

EXAMPLES OF AMBIENT XML SCHEMA V2.0 CHANGES – EFFECTIVE NOVEMBER 15, 2019

The following ambient XML schema examples separate each change to clearly show what the implications are for each of the changes taking effect November 15, 2019. Each of the examples contrast the V2.0 schema to the V1.9 schema. All of these changes are being implemented November 15, 2019, so submitters should be careful to include all of them where applicable for their submission, according to the V2.0 ambient XML schema posted on the <https://www.alberta.ca/ets-air-reporting-support> website.

Changes in the V2.0 ambient XML schema include:

Change to Add Version Information

An element has being added that will be required in each submitted XML file to denote the XML version being used.

Change to Remove Equipment from the XML

This change is removing the Equipment element from the XML schema completely.

Under the new XML schema there will be no Equipment element, even with an equipment change, however there will be a new flag to be used when significant equipment changes (including major maintenance) are made. If the make or model is changed, the submitters will be required to keep that information up to date in the new Administration Application, which will be launched in November 2019.

Change to Lab and Sample

This change brings the Lab Element and MethodDetectionLimit Element underneath the Sample Element, preventing a submission that includes a lab but no sample.

Aggregating Parameter Information into a Valid Variable Combination (VVC) Code

The “CollectionType” element and the “ParameterID” element with its “MethodCode”, “Unit” and “TimeCode” attributes have all been aggregated into a single Valid Variable Combination (VVC) code which will be used to describe all five of those pieces at once.

HYPOTHETICAL examples for Passive, Continuous and Intermittent measurements are presented below with each of the changes colour coded as shown above. For the VVC change specifically, in the V1.9 XML schema a submitter would need to submit all 5 codes on the right of the table below for each measurement. In the V2.0 XML schema they would only submit the unique VVC code.

VVC Code	Parameter Code	Method Code	Unit Code	Time Code	Collection Type
VVC382	NO2 (42602)	Ion Chromatography (105)	ppb (08)	Monthly (Calendar)/30 Days (8)	Passive (9)
VVC37	NO2 (42602)	Chemiluminescence (011)	ppb (08)	Hourly (1)	Continuous (1)
VVC551	Carbon disulphide (42143)	Gas Chromatography/Mass Spectrometry (101)	ppb (08)	NAPS 6 day Schedule (G)	Canister (6)

Examples:

All Changes Combined (Passive Example)

For a file with a single passive measurement and an equipment change in it, an example under the V1.9 XML schema could look like this:

```
<?xml version="1.0" encoding="utf-8"?>
<Data>
  <Measurement>
    <Interval Start="2019-01-01T00:00:00.000" End="2019-02-01T00:59:59.999"/>
    <Station ID="00999999-P-1"/>
    <CollectionType>9</CollectionType>
    <TimeCode>8</TimeCode>
    <ProgramCode>01</ProgramCode>
    <ApprovalID>00999999</ApprovalID>
    <Parameter ID="42602" MethodCode="105" Value="12" Unit="08"/>
    <Equipment Make="250" Model="PASS" SerialNumber="9999" OperatorID="999"/>
    <Lab ID="099" SampleReference="99999A" Accredited="True">
    <MethodDetectionLimit>1.0</MethodDetectionLimit>
    <Sample DateShipped="2019-05-04" DateReceived="2019-05-06" DateAnalyzed="2019-05-07"/>
  </Measurement>
</Data>
```

With all changes combined the same example (with the equipment change) under the V2.0 XML schema would look like this:

```
<?xml version="1.0" encoding="utf-8"?>
<Data schemaVersion="2.0">
  <Measurement>
    <Interval Start="2019-01-01T00:00:00.000" End="2019-02-01T00:59:59.999"/>
    <Station ID="00999999-P-1"/>
    <ProgramCode>01</ProgramCode>
    <ApprovalID>00999999</ApprovalID>
    <ValidVariableCombination Vvccode="VVC382" Value="12"/>
    <Sample SampleReference="99999A" LabId="099" LabAccredited="true" DateShipped="2019-05-04"
    DateReceived="2019-05-06" DateAnalyzed="2019-05-07" MethodDetectionLimit="1.0"/>
    <Flags>EC</Flags>
  </Measurement>
</Data>
```

All Changes Combined (Continuous Example):

For a file with a continuous reading and an equipment change, an example under the V1.9 XML schema could look like this:

```
<?xml version="1.0" encoding="utf-8"?>
<Data>
  <Measurement>
    <Interval Start="2019-01-01T00:00:00.000" End="2019-01-01T00:59:59.999"/>
    <Station ID="00999999-C-1"/>
    <CollectionType>1</CollectionType>
    <TimeCode>1</TimeCode>
    <ProgramCode>01</ProgramCode>
    <ApprovalID>00999999</ApprovalID>
    <Parameter ID="42602" MethodCode="011" Value="5.6" Unit="08"/>
    <Equipment Make="210" Model="200E" SerialNumber="4869" OperatorID="999"/>
  </Measurement>
</Data>
```

With all changes combined, a continuous reading with an equipment change under the V2.0 XML schema would look like this:

```
<?xml version="1.0" encoding="utf-8"?>
<Data schemaVersion="2.0">
  <Measurement>
    <Interval Start="2019-01-01T00:00:00.000" End="2019-01-01T00:59:59.999"/>
    <Station ID="00999999-C-1"/>
    <ProgramCode>01</ProgramCode>
    <ApprovalID>00999999</ApprovalID>
    <ValidVariableCombination VvcCode="VVC37" Value="5.6">
    <Flags>EC</Flags>
  </Measurement>
</Data>
```

All Changes Combined (Intermittent Example)

For a file with a single intermittent measurement and an equipment change in it, an example under the V1.9 XML schema could look like this:

```
<?xml version="1.0" encoding="utf-8"?>
<Data>
  <Measurement>
    <Interval Start="2019-01-01T00:00:00.000" End="2019-02-01T00:59:59.999"/>
    <Station ID="000999999-I-1"/>
    <CollectionType>6</CollectionType>
    <TimeCode>G</TimeCode>
    <ProgramCode>01</ProgramCode>
    <ApprovalID>00999999</ApprovalID>
    <Parameter ID="42143" MethodCode="101" Value="12.1" Unit="08"/>
    <Equipment Make="340" Model="910A" SerialNumber="9999" OperatorID="999"/>
    <Lab ID="099" SampleReference="99999A" Accredited="True">
    <MethodDetectionLimit>0.5</MethodDetectionLimit>
    <Sample Volume="8" VolumeUnit="C0" PeriodDuration="24:00:00" DateShipped="2019-05-04"
    DateReceived="2019-05-06" DateAnalyzed="2019-05-07"/>
  </Measurement>
</Data>
```

With all changes combined, the same intermittent example with an equipment change under the V2.0 XML schema would look like this:

```
<?xml version="1.0" encoding="utf-8"?>
<Data schemaVersion="2.0">
  <Measurement>
    <Interval Start="2019-01-01T00:00:00.000" End="2019-02-01T00:59:59.999"/>
    <Station ID="000999999-I-1"/>
    <ProgramCode>01</ProgramCode>
    <ApprovalID>00999999</ApprovalID>
    <ValidVariableCombination Vvccode="VVC551" Value="12.1"/>
    <Sample SampleReference="99999A" LabId="099" LabAccredited="true" MethodDetectionLimit="0.5" Volume="8"
    VolumeUnit="C0" PeriodDuration="24:00:00" DateShipped="2019-05-04" DateReceived="2019-05-06"
    DateAnalyzed="2019-05-07"/>
    <Flags>EC</Flags>
  </Measurement>
</Data>
```