Overview of Feedback and Changes to Air Monitoring Directive Draft Chapter 9 Reporting

The following summarizes the main feedback provided by stakeholders during public review of Draft Chapter 9 of the AMD from September to November 2014 and during stakeholder engagement in January and February 2015.

General Feedback

1. Reporting requirements are onerous and impose unnecessary burden on industry and airsheds.

The reporting requirements in draft Chapter 9 were reviewed and redundancy was eliminated where possible, including the removal or amalgamation of some reporting requirements and forms. AEP also worked with an industry and airshed task team to review and improve the electronic reporting forms and templates.

AEP is providing an updated draft Reporting Chapter and releasing for public review for further input to inform the finalization of the chapter.

2. There is duplication between reporting requirements for airsheds and industry.

Clarified that industry/airsheds are responsible for reporting on what monitoring they conduct. Ambient monitoring data and reports that are already submitted by airsheds do not need to be repeated by industry (and vice versa).

3. Monthly reporting should not be required from all approval holders.

Removed requirement for all approval holders to submit a monthly report. The operating approval dictates whether monthly reporting is required.

4. Annual reports duplicate monthly report requirements.

Compared monthly and annual reporting requirements and eliminated redundancy in monthly reports (when monthly reports are required to be submitted).

5. It is unclear how the Air Monitoring Directive will be enforced and what other policy or regulatory changes will take place.

The Air Monitoring Directive will be anchored under the Substance Release Regulation to ensure enforcement.

6. Does the AMD Reporting Chapter apply to EPEA approved and Code of Practice registered facilities?

References to Code of Practice registered facilities have been removed. The AMD Reporting Chapter applies to EPEA approved facilities. The Reporting Chapter would apply to Code of Practice registered facilities, if the Code of Practice or individual registration requires that the AMD be followed for reporting of air data. Currently, no Codes of Practice require reporting according to the AMD.

7. Does everyone have to include production data in the monthly/quarterly/annual reports?

Requirements in Chapter 9 have been amended to clarify that production data only needs to be included in monthly/quarterly or annual reports if the approval requires production data be reported monthly/quarterly or annually.

8. Can industry and airsheds do monitoring for their own purposes without having to submit the results to the government?

Clarified that special air studies conducted by the industrial operation/airshed for its own purposes (i.e., not mandated by the Regulator) do not need to be reported to the Regulator. If the industrial operation chooses to submit results from a special air study to the Regulator, the air monitoring for the special air study needs to be conducted in accordance with the AMD in order for the Regulator to accept the data. In accordance with approval requirements, due diligence source testing results performed by a standard or a modified method are required to be submitted to the Director if the source testing performed was on a parameter or pollutant having approval conditions or limits.

9. Do all AMD Reporting Chapter clauses apply to everyone?

No, not all clauses in Chapter 9 will apply to all industrial operations. The approval specifies the air monitoring requirements while the AMD (along with the approval) sets the minimum reporting requirements. Clauses in Chapter 9 have been clarified to specifically refer to specific conditions in an approval (e.g., monthly production reporting) and are only required to be followed if required in the site-specific approval.

10. Does the AMD Reporting Chapter replace the CEMS Code?

The AMD does not replace or supersede the CEMS code, but rather provides direction on reporting. The AMD Reporting Chapter supersedes Section 6.2 of the CEMS code (as Section 6.2 of the code specifies).

11. Why are reporting forms required in addition to reports?

While the reports and summary forms may contain some of the same information, the forms are necessary to collect the data in usable electronic format that can be used to pull the information in the Regulator database. Many of the forms have been based on the summary tables already provided in PDF format in current submitted reports. Third party contractors can prepare both the source testing report and the summary form.

12. Several clauses repeat requirements already set out in the regulations and approvals (e.g., immediate reporting of contraventions, scheduled shut-downs, etc.).

Clauses that repeated approval or regulation requirements have been removed.

13. It is not in the mandate of airsheds to provide interpretation of monitoring results.

Clarified that the intent is to summarize the results and provide any context around events, if known.

14. Can third party contractors prepare reports?

The person responsible (e.g., the specific industrial operation or Alberta airshed) is the legal entity responsible for the report. The person responsible can delegate whom they wish to collect the data and prepare the report, but the person responsible is still accountable for the report being submitted and whether it is submitted on time, contains the required information, etc.

15. What does immediate mean?

Clarified that immediate means when known, and the person responsible must exercise due diligence.

16. What does incomplete mean, and why do we need to submit incomplete source test?

Incomplete means a SES/RATA/CGA that was stopped prematurely. Identification of any stopped test/audit must be included in the monthly report with an explanation of why the testing was stopped. This information is required to identify all source monitoring being carried out and to identify ongoing testing issues.

17. Timelines are too restrictive for notifications of source tests and scheduled shut-downs.

Timelines are set out in approvals. Chapter 9 is revised to ensure consistency with the notification timelines set in approvals.

18. Duplication in reporting forms.

In June, AEP reviewed and improved the reporting forms and templates with an industry and airshed task team.

19. Report Certification Form duplicates cover sheet.

The Report Certification Form has been removed. Chapter 9 requires sign-off on the cover letter for report certification.

20. Ambient plots and trending are too onerous.

Some requirements for plots and trending have been removed or more flexibility has been provided in how to ambient monitoring results are presented in reports.

21. The AMD should not make title pages and table of contents mandatory requirements.

A title page is required to identify the report (e.g., company, third party submitting on behalf of person responsible, date, etc.). The table of contents is required for ease of use, since many monthly reports are lengthy. This requirement in Chapter 9 has been changed to only require a table of contents for reports that are greater than 10 pages.

22. Some definitions need to be clarified.

Several definitions were revised to ensure they capture intentions.

23. Where are the Ambient Calibration Forms?

Sample calibration forms for ambient air data were published along with the AMD Calibration Chapter (Chapter 7). These are available on the AMD Website. These templates are examples only. It is not mandatory to use these templates for calibration reports. However, Calibration Reports must meet the minimum requirements set out in the AMD Calibration Chapter.

24. Not enough time is being given to complete level 3 validation on ambient data.

The requirement for Level 3 Validation from AMD Chapter 6 is for independent review of the initial validation steps to go through the data (a cursory review only) to look for anything strange or missing, verify that all previous validation steps have been carried out, and sign off that the data being submitted has been verified, validated and reviewed. The Ambient Data Validation Form in Chapter 9 confirms that data submitted has undergone all necessary verification and validation (as prescribed by the AMD) before it is made public.

Level 3 validation does not need to be completed by a third party, or anyone external to the organization/contractor, but rather by someone independent of Level 0-2 validation and data collection. The intent is not to repeat primary validation tasks, but rather to assure that data have undergone a final independent review and endorsement before data are submitted. Review should include cursory review of hourly data as well as plots, including a check to make sure data is flagged if need be and suspect data is identified.

25. The guidance documents referenced in Chapter 9 are not yet available.

The content of the guidance documents is dependent on the requirements set out in the AMD. Draft guidance documents will be provided once the AMD Reporting Chapter requirements have been finalized. There will be the opportunity to review the guidance documents once they are drafted.

Feedback on Emissions Inventory Requirements

26. The enhanced emissions inventory requirements are too extensive, impose unnecessary burden on industry, and are a duplication of the emissions reporting required by the federal government's National Pollutant Release Inventory.

Currently, the 1989 Air Monitoring Directive requires reporting of only sulphur dioxide and nitrogen dioxide from sources emitting greater than 10 tonnes per year. This is insufficient to manage major air pollution sources, develop environmental policies, or conduct air modelling and regional cumulative effects management.

Kept modernized emissions inventory requirements in Chapter 9, however, eliminated some pollutants and refined the overall requirements to better collect information critical to the business requirements of Alberta.

27. The enhanced emissions inventory reporting requirements duplicate the reporting required by the federal National Pollutant Release Inventory. The NPRI should just be used to meet Alberta's emissions data needs.

The AMD requirements are more detailed and have additional data elements not captured by the NPRI. The NPRI has incomplete source-level reporting, amalgamates various sources and excludes some emission sources. There are also differences in how the NPRI defines and regulates facilities versus how a facility is defined and regulated under an EPEA approval. Stack-level reporting in the NPRI is only for stacks taller than 50 metres. There are exemptions for some non-combustion sources. Non-point sources are in some cases too summarized and do not capture all non-point sources (e.g., mine fleets). The method of estimation is not for each individual point and non-point source and thus does not accurately represent the potentially different methods used for each individual source. The NPRI does not require consistent estimation methodologies year-to-year, which means that changes in annual emissions may simply be the result of changes to the methods used for NPRI reporting.

There is currently no agreement in place between Alberta and Environment Canada on air emissions data collection. The proposed AMD emissions inventory requirements would only cover a portion of the facilities reporting to the NPRI, and would only apply to one province. The NPRI is national reporting system, with common requirements for facilities across the country. Changing a national system for a subset of the facilities in one province may be difficult to carry out.

28. Rather than an ongoing regulatory program, just use a one-off voluntary data collection to gather required emissions information.

One-off data collections have been used in the past (both voluntary and mandatory). One-off data collections become dated fairly quickly and usually lack the necessary mechanism to keep them updated.

Regulatory reporting programs are ongoing and help establish expectations for what information will be required, timelines for reporting and resources that will be required. They also represent higher-quality compliance data that has been certified by the individual operators who are most familiar with how their plants operate and emit to the atmosphere. Much of the information required in the inventory will not need to be updated annually and the same reporting form can be used from year to year to simplify the reporting process.

29. Why is the emissions data needed?

Alberta is still using the 2006-2008 source-level emissions data that was collecting through the Alberta Industrial Air Emissions Survey. There have also been numerous emissions inventory projects carried out which also demonstrate that what is currently being collected through approvals and the NPRI is not sufficient to meet key business requirements.

The AMD emissions inventory data is required to support regulatory management, air modelling, scientific assessments, policy development, regional planning, development national air quality frameworks (such as AQMS/BLIERs), and cumulative effects management. There may also be the opportunity to develop a standardized starting dataset for EIA application/renewal air quality modelling, which may help to reduce costs for developing emissions inventories for regulatory dispersion modelling.

30. There won't be enough time to prepare the first inventory report.

The annual emissions inventory reporting requirements were separated out from annual reporting requirements in AMD to give industrial operations more time to prepare the information (i.e., September 30 is the submission deadline instead of March 31). An additional year has also been provided for preparing the first emissions inventory report so that the first report will be due in September 2018 (for reporting of 2017 emissions data).

31. Reporting threshold for NOx and SO_2 are inconsistent with the NPRI.

Reporting thresholds have been modified to 20 tonnes for NOx and SO_2 for consistency with NPRI reporting.

32. The emissions inventory requirements ask for too much information.

EPEA approved industrial operations should have the required information on their release points, non-point sources, air emissions of relevant substances, etc. or should be able to prepare the information with a reasonable effort as required by EPEA. Reporting is not necessarily required for every Schedule 2 substance, only the applicable substances as described in the AMD Reporting Chapter. Several non-NPRI reportable substances have been removed from AMD emissions inventory reporting. Several substances have been changed to require the same isomer/isomer group as the NPRI reportable substances. Other changes have been made to emissions inventory requirements to reduce the amount of reporting required.

Much of the information in the inventory reporting form will not change from one year to the next (e.g., list of sources, stack locations, etc.), but annual air emissions can vary from one year to the next. The same reporting form can be used from one year to the next and industrial operations can simply update the information that has changed and report the additional information required for the specific calendar year.

33. Do we have to actually measure for the all pollutants at all our sources?

Under EPEA, the person responsible is required to take reasonable steps to meet the requirements set out in EPEA and the associated regulations, codes, directives, standards, etc. Therefore reasonable effort must be made to comply with the AMD requirements. This would not require the industrial operation to physically measure air pollutant releases from all on-site release points and non-point sources. When physical measurements (e.g., CEMS) are already required under an industrial operation's approval conditions, such measurement data should be used in the emissions inventory. When no actual measurements are available (and where no specific method has been prescribed by the Director), the AMD simply requires using: available methodologies, emission factors, equations and calculations that are: (i) based on the best information available, (ii) applicable to the particular industrial operation and its operating conditions; and (iii) if applicable, widely used and accepted by the industrial sector to which the industrial operation belongs.

34. More consultation should have been done on these inventory requirements.

An updated draft chapter is being posted for public review and comment before Chapter 9 is finalized.

35. Can the emissions inventory data be accessed by the public?

The emissions data is being collected under the authority of EPEA, the Substance Release Regulation and the Air Monitoring Directive. Any non-confidential data could potentially be accessed by the public. It is at the Director's discretion what non-confidential data is routinely published and in what format. AEP has stated its future intent on publishing at least some of the collected data to support regulatory dispersion modelling, stakeholder regional modelling and AEMERA's role of informing the public.

36. Will Code of Practice registered facilities need to prepare an emissions inventory and report?

The AMD emissions inventory requirements only apply to facilities with an EPEA approval, and emissions inventory reporting is only required if reporting thresholds are met.

37. Why are three types of emission rates being asked for?

Requirements for maximum and normal emission rates for non-point sources have been removed from Chapter 9. Maximum and normal emission rats will only be required for release points. Maximum air emissions, normal air emissions, non-point sources, and release points are all defined in the AMD.

Maximum emissions are required for modelling and regulatory assessments. The maximum emission rate is to be based on the approval limit, if applicable. If no approval limit applies, the maximum emission rate can be based on: the design maximum, information from the equipment manufacturer, a historical maximum, an engineering estimate; or method authorized in writing by the Director. If there is no emission limit, the industrial operation should provide the maximum emission rate they feel is the most representative for their release point.

Normal air emissions are required for modelling, as actual air emissions may be skewed for a single year depending on single year operating problems or short-term market conditions affecting a facility or sector. If not modelling for a particular year, normal emissions will better represent what is normally emitted and can be used to maintain or predict future emission levels. One of the criticisms received on some of the Land Use Framework regional air modelling carried out, is that the industrial air emissions survey collected actual emissions for 2008, which was the beginning of a recession and may not have been representative of more recent emission years. It is anticipated that normal emission rates will not need to be changed every year, facilities are only required to update these when the normal rate they previously reported is no longer representative.

Annual actual emissions are intended to represent the emission rates for a specific year. They are needed to support: regulatory management, air modelling, scientific assessments, policy development, regional planning, negotiating with the Federal Government on national AQ frameworks (such as AQMS/BLIERs), and the overall Cumulative Effects Management System.

38. Can we exclude negligible sources from the emissions inventory?

All sources at the industrial operation must be identified. However, industrial operations can identify select sources as negligible and exclude them from emissions reporting. More information on negligible sources will be provided in the Annual Emissions Inventory Report Standard and Guidance Document.

39. Why do we need to prepare a Quantification Methodology Document?

It is necessary to document the basis for the emission values (including sources inventoried, estimation methods, emission factors, data sources and references). Regardless of whether it is required to be submitted to the Regulator, each industrial operation should have a document outlining how they prepared their emissions inventory. This is necessary to back up the numbers being submitted and to ensure that consistent methodologies are used for future reporting years, as is required by the AMD.

40. It is not clear what the criteria are for emissions inventory reporting or who needs to submit an emissions inventory report. Can a diagram be included in Chapter 9?

A flow diagram was added to Chapter 9 to provide clarity on who needs to prepare and report an emissions inventory and what the general criteria are for an emissions inventory report.

Feedback and Responses for Air Monitoring Directive Draft Chapter 9 Reporting

The following table provides the feedback that was received during the 60-day public review (September - November 2014) of the Air Monitoring Directive Chapter 9 and during subsequent meetings with stakeholders. It also contains responses to the comments and questions, and identifies any changes made in response to the feedback. Note that the clause numbering in the feedback table refers to the clause numbering used in the September 23, 2014 version of Chapter 9 and may differ from the most recent version of the Chapter.

Section	Clause	Comment	Response	Action Taken
Introduction				
1.1	1-A	"personal responsible" is not used in Parts 1 or 2 of this Chapter. "person responsible" is already defined in AMD Chapter 1.	Definitions will be removed from Chapter 9 when complete. All definitions will reside in Chapter 1. Clause 1-A sets out who the person responsible is for Part 1 (industry) and Part 2 (airsheds) for Chapter 9.	No changes made.
1.2	1.2	The purpose of the Reporting Chapter is to establish the minimum requirements for the reporting of air data and interpreted information to the Regulator… This does not align with Chapter 1, Section 1.0, nor with the stated intent of updating the AMD to align with current practices. From the FAQ at http://esrd.alberta.ca/air/objectives-directives-policies- and-standards/air-monitoring-directive/air-monitoring-directive- faqs.aspx: "The AMD was written in 1989 and an amendment was released in 2006. Both documents are out of date. The AMD is being reviewed and revised to bring the directive in line with current practices." If there is a need for additional air data collection within Alberta, then our association recommends that the need be addressed through the NPRI working group and using the principles that have been developed for air data reporting within Canada.	The AMD Reporting Chapter is a modernization of requirements. As such, some of the requirements now cover additional types of monitoring (e.g., static ambient analyzers) and the emission inventory requirements have been expanded beyond just NOx, SO2 and H2S. In 2015, the GOA is still using the 2006-2008 source-level emissions data that was collecting through the Alberta Industrial Air Emissions Survey. There have also been numerous additional emissions inventory projects carried out over the last few years, which also demonstrate that what is currently being collected through EPEA approvals and the NPRI is not sufficient to meet key Regulator business requirements. The AMD emissions inventory data is required to support: regulatory management, air modelling, scientific assessments, policy development, regional planning, negotiating with the Federal Government on national AQ frameworks (such as AQMS/BLIERs), and the overall Cumulative Effects Management System.	Various changes to emissions inventory requirements have been made (see comments on section 7.0).
1.2	1-B	Is the 2016 annual report (submission deadline March 31, 2017) the first annual report to be using the new reporting guidance?	Changed reporting timeline so that the first annual report that must meet the requirements of the revised AMD Reporting Chapter would be for the 2017 calendar year and would need to be submitted by the deadline for annual reports specified in the approval, or by March 31, 2018.	Provided additional year for submission of first annual report.
1.2	1-B	RC 1-B indicates Chapter 9 Reporting will be commenced from January 1, 2017. Please clarify the first report to be using the new reporting guidance: • I guess the first monthly report to be using the new AMD reporting guidance is the January 2017 monthly report. Is this correct?	Yes, the first monthly report would be for January 2017 and would need to be submitted by the end of February 2017, unless another monthly report submission deadline is specified in an approval.	No changes made.
1.2	1-B	Reporting requirements are effective January 2017. The document later specifies that for the Annual Emissions Inventory reports the first inventory would cover the 2016 calendar year. The first submission of the annual and monthly report requirements are less clear. Please clarify when the first annual and monthly reports would be due. If monthly reporting commenced in January 2017, would the first monthly report submitted by end of February, or would December 2016 require a monthly report?	The first monthly report that must meet the requirements of the revised AMD Reporting Chapter would be for January 2017 and would need to be submitted by the deadline for monthly reports specified in the approval, or by end of the month following the month of monitoring data collection (February is this case) if no monthly report submission deadline is specified in the approval.	No changes made.
1.2	1-B	Similarly for the annual report – would we be required to report on the 2016 year in the annual report as well (outside of the emission inventory report).	Requirement was changed, the first annual report that must meet the requirements of the revised AMD Reporting Chapter would be for the 2017 calendar year and would need to be submitted by the deadline for annual reports specified in the approval, or by March 31, 2018 if no annual report submission deadline is specified in the approval.	No changes made.
1.4	1.4 and 1.5	Consider combining these two sections for more clarity and ability to cross reference the 1989 and 2006 references	This format of repealing section from the 1989 and 2006 AMD was followed in other AMD chapters, so this chapter stays consistent. There is a full correlation table on the AMD website showing and cross-referencing the 1989 and 2006 AMD with the revised AMD.	No changes made.

Section	Clause	Comment	Response	Action Taken
1.4	1-C	Some of the bullets in Section II C have been repealed by other AMD Chapters.	Changed RC 1-C to: "Section II C 1) a) General, bullet (vi) and Section II C 1) d) Data Validation and Data Reporting, bullets (ii) through (v) of the AMD 1989 are repealed and replaced with the Reporting Chapter."	Changed RC 1-C to: "Section II C 1) a) General, bullet (vi) and Section II C 1) d) Data Validation and Data Reporting, bullets (ii) through (v) of the AMD 1989 are repealed and replaced with the Reporting Chapter."
1.7	1.7	Does ambient monitoring data need to be including in both industry and airshed reports?	Added paragraph providing guidance that industry does not need to duplicate data submission and report discussion already provided by airsheds. Also added note to Part 1 and Part 2 title pages.	Added paragraph providing guidance that industry does not need to duplicate data submission and report discussion already provided by airsheds. Also added note to Part 1 and Part 2 title pages.
1.7	1.7	Need some clarification between air shed and industrial monitoring; did not notice anything that states that the industrial partner is not responsible for reporting the ambient air monitoring results if they are being monitored by an Air shed group. Most often both industry and airsheds do the ambient air monitoring. It is not clear if they want us to report on what the airshed is already reporting?	Some ambient air monitoring that is required under EPEA approvals are actually carried out by Alberta airsheds on behalf of some member industrial operations. In these cases, it is not necessary for industrial operations to submit the same ambient air data collected and already submitted by the Alberta airshed, as the Alberta airshed is submitting the required ambient air monitoring data on their behalf. It is also not necessary to discuss the ambient air monitoring results in the industrial operation's monthly and annual reports, provided the Alberta airshed has included the required discussion of the results in their monthly or annual report. The Alberta airshed can carry out the required ambient air reporting on behalf of its industrial operation members. Immediate notification at Alberta airshed ambient air monitoring stations can be carried out by the airshed or by a designated industrial member. Such notification roles should be clearly defined in the QAP protocols of both the Alberta airshed and industrial operation members. Some industrial operations are members of Alberta airsheds but still carry out some of the ambient air monitoring required under their EPEA approval. Submission of the ambient air monitoring data from these industry operated stations should be carried out the industrial operations, as they are the ones conducting the monitoring. Discussion of the monitoring results is also required to be included in the industrial operation's monthly and annual reports. Immediate notifications for the industry operated monitoring stations is required to be carried out by the industrial operation.	Clarifying notes were added in section 1 as well as to the beginning of Parts 1 and 2 to explain that duplicate ambient data and information are not required to be submitted if already submitted by the airshed on behalf of industry.
1.7	1.7	The Part 2 clauses still seem to reflect the old concept that Airsheds only do fence-line monitoring on behalf of approval holders. All clauses should be reviewed and wording adjusted remembering that many stations in airsheds are located in communities and residential areas that are intended to measure cumulative impacts of many sources.	Based on comments submitted and the meeting with the Alberta Airshed Council, the Monthly and Annual Report ambient clauses have been revised.	Monthly and Annual Report ambient clauses revised.
1.7	1.7	There appears to be duplication of requirements between Part 1 and 2, especially in cases where airsheds need to report results due to specific industrial activities.	Some ambient air monitoring that is required under EPEA approvals are actually carried out by Alberta airsheds on behalf of some member industrial operations. In these cases, it is not necessary for industrial operations to submit the same ambient air data collected and already submitted by the Alberta airshed. It is also not necessary to discuss the ambient air monitoring results in the industrial operation's monthly and annual reports, provided the Alberta airshed has included the required discussion of the results in their monthly or annual report. The Alberta airshed can carry out the required ambient air reporting on behalf of its industrial operation members. Immediate notification at Alberta airshed ambient air monitoring stations can be carried out by the airshed or by an industrial member. Such notification roles should be clearly defined in the QAP protocols of both the Alberta airshed and industrial operation members. Some industrial operations are members of Alberta airsheds but still carry out some of the ambient air monitoring required under their EPEA approval. Submission of the ambient air monitoring data would be completed by the industry conducting the monitoring. Discussion of the monitoring results is also required to be included in the industrial operation's monthly and annual reports, and immediate notifications would be carried out by the industrial operation.	Clarifying notes were added in section 1 as well as to the beginning of Parts 1 and 2 to explain that duplicate ambient data and information are not required to be submitted if already submitted by the airshed on behalf of industry.

Section	Clause	Comment	Response	Action Taken
Industrial General Reporting Requirements				
2.1	2-A	Clarify: In RC 2-A item (e) is the unique identifier the same identifier as outlined in the Industrial Monitoring Documents Submission Guideline?	The Industrial Monitoring Documents Submission Guideline refers to the unique station identifier (i.e., stack number/name etc.) whereas this section of the AMD on general report content refers to unique identifier that can be used to differentiate between reporters (between industrial operations) such as approval ID. Clause 2-A gives approval number as an example.	No changes made.
2.1	2-A	Contact information should be included in cover letters.	Agreed.	Added requirement for phone number and email address for person responsible and person submitting reports.
2.1	2-A	Cover letters currently cover report certification, why is a second certification through the "Report Certification Form" now required?	Removed requirement for certification form.	Changed report certification to just be covered by the cover letter and added clause requiring a statement in the cover letter that the report has been review and is accurate and representative.
2.1	2-A	It is recommended that the Industrial General Reporting Requirements NOT apply to approval holders and that approval holders follow the requirements of their approval only. Language should be updated to reflect this.	An approval specifies what monitoring is required and sets some of the requirements for monthly and annual reports. The AMD specifies the minimum requirements for how to report (what to include, format, time frame, etc.) and may set some additional reporting requirements not specifically identified in the approval. Both the approval and the AMD need to be followed. The AMD is incorporated by reference in approvals and will be also by the revised Substance Release Regulation.	No changes made.
2.1	2-A	Reports should identify both who prepared the report and who reviewed it.	Added "clear identification of (i) who prepared the report and (ii) who reviewed the report" to RC 2-A and RC 12-A.	Added "clear identification of (i) who prepared the report and (ii) who reviewed the report" to RC 2-A and RC 12-A.
2.2	2.2 and 12.2	Are the forms supposed to be submitted separately or together with reports?	Added note providing guidance that forms should be submitted with the reports they are a part of. Can be emailed at the same time.	Added note providing guidance that forms should be submitted with the reports they are a part of.
2.3	2.3	Clarify: Are reports now to be submitted according to the AMD and not the EPEA approval or both? When submitting reports a reference to the approval clause is made.	An approval specifies what monitoring is required and sets some of the requirements for monthly and annual reports. The AMD specifies the minimum requirements for how to report (what to include, format, time frame, etc.) and may set some additional reporting requirements not specifically identified in the approval. Both the approval and the AMD need to be followed. The AMD is incorporated by reference in approvals and will be also by the revised Substance Release Regulation.	No changes made.
2.3	2-E	It is recommended that the requirement for a Report Certification form be removed, as all reports would be submitted with a signed cover letter, which should be sufficient. It is general practice in industry that the signatory on the cover letter of a report is certifying the contents of the report.	Agreed.	Report Certification Form was removed. Certification of report will be provided by signature on the report cover sheet.
2.3	2-E	Proposed change Change wording from “person responsible” to “certifying official must certify all reports”	It is up to the person responsible to delegate whom will certify reports (provide signature) on behalf of the person responsible.	Removed reference to "certifying official" so that person responsible can delegate signing authority as they wish - as is currently done.
2.3	2-E	Proposed change: Change wording from “person responsible” to “certifying official must certify all reports”	It is up to the person responsible to delegate whom will certify reports (provide signature) on behalf of the person responsible.	Removed reference to "certifying official" so that person responsible can delegate signing authority as they wish - as is currently done.

