

CEMS Code Questions and Responses

December 18, 2018 Webcast – Posting of Draft Revised CEMS Code

Q#	Question / Comment	Alberta Environment and Parks (AEP) Response
1	Is the data percent availability change effective Sep 1, 2019?	Yes, monthly percent availability is staying at 90% on a monthly basis, but you are no longer able to discount QA/QC and maintenance activities as downtime. There is no specific date for the percent availability requirement so it will take effect on the date the new Code takes effect. Note that we have not finalized the effective date of the new Code yet. That will depend on what feedback we receive and the time required to finalize the Code.
2	Slide 16: The 45 minutes (75%) for valid hour doesn't have to be continuous? Any 45 minutes?	That is correct. You have a valid hour if there are 45 quality-assured minutes within the clock hour (75% of the hour). The minutes need not be consecutive.
3	Slide 35: Are there recordkeeping requirements for the flow-to-load checks? What are they?	The new requirement to conduct a quarterly flow-to-load test does not have a reporting requirement with it, but the CEMS Code (and the AMD) require that records be kept of all raw data and test results. See section 1.6 in the draft Code – CEMS Data and Records Retention. The flow-to-load test results would be reviewed during the annual evaluation/audit.
4	What is the phase in time for the QAP changes?	<p>In the current draft there is no timeline for phase-in of QAP requirements. So as the draft stands, the QAP would need to meet the new requirements on the effective date of the Code.</p> <p>We recognize that with more detailed QAP requirements in the draft Code, CEMS QAPs may need to be updated to comply with the new Code when it takes effect. We will need to discuss internally whether a specific phase-in timeframe needs to be provided for meeting the new QAP requirements. We are interested in hearing from stakeholders what would be a reasonable timeframe.</p>
5	Are all the back-up methods for CEMS outage considered quality assured data (even estimating missing data?).	<p>In the draft Code, section 8.0, clause 8.0-A provides options for reporting emissions during CEMS downtime. All of the methods listed would produce quality-assured data except for missing data estimation. Estimated emissions are not quality-assured – but you still have a requirement to report estimated emissions, as opposed to reporting nothing. Estimated data does not count towards CEMS uptime.</p> <p>Not that for the temporary replacement analyzer to produce quality-assured data you must conduct a CGA and follow the requirements in 8.0-B through 8.0-I.</p>

6	Thanks for the presentation...is there any change in regards to the load requirement to perform RATA and CGA tests?	No there is no change in the requirement to conduct a RATA or CGA during “normal” or “representative” operating conditions. In the draft, the CGA procedure does not specify operating conditions during the audit, but the RATA procedure does (see section 6.2.5). For a RATA, the source must be operating at a rate of at least 90% of average production from the previous month. This is no change from the 1998 Code.
7	<p>You had originally provided until March 11 to review the document in the November 30th email, why the change in review time?</p> <p>The deadline for submitting comments certainly does not leave us much time to review the draft, especially considering annual reporting time, new AMD online reporting, and new monthly report due at the same time.</p>	<p>We understand the concern regarding a shorter time period, however the review timelines needed to be adjusted based on the following considerations:</p> <ul style="list-style-type: none"> • Alignment with the timelines for the update of Environment and Climate Change Canada’s national CEMS code (aka “PG7”): It is important for Alberta to be ready with an up-to-date CEMS code to prevent Alberta industry facing dual regulation and reporting requirements. • The 2020 CAAQS reporting requirements: With the introduction of more stringent Canadian Ambient Air Quality Standards in 2020, Alberta needs to be ready to develop action plans to manage emissions. It is important that the action plans are based on reliable data, which necessitates updating the 20 year old CEMS code in an expedited fashion. • Fiscal year end: Unfortunately this is a busy time for both industry and Government. There may be limited staff availability to conduct technical reviews beyond February 15th. <p>However, we will still consider submissions received after the February 15th deadline as we work to compile all comments and suggestions.</p>
8	For the decimal place change for relative accuracy, is the requirement to round up vs down? E.g., if we have 10.01% for example, are we required to round up to 10.1?	Rounding requirements for reporting air data are given in AMD Chapter 9 (see section 3.2.2). It specifies “typical” rounding conventions: that is 10.05 rounds up to 10.1 and 10.04 rounds down to 10.0 for comparison to the relative accuracy specification of 10.0.
9	On slide 43, is the reporting for variables as per approval or will all the variables be required to be reported?	The revised draft Code requires that <u>all</u> CEMS parameters be reported. For example, you may measure flow, which allows you to report against your approval emission limit, however the monitoring and reporting table in your approval may not list flow as a parameter that requires continuous reporting. We would like the full picture of how the CEMS is operating, which requires all parameters to be reported hourly via FTP.
10	Will we be required to provide a summary for the 2018 audits in the 2018 annual report?	AMD chapter 9 requires that any audits conducted be summarized in the monthly or annual report (see RC 5-I and RC 6-J). This will include summarizing the findings of the CEMS annual evaluation. The 2018 annual report, which will be submitted in March 2019 is required to meet the requirements of Chapter 9 of the 2016 AMD.
11	Is there a timeline to update the current QAPs after the effective date?	The current draft does not give a phase-in period for bringing QAPs in line with the requirements in the new Code. We are interested in hearing what stakeholder think a reasonable timeline would be for updating QAPs. This is something we will consider in the final version of the Code.

