunctions occurring in relation to the Designated Project, including accidents and malfunctions occurring within the project development area which may affect area(s) outside of the project development area. The Proponent shall develop the communication plan prior to construction and shall implement and keep it up-to-date during all phases of the Designated Project. See sub-section 11.6.1 to 11.6.3 for plan specifics.	Jan-2022	As required

	Condition #	Summary of Condition	Start Date (month and year)	End Date (month and year)
Schedules	**12.1**	The Proponent shall submit to the Agency a schedule for all conditions set out in this Decision Statement no later than 60 days prior to the start of construction. This schedule shall detail all activities planned to fulfill each condition set out in this Decision Statement and the commencement and estimated completion month(s) and year(s) for each of these activities.	Dec-2021	Dec-2021
	12.2	The Proponent shall submit to the Agency a schedule outlining all activities required to carry out all phases of the Designated Project no later than 60 days prior to the start of construction. The schedule shall indicate the commencement and estimated completion month(s) and year(s) and duration of each of these activities.	Dec-2021	Dec-2021
	12.3	The Proponent shall submit to the Agency in writing an update to schedules referred to in conditions 12.1 and 12.2 every year no later than October 31.	As required; if required by April 30 of each year	
	12.4	The Proponent shall provide Indigenous groups with the schedules referred to in conditions 12.1 and 12.2, and any update to the initial schedule made pursuant to condition 12.3 at the same time the Proponent provides these documents to the Agency.	Dec-2021 and if required April 30 of each year	
Records	**13.1**	The Proponent shall maintain all records relevant to the implementation of the conditions set out in this Decision Statement. The Proponent shall provide the aforementioned records to the Agency upon demand within a timeframe specified by the Agency.	Jul-2021	As required
	13.2	The Proponent shall retain all records referred to in condition 13.1 at a facility in Canada and shall provide the address of the facility to the Agency. The Proponent shall notify the Agency at least 30 days prior to any change to the physical location of the facility where the records are retained, and shall provide to the Agency the address of the new location.	30 days prior to any change in location	
	13.3	The Proponent shall notify the Agency and Indigenous groups of any changes to the contact information of the Proponent included in this Decision Statement.	As required	

IAAC condition 12.2: *The Proponent shall submit to the Agency a schedule outlining all activities required to carry out all phases of the Designated Project no later than 60 days prior to the start of construction. The schedule shall indicate the commencement and estimated completion month(s) and year(s) and duration of each of these activities*		
IAAC condition 12.4: *The Proponent shall provide Indigenous groups with the schedules referred to in conditions 12.1 and 12.2, and any update to the initial schedule made pursuant to condition 12.3 at the same time the Proponent provides these documents to the Agency.*		
Construction Schedule	**Start Date**	**End Date**
Pre-construction Submittals	Jan-2022	Apr-2022
Clearing and Grubbing	Feb-2022	Mar-2022
Diversion Structure		
River Diversion	Jul-2022	Aug-2024
Service Spillway	Sep-2022	Aug-2024
Diversion Inlet	Sep-2022	May-2025
Floodplain and Auxiliary Spillway	Sep-2023	Nov-2025
Diversion Channel		
Stage 1 Excavation	May-2022	Oct-2024
Stage 2 Excavation	May-2024	Oct-2024
Off-stream Storage Dam		
Low Level Outlet Works	Mar-2022	Mar-2025
Stage 1 Embankment	May-2022	Oct-2024
Stage 2 Embankment	May-2024	Nov-2024
Operation Schedule	**Start Date**	**End Date**
Operational for Design Flood	May-2025	NA

APPENDIX D
SUMMARY OF WILDLIFE SPECIES OBSERVED DURING THE 2024/2025 ANNUAL REPORTING YEAR

Table D.1 Summary of Wildlife Observations between July 2024 to June 2025

Date	Species Observed	Location Description
7/2/2024	Eagle (Species not reported)	Unnamed Creek
7/5/2024	Wood Frog	West of Grade Control Structure
7/5/2025	Minnows (Species unknown)	Unnamed Creek
7/13/2024	Rabbit, Deer, Coyote	Location not reported
8/2/2024	Owl or Red Hawk pellets and feathers	East of Borrow Area 2
8/9/2024	Minnows	Unnamed Creek
8/13/2024	Deer	East of Main Site Office
8/13/2024	Herd of Elk (30-40)	Highway 22 Embankment Raise
8/20/2024	Crows	On top of hill north of dam
8/30/2024	Cow Moose and Calf	South of hill north of dam
8/30/2024	Herd of Elk (?)	North of hill north of dam
8/30/2024	Elk (4)	Borrow Area 2
9/2/2024	Hawk	On spoil pile near Main Site Office
9/3/2024	Coyote tracks	West of Barns Laydown area
9/5/2024	Elk Tracks and droppings	West of Barns Laydown area
9/5/2024	Hawk	Northwest of Grade Control Structure
9/9/2024	Fresh scat observed indicating wildlife present and active in area.	Unnamed Creek
9/9/2024	Bird nest observed in tree- no obvious signs of active nesting activity	Unnamed Creek
9/9/2024	Animal remains - relatively fresh	Unnamed Creek
9/9/2024	More animal remains found	Unnamed Creek
9/9/2024	Animal scat and potential resting area of larger animal	Unnamed Creek
9/14/2024	Geese (6+)	Borrow Area 2
9/14/2024	Fresh tracks- potentially deer	Diversion Inlet
9/18/2024	Elk herd	Field Northwest of the hill north of dam
9/19/2024	3 Deer	Field South of the hill north of dam
9/19/2024	Deer	Hill north of dam
10/2/2024	Canada Geese flying overhead	Diversion Inlet
10/3/2024	Animal tracks	Location not reported
10/4/2024	Mother deer and her fawn	Unnamed Creek Area
10/9/2024	Deer Tracks at Floodplain Berm	Floodplain Berm
10/11/2024	4 deer	Range Road 35