Section	Clause	Comment	Response	Action Taken
2.3	2-G and 12-G	Report Certification Form must have sign-off from person responsible and meet the same submission deadline as the report it applies to. Please clarify if this clause assumes that the Ambient Data Validation and Certification Form and Report Certification Form must be submitted at the same time as the report deadline. This comment specifically applies to larger airsheds. If the assumption is true, then proper data validation (L0, L1, L2 and L3) must be completed by the end of the month following the month of data collection. If the intent is to simply gather signatures for sign-off for the report, then it may meet the suggested deadline. Currently, the proper practice of data validation, which includes L0, L1 and L2 takes almost the entire period prior to data submission. If L3 validation is added to the same time period, which specifically states that L3 verification must be independent of both field operations and Primary Data Validation, then this task will take longer than the suggested timelines. Secondly, if proper validation protocols are utilized, where data validation is based on analyzer drift from period beginning and end calibrations and daily baseline reference checks, then data validation of L1, L2 and L3 cannot be completed until the current month's calibration are conducted. If utilization of proper standard operating procedures for analyzer performance and calibration are conducted and data validation principles are applied and an external data verification is also conducted, then current timelines will not be met. Analyzer performance and proper data validation periods do not coincide with calendar months. Kindly consider the actual data validation procedures and data objectives in suggesting timelines for certification reports.	The requirement for “Level 3 Validation” from AMD Chapter 6 is for someone independent of the initial validation steps to go through the data (a cursory review only) to (a) look for anything strange or missing, (b) verify that all previous validation steps have been carried out, (c) sign off that the data being submitted has been verified, validated and reviewed – in a sense, endorsement that valid data is being provided to AEMERA/AEP/public. This step needs to be completed before data is submitted to the data warehouse and made available for use. AEP wants to know that data that is being submitted has undergone all necessary verification and validation (as prescribed by the AMD) before it is made public on the data warehouse. We also need, for audit purposes, to be able to show documentation that these steps have taken place. This is where the AMD Ch. 9 Ambient Data Validation Form comes into play. Lev 3 does not need to be completed by a third party, or anyone external to the airshed or contractor; it just needs to be someone independent of Lev 0-2 validation and data collection. This could be the airshed Executive Director, Program Manager, someone from the technical committee, or an alternate member of the consultant group that performs the primary data collection/validation. The intent is not to repeat primary validation tasks, but rather to assure that data have undergone a final independent QA review and endorsement before data are submitted. Review should include cursory review of hourly data (i.e., the hourly data tables that were formerly required as part of monthly report) as well as plots, including a check to make sure data is flagged if need be and suspect data is identified – overall, this review is assuring and signing off to the effect that all steps in Level 0-2 have been completed (as per AMD Ch. 6).	No changes made.
2.3	2-H	Certification process needs to be better defined. Not sure where the details about the Certification Methodology of the Electronic Submission System are found	The "Certification Methodology of the Electronic Submission System" is defined in the AMD as "the mechanism by which data is certified during submission to an electronic reporting system. The certification methodology can include, but may not be limited to, authorized user-specific login credentials and digital sign off on the data prior to final submission". Data is certified by the person responsible when they submit the data to the specific reporting system (ambient data warehouse, CEMS submission site) and is a part of the process of submitting the data. There is no separate, external form for certification when submitting electronic data.	Modified clauses 2-H and 2-I and added guidance.
2.3	2-H	Clarify: What is the “Certification Methodology of the Electronic Submission System”? Is this yet to be released?	The "Certification Methodology of the Electronic Submission System" is defined in the AMD as "the mechanism by which data is certified during submission to an electronic reporting system. The certification methodology can include, but may not be limited to, authorized user-specific login credentials and digital sign off on the data prior to final submission". Data is certified by the person responsible when they submit the data to the specific reporting system (ambient data warehouse, CEMS submission site) and is a part of the process of submitting the data. There is no separate, external form for certification when submitting electronic data.	Modified clauses 2-H and 2-I and added guidance.
2.3	2-H and 12-H	The person responsible must submit to the Director a under the AMD using the Certification Methodology of the Electronic Submission System Please identify and provide the criteria or guidelines for the "Certification Methodology of the Electronic Submission System".	The "Certification Methodology of the Electronic Submission System" is defined in the AMD as "the mechanism by which data is certified during submission to an electronic reporting system. The certification methodology can include, but may not be limited to, authorized user-specific login credentials and digital sign off on the data prior to final submission". Data is certified by the person responsible when they submit the data to the specific reporting system (ambient data warehouse, CEMS submission site) and is a part of the process of submitting the data. There is no separate, external form for certification when submitting electronic data.	Modified clauses 2-H and 2-I and added guidance.

Section	Clause	Comment	Response	Action Taken
2.3	2-I	Certification process needs to be better defined.	The "Certification Methodology of the Electronic Submission System" is defined in the AMD as "the mechanism by which data is certified during submission to an electronic reporting system. The certification methodology can include, but may not be limited to, authorized user-specific login credentials and digital sign off on the data prior to final submission". Data is certified by the person responsible when they submit the data to the specific reporting system (ambient data warehouse, CEMS submission site) and is a part of the process of submitting the data. There is no separate, external form for certification when submitting electronic data.	Modified clauses 2-H and 2-I and added guidance.
2.3	2-I	RC 2-1 "the person responsible must certify data at the time of submission" Recommend allowing flexibility so that data entry and certification can be performed by different individuals or entities (e.g. a contractor might conduct data entry).	This is current practice - the person responsible is able to designate authority to submit data and/or certify reports or data submission on behalf of the person responsible. You must certify the data that you are submitting - cannot certify after the fact. Except for real-time ambient data, the data is supposed to be QA/QC'd.	No changes made.
2.3	2-J and 12-J	The person responsible must submit to the Director a digital copy of the certified laboratory analysis report with all passive, static and intermittent sample results. Noted. Please provide a copy or example of the certified laboratory analysis report to be forwarded to contracting laboratories.	There is no template or form for this purpose. The person responsible is required to provide whatever the lab supplies.	Added guidance under clause 2-J clarifying that there is not set form or template for the lab certification analysis report, but rather the person responsible must submit whatever is provided by the lab.
2.3	2-J and elsewhere	Clarify what a “digital copy” means (is this just a PDF?). Use of the word electronic more closely aligns with lingo for CEMS submissions. Change terminology from “digital” to “electronic”. If ESRD sees these as fundamentally different, please clarify their difference.	Yes, for this clause it would just be a PDF copy of the report.	Changed wording in clause 2-J from "digital" to "electronic", as well as elsewhere in the chapter when referring to submission of reports.
2.3	2-K and 12-K	Certified laboratory analysis report must be signed by an authorized staff member of the laboratory. Noted. Please provide a copy or example of the certified laboratory analysis report to be forwarded to contracting laboratories.	There is no template or form for this purpose. The person responsible is required to provide whatever the lab supplies.	Added guidance under clause 2-J clarifying that there is not set form or template for the lab certification analysis report, but rather the person responsible must submit whatever is provided by the lab.
2.4	2-M and 2-P	RC 2-M and RC 2-P The AMD Reporting Chapter cross references many documents (deadlines - AMD; format - document A or B; naming - document C). It would be helpful to have the AMD consolidate the requirements.	Some of the requirements in these external documents (e.g., naming conventions and where to send reports to) refer to the broader EPEA reporting, not just air/AMD. We have tried, via reference in the AMD, to tie these together and make it more clear.	No changes made.
2.4	2-O	Clarify: RC 2-O states that the data is submitted in a format that can be "manipulated". What is the purpose of this?	Changed wording from "manipulated " to "digital, extractable".	Changed wording from "manipulated " to "digital, extractable".
2.4	2-O	Data submission must be in a format that can be manipulated – please clarify exactly what format is required (word, raw excel files, unsecured PDF document, etc.). We are not comfortable sending “data that can be manipulated”. Likewise, “data that can be manipulated” is not language that would provide a lot of assurance to the public. It is recommended that this clause be removed, and if there are certain data that ESRD would like in a specific format it be requested on a case-by-case basis. Alternatively, if the “Forms” must remain part of Chapter 9, this should be sufficient for ESRD.	Changed wording from "manipulated " to "digital, extractable".	Changed wording from "manipulated " to "digital, extractable".
2.4	2-O	RC 2-O "…. In a format that can be manipulated, along with the report." Clarification of language would be helpful. The intention is presumably that data should be provided in a format that can be directly imported into other spreadsheets or applications for analysis or display. As written, it could be inferred that the intention is to change the values of the numbers after submission.	Changed wording from "manipulated " to "digital, extractable".	Changed wording from "manipulated " to "digital, extractable".

Section	Clause	Comment	Response	Action Taken
2.4	2-O and 12-N	The person responsible must submit to the Director this data in a format that can be "manipulated", along with report. Please clarify this clause. Is the intent here to provide data in excel or csv format?	Changed wording from "manipulated " to "digital, extractable".	Changed wording from "manipulated " to "digital, extractable".
2.5	2.5	For section 2.5 Submissions from Contractors, assuming that this is not an airshed, do we want the person responsible take some responsibility for the quality of the submission as well?	Assuming the airshed is separately reporting for their monitoring stations on behalf of the industrial operation, the airshed would not be a contractor as referred to in section 2.5. The responsibility for approval required monitoring rests with the approval holder. They can contract anyone qualified to do the monitoring, but the industrial operation is still ultimately responsibility for any issues with the monitoring or required reporting.	No changes made.
2.5	2.5 and 12.5	Can contractors prepare reports?	Yes.	Added note to section 2.5 and 12.5, explaining that contractors can complete reports and reporting forms, but the person responsible is expected to review and sign off on the information.
2.5	2-R	Submission from Contractors: Would this include contractors who conduct gas analysis? What about situations where you have an external company operating a plant on one of your sites under your approval?	Yes, an external company is a contractor.	No changes made.
Industrial Data Submission				
3.1	3.1	b) References are made throughout to the Alberta Ambient Air Quality Data Warehouse, which does not yet exist. Transition to this from the CASA Data Warehouse has not been discussed with stakeholders. If that has not occurred before Chapter 9 is finalized, then the text will have to address that issue.	The Alberta Ambient Air Quality Data Warehouse is defined in the AMD, including a reference to the CASA Data Warehouse being the current data warehouse. The CASA Data Warehouse will be upgraded as needed, but the function of the data warehouse will not change.	No changes made.
3.1	3.1	Clarify/Object: Ambient air monitoring is currently collected and submitted by the airshed. This clause requires the “person responsible” (being the owner of a facility and can also be an Air Shed) to submit. Is the individual site expected to certify this data before submission? This same set of data would be verified, certified and submitted by all of the companies within the airshed which is a duplication of effort.	Some ambient air monitoring that is required under EPEA approvals are actually carried out by Alberta airsheds on behalf of some member industrial operations. In these cases, it is not necessary for industrial operations to submit the same ambient air data collected and already submitted by the Alberta airshed, as the Alberta airshed is submitting the required ambient air monitoring data on their behalf. It is also not necessary to discuss the ambient air monitoring results in the industrial operation's monthly and annual reports, provided the Alberta airshed has included the required discussion of the results in their monthly or annual report. The Alberta airshed can carry out the required ambient air reporting on behalf of its industrial operation members. Immediate notification at Alberta airshed ambient air monitoring stations can be carried out by the airshed or by a designated industrial member. Such notification roles should be clearly defined in the QAP protocols of both the Alberta airshed and industrial operation members. Some industrial operations are members of Alberta airsheds but still carry out some of the ambient air monitoring required under their EPEA approval. Submission of the ambient air monitoring data from these industry operated stations should be carried out the industrial operations, as they are the ones conducting the monitoring. Discussion of the monitoring results is also required to be included in the industrial operation's monthly and annual reports. Immediate notifications for the industry operated monitoring stations is required to be carried out by the industrial operation.	Clarifying notes were added in section 1 as well as to the beginning of Parts 1 and 2 to explain that duplicate ambient data and information are not required to be submitted if already submitted by the airshed on behalf of industry.
3.1	3.1	Does the AMD have a set of rules regarding how to process Exceptional Event (EE) data? For example, EE tends to cause a positive bias on air quality summary statistics. Should EE data be removed before calculating summary statistics for “normal” ambient air quality?	No the AMD does not specify any requirements for summarizing data that includes exceptional events. Exceptional events must be reported, and no data should be removed in summarizing or calculating statistics for monthly or annual reporting. In the discussion, any “bias” should be discussed (e.g., “the average is high due to the following exceptional event that occurred on … as a result of …”).	No changes made.
3.1	3.1	Given the volume of data being uploaded to the Ambient Air Quality Data Warehouse, we would like to ensure that measures have been taken such that the site is able to handle the elevated volume of users and increased volume of data without undue access delays or excessive upload wait times.	The Ambient Data Warehouse (currently the CASA Data Warehouse) will be upgraded and tailored to accept all ambient data.	No changes made.

Section	Clause	Comment	Response	Action Taken
3.1	3.1	Is the Alberta Ambient Air Quality Data Warehouse Data Submitter's Guide the same as the CASA Clean Air Strategic Alliance Data Submitter's Guide?	Currently the "Ambient Air Quality Data Warehouse Data Submitter's Guide" referred to in the Reporting Chapter is just the CASA Data Warehouse Data Submitter's Guide. However, the Ambient Air Quality Data Submitter's Guide will be updated to reflect any changes made to the data warehouse and submission procedures. This guide, when amended, will be posted for feedback.	No changes made.
3.1	3.1	Need some clarification between air shed and industrial monitoring; did not notice anything that states that the industrial partner is not responsible for reporting the ambient air monitoring results if they are being monitored by an Air shed group. Most often both industry and airsheds do the ambient air monitoring. It is not clear if they want us to report on what the airshed is already reporting?	In general, you report what monitoring you conduct. If an airshed conducts ambient monitoring on behalf of industry, that ambient monitoring should be reported by the airshed conducting the monitoring. However, it is the responsibility of the industrial operation to ensure that all approval requirements are being met. If an industrial operation conducts ambient monitoring, the results of that monitoring would be reported by the industrial operation. Immediate notification, for example an exceedance of an AAAQO at an ambient monitoring site, can be carried out by the airshed or by an industrial member. Such notification roles should be clearly defined in the QAP protocols of both the Alberta airshed and industrial operation members. Immediate notifications for the industry operated monitoring stations is required to be carried out by the industrial operation.	Clarifying notes were added to explain that duplicate ambient data and information are not required to be submitted if already submitted by the airshed on behalf of industry.
3.1	3.1	There is the requirement to report data from special studies (all ambient data), however there is not timeline provided. Sometimes data from special studies isn't provided until years later or after submitting many requests. Is there a way to add a timeline to that clause so that data is uploaded expeditiously to the CDW? This applies to canister monitoring studies, passives – those monitoring activities that require lab analysis.	Special air studies conducted by the Alberta airshed for its own purposes do not need to be reported to the Regulator. However, if the Alberta airshed chooses to submit results from a special air study to the Regulator, the air monitoring for the special air study needs to be conducted in accordance with the AMD in order for the Regulator to accept the data. Refer to the AMD Introduction (Chapter 1).	Clarifying notes added.
3.1	3.1	With all the elevated reporting requirements in this chapter and increased data load which results from that, what structural changes are to be made to CASA to ensure good data flow. CASA has been problematic for years and unless there are upgrades would be even more problematic with the increased load.	The CASA Data Warehouse will be undergoing a complete revision before the reporting requirements come into effect in 2017.	No changes made.
3.1	3-A	Additionally, as indicated in Item RC 1-A, in Part 1 of the document the person responsible means the owner or operator of an industrial facility. With this definition in mind, the requirement in Item RC 3-A appears to be a duplicate submission in those cases where an Airshed is submitting data on behalf of industry. If this duplication is not intended, it is recommended that additional text be added to statement RC 3-A to clarify that this requirement does not apply in situations where data is already being submitted by an Airshed.	Some ambient air monitoring that is required under EPEA approvals are actually carried out by Alberta airsheds on behalf of some member industrial operations. In these cases, it is not necessary for industrial operations to submit the same ambient air data collected and already submitted by the Alberta airshed, as the Alberta airshed is submitting the required ambient air monitoring data on their behalf. It is also not necessary to discuss the ambient air monitoring results in the industrial operation's monthly and annual reports, provided the Alberta airshed has included the required discussion of the results in their monthly or annual report. The Alberta airshed can carry out the required ambient air reporting on behalf of its industrial operation members. Immediate notification at Alberta airshed ambient air monitoring stations can be carried out by the airshed or by a designated industrial member. Such notification roles should be clearly defined in the QAP protocols of both the Alberta airshed and industrial operation members. Some industrial operations are members of Alberta airsheds but still carry out some of the ambient air monitoring required under their EPEA approval. Submission of the ambient air monitoring data from these industry operated stations should be carried out the industrial operations, as they are the ones conducting the monitoring. Discussion of the monitoring results is also required to be included in the industrial operation's monthly and annual reports. Immediate notifications for the industry operated monitoring stations is required to be carried out by the industrial operation.	Clarifying notes were added in section 1 as well as to the beginning of Parts 1 and 2 to explain that duplicate ambient data and information are not required to be submitted if already submitted by the airshed on behalf of industry.
3.1	3-A	Clarify: The document does not allow delegation of authority for “person responsible”.	The person responsible is the legal entity responsible for the report. The person responsible can delegate whom they wish to collect the data and prepare the report, but the person responsible is still accountable for the report being submitted and whether it is submitted on time, contains the required information, etc.	No changes made.

Section	Clause	Comment	Response	Action Taken
3.1	3-A	In the Alberta Industrial Heartland, the Fort Air Partnership (FAP) manages the ambient air monitoring network. Clause RC 3-A states that the person responsible must submit all ambient air monitoring data collected by an industrial operation. Does this mean that if an industrial operation participates as a funding member of FAP, then this section does not apply and the industrial operation depends on the airshed to conduct all reporting in accordance with the AMD? Note: Our company currently reviews applicable ambient air station data prior to FAP submission of the monthly and annual compliance reports	Some ambient air monitoring that is required under EPEA approvals are actually carried out by Alberta airsheds on behalf of some member industrial operations. In these cases, it is not necessary for industrial operations to submit the same ambient air data collected and already submitted by the Alberta airshed, as the Alberta airshed is submitting the required ambient air monitoring data on their behalf. It is also not necessary to discuss the ambient air monitoring results in the industrial operation's monthly and annual reports, provided the Alberta airshed has included the required discussion of the results in their monthly or annual report. The Alberta airshed can carry out the required ambient air reporting on behalf of its industrial operation members. Immediate notification at Alberta airshed ambient air monitoring stations can be carried out by the airshed or by a designated industrial member. Such notification roles should be clearly defined in the QAP protocols of both the Alberta airshed and industrial operation members. Some industrial operations are members of Alberta airsheds but still carry out some of the ambient air monitoring required under their EPEA approval. Submission of the ambient air monitoring data from these industry operated stations should be carried out the industrial operations, as they are the ones conducting the monitoring. Discussion of the monitoring results is also required to be included in the industrial operation's monthly and annual reports. Immediate notifications for the industry operated monitoring stations is required to be carried out by the industrial operation.	Clarifying notes were added in section 1 as well as to the beginning of Parts 1 and 2 to explain that duplicate ambient data and information are not required to be submitted if already submitted by the airshed on behalf of industry.
3.1	3-A	Item RC 3-A indicates that the person responsible must electronically submit to Alberta's Ambient Air Quality Data Warehouse all ambient air monitoring data collected by an industrial operation. Our company's understanding is that only data collected by an industrial operation in accordance with an approval or special condition of an approval must be provided. Because companies regularly complete voluntary monitoring outside of their approvals for their own internal use, the wording of Item RC 3-A could be misleading. It should be clarified if ESRD expects industry to submit monitoring data collected by companies outside of approval requirements or conditions. Similar wording to what appears in RC 3-U could be used to clarify this statement.	The person responsible is not required to submit data/results from monitoring that was conducted for their own purposes (i.e., not required). However, in accordance with approval requirements, due diligence source testing results performed by a standard or a modified method are required to be submitted to the Director if the source testing performed was on a parameter or pollutant having approval conditions or limits.	Added the caveat in clause 3-A "except those collected for the person responsible's own purposes", and added guidance on special air studies.
3.1	3-A	Please clarify, if an external air shed / ambient air monitoring association (Strathcona Industrial association) is doing our continuous ambient air monitoring does this exempt us from submitting the data?	Some ambient air monitoring that is required under EPEA approvals are actually carried out by Alberta airsheds on behalf of some member industrial operations. In these cases, it is not necessary for industrial operations to submit the same ambient air data collected and already submitted by the Alberta airshed, as the Alberta airshed is submitting the required ambient air monitoring data on their behalf. It is also not necessary to discuss the ambient air monitoring results in the industrial operation's monthly and annual reports, provided the Alberta airshed has included the required discussion of the results in their monthly or annual report. The Alberta airshed can carry out the required ambient air reporting on behalf of its industrial operation members. Immediate notification at Alberta airshed ambient air monitoring stations can be carried out by the airshed or by a designated industrial member. Such notification roles should be clearly defined in the QAP protocols of both the Alberta airshed and industrial operation members. Some industrial operations are members of Alberta airsheds but still carry out some of the ambient air monitoring required under their EPEA approval. Submission of the ambient air monitoring data from these industry operated stations should be carried out the industrial operations, as they are the ones conducting the monitoring. Discussion of the monitoring results is also required to be included in the industrial operation's monthly and annual reports. Immediate notifications for the industry operated monitoring stations is required to be carried out by the industrial operation.	Clarifying notes were added in section 1 as well as to the beginning of Parts 1 and 2 to explain that duplicate ambient data and information are not required to be submitted if already submitted by the airshed on behalf of industry.

Section	Clause	Comment	Response	Action Taken
3.1	3-A	The clause does not allow any flexibility for companies to collect ambient air monitoring data for internal use / internal studies only. This clause will deter companies from collecting additional data outside of their Approval simply because it now must be reported externally. This should be reworded to: "If the person responsible monitors for any substances or parameters which are the subject of operational limits as set out in an Approval more frequently than is required and using procedures authorized in the Approval, then the person responsible shall provide the results of such monitoring...."	The person responsible is not required to submit data/results from monitoring that was conducted for their own purposes (i.e., not required). However, in accordance with approval requirements, due diligence source testing results performed by a standard or a modified method are required to be submitted to the Director if the source testing performed was on a parameter or pollutant having approval conditions or limits.	Added the caveat in clause 3-A "except those collected for the person responsible's own purposes", and added guidance on special air studies.
3.1	3-A and 13-A	Commencing February 1, 2017, the person responsible must electronically submit to Alberta's Ambient Air Quality Data Warehouse all ambient air monitoring data…. See comments for "specific air studies", definition 64. Define what is meant by "all".	The person responsible is not required to submit data/results from monitoring that was conducted for their own purposes (i.e., not required).	Added the caveat in clause 3-A "except those collected for the person responsible's own purposes", and added guidance on special air studies.
3.17	3 and 13	Calibration forms should just be examples that outline the minimum data elements, but the format should be left up to the contractors.	Added clause and guidance requiring that the data requirements set out in the provided AMD Calibration Report Forms at a minimum be met when using customized calibration forms.	Added clause and guidance requiring that the data requirements set out in the provided AMD Calibration Report Forms at a minimum be met when using customized calibration forms.
3.1.1	3.1.1	Is this website available for review? Currently unable to find the website .	Alberta Ambient Data Warehouse is currently the "CASA Data Warehouse" - www.casadata.org. This data warehouse will be revamped before the compliance date for Ch. 9.	No changes made.
3.1.1	3-B	3.1.1 Submission Deadline for Ambient Air Monitoring Data "RC 3-B The person responsible must submit to Alberta's Ambient Air Quality Data Warehouse all continuous ambient air monitoring data collected at permanent ambient air monitoring stations by the end of the month following the month during which the data was collected, unless otherwise authorized in writing by the Director." Based on the time that will be spent on the data submission to the CASA Data Warehouse website, the deadline is too tight. The updating speed of the current CASA system is slow. It takes a long time to upload files to the CASA website. It also takes much time to wait and find out if files are successfully accepted. If errors are contained in the file, chances are the file will be discarded automatically and a new file will need to be created. It is suggested to extend the deadline to the 15th of the month two months after the data was collected.	The Ambient Data Warehouse (currently CASA Data Warehouse) will be revamped and tailored to accept all ambient data. Currently continuous, portable continuous and passive data is successfully submitted by airsheds within the allotted time period. This will not change. AEP will take feedback and suggestions on submission to the CASA Data Warehouse into account when creating the new data warehouse. A month should be sufficient to submit ambient data, as is currently done.	No changes made.
3.1.1	3-B, 3-C and 3-D	RC 3-B, 3-C and 3-D state that the requirement will come into effect on February 1, 2017, and that the January 2017 data must be submitted by the end of February. The wording is unclear. • Consider having the requirements come into effect on January 1, 2017 which clarifies that monthly data must be submitted starting 2017.	Agreed, date for compliance changed. Continuous data needs to reported monthly - by the end of the month following the month the data was collected.	Clarified in clauses 3-B and 3-C (as well as 13-B and 13-C) that continuous data must be submitted monthly and that first submission is due February 28th, 2017 for January 2017 data.
3.1.1	3-C	RC 3-C: The person responsible must submit … collected at portable air monitoring stations by the end of the month following the month during which the data was collected … Additional time might be required to register a new location for a portable station into the data warehouse. Suggest an additional month (i.e. submit the data by the end of the second month following the month during which the data were collected).	Currently continuous, portable continuous and passive data is successfully submitted by airsheds within the allotted time period. This will not change.	No changes made.
3.1.1	3-D	Does this mean it doesn't need to be reported monthly? This is confusing and needs some clarification.	Passive and intermittent data needs to be submitted electronically as well, within one year of collection, at a minimum (not just summarized in the annual report). This data can be submitted earlier however.	No changes made.
3.1.1	3-D	Intermittent – does this include PM2.5/PM10/TPM ?	Intermittent refers to a discrete, non-continuous measurement of a pollutant concentration in ambient air using a filter, sorbent cartridge, vessel or other sampling media through which air is either actively pumped or flows by differential pressure (vacuum). This is defined in the definitions section. So yes, this would include intermittent PM (e.g., dichotomous sampler).	No changes made.