12	While the flexibility in RATA reductions is appreciated, what is the basis behind the increased CGA requirement?	<p>Most facilities that have authorization to reduce RATA frequency from 2/year to 1/year have the stipulation to increase to 3 CGAs/year. The reason for this is that with only one RATA per year, as the ultimate test of full system accuracy, going a whole year before the next RATA leaves a lot of room for error.</p> <p>For facilities that are using cuvettes in place of conducting a CGA using flowing test gas, we are moving now to requiring the use of flowing test gas to conduct CGAs, so for RATA reduction you will be required to conduct CGAs with flowing test gas as the alternate to doing RATAs less frequently.</p>
13	Is there any elapse time requirement to perform RATA and CGA test?	This has not changed from the 1998 Code, which is spacing RATAs and CGAs at least 30 days apart from each other. See 7.2-I in the draft Code.
14	If max expected concentration dictates analyzer operating range, but puts the mostly average concentration outside of the 40-70% of range (e.g., max expected 90 ppm but monthly average is 16 ppm), does that mean a dual range analyzer would be required in this case?	Yes. Requirements for when dual range analyzers are needed is in section 3.1 of the draft Code (see 3.1-D). In such a case you would want to set your operating range for the majority of concentrations measured, so as to ensure good precision. A dual range analyzer would allow for exceedances of emission limits (for example under a bypass scenario) to be accurately measured by the CEMS.
15	Are mathematical models for the estimation of missing mass emissions for data periods acceptable for periods greater or less than 90%, rather than 168 hours?	<p>The CEMS User Manual sets out 3 methods for estimating data during a CEMS outage. These would need to be followed and are only applicable for up to 168 hours. Beyond that you would need to get Director authorization to estimate data beyond 168 hours or to use another method.</p> <p>Estimated data is not quality assured data and does not count towards your uptime for percent availability calculation. There is no method of estimating data that is "quality assured". Only monitoring data can be quality assured.</p>
16	For the changes to Table 7 footnote A from the 1998 Code, is the low emission criterion based on the average for the RATA being <50 ppm or do all data points need to be <50 ppm?	This actually has not be specified in the draft revised Code, but it would be the average of all reference method runs that needs to be < 50 ppm to use the alternative relative accuracy specification (in section 6.1; 6.1-B and 6.1-C). So no, not all data points need to be < 50 ppm. We will make a note to specify that in the final version of the Code.
17	Will failed CGA's affect the RATA reduction or only a RATA not meeting the specification to have to go back to two RATA's per year?	Section 7.2.4 of the draft Code gives the RATA reduction criteria. Basically you must continue to meet the CEMS Code in order to keep the RATA reduction. If you fail a CGA or if you cannot meet the more stringent relative accuracy specification, you would have to go back to 2 RATAs/year. Same goes for if percent availability cannot be maintained. See 7.2-K through 7.2-N in the draft Code.
18	If method 3 from the CEMS User Manual is not +/- 15%, can mathematical models be used? It would not be considered quality assured?	This has not changed from the 1998 Code. If you cannot meet the criteria in the CEMS User Manual (+/- 15% error band), then you would have to go to a method 4 (modelling, which requires Director authorization). You would need to work with your approvals coordinator under this scenario. Note that this is not different from current. Use of method 4 should be the exception, not the rule.

19	With the potential RATA reduction option, does this take into account whether a CEMS has been adjusted in advance of a RATA or CGA? If a CEMS needs adjustment prior to a RATA/CGA, how does this impact the requirement?	The RATA or CGA should be conducted on an as-found basis to be a true audit of the system, so there should be no adjustments made prior to a RATA or CGA. Any maintenance that occurs before the CEMS undergoes a quality assurance check is not necessarily assessing the performance. We will consider making this clear in the revised CEMS Code, as the draft does not explicitly state this.
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