Date	Species Observed	Location Description
10/24/2024	8 deer	East of Range Road 35
10/24/2024	Elk Herd (300+)	Borrow Area 1
10/28/2024	Animal trail- possibly beaver, muskrat	Unnamed Creek Area
10/28/2024	Animal tracks	Diversion Channel/Township Road 242
10/29/2024	7 white-tail deer	HRA Buffer Area
10/29/2024	Animal tracks, likely deer	Unnamed Creek Area
10/29/2024	Animal tracks - moose tracks	Unnamed Creek Area
10/30/2024	Animal tracks	Location not reported
10/30/2024	Grebe	Location not reported
11/6/2024	1 Buck	In field South of Main Site Office
11/6/2024	1 buck, 5 deer	Hill north of dam
11/6/2024	Herd of elk	Hill north of dam
11/11/2024	8 Deer	East of Unnamed Creek Berm
11/12/2024	Herd of elk (not reported)	Unnamed Creek
11/13/2024	Herd of elk (not reported)	Range Road 35
11/13/2024	Deer	Unnamed Creek
11/14/2024	Herd of elk (not reported)	Location not reported
11/19/2024	Herd of elk (not reported)	Range Road 35
11/19/2024	Deer (2)	West of Farmhouse area
11/20/2024	Coyote	Location not reported
11/21/024	Bald Eagle	Kiwanis Area
11/21/2024	Golden Eagle	Kiwanis Area
11/25/2024	Snowshoe Hare Tracks	Emergency Spillway
11/25/2024	Flock of birds observed feeding on ground	Location not reported
11/26/2024	Various Animal tracks	Kiwanis Area
11/26/2024	Flock of geese flying overhead	Unnamed Creek
11/29/2024	Deer	East of Diversion Channel South
11/29/2024	Animal tracks	Location not reported
11/29/2024	Deer (3)	Location not reported
12/11/2024	Animal tracks (coyote)	Historical Barn area
12/10/2024	Grey-crowned Rosy Finch	Borrow Area 2
12/11/2024	Stoat	Main Site Office
12/12/2024	Moose tracks	HRA Buffer Area

Date	Species Observed	Location Description
1/7/2024	Deer	Diversion Outlet
1/9/2024	3 White-tailed Deer	Exit Channel
1/10/2025	4 White-tailed Deer	East of Highway 22, South of Springbank Road
1/10/2025	1 Elk	East of Highway 22, South of Springbank Road
1/27/2025	1 Deer	Township Road 242 Bridge
1/31/2025	Animal tracks	Auxiliary Spillway
2/7/2025	3 coyotes	Low-level Outlet Access Road
2/13/2025	Bald Eagle	Field by Highway 22 Bridge
2/14/2025	Herd of Elk (100+)	Range Road 35
2/14/2025	Deer (9)	Range Road 35
2/14/2025	Bald Eagle	Hill north of dam
2/18/2025	Herd of Elk (100+)	Borrow Area 2
2/19/2025	Moose tracks	Diversion Inlet/Diversion Channel South - crossing channel + heading west
2/19/2025	Herd of Elk (100+), rabbits, deer tracks, coyote	Borrow Area 2
2/20/2025	Herd of Elk	Borrow Area 2
3/3/2025	12 White-tailed Deer	East of hill north of dam
3/4/2025	4 coyotes	Springbank Road
3/5/2025	Elk (150)	Springbank Road
3/5/2025	Coyote	Location not reported
3/6/2025	6 White-tailed Deer	Diversion Channel Central
3/6/2025	Coyote	Location not reported
3/6/2025	Elk (75)	North of Springbank Road
3/6/2025	Coyote tracks	Unnamed Creek Area
3/7/2025	Herd of Elk and Eagle	Hill north of dam
3/10/2025	Snowshoe rabbit prints	Location not reported
3/25/2025	Herd of Elk (150+)	Hill north of dam
4/9/2025	Various Bird nests	Unnamed Creek Area
4/9/2025	Grouse	Unnamed Creek Area
4/9/2025	Empty wasp nest	Unnamed Creek Area
4/10/2025	2 robins	Diversion Channel North
4/28/2025	Deer tracks	Diversion Channel South
4/28/2025	Elk (50+)	East of Borrow Area 1
4/28/2025	Elk (50+)	South of Borrow Pit #2

Date	Species Observed	Location Description
4/29/2025	3 geese	Diversion Outlet
4/29/2025	Elk (50+)	West of Diversion Outlet
4/29/2025	Elk (50+)	North of Springbank Road
4/30/2025	Elk (50+)	North of Springbank Road
4/30/2025	Ducks and geese	Farmhouse
5/1/2025	5 Mule Deer	Kiwanis Area
5/1/2025	7 White-tailed Deer	East of Highway 22
5/2/2025	7 elk	East of Emergency Spillway
5/3/2025	6 Mule Deer	Diversion Inlet
5/3/2025	3 White-tailed Deer	Hill north of dam
5/13/2025	Moose	Unnamed Creek
5/20/2025	9+ Elk or Deer	Low Level Outlet Exit Channel
5/26/2025	2 Hawks	Unnamed Creek Area
5/27/2025	Hawk	Location not reported
5/27/2025	Eagle	Spoil 1
5/27/2025	Bird's nest with eggs	Unnamed Creek Area
5/28/2025	4 White-tailed Deer	Unnamed Creek Area
5/29/2025	Jackrabbit	Dam Area
5/30/2025	Bald eagles	Diversion Structure
6/5/2025	Coyote	Range Road 41
6/30/2025	Deer tracks	Diversion Channel Central