Section	Clause	Comment	Response	Action Taken
3.1.1	3-D	RC 3-D states that the person responsible must submit the data collected by passive, intermittent and static samplers within one year of data collection. • This clause reads as though an annual report must be submitted, where it should read that monthly data must be submitted within one year after completion (e.g. January 2015 data must be submitted by January 2016) o Please consider rewording for clarity. • Again, consider changing the date to January 1,2017 as the wording is very unclear and causes confusion.	Passive and intermittent data needs to be submitted electronically as well, within one year of collection, at a minimum (not just summarized in the annual report). This data can be submitted earlier however.	No changes made.
3.1.1	3-D and 13-D	Commencing February 1, 2017, the person responsible must electronically submit to Alberta's Ambient Air Quality Data Warehouse all ambient air monitoring data collected by (a) passive, (b) intermittent ….. Please provide updated guideline and data submission methods for passive and intermittent samples.	Currently the "Ambient Air Quality Data Warehouse Data Submitter's Guide" referred to in the Reporting Chapter is just the CASA Data Warehouse Data Submitter's Guide. However, the Ambient Air Quality Data Submitter's Guide will be updated to reflect any changes made to the data warehouse and submission procedures. This guide, when amended, will be posted for feedback.	No changes made.
3.1.2	3 and 13	Ambient data needs to be rounded prior to comparisons to AAAQOs.	Added clause requiring that the person responsible round ambient air monitoring data to one decimal place greater than the significant figures of the AAAQO, prior to doing comparisons.	Added clause requiring that the person responsible round ambient air monitoring data to one decimal place greater than the significant figures of the AAAQO, prior to doing comparisons.
3.1.2	3.1.2	Expectations with respect to rounding and significant figures are stated. We do not believe that it is necessary to explain the basic principles of rounding and it is an unnecessary clause to be contained in legislation. Also, with respect to significant figures, the many different requirements could lead to confusion. It is recommended that 3.1.2 be streamlined such that ambient air data significant figure requirements be standardized to a workable amount of decimal places (for example, everything should be rounded to a standard 1 or 2 decimal places).	Rather than assume everyone knows, having requirements stated will ensure consistency of reporting. AEP is looking for consistency in data handling.	No changes made.
3.1.2	3.1.2	Pg. 21: 3.1.2 Significant Figures for Ambient Air Monitoring Data Currently, there are requirements for the NOx and THC data submissions. A calculation must be applied on data (NOx=NO+NO2 and THC=CH4+NMHC) before data is submitted to the CASA website. Since analyzer is allowed to drift within the certain range, there is no need to have the requirement for this calculation.	This is a case where the part of the clause that says "based on an analyzer's actual measurement capability, or the method used to obtain the data" comes into play.	No changes made.
3.1.2	3.1.2	The increased level of significant figures in the data to be reported also increases the data load. While higher data resolution is a nice thing to have does not seem realistic. The Feds at Environment Canada are very familiar with computer infrastructure issues (i.e. computer data storage space limitations) and have struggled with it for years. Their main means of managing the data is to lower the resolution level. We would like to point out that increased data load may cause issues with data management and usage.	This requirement should not increase data load. This may change the data points being reported by one or two decimal places. What we don't want is data being reporting with trailing decimal places, when the instrument is not capable of reporting to that precision level. If anything, this will reduce the "resolution" of data.	No changes made.

Section	Clause	Comment	Response	Action Taken
3.1.2	3-E and 13-E	The person responsible must round all ambient air monitoring data to the appropriate number of significant figures, based on an analyzer's actual measurement capability. Please define the term, "analyzer's actual measurement capability". Is it manufacturer's factory specifications or real measurement capability based on field working conditions? This clause needs to be modified to reflect consistent reporting precision by all data submitters. The current CASA data warehouse converts values to ppm, with a few exceptions for NOx and hydrocarbons parameters. The conversion to ppm values for reporting to CDW reduces the resolution of the data set. The data collection programs utilized at the stations can have a varied effect on significant figures captured from the analyzer. A system using digital capture programs will have higher resolution of data than systems with analog data capture. Ideally, the units for most parameters should be left in ppb and the current versions of the analyzers can measure up to sub-ppb detection levels, therefore, the reporting precision should be reviewed based on actual analyzer operations in field conditions and a consistent significant figures for reporting should be adopted.	What is meant by these clauses is that the person responsible should only report the number of significant figures/decimals as corresponds to the accuracy and precision of the analyzer. You should not report additional decimal places if the instrument is not capable of reporting at that precision. It is true that this may mean that different analyzers will provide data with varying significant figures, but the user will have a more accurate representation of the data. The clause says "based on an analyzer's actual measurement capability, or the method used to obtain the data" so this would include both the analyzer and the data acquisition system.	No changes made.
3.1.2	3-E/F and 13-E/F	Rounding conventions This clause needs to be expanded to include significant figures and rounding to be consistent with Alberta Ambient Air Quality Objectives. Inconsistencies between significant figures between reporting requirements and the AAAQO limits will lead to confusion and misinterpretation of information. Please consider the following scenario: The rules for significant figures are dependent on what is measured and the precision level of the instrument. The Air Monitoring Directive (AMD, Page 10, 1989), in Section II, Monitoring, subsection D (ii), lists the data reporting precision for H2S concentration value as 0.001 ppm (1 ppb). A normal rounding procedure is followed for digits after the last decimal value. For reporting of ground level ambient air concentrations, the AMD states a requirement to report ambient air concentrations in excess of the Alberta Ambient Air Quality Objectives. For H2S, the hourly average ambient air concentrations exceeding 0.010 ppm (10 ppb), should be reported to AESRD (Page 31, Section III, Reporting, subsection 3, AMD 1989). In consideration of the data reporting precision as per the AMD and the AAAQO for H2S, the smallest possible value that can exceed the 1-hour objective is 11 ppb. Using this scenario, it illustrates the need to keep significant figures and rounding consistent between AAAQOs and data reporting.	Agreed.	Modified clauses 3-E and 13-E and added clauses to specify that when comparing to AAAQOs, you must round the ambient air monitoring data to one decimal place greater than the significant figures of the AAAQO.
3.1.2	3-F	RC 3-F Rounding instructions for air monitoring data are more detailed than in other parts of Chapter 9 (e.g. 3.2.2), and should be obvious to the reader based on normal practices.	Rather than assume everyone knows, having requirements stated will ensure consistency of reporting.	No changes made.
3.1.4	3-J and 13-J	Clause RC 3-J (and 13-J) says that time labels will be specified in the guide. What is intended by “time labels”?	Clause should rather say "must report all ambient air monitoring data using the file format specified in Alberta’s Ambient Air Quality Data Warehouse: Data Submitter’s Guide". The guide will specify the format for time.	Changed clauses 3-J and 13-J to say "file format" rather than "time labels".
3.1.5	3.1.5 and 13.1.5	There won't be enough time to complete the level 3 data validation prior to submission of ambient data to the CASA Data Warehouse.	Level 3 data validation is required by the AMD Chapter 6. The level 3 validation required under AMD Chapter 6, Ambient Data Quality, is not intended to repeat primary level 1 validation tasks, but rather to assure that data have undergone a final independent quality assurance review and endorsement before data are submitted.	Added note repeating that level 3 validation isn't supposed to repeat the level 1 primary validation tasks.

Section	Clause	Comment	Response	Action Taken
3.1.5	3-J	Alberta's Ambient Air Quality Data Warehouse Data Submitter's Guide: Do not have access to this guide	Currently the "Ambient Air Quality Data Warehouse Data Submitter's Guide" referred to in the Reporting Chapter is just the CASA Data Warehouse Data Submitter's Guide. However, the Ambient Air Quality Data Submitter's Guide will be updated to reflect any changes made to the data warehouse and submission procedures. This guide, when amended, will be posted for feedback.	No changes made.
3.1.5	3-L	RC 3-L : … the person responsible must (a) complete, (b) sign and (c) electronically submit to Alberta's Air Quality Data Warehouse, the Ambient Data Validation and Certification Form. For clarity the Ambient Data Validation and Certification Form must be submitted at the same time as the associated dataset is submitted to Alberta' Ambient Air Quality Data Warehouse. The Ambient Data Validation and Certification Form requires certification that the submitted data are complete and accurate, but the form must be submitted at the same time as the data are submitted. Either time needs to be allowed for QA/QC of the submitted data, or the certifier can only certify that the data prepared for submission are complete and accurate.	The data being submitted to the warehouse must be QA/QC'd, not raw data. The requirement for “Level 3 Validation” from AMD Chapter 6 is for someone independent of the initial validation steps to go through the data (a cursory review only) to (a) look for anything strange or missing, (b) verify that all previous validation steps have been carried out, (c) sign off that the data being submitted has been verified, validated and reviewed – in a sense, endorsement that valid data is being provided to AEMERA/AEP/public. This step needs to be completed before data is submitted to the data warehouse and made available for use.	No changes made.
3.1.5	3-L	References are made throughout this Chapter to the Alberta Ambient Air Quality Data Warehouse, which does not yet exist. Transition from the CASA Data Warehouse has not been discussed with stakeholders. If that has not occurred before Chapter 9 is finalized, then the text will have to address that issue.	The Alberta Ambient Air Quality Data Warehouse is defined in the AMD, including a reference to the CASA Data Warehouse being the current data warehouse. The CASA Data Warehouse will be upgraded as needed, but the function of the data warehouse will not change.	No changes made.
3.1.5	3-M	The forms for ambient data validation and certification appear to be duplicating requirements with redundant levels of data certification that add burden and complexity, and create little value. It is recommended that the signature on the cover letter of the monthly report, which according to the AMD needs to include a summary of ambient data, be sufficient enough for the purposes of data validation.	The signature certifies that the data has been QA/QC'd before it is made available to the public or used for policy or management decisions. The signee is declaring that the verification and validation steps listed on the form (as per requirements of AMD Chapter 6) have been completed.	No changes made.
3.1.5	3-M	Not sure that more signatures necessarily results in improved data quality. This requirement could also be difficult for smaller companies to manage.	The signature certifies that the data has been QA/QC'd before it is made available to the public or used for policy or management decisions. The signee is declaring that the verification and validation steps listed on the form (as per requirements of AMD Chapter 6) have been completed.	No changes made.
3.1.6	3.1.6	"Keeping metadata and account information up to date means that it should be updated when the information changes. This includes changes such as when there are staff changes, changes to a monitor or its siting, or other changes … Suggest that some time allowance be provided as it is not practical to expect that metadata and account information be updated instantaneously "when the information changes."	Update to staff changes was meant to provide an up-to-date contact. The time required to make changes to meta data is understood. It is not required immediately. When data is uploaded, changes should be made to meta data if there have been any changes so that meta data is in sync with the data submitted.	In 3.1.6 and 13.1.6, changed guidance from "when there are staff changes" to "personnel contact information". Added guidance that metadata should be updated when the data is submitted (by the end of the month following the month the change was made).
3.1.6	3.1.6	There is no timeline for Metadata updates – functionally, this could be done at the time of reporting (end of the month following the month in which the change occurred), but there should be a timeline expectation included in the AMD as the language of “keep up to date” is vague. It is recommended that the language be adjusted to read “The person responsible must submit all metadata associated with the ambient air monitoring data being submitted to Alberta’s Ambient Air Quality Data Warehouse. If changes in metadata are made, the metadata shall be updated by [e.g.. the end of the month following the month in which the change was made]	Update to staff changes was meant to provide an up-to-date contact. The time required to make changes to meta data is understood. It is not required immediately. When data is uploaded, changes should be made to meta data if there have been any changes so that meta data is in sync with the data submitted.	In 3.1.6 and 13.1.6, changed guidance from "when there are staff changes" to "personnel contact information". Added guidance that metadata should be updated when the data is submitted (by the end of the month following the month the change was made).
3.1.6	3.1.6 Note and 13.1.6 Note	Keeping meta data and account update …requires updates on staff changes Does the monitoring organization need to provide staff changes as part of the meta data and account update?	Update to staff changes was meant to provide an up-to-date contact. The time required to make changes to meta data is understood. It is not required immediately. When data is uploaded, changes should be made to meta data if there have been any changes so that meta data is in sync with the data submitted.	In 3.1.6 and 13.1.6, changed guidance from "when there are staff changes" to "personnel contact information". Added guidance that metadata should be updated when the data is submitted (by the end of the month following the month the change was made).

Section	Clause	Comment	Response	Action Taken
3.1.6	3-N	RC 3-N states that all metadata associated with the ambient air monitoring data must be submitted Consider adding a definition for "metadata".	There are examples of the type of meta data provided below the clause. The Ambient Data Quality Warehouse has various fields that need to be populated when an account is set up to submit data. The data submitters guide will run through the population and updates to meta data fields.	No changes made.
3.1.7	3.1.7 and 13.1.7	For reporting calibration reports, does this require only monthly calibrations (i.e., 1 per month) or every calibration (include daily zero/span)? It does say “during the month” but we may need to clarify with guidance.	There should be one per month for each type of monitor. The clause says to "prepare for each analyzer calibrated during the month" and "submit with monthly data".	No changes made.
3.1.7	3-P and 13-P	New Calibration Report Please provide a copy of the new calibration report	The AMD Calibration Chapter (Chapter 7) provides requirements for calibration. Calibration report templates are posted on the AMD website. These are provided as templates only, and it is acceptable to use custom developed formats, as long as the applicable content requirements of the templates are met.	Changed clauses 3-Q and 13-Q to refer to AMD Chapter 7 (Calibration) rather than referring to a form and added guidance to clarify.
3.1.7	3-Q and 13-R	New Calibration Report Form to be submitted data warehouse Please provide a copy of the new calibration report	The AMD Calibration Chapter (Chapter 7) provides requirements for calibration. Calibration report templates are posted on the AMD website. These are provided as templates only, and it is acceptable to use custom developed formats, as long as the applicable content requirements of the templates are met.	Changed clauses 3-Q and 13-Q to refer to AMD Chapter 7 (Calibration) rather than referring to a form and added guidance to clarify.
3.1.7	3-R and 3-T	RC 3-R and RC 3-T RC 3-T is required to meet the letter of RC 3-R (submission of the report form with the monthly ambient air monitoring data), and so the two requirements could be combined.	Agreed.	Removed clauses 3-T and 13-T.
3.1.7	3-S and 13-S	Alberta's Ambient Air Quality Data Warehouse: Data Submitter's Guide This guide should be updated to include new requirements. This guide does not provide methods for semi-continuous data submission. Could you please provide a copy of the IDEF methods on your website.	Currently the "Ambient Air Quality Data Warehouse Data Submitter's Guide" referred to in the Reporting Chapter is just the CASA Data Warehouse Data Submitter's Guide. However, the Ambient Air Quality Data Submitter's Guide will be updated to reflect any changes made to the data warehouse and submission procedures. This guide, when amended, will be posted for feedback.	No changes made.
3.1.7	3-T	There are approvals that have a 45 day window to submit.	Covered by "unless otherwise authorized in writing by the Director".	No changes made.
3.1.7	3.1.7	This Section states the requirements for the Calibration Reports. • The "Calibration Report Form" was not included with the draft Forms or Templates. Is this form the "Draft Daily CEMS Calibration Form"?	The AMD Calibration Chapter (Chapter 7) provides requirements for calibration. Calibration report templates are posted on the AMD website. These are provided as templates only, and it is acceptable to use custom developed formats, as long as the applicable content requirements of the templates are met.	Changed clauses 3-Q and 13-Q to refer to AMD Chapter 7 (Calibration) rather than referring to a form and added guidance to clarify.
3.2.1	3.2.1	Data reporting formats … Upon uploading to the Regulator File Transfer …. These paragraphs represent some, but not all of the requirements from the CEMS Code and CEMS User Manual. Either the AMD should include all requirements or none of the requirements as a reader might otherwise think that all key requirements had been captured in the AMD.	Requirements are in CEMS Code/User Manual. Clause changed to guidance.	Changed clause 3-V to guidance.
3.2.1	3.2.1	Quarterly reporting as per CEMS Code. Is it still required? Since the AMD addresses so much of the overall reporting including the CEMS data why is this not included? Rather than have the CEMS reporting requirements in two locations, can it not be amalgamated into one?	The revised AMD Reporting Chapter replaces the quarterly reports required by the CEMS Code. Paragraph added to Section 3.2 clarify.	Added a reference to section 6.0 of the CEMS Code, stating that section 6.2 is now superseded by the revised AMD for CEMS reporting requirements.
3.2.1	3.2.1	Unclear what air emissions data this applies to. Is this all CEMS data or only what is required by Approvals? Consider adding a paragraph below this for some clarity.	Added guidance. Section 6.2 of CEMS Code is replaced by the revised AMD, therefore the quarterly reports are replaced with additional monthly requirements.	Added a reference to section 6.0 of the CEMS Code, stating that section 6.2 is now superseded by the revised AMD for CEMS reporting requirements.
3.2.1	3-U	"Note: Other applicable source data may include, but are not limited to, flaring and industrial operation totals." It is not clear what "flaring and industrial operation totals" means. If the requirements for "other applicable source data" are spelled out in an approval or Code of Practice registration, then no examples are required in the AMD.	Agreed. Will remove note.	Note removed.
3.2.1	3-U	RC 3-U states that all continuous emission monitoring and other applicable source data that is required to be submitted under an approval must be electronically submitted to the Director. Please clarify if this requirement is different from CEMS data and other data that is already submitted to AESRD, as this would be a duplication of data submitted.	Agreed, this restates CEMS and other source reporting that is required by an approval. Same as CEMS electronic data submission.	Removed clause 3-U

Section	Clause	Comment	Response	Action Taken
3.2.1	3-U and 3-V	RC 3-U and RC 3-V "The person responsible must electronically submit … data that is required to be submitted under an approval or Code of Practice registration." This is one of the few instances where the AMD requirement is subject to the requirement of an EPEA Approval or Code of Practice registration (as it should be). See comments for other sections, where this is not the case.	Changed clause 3-V to guidance.	Changed clause 3-V to guidance.
3.2.1	3-V	RC 3-V sites both the CEMS Code and the CEMS User manual. These two documents have conflicting procedures (e.g. backfilling). • Please clarify which backfilling method the AMD requires • Consider changing the name of (iii) the CEMS User Manual to the full name of the document, "Electronic Reporting of Continuous Emission Monitoring (CEMS) Information User Manual".	Requirements are in the CEMS Code/User Manual. Clause changed to guidance. The "CEMS User Manual" is defined in the definitions, where the full name is provided. The AMD does not supersede CEMS code, but rather provides direction on reporting; the AMD supersedes section 6.2 of the CEMS code only (as section 6.2 of the code specifies). The Electronic Reporting of Continuous Emission Monitoring (CEMS) Information User Manual includes more details on how to; backfilling is not fully explained as a procedure in the CEMS Code.	Changed clause 3-V to guidance.
3.2.1	3-V	This REQUIRES submissions per the CEMS Code by use of the word “and” in the language. The Approval supersedes the CEMS Code but this language makes it confusing. Not all submissions of CEMS data/information is pursuant to the CEMS Code, particularly if operating a continuous emission monitor as per an approved QAP instead of the CEMS Code. It is recommended that the words “as applicable” are added at the end of the clause.	Changed clause 3-V to guidance.	Changed clause 3-V to guidance.
3.2.1	3-V	Is the AMD going to formally supersede the CEMS Code? Have historically been separate documents, and it isn't clear what the relationship will be based on the overlap between the AMD Chapter 9 and the CEMS Code.	The AMD does not supersede the entire CEMS code, but rather provides direction on reporting; the AMD supersedes section 6.2 of the CEMS code only (as section 6.2 of the code specifies).	No changes made.
3.2.1	3-V	This reference has resulted in both the CEMS User Manual and Codes for Electronic Reporting becoming a mandatory requirement which is "enforceable and legally binding". The CEMS User Manual is still inconsistent in many places with the CEMS Code. It is recommended that the Code be revised and reconciled with the User Manual before the requirements become enforceable.	Changed clause 3-V to guidance. AEP is aware that the CEMS code needs to be revised.	Changed clause 3-V to guidance.
3.2.2	3-AA	RC 3-AA {Rounding to compare with limits} and the Note below it. Apparent contradiction as the RC 3-AA requires sig figs to be equal to the number of sig figs in the limit, whereas the note indicates that the number of sig figs should be equal to or greater than those of the limit. Stack sampling codes has significant figure information, is this information to be used?	Agreed.	Removed note below 3-AA.
3.2.2	3-AA & Note:	Conflicting messages exist here. In 3-AA it says to round data to the same number of significant figures as those in an approval; the Note says “equal to or greater than the limit’s significant figures”. Which is it? It is recommended that the note under RC 3-AA be removed as it contradicts RC 3-AA. Also, per the comment on 3.1.2, it is recommended that significant figure requirements be standardized to a workable amount of decimal places.	Agreed.	Removed note below 3-AA.
3.2.3	3-CC	Clarify: "For the unit conversion in RC 3-BB, the person responsible must use generally accepted scientific principles to perform all unit conversions.” How do we know if it’s acceptable?	This is just a general clause to ensure unit conversions are done using appropriate scientific methods. For example, converting kg to tonnes using the scientifically accepted 1 kg = 0.001 tonne. If you have a question about a specific unit conversion method, you should inquire with your approval engineer.	No changes made.

Section	Clause	Comment	Response	Action Taken
Industrial Exceedance and Performance Reporting				
4.0	4.0	ESRD evaluate the “immediate” reporting requirements and requirements to “report to” or “notify” the Director. There are many examples in Chapter 9 which require unnecessary immediate reporting, assumedly via the 1-800 Environmental Hotline, which will result in backlogging the system. In addition, ESRD needs to ensure there is appropriate staff/resources to manage all the required Director notifications. Again, remove anything that is redundant or not NEEDED.	Exceedance and performance reporting is covered in legislation. Changed clauses 4-A, B, C, G, H and I to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4.0	First paragraph talks about "other contraventions of approval". This is a really broad statement that could imply that we would describe water incidents for example. Should be careful about alignment with air and clear guidance on these types of statements. These requirements are already specified in Approvals, so the comment is unnecessary duplication.	Exceedance and performance reporting is covered in legislation. Changed clauses 4-A, B, C, G, H and I to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4.0	For example, Approvals and Regulations use Adverse Impact criteria for reporting, rather than requiring blanket release reporting that seems to be the case for Chapter 9.	Exceedance and performance reporting is covered in legislation. Changed clauses 4-A, B, C, G, H and I to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4.0	In terms of exceedances and releases, facilities already report to the Environmental Service Response Centre according to the Release Reporting Regulation or their Approval what they are required to report. Please ensure that the reporting of releases and exceedance are only required to be reported to one centralized center.	Exceedance and performance reporting is covered in legislation. Changed clauses 4-A, B, C, G, H and I to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4.0	Paragraphs 2 and 3 Editorial. Use of the word "this" ("this Regulation", "this guide") are confusing as the reader can assume that "this" refers to the document currently being read, i.e. AMD Chapter 9.	Agreed. Will substitute document names.	Changed to refer to Release Reporting regulation and A Guide to Release Reporting.
4.0	4.0	Please clarify that this section means the reporting of air exceedances only.	Exceedance and performance reporting is covered in legislation. Changed clauses 4-A, B, C, G, H and I to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4.0	Section 4 duplicates what is already covered by the Release Reporting Regulation and EPEA approval conditions.	Agreed.	Changed much of section 4 to guidance.
4.0	4.0	Since the concept of industrial exceedance and performance reporting is covered in the Act and Regulations, I don’t think we need this section. The section may really confuse things and potentially induce official error. The 1989 AMD contained information related to exceedances because there was nothing to fill the gap at the time; but, this need has now been addressed with EPEA and its associated regulations. If an item is required then a general clause referring to EPEA Acts and Regulations for exceedances may work.	Agreed, several clauses changed to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4.0	The amendments are being positioned as an update to the existing Air Monitoring Directive (AMD); however, the significant change to the directive suggests that this is a new policy directive. It is not clear that these changes are necessary, especially when the proposed revisions include reporting requirements that are different from those in many site operating approvals.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.
4.0	4.0	The Guide to Release Reporting, which is over 10 years old, is referenced in this section. It would be desirable to see the Guide updated or to include the specific references from the Guide into the AMD so that all requirements are explicitly stated in the AMD. This would ensure that requirements are clear and aren’t missed.	The Guide will need to be updated, but this is a separate process from the revisions to the Air Monitoring Directive.	No changes made.
4.0	4.0	The requirements for immediate reporting are already outlined in existing legislation (Release Reporting Regulation), and are stated in standard approval requirements. It is recommended that this section be streamlined to only include any immediate reporting requirements that are not already covered elsewhere (in Regulations or approvals).	Exceedance and performance reporting is covered in legislation. Will change clauses to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4.0	The wording in this section translates to facilities being required to report any and all releases to the environment to the Director immediately. The Air Monitoring Directive is in place for the reporting of air quality ,which would be ambient air and source air.	Exceedance and performance reporting is covered in legislation. Will change clauses to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.

Section	Clause	Comment	Response	Action Taken
4.0	4.0	This Chapter contains "immediate reporting to the Director" clauses. It is unclear if these immediate reporting incidents would results in contraventions or if these are just required for information only.	Exceedance and performance reporting is covered in legislation. Will change clauses to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4 and 14	Exceedances of 24 hr. average AAAQOs – alarms: Is it necessary to “immediately report” 24 hr. exceedances to the ESRD environmental hotline? While we understand that a 1 hour exceedances should be reported immediately since there is an acute issue, is there the same urgency for the 24 hour exceedances to be reported at midnight? ESRD station exceedances are not typically reported until the following morning. Key would be to get simple, direct advice on this item. Recommend that for 24 hour issues, it be “all or nothing” – either ALL exceedances, regardless of parameter, timeframe, station, season, etc get immediately reported or not.	Should be reported be when known.	No changes made.
4.0	4 and 14	GOA departments and emergency responding agencies need access to monitoring data during emergencies and this should be added to the AMD Reporting Chapter.	Will add clause on immediately providing emergency monitoring data, if requested by the Regulator.	Add clause on immediately providing emergency monitoring data, if requested by the Regulator.
4.0	4 and 14	Industry and airsheds should have documented immediate reporting roles in the their QAPs.	Agreed. Will add guidance.	Added note recommending all industrial operations and Alberta airsheds have documented protocols in their QAPs on immediate reporting and clearly assign roles for immediate reporting.
4.0	4 and 14	New Industrial Exceedance and Performance Reporting and reference a Guide to Release Reporting Does this supersede any Airshed's Immediate Reporting Protocols? This guide needs details about ambient air concentrations exceedance protocols.	Exceedances of AAAQOs must be reported when known. It is strongly recommended that all airsheds have documented protocols in their QAPs covering immediate reporting of ambient air concentrations exceeding the AAAQOs and significant interruption of monitoring equipment.	Added note to section 4.
4.0	4 and 14	What should be done if a company is not sure if something needs to be called in?	Added guidance recommending that If the person responsible is not sure whether or not immediate notification is required in a specific circumstance, that they play it safe and call it in.	Added guidance recommending that If the person responsible is not sure whether or not immediate notification is required in a specific circumstance, that they play it safe and call it in.
4.0	4-A	a) The proposed revisions to Chapter 9 include reporting requirements that are different from those in many Approvals. For example, Approvals and the Regulation use an Adverse Impact criteria for reporting, rather than requiring blanket release reporting that seems to be the case for Chapter 9. b) Additionally, Clause RC 4-A is specifically linked to adverse effects within the requirements of Environmental Protection and Enhancement Act (EPEA), the Release Reporting Regulation, and A Guide to Release Reporting whereas other clauses (e.g. RC 4-C, RC 5-BB, and RC 6-GG) require immediate reporting of all uncontrolled, unauthorized, and accidental releases. This potentially creates more immediate reporting for less significant releases, and we question the value in reporting to that level of detail.	Exceedance and performance reporting is covered in legislation. Will change clauses to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4-A	RC 4-A states that releases that may cause, are causing or have caused adverse effects must be immediately reported to the Director in accordance with the Environmental Protection and Enhancement Act, Release Reporting Regulation and A Guide to Release Reporting. • Is this reporting process the same or different from the reporting to the Environmental Service Response Centre?	Exceedance and performance reporting is covered in legislation. Will change clauses to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.

Section	Clause	Comment	Response	Action Taken
4.0	4-A	Recommendations: -Align Chapter 9 reporting to the Release Reporting Regulation reporting trigger, which includes the criteria of adverse effect. -Remove redundant requirements. -Evaluate the need for any “immediate” reporting clause and the requirements to “report to” or “notify” the Director within the AMD. Existing regulatory requirements include many of the proposed reporting requirements and we would recommend that the AMD is not the appropriate document to add additional requirements of this nature.	Exceedance and performance reporting is covered in legislation. Will change clauses to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4-A	Requiring release reporting to be in accordance with A Guide to Release Reporting is inappropriate. The Guide interprets and provides guidance on the Regulation. Regulatory requirements should be based on the Regulation, not Guidance. Also, the Guide implies that if any one of the 4 bullets on Page 9 of the Guide are met, the event is reportable. However, the Regulation is clear that the event is ONLY reportable IF it “has caused, is causing or may cause an adverse effect AND meets a TDG limit” or if any quantity is released to a water course. At a minimum, this should be clarified. It is recommended that at a minimum, (c) of RC 4-A be removed, however, it would be better to remove RC 4-A entirely as EPEA and the Regulation already apply to release reporting in the province without the AMD mandating them.	Exceedance and performance reporting is covered in legislation. Will change clauses to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4-A	This reference has resulted in the Guide to Release Reporting becoming a mandatory requirement which is "enforceable and legally binding". The Guide to Release Reporting is a Guide and has some provisions which are unclear and have been viewed as inconsistent with the Release Reporting Regulation. It is recommended that the Guide be revised including public review before the requirements become enforceable.	Exceedance and performance reporting is covered in legislation. Will change clauses to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4-A to 4-K	RC 4-A and RC 4-A through RC 4-K Clarification. Is RC 4-A intended to address a situation where an approved emission source is found to result in adverse effects? It would otherwise be covered under RC 4-C. The wording used in the Guide to Release Reporting is " Any spill, release or emergency that may cause, is causing or has caused an adverse effect to the environment must be immediately reported to Alberta Environment ." If that is the intent, then the RC 4-A and RC 4-C could be combined.	Exceedance and performance reporting is covered in legislation. Will change clauses to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4-A to 4-K	RC 4-A and RC 4-A through RC 4-K Presumably "immediately" in this case implies "as soon as possible after an adverse effect has been confirmed"? The time scale is likely different for the different reporting requirements.	Should be reported be when known.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4-A to 4-K	RC 4-A to RC 4-K This section is redundant to EPEA , the Release Reporting Regulation and "A Guide to Release Reporting" (ESRD Publication No. I/792), as well as the CEMS Code and conditions of EPEA Approvals. What is the purpose of including these requirements in this chapter of the AMD? Are there plans to amend the Release Reporting Regulation , CEMS Code and guides?	Exceedance and performance reporting is covered in legislation. Will change clauses to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4-A to 4-K	Section 4.0: The AMD should not be used to clarify a regulation. The regulation stands on its own, and affects activities outside of air monitoring. The regulation also supersedes the AMD. Adding qualifiers and conditions only leads to officially-induced error and unenforceability. The regulation is also subject to change by the Legislature, which can lead to inconsistencies between the two documents. This paragraph and RC 4-A through RC 4-K should be removed.	Exceedance and performance reporting is covered in legislation. Will change clauses to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4-A, 4-B, 4-C, 4-D, 4-E, 4-F, 4-G, 4-H, 4-I, 4-K	Clarify: Consider replacing the word “immediate” with “as soon as reasonably possible”.	Immediate constitutes due diligence, i.e., reporting when an issue is known.	Changed clauses 4-A, B, C, G, H and I to guidance.

Section	Clause	Comment	Response	Action Taken
4.0	4-A, 4-C	Clarify: No clear definition is provided for “release”, nor for “uncontrolled”, “unauthorized” or “accidental release”; no reporting thresholds are set forth.	Exceedance and performance reporting is covered in legislation. Will change clauses to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4-B and 4-H	RC 4-B, RC 4-H Code of Practice contravention reporting requirements These items are not consistent with the Code of Practice for Compressor and Pumping Stations and Sweet Gas Processing Plants . The AMD is not a place for interpretation of the Code of Practice. Are there plans to amend this Code of Practice, or others?	The AMD only applies to EPEA approved facilities and Alberta airsheds. It could apply to new or revised Code of Practice registered facilities, if the new or revised Code requires reporting according to the AMD.	No changes made.
4.0	4-C	RC 4-C “The person responsible must immediately report to the Director all (a) uncontrolled, (b) unauthorized and (c) accidental releases. This is a broad varied description of a reportable release, that fails to align with the release reporting regulation. This statement fails to address or define volume, material, or onsite/offsite impact. Under the above statement a spill of hydrocarbon under a barrel would be required to be reported. Is this the intent that any spill of any material be reported regardless of the spill location? Remove clause RC4-C as release reporting is adequately defined under RC4A & B	Exceedance and performance reporting is covered in legislation. Will change clauses to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4-C	Requiring industry to report all releases without using the definitions contained in the Release Reporting Regulation creates a significant and unnecessary burden for industry. Also, by referencing the Release Reporting Regulation in RC 4-A and then creating a separate reporting requirement with different thresholds in RC 4-C creates regulatory confusion about which requirement to apply to different situations. It is recommended that the requirements for Release Reporting be removed from the AMD as these are covered under separate legislation. If not, at a minimum, remove 4-C as this is covered in 4-A already.	Exceedance and performance reporting is covered in legislation. Will change clauses to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4-C	This is a broad varied description of a reportable release, that fails to align with the release reporting regulation. This statement fails to address or define volume, material, or onsite/offsite impact. Under the above statement a spill of hydrocarbon under a barrel would be required to be reported. Is this the intent that any spill of any material be reported regardless of the spill location? Recommendation: Remove clause RC4-C as release reporting is adequately defined under RC4A & B	Exceedance and performance reporting is covered in legislation. Will change clauses to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4-C	This statement is too broad and should be removed - clauses RC 4-A & RC 4-B already cover release reporting requirements.	Exceedance and performance reporting is covered in legislation. Will change clauses to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4-C	This needs to align with adverse impact definitions that are used in industrial Approvals.	Exceedance and performance reporting is covered in legislation. Will change clauses to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4-C	Proposed Change: Change wording to reflect the intent that the person responsible must report all uncontrolled, unauthorized and accidental air related releases “which cause an adverse effect”. With current wording we’d have to report a water leak, hydrogen leak etc.	Exceedance and performance reporting is covered in legislation. Will change clauses to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4-D	• Immediate reporting of an AAAQO exceedance should not result in a contravention as the AAAQOs are not a Regulation or in facility approvals . o Please clarify if this is the case or consider rewording.	Exceedances of AAAQOs must be reported when known. A measured exceedance of an AAAQO may not be caused by the facility, but could come from other sources in the area. It may not necessarily constitute a contravention of approval conditions, but must be called in regardless. Clause RC 4-D does not include any specific wording on contravention of approval conditions. Instead it merely says: "The person responsible must immediately report to the Director all monitoring results that show ambient air concentrations exceeding the AAAQOs." EPEA approvals are what require immediate reporting of any contravention of any term or condition of the EPEA approval.	No changes made.

Section	Clause	Comment	Response	Action Taken
4.0	4-D	Also, general accepted practice is to report 24 hour AAAQOs the next morning…is this acceptable?	Immediate constitutes due diligence. For example, reporting an AAAQO exceedance is required once it is known.	Guidance added.
4.0	4-D	Clarification required - is this for property line concentrations only? Regardless, this requirement is much too broad and overly onerous on companies and should be removed. Reporting requirements are outlined in Approvals, Code of Practice Registrations, etc. and should be kept within these documents.	The Alberta Ambient Air Quality Objectives are intended to provide protection of the environment and human health to an extent technically and economically feasible, as well as socially and politically acceptable. The provincial ambient air monitoring network is made up of monitoring stations operated by airsheds, industry and government. Reporting of exceedances of AAAQOs is required regardless of who operates a station. The cause of an exceedance may not always be known. The cause of an AAAQO may not necessarily even be from the facility, but could come from some other source. As industrial monitoring stations are not required to report in real-time, a measured exceedance of an AAAQO should be called in to ensure that the department, and other associated health and emergency agencies, can be informed when there is a potential air quality event in an area. If the person responsible is not sure whether or not immediate notification is required in a specific circumstance, it is recommended that they play it safe and call it in.	No changes made.
4.0	4-D	Clarify the requirement It is unclear why ESRD must be notified if AAAQO is exceeded unless specified in the operating permit. This is an objective rather than a requirement.	The Alberta Ambient Air Quality Objectives are intended to provide protection of the environment and human health to an extent technically and economically feasible, as well as socially and politically acceptable. The provincial ambient air monitoring network is made up of monitoring stations operated by airsheds, industry and government. Reporting of exceedances of AAAQOs is required regardless of who operates a station. The cause of an exceedance may not always be known. The cause of an AAAQO may not necessarily even be from the facility, but could come from some other source. As industrial monitoring stations are not required to report in real-time, a measured exceedance of an AAAQO should be called in to ensure that the department, and other associated health and emergency agencies, can be informed when there is a potential air quality event in an area. If the person responsible is not sure whether or not immediate notification is required in a specific circumstance, it is recommended that they play it safe and call it in.	No changes made.
4.0	4-D	RC 4-D states that all monitoring results that show ambient air concentrations exceeding the AAAQOs must be immediately reported to the Director. • Many remote locations have unpaved roadways by their ambient stations as well as farming activities, etc. Consider removing this clause.	The cause of an exceedance may not always be known. The cause of an AAAQO may not necessarily even be from the facility, but could come from some other source. As industrial monitoring stations are not required to report in real-time, a measured exceedance of an AAAQO should be called in to ensure that the department, and other associated health and emergency agencies, can be informed when there is a potential air quality event in an area.	No changes made.
4.0	4-D	The person responsible must immediately report exceedances of AAAQO's. What if you are a member of an airshed? Does this mean industry needs to report on airshed exceedances? It is recommended that this clause be re-written to read "If not a member of an airshed, the person responsible….". The requirement to "immediately" report should either not apply to the longer time period calculated AAAQO's, or it should be clarified in which circumstances "immediately" will apply and/or what "immediately" means.	Industrial operations are not required to report on ambient air monitoring conducted and already reported by Alberta airsheds. However, the role of who immediately reports exceedances (industry or airshed) can vary by airshed. It is strongly recommended that all industrial operations have documented protocols in their QAPs covering immediate reporting of approval contraventions, ambient air concentrations exceeding the AAAQOs and significant interruption of monitoring equipment. Industrial operations who are members of an Alberta airshed should also make sure that their airshed has a documented protocol in place to ensure that the roles of who carry out immediate reporting of ambient air issues is clearly defined. For example, the documented protocol should assign the role of immediate reporting so that the Alberta airshed will immediately reports on ambient air issues on behalf of its members, or that individual industrial operations will immediate report on ambient issues associated with their operation.	Guidance added.
4.0	4-D	The requirement to "immediately" report should either not apply to the longer time period calculated AAAQO's, or it should be clarified in which circumstances "immediately" will apply and/or what "immediately" means.	Reporting an AAAQO exceedance is required once it is known.	Guidance added.

Section	Clause	Comment	Response	Action Taken
4.0	4-D	This reference has resulted in the AAAQOs becoming a mandatory requirement which is "enforceable and legally binding". This is a concern particularly for objectives which have not undergone a current review i.e. Total suspended particulate matter that has not been reviewed since 1975. It is recommended that the Alberta Ambient Air Quality Objectives be reviewed and publically vetted again prior to making them legally binding, immediately reportable and therefore managed the same as "limits".	AEP has been reviewing ambient air quality objectives by multi-stakeholder consultation since 2000. AEP works with a variety of stakeholders, including: industry, environmental organizations, other government departments, the scientific community, and the general public to prioritize substances and to review Objectives and Guidelines.	No changes made.
4.0	4-E	Clarify: There is no threshold, nor clear definition, for “significant”.	An example of significant interruption to an analyzer or sensor (RC 4-E) is an analyzer or sensor being taken offline indefinitely or permanently, damage requiring an analyzer or sensor to be offline for an extended period, or an analyzer or sensor being replaced with one that uses a different sampling method (e.g., replacing a TEOM with a SHARP).	Guidance added.
4.0	4-E	Define “significant”? Is this referring to 90% uptime requirement? It is recommended that separate reporting to the Director for interruption/damage/interference of an ambient air analyzer or sensor only apply if it results in a failure to meet the 90% uptime requirements.	An example of significant interruption to an analyzer or sensor (RC 4-E) is an analyzer or sensor being taken offline indefinitely or permanently, damage requiring an analyzer or sensor to be offline for an extended period, or an analyzer or sensor being replaced with one that uses a different sampling method (e.g., replacing a TEOM with a SHARP).	Guidance added.
4.0	4-E	Item RC 4-E indicates that any significant interruptions to any continuous ambient air analyzer or meteorological sensor must be immediately reported. It would be useful if ESRD could further define what constitutes a “significant” interruption. Often during onsite calibration activities, analyzer change-outs, or analyzer upgrades, there may be short periods of data interruption. It is unclear if these would trigger immediate reporting. To ensure that the reporting burden is minimized, we suggest that significant interruptions be defined as anything that would impact meeting the minimum instrumentation up time requirement of 90%.	An example of significant interruption to an analyzer or sensor (RC 4-E) is an analyzer or sensor being taken offline indefinitely or permanently, damage requiring an analyzer or sensor to be offline for an extended period, or an analyzer or sensor being replaced with one that uses a different sampling method (e.g., replacing a TEOM with a SHARP).	Guidance added.
4.0	4-E	RC 4-E states that any significant interruption, damage or interference of the continuous ambient air analyzer or meteorological sensor must be reported. • Consider adding a definition for "significant" as it is a subjective.	An example of significant interruption to an analyzer or sensor (RC 4-E) is an analyzer or sensor being taken offline indefinitely or permanently, damage requiring an analyzer or sensor to be offline for an extended period, or an analyzer or sensor being replaced with one that uses a different sampling method (e.g., replacing a TEOM with a SHARP).	Guidance added.
4.0	4-E	RC 4-E: Immediate reporting for continuous ambient air analyzer or met sensor. Is this meant to be greater than 10% downtime threshold? If so, define number vs. using significant as the qualifier	An example of significant interruption to an analyzer or sensor (RC 4-E) is an analyzer or sensor being taken offline indefinitely or permanently, damage requiring an analyzer or sensor to be offline for an extended period, or an analyzer or sensor being replaced with one that uses a different sampling method (e.g., replacing a TEOM with a SHARP).	Guidance added.
4.0	4-E	Suggest that 'significant' should be defined with alignment to 10% downtime. Also, there are Approval clauses that should be recognized to supersede this requirement. For example, our approval allows us to provide alternate data (PAMU1/2 THC) rather than report a downtime incident.	Approval takes precedent. An example of significant interruption to an analyzer or sensor (RC 4-E) is an analyzer or sensor being taken offline indefinitely or permanently, damage requiring an analyzer or sensor to be offline for an extended period, or an analyzer or sensor being replaced with one that uses a different sampling method (e.g., replacing a TEOM with a SHARP).	Guidance added.
4.0	4-F	Clarify: Does this mean a failed CGA is now reportable even if the uptime is above 90%?	This would not necessarily require immediate reporting, but a failed CGA must be including in the CGA Report. A failed CGA is a temporary loss of monitoring.	Clause RC 4-F revised to clarify that this is equipment uptime.
4.0	4-F	RC 4-F: Immediate should be changed to within a prescribed period such as a month after the failed audit/performance check.	Immediate is when it is known.	Clause RC 4-F revised to clarify that this is equipment uptime.
4.0	4-F	Why not just say “any part of the AMD”? Why is Chapter 4 specifically mentioned? Also, making a call to the ERC to report performance evaluation or audit findings is onerous and since it is not an “emergency” this could lead to backing up the ESRD compliance system. It is recommended that this be removed. This is not an immediate report item and could be handled by submitting a letter or the report within 30 days.	Clause RC 4-F refers to equipment uptime.	Clause RC 4-F revised to clarify that this is equipment uptime.
4.0	4-F	This is overly excessive. Third party audits can often be subjective and open to interpretation. Audits should be retained at site and be available for ESRD Inspection. It should also be noted that a minimum auditing protocol and certification process would be needed before this becomes an "enforceable and legally binding" requirement.	Clause RC 4-F refers to equipment uptime.	Clause RC 4-F revised to clarify that this is equipment uptime.

Section	Clause	Comment	Response	Action Taken
4.0	4-G	RC 4-G states that all CEMS performance issues must be reported to the Director. • Consider removing as this is already reported as part of the CEMS Code/Electronic Reporting of Continuous Emissions Monitoring (CEMS) Information User Manual.	Exceedance and performance reporting is covered in legislation. Will change clauses to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4-G	RC 4-G Editorial (missing word "metric"): "… report to the Director all CEMS performance metrics, including, but not limited to …"	Exceedance and performance reporting is covered in legislation. Will change clauses to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4-G	This makes sense for 90% uptime or a limit exceedance. It doesn't make sense for other performance items. Immediately having to report on performance items that do not meet CEMS Code requirements creates a new reporting burden on industry with questionable benefit to ESRD. This clause suggests that all CEMS parameters, such as calibration adjustments, now become "Immediate reportable events" under the AMD. The ERC should not be used for this purpose. It is recommended that this be removed/clarified. If industry has an issue with a CEMS, reporting it in the monthly or quarterly CEMS report should be sufficient.	Exceedance and performance reporting is covered in legislation. Will change clauses to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4-H	RC 4-H Dictates that disruptions or failures in pollution control technologies or equipment must be reported to the Director. • Please consider requiring the reporting of control technology operation that is in non-compliance to an approval clause. • Please include a provision for maintenance of pollution control equipment. • RC 6-LL also states that operation time of pollution control technologies must be included in the Annual Report. Approvals only state that the equipment must run, not that it must run a certain percentage of time. • Consider requiring this only for control technologies that have a specific uptime requirement.	Exceedance and performance reporting is covered in legislation. Will change clauses to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4-H	RC 4-H: Reporting should only be required if the failure results in an approval exceedance or other regulatory limit. There can be minor upsets that cause a bump, but do not result in an exceedance or any significant release.	Exceedance and performance reporting is covered in legislation. Will change clauses to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4-H	Recommend removal of this requirement. This is overly excessive and does not consider equipment specific requirements or circumstances that may be addressed in Approvals or otherwise authorized by the Director. Approval (source) limits are also the indicator which provides assessments of whether operating without the technologies or equipment has or will result in an environmental impact.	Exceedance and performance reporting is covered in legislation. Will change clauses to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4-H	There are certain situations where pollution abatement equipment is disrupted, but "backup" pollution abatement equipment is then used (e.g., an incinerator goes down and instead material is swung to flare) and therefore there is no adverse effect. Likewise, if there is a significant issue with pollution abatement equipment, AND the associated production equipment is also impacted (i.e., both the operating and pollution abatement equipment are down), there would be no adverse effect. Also, some approvals contain clauses which allow for limited approved pollution abatement equipment downtime. These situations do not warrant an immediate report to the Director/call to the ERC since industry would be operating within the terms of their approval. It is recommended that RC 4-H be removed. It is redundant considering situations where reporting to the Director is required are covered in the Approvals. Also, this causes confusion as to which direction should be followed – the Approval requirements or the AMD?	Exceedance and performance reporting is covered in legislation. Will change clauses to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4-H	Does this need to be in the AMD? Feels like duplication of Approval requirements to report pollution control equipment function issues.	Exceedance and performance reporting is covered in legislation. Will change clauses to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4-H and 4-I	RC 4-H and RC 4-I RC 4-H appears to address a subset of RC 4-I and the two requirements could be combined.	Exceedance and performance reporting is covered in legislation. Will change clauses to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4-I	It would be appreciated if ESRD could clarify what they consider a contravention in Item RC 4-I. It is unclear if this statement is intended to apply to exceedances of approval emission limits only or if failing an assurance test would also require an immediate report	Exceedance and performance reporting is covered in legislation. Will change clauses to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.

Section	Clause	Comment	Response	Action Taken
4.0	4-I	RC 4-I states that all contraventions of terms and conditions of an approval or Code of Practice registration must be reported to the Director. All facilities report contraventions within 24-hours of occurrence. Is this an additional reporting requirement or the same requirement?	Exceedance and performance reporting is covered in legislation. Will change clauses to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4-I	The requirement to immediately report is a standard clause in all approvals. There is no value in including this instruction in the AMD as well. There are already other clauses in the AMD that require immediate reporting under the AMD as well. Also, this would cover exceedances of limits, which is also stated in RC 4-B. It is recommended that RC 4-I be removed.	Exceedance and performance reporting is covered in legislation. Will change clauses to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4-I	This is a redundant clause as it is strongly represented in facility Approvals already.	Exceedance and performance reporting is covered in legislation. Will change clauses to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
4.0	4-J	If the plan is to reference the Guide to Release Reporting, the Guide needs to be updated. All 7-day letters are now REQUIRED to be submitted via e-mail; this is not currently contemplated in the Guide. Also, as previously mentioned, the Guide does not align with the associated Regulation. This already causes confusion with respect to reporting and the AMD does nothing to help clarify this. It is recommended that RC 4-J be removed. If not considered, then at a minimum, the Guide needs to be updated to align with the associated regulation and the requirements to report electronically.	The Guide will need to be updated, but this is a separate process from the revisions to the Air Monitoring Directive. RC 4-J just requires the procedures of the guide be followed.	No changes made.
4.0	4-K	RC 4-K For all issues and deficiencies leading to the notifications in RC 4-A, RC 4-B, RC 4-C, RC 4-D, RC 4-E, RC 4-F, RC 4-G, RC 4-H and RC 4-I, the person responsible must take immediate action to correct or address the issues and deficiencies to the satisfaction of the Regulator. Please extend/clarify the meaning of "to the satisfaction of the Regulator".	An example of immediate correction is ordering a replacement part when it becomes known that equipment is not working properly; that is, some action is taken to begin to address a discovered issue or deficiency.	Guidance added, changed to Director.
Industrial Monthly Reports				
5.0	5.0	• Monthly reports with the required data are already submitted electronically. o Please clarify if facilities are required to send in their monthly reports electronically (as done in the past) as well as the monthly reports required by the AMD.	Monthly reports must be submitted electronically to the department. Two monthly reports should not be required, as the AMD required information and any additional approval specified monthly report information can be submitted in one monthly report.	No changes made.
5.0	5.0	Approval contravention information should be captured in a form, rather than a list in the reports.	Agreed.	Added clause requiring submission of AMD Approval Contravention Form.
5.0	5.0	Clarify: There is no discussion of the quarterly reports as outlined in section 6.2 of the CEMS code, are these no longer required? If they are, are they to follow the monthly report format?	As per section 6.0 of the CEMS Code, the AMD provides detailed CEMS reporting requirements and supersedes section 6.2 of the CEMS Code.	Added clarifying note: "As per section 6.0 of the CEMS Code, the AMD provides detailed CEMS reporting requirements and supersedes section 6.2 of the CEMS Code."
5.0	5.0	Currently at AESRD all monthly reports are being given a cursory review and being sent directly to file. Due to limited staffing resources, how will AESRD review and process the additional data requested in the AMD? How often is this data needed/how are you using this data? Would like insight into current AER data infrastructure.	Monthly reports are not being phased out, nor is there a new policy to "streamline" to reduce reporting. AEP staffing doesn't dictate what data is needed by the department. Monthly reports are still reviewed, by both regional Operations and Data Managements. A large portion of reports will be going to the AER.	Changed clause 5-A on requirement for monthly reporting to say "If the person responsible is required to prepare (a) a monthly report or (b) a quarterly report under the conditions of an approval or Code of Practice ...".
5.0	5.0	Does the “Note” regarding quarterly reporting mean that if your approval requires quarterly reporting, then you do NOT have to do monthly reporting; instead all the AMD monthly reporting requirements become wrapped into the quarterly report? What about facilities that have NEITHER monthly or quarterly reports and everything is submitted annually? Can the same ‘exemption’ apply in that all AMD reporting requirements can be submitted annually? Please clarify.	Reporting frequency is dictated by the approval, so if your approval states quarterly reports you submit quarterly reports. If it states monthly reports, than submit monthly reports, etc.	Select clauses in section 6.0 (annual reports) were modified to account for information that may have been missed if monthly reporting is not required.
5.0	5.0	Editorial. The heading could be "INDUSTRIAL MONTHLY OR QUARTERLY REPORTS" since that is the stated intent.	Agreed.	Changed heading and clauses in section 5 to say "monthly and quarterly" reports.

Section	Clause	Comment	Response	Action Taken
5.0	5.0	In the past, ESRD initiated a streamlining effort that resulted in the removal of monthly reporting requirements for many approvals. The volume of work in reviewing monthly reports represented a significant burden on government staff, which did not provide sufficient value to justify continuing. This reporting chapter represents a significant shift away from that direction.	Monthly reports are not being phased out, nor is there a new policy to "streamline" to reduce reporting. AEP staffing doesn't dictate what data is needed by the department. Monthly reports are still reviewed, by both regional Operations and Data Managements. A large portion of reports will be going to the AER.	Changed clause 5-A on requirement for monthly reporting to say "If the person responsible is required to prepare (a) a monthly report or (b) a quarterly report under the conditions of an approval...".
5.0	5.0	Industrial Monthly Reports Examples of Monthly Reports was not available for review (as stated).	An example monthly report was not provided for the draft review. An example report will be provided once the requirements of the Reporting Chapter are finalized.	No changes made.
5.0	5.0	Monthly reports with the required data are already submitted electronically. o Please clarify if facilities are required to send in their monthly reports electronically (as done in the past) as well as the monthly reports required by the AMD.	Monthly reports must be submitted electronically to the department. Two monthly reports should not be required, as the AMD required information and any additional approval specified monthly report information can be submitted in one monthly report.	No changes made.
5.0	5.0	Recommendations: - Clarify the language in Chapter 9 to ensure that approval requirements take precedence over the AMD. For example, if the approval does not require monthly reporting, then there is no obligation to provide monthly reporting via the AMD. Likewise, if the approval requires annual reporting, the report only needs to contain the information required by the approval, not the information required by the AMD.	Will keep status quo that an approval specifies whether monthly reporting is required or not. If monthly reports are required by an approval, then the AMD specifies the minimum requirements for that monthly report, and approval holders must comply with those minimum requirements.	Changed clause 5-A on requirement for monthly reporting to say "If the person responsible is required to prepare (a) a monthly report or (b) a quarterly report under the conditions of an approval or Code of Practice ...".
5.0	5.0	The monthly reports section should be renamed to also cover quarterly reports, rather than just having a note to indicate that this section covers quarterly reports.	Agreed.	Renamed Monthly Reports Section to Monthly and Quarterly Reports and adjusted text and clauses as required.
5.0	5.0	The paragraph section states that an example Monthly Report is available on the AMD website . • Unable to find the "Monthly Report" document. Only able to find Draft AMD Summary Sheet.	An example monthly report was not provided for the draft review. An example report will be provided once the requirements of the Reporting Chapter are finalized.	No changes made.
5.0	5.0	There is a statement that the report format is available on the AMD website – it is not yet available and industry should have access to it to provide comments BEFORE Chapter 9 is finalized. Please send an example monthly report to industry so we can see what the final product is expected to look like.	An example monthly report was not provided for the draft review. An example report will be provided once the requirements of the Reporting Chapter are finalized.	No changes made.
5.0	5.0	There is no sample report available currently to comment	An example monthly report was not provided for the draft review. An example report will be provided once the requirements of the Reporting Chapter are finalized.	No changes made.
5.0	5.0	Under which requirement should specific reporting that is triggered by performance issues (e.g.. Sulphur Tiered Reporting, acid gas injection flare events, etc.) be submitted?	These are approval triggered (ex. tier reporting dictated by approval condition) not AMD triggered.	No changes made.
5.0	5 and 6	For companies with both an incineration stack and a flare stack, is there a proposed approach to correlate the data between each stacks' releases?	If dictated by the approval this would need to be included in the monthly or annual report.	No changes made.
5.0	5 and 6	For the monthly and annual reports, it would be beneficial to have the person responsible identify the status of the incident (or the in addition to the incident number (internal communication systems are not yet robust).	Agreed.	Added a clause to annual reports section requiring completion of the AMD Approval Contravention Form.
5.0	5 and 6	Limits – in some cases we have Performance Targets in addition to Limits.	Will add performance targets to clause.	Added clause requiring "a discussion of comparisons to performance targets specified in the approval" to the monthly and annual reports.

Section	Clause	Comment	Response	Action Taken
5.0	5 and 6	Monthly & Annual Report Requirement In recent years, ESRD went through a streamlining effort which resulted in the removal of monthly reporting requirements from many approvals since many monthly reports were not being reviewed, did not provide value, and staffing issues resulted in a refocus of efforts. This reporting chapter is an extreme shift from this direction. The language in Chapter 9, and comments provided by ESRD in the associated Webinar, imply that monthly and annual reports are now mandatory across the board, regardless of what the approval requires. Likewise, the language in Chapter 9 prescribes what information the reports must contain, as well as how they are to be formatted, which “Forms” must be included, etc. It is recommended that: - The language in Chapter 9 be clarified such that the approval requirements take precedence over the AMD. For example, if the approval does not require monthly reporting, then there is no obligation to provide monthly reporting via the AMD. Likewise, if the approval requires annual reporting, the report only needs to contain the information required by the approval, not the information required by the AMD.	Monthly reports are not being phased out, nor is there a new policy to "streamline" to reduce reporting. AEP staffing doesn't dictate what data is needed by the department. Monthly reports are still reviewed, by both regional Operations and Data Managements. A large portion of reports will be going to the AER.	Changed clause 5-A on requirement for monthly reporting to say "If the person responsible is required to prepare (a) a monthly report or (b) a quarterly report under the conditions of an approval or Code of Practice ...".
5.0	5 and 6	Monthly reports should only be required if an approval dictates they must be prepared.	Agreed.	Made monthly and annual report submission dependant on approval requirements to submit the reports.
5.0	5 and 6	Our company has achieved EnviroVista Champion status and as such, is not required to submit monthly or quarterly reports. However, air reporting is required to comply with the Air Monitoring Directive. Clause 5.1.2 stipulates the requirements for an annual report. In addition, the Champion Level Stewardship Agreement also includes the commitment that our company submits an annual EnviroVista Progress Report that includes the status of each of the commitments listed in the Agreement. Therefore, the most significant concern for our company with respect to the draft Chapter 9 AMD requirements is applicability of Sections 5.0 Industrial Monthly Reports, & Section 6.0 Industrial Annual Reports. The requirements of Section 5.0 and Section 6.0 are quite onerous and redundant and should these sections be deemed applicable to our company, it would negate any benefits of having achieved the EnviroVista Champion Status.	Will keep status quo that an approval specifies whether monthly reporting is required or not. If monthly reports are required by an approval, then the AMD specifies the minimum requirements for that monthly report, and approval holders must comply with those minimum requirements.	Changed clause 5-A on requirement for monthly reporting to say "If the person responsible is required to prepare (a) a monthly report or (b) a quarterly report under the conditions of an approval or Code of Practice ...".
5.0	5 and 6	What approval contravention information needs to be included in the reports?	Added minimum requirements for AMD Approval Contravention Form clause.	Added minimum requirements for AMD Approval Contravention Form clause.
5.0	5 and 6	What information needs to be reported in the monthly and annual summary sheets?	Removed Monthly and Annual Summary Sheet subsections.	Removed Monthly and Annual Summary Sheet subsections.
5.0	5-U and 6-Y	Clauses in monthly reports should be monthly or quarterly reports.	Will reflect in clause.	Clauses revised to monthly or quarterly reports.
5.1	5-A	Clarification is required as to whether or not those EPEA approvals that do not have monthly monitoring requirements are now required to perform monthly monitoring. At this time, it may be useful to allow the approval holders to follow their existing approval requirements related to monitoring frequency.	Will keep status quo that an approval specifies whether monthly reporting is required or not. If monthly reports are required by an approval, then the AMD specifies the minimum requirements for that monthly report, and approval holders must comply with those minimum requirements.	Changed clause 5-A on requirement for monthly reporting to say "If the person responsible is required to prepare (a) a monthly report or (b) a quarterly report under the conditions of an approval or Code of Practice ...".
5.1	5-A	Clarification. Other sections of Chapter 9 also include requirements for Monthly reporting (e.g. RC -3-Y)	Section 3 outlines requirements for submitting data (monthly or at other frequencies).	No changes made.

Section	Clause	Comment	Response	Action Taken
5.1	5-A	Clarify: Currently our approval does not require us to report ambient air monitoring monthly. If there is a requirement in AMD then a monthly report would be expected? Will approvals be amended to meet the expectation of the AMD?	Will keep status quo that an approval specifies whether monthly reporting is required or not. If monthly reports are required by an approval, then the AMD specifies the minimum requirements for that monthly report, and approval holders must comply with those minimum requirements.	Changed clause 5-A on requirement for monthly reporting to say "If the person responsible is required to prepare (a) a monthly report or (b) a quarterly report under the conditions of an approval or Code of Practice ...".
5.1	5-A	Does the AMD require monthly reports if approvals don't require monthly reports?	Will keep status quo that an approval specifies whether monthly reporting is required or not. If monthly reports are required by an approval, then the AMD specifies the minimum requirements for that monthly report, and approval holders must comply with those minimum requirements.	Changed clause 5-A on requirement for monthly reporting to say "If the person responsible is required to prepare (a) a monthly report or (b) a quarterly report under the conditions of an approval or Code of Practice ...".
5.1	5-A	Due to limited staffing resources, how will AESRD review and process the additional data requested in the AMD?	Monthly reports are not being phased out, nor is there a new policy to "streamline" to reduce reporting. AEP staffing doesn't dictate what data is needed by the department. Monthly reports are still reviewed, by both regional Operations and Data Managements. A large portion of reports will be going to the AER.	Changed clause 5-A on requirement for monthly reporting to say "If the person responsible is required to prepare (a) a monthly report or (b) a quarterly report under the conditions of an approval or Code of Practice ...".
5.1	5-A	Furthermore, in specific situations monthly reporting may be too frequent to allow for appropriate completeness and accuracy of data (e.g., where samples are sent to a laboratory for analysis). In these cases, quarterly reporting may be more practical to achieve.	Reporting frequency is dictated by the Approval.	No changes made.
5.1	5-A	If an approval DOES NOT require monthly reports, is this section still applicable to the approval holder? Also, if a monthly report IS required, but the contents of the monthly report are already covered in other sections of the AMD monthly report requirements (such as CEMS overview, contravention reporting, ambient monitoring results, manual stack survey summary), does this section still apply? It is recommended that if an Approval does not specify a monthly reporting requirement, it should not be superseded by the AMD.	Will keep status quo that an approval specifies whether monthly reporting is required or not. If monthly reports are required by an approval, then the AMD specifies the minimum requirements for that monthly report, and approval holders must comply with those minimum requirements.	Changed clause 5-A on requirement for monthly reporting to say "If the person responsible is required to prepare (a) a monthly report or (b) a quarterly report under the conditions of an approval or Code of Practice ...".
5.1	5-A	Manual Surveys are reported the month after the month in which they are conducted. Monthly reports are a summary of information already reported. Any other information is reported on an annual basis currently. We suggest removing the monthly reporting requirement or limiting it to those who are already required to complete one.	Only those required to report monthly, as per approval, need to submit a monthly report. Stack survey reports are sent in as separate reports, while a monthly report includes a summary only.	No changes made.
5.1	5-A	Monthly reports are required unless otherwise authorized by the Director…is having an approval that currently does NOT require monthly reports implied authorization? Under what circumstances will the Director NOT require monthly reports? It is recommended that if an Approval does not require a monthly report, then no separate AMD monthly report needs to be submitted. The 2006 amendment states under 3.1.1 that “The person responsible shall submit reports to Alberta Environment by the time specified in the EPEA Approval, Code of Practice, Registration, or as required in writing by the Director.” This is much more appropriate considering ESRD’s efforts to streamline reporting in the province over the past number of years.	Will keep status quo that an approval specifies whether monthly reporting is required or not. If monthly reports are required by an approval, then the AMD specifies the minimum requirements for that monthly report, and approval holders must comply with those minimum requirements.	Changed clause 5-A on requirement for monthly reporting to say "If the person responsible is required to prepare (a) a monthly report or (b) a quarterly report under the conditions of an approval or Code of Practice ...".
5.1	5-A	RC 5-A Where is the monthly report example referenced located?	An example monthly report was not provided for the draft review. An example report will be provided once the requirements of the Reporting Chapter are finalized.	No changes made.

Section	Clause	Comment	Response	Action Taken
5.1	5-A	RC 5-A "The person responsible must prepare a Monthly Report, unless otherwise authorized in writing by the Director." Is intent that monthly reports be prepared and submitted for all facilities with Code of Practice registrations? Or if not, that persons responsible for these facilities must obtain authorization? This contradicts AMD Chapter 1, Section 1.0. Refer to comments above. Recommend adding text similar to RC 3-U or RC 5-W. i.e. "where a monthly report is required to be submitted under an EPEA Approval or Code of Practice".	Will keep status quo that an approval specifies whether monthly reporting is required or not. If monthly reports are required by an approval, then the AMD specifies the minimum requirements for that monthly report, and approval holders must comply with those minimum requirements.	Changed clause 5-A on requirement for monthly reporting to say "If the person responsible is required to prepare (a) a monthly report or (b) a quarterly report under the conditions of an approval or Code of Practice ...".
5.1	5-A	The hierarchy of compliance (i.e., EPEA Approval vs. AMD) is not clear in the current draft. In a situation where an EPEA approval does not have a monthly or quarterly reporting requirement, only an annual reporting requirement, does the AMD trigger the need for a monthly report anyway? It would be appreciated if this could be clarified in Section 5.	Will keep status quo that an approval specifies whether monthly reporting is required or not. If monthly reports are required by an approval, then the AMD specifies the minimum requirements for that monthly report, and approval holders must comply with those minimum requirements.	Changed clause 5-A on requirement for monthly reporting to say "If the person responsible is required to prepare (a) a monthly report or (b) a quarterly report under the conditions of an approval or Code of Practice ...".
5.1	5-A	The language used is clear that a Monthly Report is required and must meet the requirements of the approval **AND** the AMD. It is recommended that 5.0 be reworded to exempt approval holders who do not otherwise have a monthly reporting requirement from having to submit AMD monthly reports.	Will keep status quo that an approval specifies whether monthly reporting is required or not. If monthly reports are required by an approval, then the AMD specifies the minimum requirements for that monthly report, and approval holders must comply with those minimum requirements.	Changed clause 5-A on requirement for monthly reporting to say "If the person responsible is required to prepare (a) a monthly report or (b) a quarterly report under the conditions of an approval or Code of Practice ...".
5.1	5-A	What benefit is obtained from submitting monthly reports. Many operating approvals do not list the need to report this information. CEMS data is currently reported monthly and incidents are reported when they happen.	Will keep status quo that an approval specifies whether monthly reporting is required or not. If monthly reports are required by an approval, then the AMD specifies the minimum requirements for that monthly report, and approval holders must comply with those minimum requirements.	Changed clause 5-A on requirement for monthly reporting to say "If the person responsible is required to prepare (a) a monthly report or (b) a quarterly report under the conditions of an approval or Code of Practice ...".
5.1	5-B	RC 5-B: Does this refer to monitoring plans that are submitted to ESRD to meet a regulatory/approval requirement. Voluntary monitoring should not be included as this is discretionary and may or may not change over time.	Some EPEA approvals refer to monitoring plans (ambient, fugitive, etc) that were submitted as part of an application/renewal or that are specifically required to be developed/submitted under the approval. The industrial operation may need to report for the specific monitoring carried out under such plans. You should refer to your individual approval to determine whether any monitoring plans are referenced or required.	No changes made.
5.1	5-B	What is the 'monitoring plan of the industrial operation'? Does this refer to the Approval requirement? Application? Something else? There was reference to plans for Airsheds in earlier chapters of the AMD that we believe were not intended to be an industrial requirement.	Some EPEA approvals refer to monitoring plans (ambient, fugitive, etc) that were submitted as part of an application/renewal or that are specifically required to be developed/submitted under the approval. The industrial operation may need to report for the specific monitoring carried out under such plans. You should refer to your individual approval to determine whether any monitoring plans are referenced or required.	No changes made.
5.1	5-B (c)	What is a “monitoring plan of the industrial operation”? Is that a separate requirement of the AMD? Please clarify and if not applicable, remove. Currently a monitoring plan as defined in the AMD is for airsheds only.	Some EPEA approvals refer to monitoring plans (ambient, fugitive, etc) that were submitted as part of an application/renewal or that are specifically required to be developed/submitted under the approval. The industrial operation may need to report for the specific monitoring carried out under such plans. You should refer to your individual approval to determine whether any monitoring plans are referenced or required.	No changes made.

Section	Clause	Comment	Response	Action Taken
5.2	5-J and 15-J (d)	Identification and description of any incidents called into the Environmental Response Centre. The current monthly summary letter from our organization provides a list of all reference numbers including parameters, time intervals, and values for incidents called into the Environmental Response Centre. Since monitoring organizations are not mandated or appropriately equipped to investigate each incident, providing a summary of each incident is impossible. It is not our airshed's mandate to attribute any exceedance to individual operators. The latter mandates belong with ESRD and AER.	The description of the incident would not necessarily need to include attribution to a particular source, the information you list would likely provide a sufficient description of the event. If the airshed is aware of the cause (e.g., forest fire), then they should include that in their description. If the industrial operation does the immediate reporting of exceedances for the airshed, then the incident information can be included in their monthly report instead of the airshed monthly report. It is not necessary to duplicate the information in both monthly reports, but it must be included in one or the other, and if the airshed is not including this information in their reports, they should identify that ERC incident information is being included in their member reports. It is strongly recommended that all Alberta airsheds have documented protocols in their QAPs covering immediate reporting of ambient air concentrations exceeding the AAAQOs and any significant interruption of monitoring equipment. The documented protocol should clearly define the roles of who carry out immediate reporting of ambient air issues. For example, the documented protocol should assign the role of immediate reporting so that the Alberta airshed will immediately reports on ambient air issues on behalf of its members, or that individual industrial operations will immediate report on ambient issues associated with their operation. The QAP should assign roles to who includes this information in monthly reports as well.	No changes made.
5.2	5-E and 5-F	Object: The minimum information requirements for a cover letter appears wasteful. If there are no changes to the monitoring from month to month there is still an expectation that this information is to be included. The Title Page, Table of Contents and other associated requirements appear better suited to a comprehensive annual report.	The cover letter is a summary only, not details. The cover letter is needed for a quick identification of any issues that may have occurred during the month. The cover letter will also provide certification/sign-off on the report contents.	Removed requirement for certification form and rather changed cover letter requirements to include sign-off and certification using the cover letter.
5.2	5-E and 5-F	The Title Page, Table of Contents and other associated requirements appear better suited to a comprehensive annual report.	A title page is required to identify the report - company, third party submitting on behalf of person responsible, date, etc. The table of contents is required for ease of use - many monthly reports are over 100 pages and can be separate out by station. A table of contents makes it easier to find specific information.	Changed requirement for table of contents to only if report is greater than 10 pages.
5.2	5-F	RC 5-F (a) a description of the problems that led to any monitoring analyzer being operational less than 90% of the time Clarification is needed on whether the monitoring analyzers not required by approval/code of practice are part of this requirements	This would include any analyzer that are supplying data for the report that is being submitted.	No changes made.
5.2	5-F	RC 5-F(a) and (e) There appears to be redundancy in that reasons for any extended analyzer downtime would have to be reported under (a) and under (e)	Will provide clarification in guidance.	The note giving examples has been revised to provide clarification.
5.2	5-F	The cover letter requirements in Item RC 5-F are very detailed. As all of this information will be contained in the monthly report itself, repeating it in the cover letter creates unnecessary additional administrative burden for industry.	The cover letter is a summary only, not details. The cover letter is needed for a quick identification of any issues that may have occurred during the month. The cover letter will also provide certification/sign-off on the report contents.	Removed requirement for certification form and rather changed cover letter requirements to include sign-off and certification using the cover letter.
5.2	5-F	The cover letter should only require identification of monitoring issues, not the descriptions of the issues. The descriptions are covered in detail elsewhere in the monthly reports.	Changed to just "identification" of changes and issues.	Changed to just "identification" of changes and issues.
5.2	5-F (a)	Also, if a facility is part of an airshed, are they expected to report on the 90% IN ADDITION TO the airshed reporting on it?	Some ambient air monitoring that is required under EPEA approvals are actually carried out by Alberta airsheds on behalf of some member industrial operations. In these cases, it is not necessary for industrial operations to submit the same ambient air data collected and already submitted by the Alberta airshed, as the Alberta airshed is submitting the required ambient air monitoring data on their behalf. It is also not necessary to discuss the ambient air monitoring results in the industrial operation's monthly and annual reports, provided the Alberta airshed has included the required discussion of the results in their monthly or annual report. The Alberta airshed can carry out the required ambient air reporting on behalf of its industrial operation members.	Clarifying section added to introduction.

Section	Clause	Comment	Response	Action Taken
5.2	5-F (a)	This should apply only to monitoring analyzers that REQUIRE 90% uptime per the AMD and CEMS Code.	Agreed.	Added "where a monitoring analyzer is required to be operational 90% of the time" to the clause.
5.2	5-F (a)	It is recommended that this section read “a description of the problems that led to any monitoring analyzer being operation less that 90% of the time, if 90% uptime is required”, or similar language.	Agreed. Will modify clause	Added "where a monitoring analyzer is required to be operational 90% of the time" to the clause.
5.2	5-F (b)	If a facility is part of an airshed, are they expected to report on AAAQO exceedances within the network IN ADDITION TO the airshed reporting on it? Also, see comment on RC 4-C regarding the reporting on all uncontrolled, unauthorized, and accidental releases. It is recommended that industry who are part of an airshed be exempted from also reporting these instances individually. Update language accordingly.	Some ambient air monitoring that is required under EPEA approvals are actually carried out by Alberta airsheds on behalf of some member industrial operations. Immediate notification at Alberta airshed ambient air monitoring stations can be carried out by the airshed or by a designated industrial member. Notifications from both the airshed and the industrial operation are not required. Notification roles should be clearly defined in the QAP protocols of both the Alberta airshed and industrial operation members.	Clarifying section added to introduction.
5.2	5-F (b)	Also, please clarify expectations with respect to industries that are a part of airsheds.	Agreed.	Clarifications on reporting party added to section 1 and parts 1 and 2.
5.2	5-F (b)	Needs to align with adverse impact.	This goes beyond releases with potential adverse impacts, and this portion of the cover letter only refers to identification of relevant correspondence.	Clause revised for types of releases that are relevant.
5.2	5-F (c)	Again, does industry report on this IN ADDITION TO airsheds? Can you provide an example of what you mean by changes to monitoring equipment? This is clear from an airshed/ambient perspective, but what do you mean for industrial monitoring? See recommendation in RC 5-F (b). In addition, this should specify any changes to AMBIENT monitoring locations, methods, equipment if that is the intent.	This would include changes to any equipment required for monitoring under an approval. Some ambient air monitoring that is required under EPEA approvals are actually carried out by Alberta airsheds on behalf of some member industrial operations. Immediate notification at Alberta airshed ambient air monitoring stations can be carried out by the airshed or by a designated industrial member. Notifications from both the airshed and the industrial operation are not required. Notification roles should be clearly defined in the QAP protocols of both the Alberta airshed and industrial operation members.	Clarifying section added to introduction.
5.2	5-F (c)	Changes to location, methods, or equipment require a Letter of Authorization which should be documented elsewhere.	Monthly reports provide a summary and overview of the monitoring carried out during the month, and must include identification of any associated authorization was provided by the Director.	No changes made.
5.2	5-F (d)	RC 5-F (d) states that facilities must identify and describe all special air studies carried out including, but not limited to, those required by the approval. • Although "special air studies" is defined, it still remains unclear whether or not all air studies, other than routine air monitoring, are included. • Operational studies that include emission studies are carried out to improve efficiencies and determine the effectiveness of emission abatement strategies .The results of these studies are used in part to ensure competiveness in the market. Therefore, these are proprietary studies and should not be required to be submitted. o Consider removing this clause or limiting only those studies required by an Approval or the Director.	Clauses 5-F and 6-G have been revised to cover to special studies for which data or results are being provided to the Director. Special studies that are done for the industrial operation's own purposes are not required to be reported to the Regulator. If the industrial operation wishes to submit data/results from a special air study to the Regulator, that monitoring must be conducted in accordance with the AMD. However, in accordance with approval requirements, due diligence source testing results performed by a standard or a modified method are required to be submitted to the Director if the source testing performed was on a parameter or pollutant having approval conditions or limits. Special air studies are defined as "any additional air monitoring studies carried out by an industrial operation or Alberta airshed that go beyond their normal routine air monitoring (e.g., to satisfy an EPEA approval requirement, a written notice from the Director, or to study a particular issue or stakeholder concern).	Edited clauses 5-f(d) and 6-G (d) to clarify "any special air studies for which data or results are being provided to the Director", and added guidance below clause.
5.2	5-F (d)	Does this mean any specialty testing has to be reported even if we don’t follow the reference method?	Clauses 5-F and 6-G have been revised to cover to special studies for which data or results are being provided to the Director. Special studies that are done for the industrial operation's own purposes are not required to be reported to the Regulator. If the industrial operation wishes to submit data/results from a special air study to the Regulator, that monitoring must be conducted in accordance with the AMD. However, in accordance with approval requirements, due diligence source testing results performed by a standard or a modified method are required to be submitted to the Director if the source testing performed was on a parameter or pollutant having approval conditions or limits. Special air studies are defined as "any additional air monitoring studies carried out by an industrial operation or Alberta airshed that go beyond their normal routine air monitoring (e.g., to satisfy an EPEA approval requirement, a written notice from the Director, or to study a particular issue or stakeholder concern).	Edited clauses 5-f(d) and 6-G (d) to clarify "any special air studies for which data or results are being provided to the Director", and added guidance below clause.

Section	Clause	Comment	Response	Action Taken
5.2	5-F (e)	Can you please provide another example of what you are after? The example provided in the “Note” is inappropriate since that circumstance is already addressed/required to be reported on in RC 5-F (a). It is recommended that RC 5-F (e) be removed as it appears that all potentially relevant situations that require reporting to the Director are already captured elsewhere.	Will provide other examples of monitoring irregularities.	Note revised to provide other examples of monitoring irregularities.
5.2	5-F and 5-J	RC 5-F(b) and RC 5-J (d) Is the intent to have information included in the cover letter repeated in the body of the report. Streamlining reports would reduce administrative burden for those reporting and those reviewing reports.	The cover letter is a summary only, not details. The cover letter is needed for a quick identification of any issues that may have occurred during the month. The cover letter will also provide certification/sign-off on the report contents.	Removed requirement for certification form and rather changed cover letter requirements to include sign-off and certification using the cover letter.
5.2	5-F and 6-G	There are requirements to identify and describe all special air studies carried out at a facility including, but not limited to, those required by the approval. There may be operational studies carried out at facilities that are not required by the approval, by the Director or to study a particular issue (as stated in the definition of "special air studies"). Studies may be done not only to improve efficiencies, but to also determine the effectiveness of emission abatement strategies. As the results of these studies are used in part to ensure competitiveness in the market, they are confidential and should not be required to be submitted as they are not available in a competitive electricity market.	Clauses 5-F and 6-G have been revised to cover to special studies for which data or results are being provided to the Director. Special studies that are done for the industrial operation's own purposes are not required to be reported to the Regulator. If the industrial operation wishes to submit data/results from a special air study to the Regulator, that monitoring must be conducted in accordance with the AMD. However, in accordance with approval requirements, due diligence source testing results performed by a standard or a modified method are required to be submitted to the Director if the source testing performed was on a parameter or pollutant having approval conditions or limits. Special air studies are defined as "any additional air monitoring studies carried out by an industrial operation or Alberta airshed that go beyond their normal routine air monitoring (e.g., to satisfy an EPEA approval requirement, a written notice from the Director, or to study a particular issue or stakeholder concern).	Edited clauses 5-f(d) and 6-G (d) to clarify "any special air studies for which data or results are being provided to the Director", and added guidance below clause.
5.2	5-G and 5H	These clauses state that monthly Reports require a Title Page and Table of Contents. This level of prescription is excessive and creates potential compliance traps for industry. For example, if the title page is forgotten, and the report is otherwise complete, technically it could be a contravention of the requirements of the AMD. It is recommended that RC 5-G and RC 5-H be removed.	A title page is required to identify the report - company, third party submitting on behalf of person responsible, date, etc. The table of contents is required for ease of use - many monthly reports are over 100 pages and can be separate out by station. A table of contents makes it easier to find specific information.	Changed requirement for table of contents to only if report is greater than 10 pages.
5.2	5-G 5-H	These are pretty detailed, not sure about the value that they add.	A title page is required to identify the report - company, third party submitting on behalf of person responsible, date, etc. The table of contents is required for ease of use - many monthly reports are over 100 pages and can be separate out by station. A table of contents makes it easier to find specific information.	Changed requirement for table of contents to only if report is greater than 10 pages.
5.2	5-G 5-H	Would including bookmarks in the .pdf report constitute a reasonable Table of Contents?	The bookmarks are not an actual component of the report and thus won't meet the requirements of the AMD clause. Therefore, an actual table of contents is required for reports.	No changes made.
5.2	5-H	Do we need this if it is a small report?	No. Will modify requirement for table of contents for only reports that are greater than 10 pages.	Changed to only be required if report is more than 10 pages.
5.2	5-I	Is this applicable to industries that are a part of airsheds or is this managed by the airsheds? Please clarify/update language accordingly.	Some ambient air monitoring that is required under EPEA approvals are actually carried out by Alberta airsheds on behalf of some member industrial operations. In these cases, it is not necessary to discuss the ambient air monitoring results in the industrial operation's monthly and annual reports, provided the Alberta airshed has included the required discussion of the results in their monthly or annual report. If facility has additional requirement to monitor additional ambient as per an approval condition, this need to be reported in the monthly report.	Clarifying section added to introduction.
5.2	5-I and 15 -I (b)	The monthly report must include a summary of ambient air monitoring station audit findings and responses that affected data validity The current audit process has requirement for audit summary findings and responses that affected data validity. In a network, where there are 18 continuous air monitoring stations and over 240 parameters, of which only 80 parameters are audited per audit year, we only include audit findings that affect data validity. Summary of audit findings for all parameters in the monthly report would be a redundant task. The audit response letter already addresses this information need.	The clause only requires a summary of audit findings and responses that affected data validity. Monthly reports provide a summary and overview of the monitoring carried out during the month, and must include a summary of any relevant audit findings affecting the data.	No changes made.

Section	Clause	Comment	Response	Action Taken
5.2	5-J	RC 5-J (d)(i) RC 5-J (d)(i) identification and (ii) description of any incidents called into the Environmental Response Centre, including the incident Number: Does this include notifications made to the Environmental Response Centre? Does this include events that do not relate to air?	Should be only "air related incidents".	Changed to "air related incidents".
5.2	5-J	RC 5-J (e) a discussion of the operating status of the industrial operation and any of the major sources that had an impact on source emissions….. Define " major sources ". If an equipment is down for maintenance but facility is operating, is it consider a " major source"?	It could be any source having an impact on emissions or air quality.	Removed "major" to clarify it could be any source having an impact on emissions or air quality.
5.2	5-J	This information is already submitted electronically to AESRD (7 day letter). What is the benefit of having the information duplicated? Remove clause RC 5-J (d).	Monthly reports provide a summary and overview of the monitoring carried out during the month, and must include identification of any air issues encountered.	No changes made.
5.2	5-J (b)	Does this apply to more than CEMS/ambient air analyzers? If not, isn't this information already provided through the online reporting electronic submission of CEMS and ambient data? For example, data qualifiers (flags) are a requirement for CEMS e-reporting; does the monthly AMD report now also require additional explanation? This is a duplication of efforts. Remove RC 5-J (b).	This is just a summary, not hour-by-hour data flagging. A clarifying note is provided below the clause indicating that non-standard conditions include, but are not limited to, the presence of forest fire smoke in the monitoring area, excessively elevated concentrations, problems with calibrations or monitoring equipment and changes in monitoring or supporting equipment.	No changes made.
5.2	5-J (c)	What does this mean? Can you provide an example? Please clarify.	Note expanded to provide examples of beyond quantification limits.	Note expanded to provide examples of beyond quantification limits.
5.2	5-J (d)	Also – this information can be pulled from the ERC database on a company-specific basis. It should not be necessary for industry to report information that ESRD has systems in place to manage. This is a duplication of reporting efforts by industry and needs to be streamlined. It is recommended that this be removed since ESRD has access to this information within its own systems and descriptions of events are submitted in 7-day letters.	Monthly reports provide a summary and overview of the monitoring carried out during the month, and must include identification of any air issues encountered. This is already being done in most monthly reports.	No changes made.
5.2	5-J (d)	RC 5-J (d) (ii states that a description of any incidents called into the Environmental Response Centre must be included in the monthly report. • Please specify that these incidents are related to air as the Air Monitoring Directive does not regulate other incidents called into the Environmental Response Centre.	Should be only "air related incidents".	Changed to "air related incidents".
5.2	5-J (d)	This is currently known as a "reference number" not an "incident number".	Agreed.	Changed to "reference number".
5.2	5-J (d)	All incidents or just air incidents? For alignment with the AMD, it is reasonable to include incidents that are correlated with air quality impact.	Changed to "air related incidents".	Changed to "air related incidents".
5.2	5-J (d)	Proposed change: Change wording to reflect that monthly reports must include identification and description of any "air or CEMS" incidents called into ERC.	Changed to "air related incidents".	Changed to "air related incidents".
5.2	5-J (d)(i)	Does this include notifications made to the Environmental Response Centre? Does this include events that do not relate to air?	Changed to "air related incidents".	Changed to "air related incidents".
5.2	5-J (d)(i)	This information is already submitted electronically to AESRD (7 day letter). What is the benefit of having the information duplicated? Recommendation: Remove clause RC 5-J (d).	Monthly reports provide a summary and overview of the monitoring carried out during the month, and must include identification of any air issues encountered.	No changes made.
5.2	5-J (e)	"Normal Operations" can vary on a day-by-day basis, and certainly month-by-month. They can also vary based on feedstock, which is not in our control. To have to explain such variances is tedious. Narrow the scope of this requirement to identify specifically what ESRD is after or remove. If all you are after is information on start-ups, shut-downs and turnarounds, just say that. The current language is too broad.	Variation from month to month should be disclosed in a monthly report, changes in emissions resulting from changes in feedstock would be an example of what should be noted.	Removed "major" to clarify, it could be any source having an impact on emissions or air quality.
5.3	5.3	Industry participating in an airshed should not be required to report on ambient monitoring. As stated in multiple comments above, please clarify if this applies to industries which are members of airsheds. If not, this should be clarified in the Chapter.	Industry is required to report on what they monitor. If an airshed is conducting ambient monitoring on industry's behalf, then the airshed would report on that ambient monitoring.	Guidance added to parts 1 and 2 of the AMD RC.

Section	Clause	Comment	Response	Action Taken
5.3	5.3	Object: This data is collected, analyzed and submitted by FAP on behalf of our facility as is outlined in the approval. Is the expectation that each person responsible send a signed certification to FAP for the same ambient data?	Industry is required to report on what they monitor. If an airshed is conducting ambient monitoring on industry's behalf, then the airshed would report on that ambient monitoring. However, industry should be involved in the review of ambient data.	Guidance added to parts 1 and 2 of the AMD RC.
5.3	5.3	The current wording of this section appears to indicate that an individual company must upload monitoring data to the Data Warehouse even if it is being uploaded by an Airshed, which would mean duplicate reporting. Although this likely isn't the intent, it would be helpful if some language could be added to indicate that the requirements related to submitting monitoring data in Part 1 do not apply if the data is already being submitted by an Airshed as per Part 2.	Industry is required to report on what they monitor. If an airshed is conducting ambient monitoring on industry's behalf, then the airshed would report on that ambient monitoring. However, industry should be involved in the review of ambient data.	Guidance added to parts 1 and 2 of the AMD RC.
5.3	5-K	RC 5-K (a) Clarification. Is it the intent that any deletion or resubmission of data that occurred during the month in question for data from any previous month?	This refers to any changes in data that was previously submitted, where an error was found and resubmission or deletion was necessary. You would report the deletion/resubmission when it is occurs.	No changes made.
5.3	5-K	RC 5-K (c) states that the person responsible must identify and describe any ambient air analyzers that were not calibrated during the reporting month. • Please consider changing the definition for "analyzer" as it is unclear how it is currently written . • Due to the nature of the ambient analyzers ,there are numerous calibrations that occur annually or more. o Consider changing this to only requiring the reporting of calibrations that did occur during a given month so that analyzers that are calibrated less frequently are not over reported each month.	Will reword clause to specify any ambient air analyzers that were required to be calibrated during the reporting period, but were not calibrated during the reporting period. Analyzer is already defined elsewhere in the AMD and defining it differently in the Reporting Chapter would create inconsistencies and confusion.	Clause reworded.
5.3	5-K	RC 5-K (c) Is it the intent that the reporter provide information about any analyzers not calibrated during the month for which calibration should have been conducted? For example, wind instruments are to be factory calibrated once every two years. The way the requirement is written, each monthly report would include the fact that no calibration was conducted that month, except for one in 24 months. Suggestion is to describe the requirement as per RC 6-L(d) "reasons for any missed calibration(s)"	Will reword clause to specify any ambient air analyzers that were required to be calibrated during the reporting period, but were not calibrated during the reporting period.	Clause reworded.
5.3	5-L	Overall RC 5-L RC 5-L does not make much sense from the statistical perspective either. Averages maximums and minimums are not very descriptive. There is no mention of percentile values at all in the AMD which results in a degradation of the data because there is no accounting for outliers in the data. It is important to use proper statistical methodologies in order to properly represent the data.	Distribution of data (i.e., percentiles) is required in the monthly report (Section 5.3.2 Ambient Air Monitoring Results). This was carried over from the 1989 AMD.	No changes made.
5.3	5-L	RC 5-L (d) states that monthly wind rose for each continuous ambient air monitoring station must be generated using meteorological data collected at the ambient air monitoring station. If it cannot be collected, meteorological data from another source must be chosen that is representative to generate the wind rose. • If meteorological data cannot be collected, data from another source would be an inaccurate representation due to the remote location of many facilities.	This is looking for met data from the nearest location to the site in question when the air monitoring site does not collect met data, in order for a wind rose to be generated for the monthly report. The wind rose should note that the data is from another location. This should still give a fairly good idea of the prevailing winds. For airsheds with multiple stations, this will not be necessary as there is always a station that has met data.	Clarified clause 5-L to say "closest proximity" for using meteorological data from another location, and added that this should be noted on the plot (i.e., that met data from another site was used to generate the wind rose).
5.3	5-L	RC 5-L (d) d) a monthly wind rose for each continuous ambient air monitoring station for the month being monitored……. Generating a "monthly wind rose" requires a special program and monthly meteorological data in a special format for the program and probably hiring of a consultant to do the job - Puts unnecessary burden in the industry for very little benefit, especially if the meteorological data is not available on site.	Wind roses should not be onerous to create. They can be created using MS Excel. They compile wind data into a graphic to show the prevailing wind direction at different wind speeds (frequency distribution tables of wind speed and direction were required in the 1989 AMD). Once the plots are created, they should be easily updatable each month. A wind rose is required in the 1989 AMD as a requirement for site documentation, so the requirement is not entirely new.	No changes made.

Section	Clause	Comment	Response	Action Taken
5.3	5-L (b)	Addition of a 'time series plot' is new. Additional discussion will require more effort, and it's not clear that this necessarily adds much value if the result is that most comments are 'everything normal' in nature; focusing on unusual events and exceedances (exception reporting) would be more valuable.	This is looking for any context or description that can be provided about anomalous data or events, if known by the person responsible (e.g., forest fire, local source/event, inversion, etc.). In 5.3.1, 6.3.2, 15.3.2 and 16.3.2, removed the word "interpretation". For "discussion of plots" in 5-L, 6-M, 16-L and 16-N, changed to "discussion of context around any data anomalies that person responsible is aware of". This is a plot of hourly averages for the whole month. Allows the reviewer of the report to see trends and peaks in the hourly data at a quick glance.	In 5.3.1, 6.3.2, 15.3.2 and 16.3.2, removed the word "interpretation". For "discussion of plots" in 5-L, 6-M, 16-L and 16-N, changed to "discussion of context around any data anomalies that person responsible is aware of".
5.3	5-L (b)	RC 5-L (b) states that a time series plot of the hourly average ambient air concentrations and a discussion for each parameter must be in the monthly report • Is this a time series plot with every hour of every month or with the daily average? Please provide clarity.	This is looking for any context or description that can be provided about anomalous data or events, if known by the person responsible (e.g., forest fire, local source/event, inversion, etc.). In 5.3.1, 6.3.2, 15.3.2 and 16.3.2, removed the word "interpretation". For "discussion of plots" in 5-L, 6-M, 16-L and 16-N, changed to "discussion of context around any data anomalies that person responsible is aware of". This is a plot of hourly averages for the whole month. Allows the reviewer of the report to see trends and peaks in the hourly data at a quick glance.	In 5.3.1, 6.3.2, 15.3.2 and 16.3.2, removed the word "interpretation". For "discussion of plots" in 5-L, 6-M, 16-L and 16-N, changed to "discussion of context around any data anomalies that person responsible is aware of".
5.3	5-L (b)	Value of requirement is not provided and will result in substantial additional resources to develop and support. Recommend requirement be deleted.	This is looking for any context or description that can be provided about anomalous data or events, if known by the person responsible (e.g., forest fire, local source/event, inversion, etc.). In 5.3.1, 6.3.2, 15.3.2 and 16.3.2, removed the word "interpretation". For "discussion of plots" in 5-L, 6-M, 16-L and 16-N, changed to "discussion of context around any data anomalies that person responsible is aware of". This is a plot of hourly averages for the whole month. Allows the reviewer of the report to see trends and peaks in the hourly data at a quick glance.	In 5.3.1, 6.3.2, 15.3.2 and 16.3.2, removed the word "interpretation". For "discussion of plots" in 5-L, 6-M, 16-L and 16-N, changed to "discussion of context around any data anomalies that person responsible is aware of".
5.3	5-L (b) and (c)	RC 5-L (b) and (c) b) (i) a time series Plot of the hourly average ambient air concentration and ….. c) Monthly (i) average, (ii) maximum, (iii) minimum…. The demands for plots displaying "Average", "Maximum" and "Minimum" for each parameter monitored is an excessive reporting requirement that requires excessive time for little benefit	A plot is only required under RC 5-L (b), the hourly time series plot. The monthly average, max and min under RC 5-L (c) does not require a plot, they are monthly statistics.	No changes made.
5.3	5-O	RC 5-O "Use the averaging specifications listed in Table 2 of the Appendix" Where is table 2 of the appendix?	The table is in Appendix A.	Change clauses 5-O and 15-O to point to Appendix A.
5.3	5-O and 15-O	RC 5-O states that the person responsible must use the averaging specifications listed in Table 2 of the Appendix for the appropriate averaging period. • Table 2 in the appendix is Appendix B Schedule 1:Common Air Contaminant Substance list where it should be the Table in Appendix A Alberta Ambient Air Quality Objective Guidelines o Consider labelling Tables or referring to an Appendix for clarity.	The table is in Appendix A.	Change clauses 5-O and 15-O to point to Appendix A.
5.3	5-P	Value of requirement is not provided and will result in substantial additional resources to develop and support. Recommend requirement (and related RC 5-Q) be deleted.	Looking for a representation of data distribution.	Reworded to "a representation of data distribution".
5.3	5-P	These clauses get very specific, requiring numerous forms of the same data: electronic, pdf summary, table, graph, and also histograms. Are they all necessary, as a minimum requirement?	Looking for a representation of data distribution.	Reworded to "a representation of data distribution".
5.3	5-Q	Histograms – The number of bins should be ten (10), so that the deciles of the data can be easily read. The Bin Width should be one tenth of the maximum value (not the AAAQO), so that the histogram goes from zero to the Max value, with ten bins.	Will remove requirement for histogram.	Clause removed.
5.3	5-Q	Provide a histogram example for clarification. If Number of Bins always = 16, then Bin Width is AAAQO x 1/8. Reference to "x 2/(Number of Bins)" not useful if # of bins is static.	Will remove requirement for histogram.	Clause removed.

Section	Clause	Comment	Response	Action Taken
5.4	5.4	Clarify: Is the intent to have source emission testing be monthly? If the EPEA approval states annual, are sites expected to submit a monthly report anyway?	The requirement to carry out source testing is set out in the EPEA approval. The results are required to be submitted in a report and summary form the month after the month when the testing was conducted. The monthly report covering the month when the source testing was carried out also requires identification of any source testing done and a brief overview of the testing carried out.	Clause reworded.
5.4	5.4	For those that conduct manual stack surveys using a third party, is the expectation that the data from the report provided be duplicated on the Manual Stack Survey Form? This is an additional administrative task.	The required content of the monthly report for the source testing (section 5.4.3) will just be identification of what testing was carried out, when and a brief overview of the results. Section 9 requires the submission of a report and a summary form that collects select information for importing into the regulator database. While the report and summary form may contain some of the same information, the form is necessary to collect the data in usable electronic format and has been based on the summary sheets currently being included by most third party contractors in the source testing reports. The third party contractor can prepare both the source testing report and the summary form.	Clause reworded.
5.4	5.4	Reporting requirements associated with source monitoring are stated in the approval. The AMD should not supersede the requirements of the approval. The AMD requirements in this section are mostly repetitive/duplication of efforts for other systems already in place (example: CEMS e-reporting already covers a lot of the information required in 5.4; submission of a stack survey report already meets the requirements of 5.4, except for all the duplication of efforts in filing forms, cover pages, title pages, etc. as required by Chapter 9). It is recommended that this section be removed or, at a minimum, clarify that these requirements are NOT applicable to approval holders.	The AMD can require additional/more detailed reporting for the monitoring that is specifically required under an EPEA approval. EPEA approvals usually do not have all of the detailed reporting requirements set out in the approval conditions, and the AMD and its reporting requirements are incorporated by reference in the EPEA approval and also under the proposed revisions to the Substance Release Regulation.	Changes have been made to the section 5.4.
5.4	5.4	What exactly is meant by “emissions monitoring”? For example, if an approval requires annual emissions estimates/calculated volumes of NOx and/or SO2 from a flare, does this section apply? Or, is this just meant for gas plants and those flares with in-line emissions monitors? Emissions monitoring should not apply to quantification methodologies and should only apply to direct emissions monitoring. It is recommended that this clarification be included in a revised Chapter 9.	Will remove the phrase "emission monitoring".	The phrase "emission monitoring" in section 5.4.4 has been removed.
5.4	5-R	Data that is affected by out of control events is already reported via the CEMS e-reporting. This is another duplication of efforts. In addition, analyzer techs keep log books of all associated work on CEMS. This item would be captured in the log book with associated corrective actions. This information is subject to annual review/audit per the requirements of the CEMS Code. It is recommended that RC 5-R be removed. OOC events are flagged in the monthly CEMS reports uploaded to the ESRD website. If ESRD wants information about a specific event they should ask for it on a case-by-case basis.	Monthly reports provide a summary and overview of the monitoring carried out during the month, and must include information on out of control zero and span. Forms are necessary in order to collect summary information in a format that can be pulled into a regulator database.	No changes made.
5.4	5-S	• Stack surveys, RATAs and CGA reports are already submitted electronically .	The required content of the monthly report for the source testing (section 5.4) will just be identification of what testing was carried out, when and a brief overview of the results. Source reports (section 9) provide a variety of detailed information on the testing, while the forms collect only select summary information. Forms are necessary in order to collect summary information in a format that can be pulled into a regulator database.	Clause reworded.
5.4	5-S	Incomplete should be limited to those tests which were scheduled for regulatory testing but were halted before completing the full test. This should not be required for additional testing done by the site for other reasons (i.e.-process management, etc.) or using non-approved methods.	Results of source monitoring carried out by the industrial operation for its own purposes (i.e., not mandated by the Regulator) do not necessarily need to be reported to the Regulator. If the industrial operation plans to use the results for anything beyond the industrial operations own private use, it must be done in accordance with the requirements of the AMD in order for the regulator to consider it. However, in accordance with approval requirements, due diligence source testing results performed by a standard or a modified method are required to be submitted to the Director if the source testing performed was on a parameter or pollutant having approval conditions or limits.	No changes made.

Section	Clause	Comment	Response	Action Taken
5.4	5-S	o Please consider having one form of submission.	The required content of the monthly report for the source testing (section 5.4) will just be identification of what testing was carried out, when and a brief overview of the results. Source reports (section 9) provide a variety of detailed information on the testing, while the forms collect only select summary information. Forms are necessary in order to collect summary information in a format that can be pulled into a regulator database.	Clause reworded.
5.4	5-S	RC 5-S and Note It appears to be burdensome to enter related information onto two forms (AMD Manual Stack Survey Form and Manual Stack Survey Report; AMD RATA Form and RATA Reports, AMD CGA Form and CGA Reports).	The required content of the monthly report for the source testing (section 5.4) will just be identification of what testing was carried out, when and a brief overview of the results. Source reports (section 9) provide a variety of detailed information on the testing, while the forms collect only select summary information. Forms are necessary in order to collect summary information in a format that can be pulled into a regulator database.	Clause reworded.
5.4	5-S	RC 5-S states that the Monthly Report must include the results of complete or incomplete stack surveys, any complete or incomplete RATAs and any complete or incomplete CGAs . • Please provide the reasoning behind reporting incomplete surveys, RATAs or CGAs .	Identification of any SES/RATA/CGA that was stopped/aborted prematurely must be included in the monthly report and an explanation for why the testing was stopped/aborted should be included. This information is required simply to identify the monitoring being carried out, to identify ongoing testing issues and to ensure that facilities are not only completing and submitting testing showing favorable results.	No changes made.
5.4	5-S	These forms appear to just require the SAME information that is already provided in the stack survey etc. reports as generated by the contractor conducting the work. By providing the reports to ESRD, the "Form" requirements are, for the most part, inherently met. It is recommended that RC 5-S be removed as the elements of these forms can be found in the reports themselves.	The required content of the monthly report for the source testing (section 5.4.3) will just be identification of what testing was carried out, when and a brief overview of the results. Section 9 requires the submission of a report and a summary form that collects select information for importing into the regulator database. While the report and summary form may contain some of the same information, the form is necessary to collect the data in usable electronic format and has been based on the summary sheets currently being included by most third party contractors in the source testing reports. The third party contractor can prepare both the source testing report and the summary form.	Clause reworded.
5.4	5-S	Results of RATA and CGA to be included with the monthly Stack Testing Report, or under a separate cover letter/report? What is meant by incomplete RATA or CGA? A per CEMS code, we can throw out some RATA tests, it doesn't require us to report the tests that was thrown out or tests that were stopped before completion. According to this statement when we say, incomplete, are we referring to those incomplete tests?	Identification of any SES/RATA/CGA that was stopped/aborted prematurely must be included in the monthly report and an explanation for why the testing was stopped/aborted should be included. Only an overview of the results needs to included in the monthly reports (along with identification of testing dates and who carried out the testing). Section 9 of the Reporting Chapter also requires the submission of manual stack survey reports, RATA reports and CGA reports and associated summary forms.	No changes made.
5.4	5-T	ALL of this information is included in the monthly CEMS e-submissions. We are already required to submit it in ESRD's required format. As such, you should have the tools you need to pull this information on your own. It is recommended that RC 5-T be removed as this information can be obtained from the data already uploaded to ESRD.	The AMD CEMS Summary Form collects summary information, not a duplication of the hourly CEMS data submitted electronically. While the submitted CEMS data could potentially be used by the Regulator to determine much of the summary information, it is not practical for the regulator to prepare summaries of all approval required CEMS operating in the province. Monthly reports provide a summary and discussion of all the monitoring carried out by the industrial operation during the month. As with the other source monitoring and ambient monitoring carried out by the industrial operation, the Regulator requires the industrial operation to review, summarize and discuss the monitoring in the monthly report and associated summary forms.	No changes made.
5.4	5-T	Continuous Emission Monitoring Results All of the information requested in section 5.4.3 is already submitted electronically in the CEMS electronic data. What is the purpose of duplication of the data? Remove RC5-T (a) through (i).	The AMD CEMS Summary Form collects summary information, not a duplication of the hourly CEMS data submitted electronically. While the submitted CEMS data could potentially be used by the Regulator to determine much of the summary information, it is not practical for the regulator to prepare summaries of all approval required CEMS operating in the province. Monthly reports provide a summary and discussion of all the monitoring carried out by the industrial operation during the month. As with the other source monitoring and ambient monitoring carried out by the industrial operation, the Regulator requires the industrial operation to review, summarize and discuss the monitoring in the monthly report and associated summary forms.	No changes made.
5.4	5-T	RC 5-T (d) states that the monthly averages, minimums and maximums for each source for each CEMS operational parameter monitored. • Consider changing this to"... for each source for each CEMS operational parameter monitored that is required by an Approval".	Will revise AMD CEMS Summary Form to "parameter monitored" and "pollutant monitored" for max, min, average.	Form revised.

Section	Clause	Comment	Response	Action Taken
5.4	5-T	RC 5-T states that a summary of the CEMS data using the AMD CEMS Form must be completed with the Monthly Report. • All information is included in the CEMS Electronic reports . o Consider removing the AMD CEMS Form as this is a duplicate of information that is already submitted on a monthly basis.	The AMD CEMS Summary Form collects summary information, not a duplication of the hourly CEMS data submitted electronically. While the submitted CEMS data could potentially be used by the Regulator to determine much of the summary information, it is not practical for the regulator to prepare summaries of all approval required CEMS operating in the province. Monthly reports provide a summary and discussion of all the monitoring carried out by the industrial operation during the month. As with the other source monitoring and ambient monitoring carried out by the industrial operation, the Regulator requires the industrial operation to review, summarize and discuss the monitoring in the monthly report and associated summary forms.	No changes made.
5.4	5-T	We are already submitting an electronic CEMS report, so including the CEMS data in the monthly air report is duplication of effort.	The AMD CEMS Summary Form collects summary information, not a duplication of the hourly CEMS data submitted electronically. While the submitted CEMS data could potentially be used by the Regulator to determine much of the summary information, it is not practical for the regulator to prepare summaries of all approval required CEMS operating in the province. Monthly reports provide a summary and discussion of all the monitoring carried out by the industrial operation during the month. As with the other source monitoring and ambient monitoring carried out by the industrial operation, the Regulator requires the industrial operation to review, summarize and discuss the monitoring in the monthly report and associated summary forms.	No changes made.
5.4	5-T	What is meant by incomplete RATA or CGA? A per CEMS code, we can throw out some RATA tests, it doesn't require us to report the tests that was thrown out or tests that were stopped before completion. According to this statement when we say, incomplete, are we referring to those incomplete tests?	Identification of any SES/RATA/CGA that was stopped/aborted prematurely must be included in the monthly report and an explanation for why the testing was stopped/aborted should be included. Only an overview of the results needs to included in the monthly reports (along with identification of testing dates and who carried out the testing). Section 9 of the Reporting Chapter also requires the submission of manual stack survey reports, RATA reports and CGA reports and associated summary forms.	No changes made.
5.4	5-U and 5-V	"Where emissions monitoring of flares is required under an approval or Code of Practice registration…" Emissions monitoring of flares is not a requirement under the Code of Practice for Compressor and Pumping Stations and Sweet Gas Processing Plants .	This will only apply to EPEA approved sites, unless an existing Code of Practice (or a new Code of Practice) requires reporting under the AMD.	No changes made.
5.4	5-V	"… the person responsible for an AER regulated gas processing plant or injection facility must also include the following information, at a minimum …" This only applies to sour gas processing plants and acid gas injection facilities, and not to sweet gas processing plants and other types of injection facilities (e.g. produced water injection) regulated by AER. The requirements of RC 5-V are very similar to those for the S-30 Monthly Gas Processing Plant Sulphur Balance Report, as described in AER Directive 017: Measurement Requirements for Oil and Gas Operations , section 11 which includes very detailed measurement and reporting instructions. What is the plan for this reporting, AMD vs. Directive 017, and avoiding duplicative reporting?	Will revise for consistency with AER Directive 17.	Clause revised for consistency with AER Directive 17, and will only apply to sour gas processing plants with less than 1 tonne/day inlet.
5.4	5-V	Please review as I believe there is information related to sulphur recovery in this section that should not be reported as flare.	Agreed.	A separate Sulphur Recovery and Removal Form has been created.
5.4	5-V	RC 5-V (c) c) actual sulphur in volume The AER S-30 report requires reporting of only sulphur in mass quantity, not in volume, and the AER approved sulphur is in mass quantity - Why is the volume required?	Will revise for consistency with AER Directive 17.	Clause revised for consistency with AER Directive 17, and will only apply to sour gas processing plants with less than 1 tonne/day inlet.
5.4	5-X	RC 5-X states the information that must be included in the Monthly Report. • Are 6-minute opacities included in this clause? Only hourly limits are outlined.	Opacity would be covered by the AMD CEMS Summary Form and would not be reported in the Monthly Emissions Summary Sheet.	No changes made.
5.4	5-Z	Object: This is the same information that would be provided under current incident reporting, 7-day letters. Why the need for restatement of this information?	RC 5-Z has been replaced by the AMD Approval Contravention Form. Monthly reports provide a summary and overview of the monitoring carried out during the month, and must include information on air issues encountered by the facility. Forms are necessary in order to collect summary information in a format that can be pulled into a regulator database.	RC 5-Z has been replaced by the AMD Approval Contravention Form.

Section	Clause	Comment	Response	Action Taken
5.5	5.5	Due to the proprietary nature of production reporting, our company would like assurance that ESRD does not intend to publish data in a manner that would allow third parties to approximate production data. For example, emissions values can in some cases be used to approximate production values and that data would therefore be as competitively sensitive as the production data itself. Furthermore, we would like to also understand if the production reporting is to be legally mandatory or to some extent voluntary.	Section 5.5 only applies to production data that must be submitted under EPEA approval requirements. Information submitted under EPEA must meet certain requirements set out in EPEA in order to be granted confidentiality. Both EPEA and FOIPPA came into effect after the 1989 AMD was published, and modern policy and regulatory requirements must meet the confidentiality granting requirements set out in the legislation. The formal process for requesting and granting confidentiality is necessary to ensure that information that needs to be kept confidential is in fact protected under the legislation.	No changes made.
5.5	5.5	It is noted that an AMD Production Form should be used to report production summary data. As this information is already reported to the AER, our company questions whether or not there is value in having the same data reported via a different form. If there is some way to leverage the AER production reporting data that would be preferred as it would eliminate the potential for duplicate effort on behalf of operators.	This is only required if your approval says production data must be reported. Regardless of this AMD clause, the approval requirement must be met.	No changes made.
5.5	5.5	Much of this information is already reported in Alberta (e.g. oil and gas production volumes). Consider clarifying this requirement, to avoid duplicative reporting.	This is only required if your approval says production data must be reported. Regardless of this AMD clause, the approval requirement must be met.	No changes made.
5.5	5.5	Section 5.5 Confidentiality requires the person responsible to accompany their request for data confidentiality with the data, prior to the decision. Is there room to request an alternate process?	Information submitted under EPEA must meet certain requirements set out in EPEA in order to be granted confidentiality. Both EPEA and FOIPPA came into effect after the 1989 AMD was published, and modern policy and regulatory requirements must meet the confidentiality granting requirements set out in the legislation. The formal process for requesting and granting confidentiality is necessary to ensure that information that needs to be kept confidential is in fact protected under the legislation.	No changes made.
5.5	5 and 6	Does the same production information need to be reported in both the monthly and annual reports.	Reporting of production is dependant on approval conditions. Production information does not need to be reported both monthly and annually.	Updated the production summary clauses to be clearly dependant on approval conditions and to indicate they are not required to duplicate reporting monthly and annually.
5.5	5-FF	RC 5-FF states that monthly production summary data is required to be submitted using the AMD Production Form. • This information is included in the monthly reports. o Please consider removing this clause	This is only required if your approval says production data must be reported. Regardless of this AMD clause, the approval requirement must be met.	No changes made.
5.5	5-FF	These data may be duplicative to those submitted to Petrinex, and to that required for the S-30 Monthly Gas Processing Plant Sulphur Balance Report.	This is only required if your approval says production data must be reported. Regardless of this AMD clause, the approval requirement must be met.	No changes made.
5.5	5-FF 5-GG	In the past, ESRD removed operational reporting from Approval clauses as part of streamlining initiatives that focused instead on end-of-pipe emissions and limits. Re- introducing this requirement adds administrative burden, and could create significant operational challenges if the facility could more efficiently shutdown and start-up earlier than expected. This requirement could therefore impact production and revenue and is a concern; suggest removing the requirements.	This is only required if your approval says production data must be reported. Regardless of this AMD clause, the approval requirement must be met.	No changes made.
5.5	5-GG	Based on feedback at the Webinar, it is unclear if the production information is required in all circumstances where an AMD monthly report is to be submitted (the Webinar suggested yes, the Chapter 9 language states only if an approval requires it). The production form requires daily production numbers for individual product lines, which has the potential to create situations where competitive advantages are gained. If production information is required/requested, it should be considered confidential in all cases. It is also not clear how having this information will it improve environmental outcomes or the state of the environment. It is recommended that Section 5.5 be removed, or at a minimum, clarified to ensure that this is not a requirement for all.	This is only required if your approval says production data must be reported. Regardless of this AMD clause, the approval requirement must be met.	No changes made.
5.5	5-GG	Is the confidentiality request to be submitted every month?	The Director's authorization would dictate what was granted confidentiality and for how long.	No changes made.
5.5	5-GG	Object/Clarify: What is meant by “name of product”? Proper name? name of materials?	The production information should be reported as required by the approval conditions.	No changes made.

Section	Clause	Comment	Response	Action Taken
5.5	5-GG	Object/Clarify: What is the purpose of providing production data? How will this data be used?	This is only required if your approval says production data must be reported. Regardless of this AMD clause, the approval requirement must be met.	No changes made.
5.5	5-GG	RC 5-GG: Production data should be confidential by default.	Information submitted under EPEA must meet certain requirements set out in EPEA in order to be granted confidentiality. Both EPEA and FOIPPA came into effect after the 1989 AMD was published, and modern policy and regulatory requirements must meet the confidentiality granting requirements set out in the legislation. The formal process for requesting and granting confidentiality is necessary to ensure that information that needs to be kept confidential is in fact protected under the legislation.	No changes made.
5.5	5-GG	What is deemed as “supporting information”? This will be an onerous and additional administrative task.	The industrial operation should provide whatever supporting information they feel is required to support their case for granting confidentiality. EPEA has specific criteria that must be met in order to grant confidentiality. If the industrial operation is not familiar with requesting confidentiality under the Act, the appropriate sections of EPEA should be reviewed and used to help determine what information they provide.	No changes made.
5.7	5-II	AMD Monthly Report Summary Sheet The draft sheet shows daily data; this is duplicative to other report forms. The Monthly Summary should only show monthly totals.	This summary sheet has been removed.	This summary sheet has been removed.
5.7	5-II	Monthly Report Summary Sheet Please clarify whether the Monthly Report Summary sheet is the Draft AMD Summary Sheet available on the AMD website. If so, the format is very cumbersome, especially for something that must be completed on a monthly basis. It is not clear to how many facilities this requirement is likely to apply, or to how many sources. A discussion around the practicality and alternatives to the use of this form would be informed by that knowledge. In Section 5.4.5, it appears that the requirement to report monthly air emissions reporting is included in some approvals or registrations. Section 5.7 does not include that conditioning text, and so it appears that all facilities must report air emissions on a monthly basis. Most facilities do not have the systems in place to estimate emissions on a monthly basis for all emission sources, so if this requirement is intended, then the resulting administrative burden should be considered against the expected benefit.	This summary sheet has been removed.	This summary sheet has been removed.
5.7	5-II	RC 5II: Should only require an Annual Report summary vs. a Monthly Report Summary. Annual can be a day by day emissions report. Not sure of the value of either reports unless it is being used to update dispersion model database.	This summary sheet has been removed.	This summary sheet has been removed.
5.7	5-II	The monthly and annual summary sheets are so similar it would be more efficient to make the monthly reports a year to date report. In this event the annual report would be the December monthly report submission instead of being a summary of each of the monthly report.	This summary sheet has been removed.	This summary sheet has been removed.
5.7	5-II	This states that ALL monthly reports have to use the AMD Summary Sheet. However, in 5.4.5 (RC 5-W), it implies that this Sheet is only required if an approval requires a monthly report. The duplicate requirements of the Chapter and forms creates confusion on which requirements are applicable and/or take precedence. It is recommended that the requirements of the approval supersede those of the AMD. As such, for those with no monthly reporting requirements, no Summary Sheet or ANY OTHER REQUIREMENTS of this section would apply.	This summary sheet has been removed.	This summary sheet has been removed.
5.3.1	5.3.1	5.3.1- Monthly Ambient Data Issues: Assuming this is for AMD data managed by the site vs. an airshed on behalf of industry. Should be explicit. Currently under the Industrial Monthly Report Section and implies the industry members may need to repeat airshed data reporting.	Industry is required to report on what they monitor. If an airshed is conducting ambient monitoring on industry's behalf, then the airshed would report on that ambient monitoring. However, industry should be involved in the review of ambient data.	Guidance added to parts 1 and 2 of the AMD RC.
5.3.2	5 and 6	Comparisons to AAAQOs should only be for parameters that are monitored.	Agreed.	Changed comparisons to and exceedances of "the AAAQOs" to " all AAAQOs corresponding to the monitored parameters".

Section	Clause	Comment	Response	Action Taken
5.3.2	5, 6, 15 and 16	Ambient data displays should not be limited to just histograms.	Agreed.	Added note that the representation of data distribution in could include, but is not limited to, histograms, frequency distribution tables or percentiles.
5.3.2	5-L (a)	Require clarification on the requested "statistics" in this section.	Statistics are referring to percentage of data availability.	Modified RC 5-L wording. Removed "statistics".
5.3.2	5-L (b) (ii) and 15-L (b) (ii)	A discussion of the time series plot for each parameters monitored at an ambient air monitoring station. Our airshed has over 240 specific parameters in the monitoring network, discussions on each parameter will greatly increase the report preparation time. Secondly, our airshed's mandate is as a transparent, credible, independent air quality reporter. It is not our airshed's mandate to provide interpretation of data.	This is looking for any context or description that can be provided about anomalous data or events, if known by the person responsible (e.g., forest fire, local source/event, inversion, etc.). This is a plot of hourly averages spanning the whole month. Allows the reviewer of the report to see trends and peaks in the hourly data at a quick glance.	In 5.3.1, 6.3.2, 15.3.2 and 16.3.2, removed the word "interpretation". For "discussion of plots" in 5-L, 6-M, 16-L and 16-N, changed to "discussion of context around any data anomalies that person responsible is aware of".
5.3.2	5-L 6-M	Sections 5.3.2 and 6.3.2 - Note: airport data are not compatible with air monitoring standards and should not be combined with data collected under the AMD. The wind speed and direction are especially troublesome, as the instantaneous readings done at airports are not representative of actual meteorological conditions. We should not allow airport data to be submitted to the Data Warehouse.	The use of wind data from another location is for the production of a wind rose for monthly or annual reports, not for submission to the CASA Data Warehouse. The idea is to give a general idea of what the prevailing winds are for the site for that month/year.	No changes made.
5.3.2	5-N (b) and 15 N-(b)	Comparisons to AAAQO for monitored parameters are required and identification and description of ambient air concentrations in excess of the AAAQOs. The part (b) request the reason(s) for any exceedance(s) identified. The current monthly summary letter from our organization provides a list of all reference numbers including parameters, time intervals, and values for incidents called into the Environmental Response Centre. Since monitoring organizations are not mandated or appropriately equipped to investigate each incident, providing a summary of each incident is impossible. It is not our airshed's mandate to attribute any exceedance to individual operators. The latter mandates belong with ESRD and AER.	This requirement looks for context around exceedances identified, if any context is known (e.g., forest fire, temperature inversion, local source, etc.). Context around an event can help AEP to determine if management is required or if events are natural or not likely to happen again.	Changed "reason" to "context" and added "if known". Added examples of what is meant by "context" around exceedances. Clauses 5-N, 6-O, 15-N and 16-O.
5.3.2	5-O	The Appendix is not provided. Please clarify	The table is in Appendix A.	Change clauses 5-O and 15-O to point to Appendix A.
5.3.2	5-O and 15-O	A Table 2 is referenced for appropriate averaging period. Please provide Table 2.	The table is in Appendix A.	Change clauses 5-O and 15-O to point to Appendix A.
5.4.1	5 and 6	The CEMS zero and span form needs to be revised to better reflect what information is required.	Updated CEMS Zero and Span Summary Form clause requirements for consistency with revised form.	Updated CEMS Zero and Span Summary Form clause requirements for consistency with revised form.
5.4.2	5.4.2	Are source summary forms supposed to be submitted both with monthly reports and with source sampling reports?	Should be submitted as part of (same time as) source sampling reports.	Updated reference to section 9 in section 5 to refer to source summary forms submitted as part of source sampling reports.
5.4.2	5-S	Item RC 5-S indicates that both complete and incomplete manual stack survey, RATA, and CGA results need to be submitted in the monthly report. In situations where testing is scheduled near the end of a calendar month and the testing may not be completed until early in the next calendar month, two reports would be required. As there is limited value in the submission of incomplete reports, it would be preferred to allow for results to be submitted only once upon completion, so as to minimize duplication of reporting efforts.	The required content of the monthly report for the source testing (section 5.4.3) will just be identification of what testing was carried out, when and a brief overview of the results.	Clause reworded.

Section	Clause	Comment	Response	Action Taken
5.4.2	5-S	Should provide an example of the level of detail required for the brief overview of the source testing	Agreed.	Added clarifying note: An example of a brief overview of source testing results would be: "On May 6th, Stack Testing Company X carried out a source emission survey measuring particulate emissions from the Main Exhaust Stack. The average particulate emissions were 0.01 g/kg flue gas, which is under the 0.02 g/kg limit set forth in our approval".
5.4.3	5 and 6	Does RC 5-T (d) intended to include concentrations (where limits are established) in addition to mass emissions?	Yes	No changes made.
5.4.3	5 and 6	The CEMS summary form needs to be revised to better reflect what information is required.	Updated AMD CEMS Summary Form clause requirements for consistency with the revised form.	Updated AMD CEMS Summary Form clause requirements for consistency with the revised form.
5.4.3	5 and 6	The source testing section of the monthly reports is missing CEMS initial and re-certification tests required by CEMS Code quarterly reports.	Added "a brief overview of any CEMS initial or re-certification test carried out during the month" to the source testing section.	Added "a brief overview of any CEMS initial or re-certification test carried out during the month" to the source testing section.
5.4.3	5 and 6	The two CEMS subsections in the monthly reports sections should come one after the other.	Agreed.	Moved CEMS Results section to before Source Testing Results section, so that it will follow CEMS Zero and Span section.
5.4.3	5-T	All of the information requested in section 5.4.3 is already submitted electronically in the CEMS electronic data. What is the purpose of duplication of the data? Recommendation: Remove RC5-T (a) through (i).	The AMD CEMS Summary Form collects summary information, not a duplication of the hourly CEMS data submitted electronically. While the submitted CEMS data could potentially be used by the Regulator to determine much of the summary information, it is not practical for the regulator to prepare summaries of all approval required CEMS operating in the province. Monthly reports provide a summary and discussion of all the monitoring carried out by the industrial operation during the month. As with the other source monitoring and ambient monitoring carried out by the industrial operation, the Regulator requires the industrial operation to review, summarize and discuss the monitoring in the monthly report and associated summary forms.	No changes made.
5.4.3	5-T	All requirements in item RC 5-T are already reported electronically via INFOHAWK to the Alberta Energy Regulator (AER). We encourage ESRD to make use of this data instead of having industry duplicate reporting using the new forms as duplicate reporting in two separate formats could lead to transcription errors and unnecessary additional effort.	The AMD CEMS Summary Form collects summary information, not a duplication of the hourly CEMS data submitted electronically. While the submitted CEMS data could potentially be used by the Regulator to determine much of the summary information, it is not practical for the regulator to prepare summaries of all approval required CEMS operating in the province. Monthly reports provide a summary and discussion of all the monitoring carried out by the industrial operation during the month. As with the other source monitoring and ambient monitoring carried out by the industrial operation, the Regulator requires the industrial operation to review, summarize and discuss the monitoring in the monthly report and associated summary forms.	No changes made.
5.4.4	5 and 6	The flare stack summary form needs to be revised to better reflect what information is required.	Updated AMD Flare Stack Form clause requirements for consistency with the revised form.	Updated AMD Flare Stack Form clause requirements for consistency with the revised form.
5.4.4	5.4.4	Flaring Monitoring Results Daily flared gas volume reporting by pollutant appears to duplicate production accounting reporting requirements to PETRINEX. We would be happy to work with AER/ESRD to better understand the intent of the reporting requirement and to develop methods to achieve the desired results without requiring duplicate data entry.	EPEA approvals require the submission of monthly reports. PENTRINEX covers reporting under AER Directives and legislation. Currently reporting is separate, but could potentially be streamlined in the future.	No changes made.
5.4.4	5.4.4	Where is EPEA required sulphur recovery information to be reported?	Added new requirement for Sulphur Recovery and Removal Form.	Added new requirement for Sulphur Recovery and Removal Form.
5.4.4	5-V	Flaring form appears to include S-30 reporting, but is for all flaring not just less than 1 tonne/day sour gas plants.	Removed this clause, as S-30 reporting now has its own form.	Removed this clause, as S-30 reporting now has its own form.
5.4.4	5-V	Flaring form appears to include S-30 reporting, but is for all flaring not just less than 1 tonne/day sour gas plants.	Added new section, guidance and clause for S-30 reporting.	Added new section, guidance and clause for S-30 reporting.

Section	Clause	Comment	Response	Action Taken
5.4.4	5-V (h)	Define "ACTUAL" percentage of H2S.	Will revise clause for consistency with AER Directive 17. Will only apply to source gas processing plants with less than 1 tonne/day inlet.	Clause revised for consistency with AER Directive 17, and will only apply to source gas processing plants with less than 1 tonne/day inlet.
5.4.5	5 and 6	The emissions summary form needs to be revised to better reflect what information is required.	Updated AMD Emission Summary Form clause requirements for consistency with the revised form.	Updated AMD Emission Summary Form clause requirements for consistency with the revised form.
5.4.5	5-W	RC 5-W "For the Monthly Report in RC 5-A, the person responsible must include any air emissions data required to be reported monthly to the Director by an approval or Code of Practice registration…" This qualifier should be included in RC 5-A.	Monthly reports will only be required if required by the EPEA approval.	Clause RC 5-A revised.
5.4.5	5-X	RC 5-X "…the person responsible must include the following information, at a minimum;" Application to Code of Practice registration facilities is not clear. For compressor stations and sweet gas processing plants, the information requested is generally not available on an hourly or daily basis.	This will only apply to EPEA approved sites, unless an existing Code of Practice (or a new Code of Practice) requires reporting under the AMD.	No changes made.
5.4.6	5.4.6	Any release must be reported, even if not exceeding limits, does this include release to soil, water and air? Recommend that adverse impact for required reporting (this affects numerous clauses throughout Chapter 9).	Will address in interpretation section.	Added clause to interpretation section to clarify "release" means "air release or release affecting air" unless otherwise specified in the Reporting Chapter.
5.4.6	5.4.6	For clarity, include the word "air" in terms of releases	Will address in interpretation section.	Added clause to interpretation section to clarify "release" means "air release or release affecting air" unless otherwise specified in the Reporting Chapter.
5.4.6	5.4.6	Recommend that adverse impact for required reporting (this affects numerous clauses throughout Chapter 9).	Under the terms and conditions of an EPEA approval, any unauthorized or uncontrolled (when required to be controlled, factoring in other approval conditions) release is an approval contravention. This section is not for immediate reporting but for providing a summary of the release issues occurring at the industrial operation during the month. The number of release issues that occurred and their associated emissions is important information related to the operation and performance of the industrial operation.	Clause wording revised. Clarifying note added for accidental releases.
5.4.6	5.4.6	Subsection 5.4.6 states that any uncontrolled, unauthorized or accidental releases, regardless of whether limits were exceeded, are also required to be reporting in the Monthly Report. • Air releases are only reported if limits in the approval or Release Reporting Regulation are exceeded. o Consider changing to "if the limits were exceeded"	Under the terms and conditions of an EPEA approval, any unauthorized or uncontrolled (when required to be controlled, factoring in other approval conditions) release is an approval contravention. This section is not for immediate reporting but for providing a summary of the release issues occurring at the industrial operation during the month. The number of release issues that occurred and their associated emissions is important information related to the operation and performance of the industrial operation.	Clause wording revised. Clarifying note added for accidental releases.
5.4.6	5-AA	Normal needs to be better defined. Is it based on a range seen in a year or other time frame. Is it typical (e.g. 90 percentile). Or is it up to the individual to determine?	Should include information on what is going on at the operation during the month that affected stack emission levels.	Clause reworded.
5.4.6	5-AA	Our company disagrees that this is required. Higher than “normal” emissions is not the same as a permit exceedance. Why would we need to report on this? Who defines “normal”?	Should include information on what is going on at the operation during the month that affected stack emission levels.	Clause reworded.
5.4.6	5-AA	RC 5-AA states that descriptions of any operational problems that resulted in higher than normal stack emissions during the month must be included in the Monthly report. • Facilities do not always operate based-loaded and therefore, "normal" conditions can be difficult to set. • Please provide clarity as to what the Directive means by "higher than normal". Unsure how to determine "normal".	Should include information on what is going on at the operation during the month that affected stack emission levels.	Clause reworded.

Section	Clause	Comment	Response	Action Taken
5.4.6	5-AA	RC 5-AA For the monthly report in RC 5-A the person responsible must include descriptions of an operational problems that resulted in higher than normal stack emissions during the month Define "higher than normal". Are the following scenarios part of the requirement: If there are no operational problem but emissions are "higher than normal"? If emissions are "higher than normal" and way below the limit ? Recommend to remove this section - align with D60 requirements/threshold.	Should include information on what is going on at the operation during the month that affected stack emission levels.	Clause reworded.
5.4.6	5-AA	This is repetitive as this has already been covered in the other reporting requirements of the Chapter. Also, a definition of “higher than normal stack emissions” is required. For example: Is that a 10% increase over previous month? If there was no exceedance, then why does it have to be explained at all? It could be a shut-down or turnaround item which is ALSO covered elsewhere in the monthly reporting requirements. It is recommended that 5.4.6 be removed completely. The relevant incidents, where limits are exceeded, would be reported immediately to the Director and all relevant information relating to the incident would be captured in 7-day letters. If further follow-up on specific incidents is required it should be requested on a case-by-case basis.	Should include information on what is going on at the operation during the month that affected stack emission levels.	Clause reworded.
5.4.6	5-AA	Determination of 'higher than normal stack emissions during the month' is problematic based on an annual stack test approach. Further, the concept of 'normal' is problematic, as plant production can change for a variety of reasons. Recommend removal of this clause.	Should include information on what is going on at the operation during the month that affected stack emission levels.	Clause reworded.
5.4.6	5-AA	Object: Higher than normal emissions is not the same as an exceedance. Why would we need to report on this?	Should include information on what is going on at the operation during the month that affected stack emission levels.	Clause reworded.
5.4.6	5-AA and 6-FF	There are several references within this section and in other sections that refer to “higher than normal stack emissions” and “high stack emissions” (i.e., Page 35 RC 5-AA, Page 45 RC 6-FF). It would be useful if these terms were defined, as clarification is needed to understand if air emissions during upset conditions that are still within approval limits would trigger reporting. It is very difficult for larger facilities to track increases that aren’t exceedances. Our current practice is to have our systems flag data that exceed a regulatory threshold or limit and there would be significant work required to change the notification levels or “flags” within our systems.	Should include information on what is going on at the operation during the month that affected stack emission levels.	Clause reworded.
5.4.6	5-BB	Estimates for duration of accidental release incidents and estimates for mass emissions? Suggest alignment with adverse impact approach (per RC 4-A).	Under the terms and conditions of an EPEA approval, any unauthorized or uncontrolled (when required to be controlled, factoring in other approval conditions) release is an approval contravention. This section is not for immediate reporting but for providing a summary of the release issues occurring at the industrial operation during the month. The number of release issues that occurred and their associated emissions is important information related to the operation and performance of the industrial operation.	Clause wording revised. Clarifying note added for accidental releases.
5.4.6	5-Y	Comparisons to emission limits should include discussions.	Agreed.	Changed comparisons to emission limits to discussions comparing the industrial operations emissions to approval emission limits.
5.4.7	5.4.7	Fugitive monitoring should really only be discussed in the annual reports, not the monthly reports.	Agreed.	Removed Monthly Fugitive Monitoring Results Subsection.
5.4.7	5.4.7	Might want to consider taking annual report approach to fugitive emissions instead of monthly.	Fugitive monitoring will only be covered by the annual report.	Fugitive monitoring will only be covered by the annual report.
5.4.7	5-CC	Based on the nature of the calculation used to estimate our fugitive emissions, it is not possible to provide a monthly amount of fugitive emissions which would add up to the annual amount (i.e., fugitive emissions calculations are not cumulative). A summary of the number of components monitored and number of leakers found could be provided, however, what value does this provide? It is recommended that 5.4.7 be removed. Fugitive Monitoring Results should remain a requirement of the annual report only.	Fugitive monitoring will only be covered by the annual report.	Changed to only be included in annual reports.

Section	Clause	Comment	Response	Action Taken
5.4.7	5-CC	Clarify: It is unclear what “a description” should include, and what is the specific nature of “the results” to be provided. Definitions should be provided for “fugitive emissions” and “results of fugitive emissions monitoring”.	Fugitive monitoring will only be covered by the annual report. An example will be provided in the example annual report.	Changed to only be included in annual reports. Added "required" to the clause.
5.4.7	5-CC	For the monthly Report in RC 5-A, the person responsible must include …… Suggest including the note as part of directive (in the box) and that this be part of the annual report and not monthly report as would be more aligned with D-60 requirement on fugitives.	Fugitive monitoring will only be covered by the annual report.	Changed to only be included in annual reports.
5.4.7	5-CC	Item RC 5-CC indicates that any fugitive emissions monitoring carried out during the month must be included in the monthly report for that month. Fugitive monitoring results may be delayed due to time required for lab testing or contractor data processing which could hinder our ability to include it in the monthly report for which it should be included. We would like clarification on if the fugitive reporting is simply meant to indicate that a leak is detected or if ESRD expects a level of detail that would require quantification of total emissions. If the latter is required, this would significantly impact our current LDAR programs and our ability to meet the monthly reporting schedule.	Fugitive monitoring will only be covered by the annual report.	Changed to only be included in annual reports.
5.4.7	5-CC	RC 5-CC states that results of fugitive emissions monitoring carried out at the industrial operation during the month must be included in the Monthly Report. • Fugitive emissions monitoring may be done on a voluntary basis and may not be required by an Approval. • Please consider restricting the reporting of fugitive emissions to Approval requirements.	Fugitive monitoring will only be covered by the annual report.	Changed to only be included in annual reports. Added "required" to the clause.
5.4.7	5-CC	RC 5-CC "…(a) a description and (b) the results of fugitive emissions monitoring carried out at the industrial operation during the month." Further discussion of fugitive emissions reporting is required. Monthly reporting is not a current requirement of any approval, and is not included in the Code of Practice for Compressor and Pumping Stations and Sweet Gas Processing Plants. Monthly reporting is not meaningful, in any event. Results of fugitive emissions monitoring might not be available the month following the report. In many cases approvals require only annual reporting of such results. Clarification of the intent of this monthly reporting requirement and the purpose to which the data will be used on a month-to-month basis would be helpful in order to determine a less burdensome alternative to the requirement as written.	Fugitive monitoring will only be covered by the annual report.	Changed to only be included in annual reports.
5.4.7	5-CC	Section 5.4.7 and clause RC 5-CC (Fugitive Emissions) is vague which may create confusion for sectors like ours, who have been monitoring for fugitive emissions for some time. For example, it might imply that ESRD would like a fugitive mass emissions value on a monthly basis, and many sites have only calculated fugitive mass emissions on an annual basis.	Fugitive monitoring will only be covered by the annual report.	Changed to only be included in annual reports.
5.4.7	5-CC	The requirement to include a (a) description and (b) the results of fugitive emissions monitoring on a monthly basis is overly onerous on companies - this should be at a maximum an annual report requirement.	Fugitive monitoring will only be covered by the annual report.	Changed to only be included in annual reports.
5.4.7	5-CC	Our approval requires an annual fugitive emissions report, rather than monthly reporting. The calculation of mass emissions is currently only completed on an annual basis, and the remainder of the clause isn't clear about what data would be provided monthly. Also note that fugitive emissions monitoring tends to be seasonally focused (typically April to October).	Fugitive monitoring will only be covered by the annual report.	Changed to only be included in annual reports.

Section	Clause	Comment	Response	Action Taken
5.4.8	5 and 6	Discussion on pollution controls should only be issues.	Agreed.	Changed "discussion on operation and performance of pollution control technologies" to "discussion of any operational or performance issues with of any pollution control technologies and equipment".
5.4.8	5 and 6	Facilities should only have to discuss control equipment that is required by an approval.	Agreed.	Added note that discussion of the operation of pollution control tech and equipment is only required for controls required by the industrial operation's EPEA approval.
5.4.8	5.4.8	The requirement of this information is not appropriate on a monthly basis. Firstly, pollution control equipment is not routinely replaced or upgraded (doing so would also trigger an amendment to the approval); secondly, the effectiveness of the equipment does not vary on a monthly basis (it has a design capacity and that's it); thirdly, if the equipment is down, unless a specific exemption is provided in an approval, the operating equipment associated with the pollution control equipment cannot operate. That is a standard approval clause. We are also required to immediately report if our pollution control equipment goes down and the plant remains operational as that condition would be a contravention of the approval. It is recommended that 5.4.8 be removed.	This section mainly identifies any operational or performance issues, as well as any changes and maintenance carried out. If there have been no issues or changes, then the same information can be used as the previous monthly report.	Clause reworded.
5.4.8	5-DD 5-EE	The requirements relating to pollution control equipment seems to duplicate requirements that have historically been included in Approvals. It isn't clear that there is value in also adding this section in the AMD.	This section mainly identifies any operational or performance issues, as well as any changes and maintenance carried out. If there have been no issues or changes, then the same information can be used as the previous monthly report.	Clause reworded.
5.4.8	5-DD and 5-EE	RC 5-DD and RC 5-EE " …must include a discussion on the operation and performance of any pollution control technologies and equipment…", "A description of the pollution control technologies and equipment;", "the estimated control effectiveness or efficiency of the pollution control technologies and equipment" This is excessive for a monthly report, and would just be repeated month after month! Much of this information is included in EPEA Approval applications, or specified in Codes of Practice. Recommend deleting these requirements. Only exceptions to normal operations should be reportable.	This section mainly identifies any operational or performance issues, as well as any changes and maintenance carried out. If there have been no issues or changes, then the same information can be used as the previous monthly report.	Clause reworded.
5.4.8	5-DD and 5-EE	RC 5-DD/ RC 5-EE: Why? Issues will be identified if exceedances occur. As a standing requirement this section has little value.	This section mainly identifies any operational or performance issues, as well as any changes and maintenance carried out. If there have been no issues or changes, then the same information can be used as the previous monthly report.	Clause reworded.
5.4.8	5-EE	For Discussions on Pollution Control Technologies and Equipment, it would provide value to report maintenance done, and the maintenance period: • In some circumstances, special limits are developed for maintenance/start-up & shut down periods, and • For representative CEMS for banked units (e.g.. In-situ), it is beneficial to confirm maintenance is occurring on non-monitored units.	Agreed.	Added "(i) the most recent maintenance date of the pollution control technologies and equipment and (ii) identification of the type of maintenance performed ."
5.4.8	5-EE	RC 5-EE(d): Why is this a requirement? No value in reporting unit status changes generally. ESRD should not be collecting unit operating data. Not for public consumption. Impacts to ambient or emissions data is already quantified. Facilities have a number of individual units and they can be up and down frequently. This info is proprietary to the company.	This section mainly identifies any operational or performance issues, as well as any changes and maintenance carried out. If there have been no issues or changes, then the same information can be used as the previous monthly report.	Clause reworded.
5.4.8	5-EE	Since the pollution control technologies deployed are unlikely to change month to month, please clarify the intent of this reporting section. Could the requirements be replaced with a discussion of any new control equipment or of any malfunction or period during which pollution control equipment were not available during the month?	This section mainly identifies any operational or performance issues, as well as any changes and maintenance carried out. If there have been no issues or changes, then the same information can be used as the previous monthly report.	No changes made.

Section	Clause	Comment	Response	Action Taken
5.4.8	5-EE	The estimated control effectiveness or efficiency of pollution control technologies and equipment. Efficiency provided by manufacturer or efficiencies already established for other reporting requirements (e.g. Flares 98% efficiency) should be accepted.	Will add clarification.	Added clarifying note "the estimated control effectiveness or efficiency should be based on the based available information".
5.7	5-II and 15-R	Monthly Report Summary Sheet Please provide more details on the Monthly Report Summary Sheet? Is it a sign-off sheet or a new reporting format?	Will remove summary sheet requirement.	This summary sheet has been removed.
Industrial Annual Reports				
6.0	6.0	"The exact content that is required for an Annual Report will depend upon the specific monitoring and reporting requirements for the industrial operation, as set out in the approval or Code of Practice Registration, associated monitoring plan, the AMD and written notices from the Director." It would seem that the AMD is giving direction to follow all of the documents mentioned in the above paragraph. Is the AMD expecting Industry to submit two reports? i.e. AMD Annual Report and an Annual Report to satisfy our approval? Does the approval take precedent over the AMD?.	The content of the annual report will depend on the monitoring that was carried out by the industrial operation. The AMD Reporting Chapter annual report requirements are intended to cover the requirements that are common across most annual report approval reporting requirements, but may include some additional elements not specifically identified in the approval clauses (i.e., the AMD RC provides more details on what is to be reported). The intent is NOT to require two annual reports covering much of the same information. Any additional annual report requirements specified in an approval (but not covered by the AMD RC) should be included in the annual report being submitted under the AMD RC.	No changes made.
6.0	6.0	Approval contravention information must be included in annual reports.	Added clauses to section 6.4.6 Approval Contraventions and Comparisons to Source Emission Limits for consistency with monthly reports (if info not submitted via monthly reports)	Added clauses to section 6.4.6 Approval Contraventions and Comparisons to Source Emission Limits for consistency with monthly reports (if info not submitted via monthly reports)
6.0	6.0	Approval contravention information should not be required in both the monthly and annual reports.	Added "if not already submitted via monthly reports" to clause requiring submission of AMD Approval Contravention Form,	Added "if not already submitted via monthly reports" to clause requiring submission of AMD Approval Contravention Form,
6.0	6.0	Clarify: Ambient reports are provided by the Air Shed. Is the expectation that the annual report from the Air Shed be separated and submitted by each participating member?	Industry is required to report on what they monitor. If an airshed is conducting ambient monitoring on industry's behalf, then the airshed would report on that ambient monitoring. However, industry should be involved in the review of ambient data.	Added clarifying note to parts 1 and 2 and to the introduction.
6.0	6.0	Comments provided with respect to Monthly reporting also apply to annual reporting.	Understood.	No changes made.
6.0	6.0	Overall, the Annual Report requirements appear to be the exact same as for monthly reports. If all the data is already required monthly, then the annual report is a repetition of the monthlies. This doesn't seem to add a lot of value. It is recommended that the approval supersede the AMD such that approval holders are NOT REQUIRED to submit the information required by the AMD and should only be required to submit information as required by the Approval. Alternatively, reword the annual section to only ask for what is required on an annual basis (i.e., not just repeat the monthly requirements).	The content of the monthly and annual reports will depend on the monitoring that was carried out by the industrial operation. The monthly and annual reports cover different monitoring periods and timescales, and the annual report requires some additional summarization and discussion not covered by the monthly reports.	Clauses in the annual report section have been revised to not require the same information already included in the monthly reports.
6.0	6.0	The AMD Reporting Chapter needs to cover instances when only annual reports are being submitted.	Added wording to cover information and summary forms not submitted via Monthly Reports.	Added wording to cover information and summary forms not submitted via Monthly Reports.
6.0	6.0	The language used is clear that an Annual Report is required and must meet the requirements of the approval **AND** the AMD. It is recommended that 6.0 be reworded to exempt approval holders from having to submit an AMD annual report, and instead direct approval holders to only meet the requirements of their approval (i.e., AMD annual report requirements DO NOT APPLY).	Annual reports are only required if required to report annually under an EPEA approval. AMD sets out minimum requirements for annual reports.	Clause reworded to only require annual reports if required to do so under an EPEA approval.
6.0	6.0	Where should approval required sulphur recovery information be submitted?	Added new requirement for discussion of sulphur recovery performance.	Added new requirement for discussion of sulphur recovery performance.

Section	Clause	Comment	Response	Action Taken
6.0	6.0	Will the first annual report need to cover 2016 monitoring data, even though we won't have completed the modernized monthly reports, source reports or summary forms for 2016?	The timeline for first annual report has changed. The first annual report under the revised AMD Reporting Chapter will need to be submitted in March 2018 and will need to cover the 2017 monitoring period.	Provided an addition year for submission of first annual report. Added "commencing with the 2017 calendar year" to the annual reports section.
6.0	6 and 16	Annual data distribution should be required in annual reports.	Added new clause specifically requiring representation of annual data distribution.	Added new clause specifically requiring representation of annual data distribution.
6.1	6.1	"Note: An example Annual Report is available on the AMD website. This example shows what a completed Annual Report looks like, what information may need to be included and what general format should be used." Please be more specific where an example Annual Report can be found on the AMD website as we cannot find the example.	The example reports will depend on the requirements set out in the AMD Reporting Chapter and thus cannot be provided until reporting requirements have been finalized. Example reports will be posted on the AMD website, prior to required submission of reports in 2017.	No changes made.
6.1	6.1	Industrial Monthly Reports Examples of Annual Reports were not available for review (as stated).	The example reports will depend on the requirements set out in the AMD Reporting Chapter and thus cannot be provided until reporting requirements have been finalized. Example reports will be posted on the AMD website, prior to required submission of reports in 2017.	No changes made.
6.1	6.1	There is a statement that the report format is available on the AMD website – it is not yet available and industry should have access to it to provide comments BEFORE Chapter 9 is finalized. Please send an example annual report to industry so we can see what the final product is expected to look like.	The example reports will depend on the requirements set out in the AMD Reporting Chapter and thus cannot be provided until reporting requirements have been finalized. Example reports will be posted on the AMD website, prior to required submission of reports in 2017.	No changes made.
6.1	6-A	Is the intent of Section 6.0 and Item RC 6-A that annual reports be prepared and submitted for all facilities with Code of Practice registrations, even if the registration does not list any reporting requirements? If so, this contradicts AMD Chapter 1, Section 1.0 which states that "The AMD outlines the methods acceptable to the Regulator for air monitoring and reporting, as required by an Alberta EPEA Approval, Code of Practice registration, or any other air monitoring and reporting activities for which data is submitted to the Regulator or other person acting on its behalf." Existing Code of Practice registrations for Compressor and Pumping Stations and Sweet Gas Processing Plants do not have any reporting requirements; therefore it's unclear why Code of Practice registrations are mentioned throughout Chapter 9.0 if the AMD reporting is limited to the requirements within the Code of Practice.	The AMD Reporting Chapter will only apply to Code of Practice registered facilities if their specific Code of Practice requires the AMD to be followed for reporting. Currently no Code of Practice requires the AMD to be followed for reporting.	No changes made.
6.1	6-A	RC 6-A "The person responsible must prepare an Annual Report, unless otherwise authorized in writing by the Director." Is intent that annual reports be prepared and submitted for all facilities with Code of Practice registrations? Or if not, that persons responsible for these facilities must obtain authorization? This contradicts AMD Chapter 1, Section 1.0. Refer to comments above. An Annual Report need only be prepared if required by an EPEA Approval (as per RC 6-B).	The AMD Reporting Chapter will only apply to Code of Practice registered facilities if their specific Code of Practice requires the AMD to be followed for reporting. Currently no Code of Practice requires the AMD to be followed for reporting.	No changes made.
6.1	6-B	RC 6-B (c) Monitoring Plan Please provide a template of the Monitoring Plan	Some EPEA approvals refer to monitoring plans (ambient, fugitive, etc) that were submitted as part of an application/renewal or that are specifically required to be developed/submitted under the approval. The industrial operation may need to report for the specific monitoring carried out under such plans. You should refer to your individual approval to determine whether any monitoring plans are referenced or required.	No changes made.
6.1	6-B	RC 6-B (c) states that the Annual Report must include the monitoring plans of the industrial operation. • Please clarify what monitoring plans are referenced here.	Some EPEA approvals refer to monitoring plans (ambient, fugitive, etc) that were submitted as part of an application/renewal or that are specifically required to be developed/submitted under the approval. The industrial operation may need to report for the specific monitoring carried out under such plans. You should refer to your individual approval to determine whether any monitoring plans are referenced or required.	No changes made.
6.1	6-C,D,E	This section seems repetitive as the due dates are explained previously. It is recommended that this be removed in an effort to streamline the Chapter.	These clauses are provided for clarity of when annual reports need to be submitted.	No changes made.
6.1	6-E	Moving the Annual Air Report date from March 15th to March 31st is a good move to align with other annual reporting timelines, which is easier for deadline tracking for industry (and provides an additional 2 weeks from the previous AMD requirement).	This is to mirror most of the approval conditions.	No changes made.

Section	Clause	Comment	Response	Action Taken
6.2	6.2	In the written description at the end of section 6.2, suggest that the second paragraph should be changed to "Non-standard conditions could include…" For context, we agree that these factors could be relevant to data reports, however the clause could be interpreted that they are expected/required.	Current wording of the note means the same thing. The clause requires (i) identification and (ii) description of any non-standard conditions that may have affected the quality of the monitoring results.	No changes made.
6.2	6.2	Is there a need for a tie back to Section 2.0?	Agreed. General report requirements are set out in section 2 of the Reporting Chapter.	Added note to indicate general report requirements are set out in section 2 of the Reporting Chapter.
6.2	6.2	Smaller sites with one source point that requires reporting are asked to provide a title page, table of contents and create a large, unnecessary report.	A table of contents will only be required if the report is longer than ten pages.	Clause changed.
6.2	6-A	"RC 6-A The person responsible must prepare an Annual Report, unless otherwise authorized in writing by the Director." Question: If a monitoring program runs less than twelve full months, is the annual report still required?	Yes. An industrial operation must submit an annual report if required to do so under an EPEA approval, unless otherwise authorized by the Director.	Clause reworded to only require annual reports if required to do so under an EPEA approval.
6.2	6-G	RC 6-G (a) states that in the cover letter, a description of the problems that lead to any monitoring analyzer being operational less than 90% of the time for the year must be included. • There is a 90% uptime clause in the CEMS Code on a monthly basis, but not annually. o Please consider rewording to describe the problems that lead to any monitoring analyzer being operational less than 90% during any given month.	Will reword clause to require a description of the monitoring issues that led to less than 90% operational time.	Clause reworded.
6.2	6-G	RC 6-G: duplicates monthly report information. Suggest one or the other. Forms in monthly can be YTD so that by the 12th month all monthly data is summarized into an annual data dump already.	The cover letter is a summary only, not details and covers the entire year. The annual cover letter can also identify issues that occurred across more than one month. The cover letter is needed for a quick identification of any issues that may have occurred during the year. The cover letter will also provide certification/sign-off on the report contents.	No changes made.
6.2	6-G	The cover letter requirements in Item RC 6-G are very detailed. All of this information will be in the annual report itself, therefore repeating it in the cover letter creates unnecessary administrative burden. We would encourage ESRD to reduce the cover letter requirements as appropriate.	The cover letter is just a brief, high-level summary of what will be contained in the report, like an executive summary. The details will remain in the report body.	No changes made.
6.2	6-G	Object: Annual report cover letter seems to cover same information as monthly report. Why is the repetition needed?	The cover letter is a summary only, not details and covers the entire year. The annual cover letter can also identify issues that occurred across more than one month. The cover letter is needed for a quick identification of any issues that may have occurred during the year. The cover letter will also provide certification/sign-off on the report contents.	No changes made.
6.2	6-G (a)	It isn't clear if the 90% operational time refers to the entire year, or if this is intended to be an assessment of the month-by-month performance against the 90% requirement. Some clarification would be helpful.	It was intended to be 90% monthly.	Clause reworded.
6.2	6-G and 16-H (b)	Annual Reports - identification and description of any previous correspondence related to the reporting of ambient air concentration in excess of AAAQOs. A repeat of monthly report requirement. A listing of exceedances are provided in the monthly reports. This is a redundant task and unnecessary burden on monitoring organizations.	Annual reports provide a summary and overview of the monitoring carried out during the year, and must include identification of any exceedances that occurred during the year.	No changes made.
6.2	6-J	RC 6-J(a): already done in monthly reports	This information is cumulative for the year and there may be changes to the monitoring that occurred during the year. RC 6-J (a) asks for identification of any changes from the monthly reports.	No changes made.
6.2	6-J	RC 6-J(b): do we need to repeat this every year. Prefer a single submission updated as required.	This could vary from one year to the next. If it hasn't changed, can simply paste in the same information.	No changes made.
6.2	6-J	RC 6-J(c): already done in monthly reports	This information is cumulative for the year and there may be changes to the monitoring that occurred during the year. If it hasn't changed, can simply paste in the same information.	No changes made.
6.2	6-J	RC 6-J(d): Remove this requirement from monthly reports and leave in annual	An audit will likely occur at a different time than the monitoring data that may be affected by the findings. Annual reports provide a summary and overview of the monitoring carried out during the year, and must include a summary of audit findings that affected data validity.	No changes made.

Section	Clause	Comment	Response	Action Taken
6.2	6-J (a)	Does the justification need to be submitted in annual report if a revised monthly report was already submitted outlining the changes made to data? The requirement feels like duplication.	RC 6-J (a) simply requires indication that the data being used in the annual report differs from the data used in the original monthly report and why. This simply highlights that the information previously reviewed in the monthly report will be somewhat different and that there is a revised monthly report that provides additional context and information that may not be captured by the annual summary report.	No changes made.
6.2	6-J (d) and 16 - K (d)	Annual Reports - a summary of ambient air monitoring station audit findings and responses that affected data validity. See comments from RC 5-I and RC 15-I. A summary of audit findings that affect validity is provided in the monthly reports. This is a redundant task and unnecessary burden on monitoring organizations.	An audit will likely occur at a different time than the monitoring data that may be affected by the findings. Annual reports provide a summary and overview of the monitoring carried out during the year, and must include a summary of audit findings that affected data validity.	No changes made.
6.2	6-J (e) and 16 - K (e)	Annual Reports - Report Certification Form Please provide more details on the new reporting certification form.	The Report Certification Form has been removed.	The Report Certification Form has been removed.
6.2	6-K	Is this an ambient requirement? Is this analyzer range exceedance?	This could be for any air analyzer.	Clarifying note added.
6.2	6-K	RC 6-K (d) states that a description of numerical results for values outside quantification limits is included in the annual report. • This sentence is unclear. Please provide clarity.	A clarifying note is included under the clause.	No changes made.
6.2	6-K	RC 6-K(a) through (f): already done in monthly reports	This is cumulative for the year, and it is not practical for the regulator to review 12 reports to determine this information for the entire year. Annual reports provide a summary and overview of the monitoring carried out during the year, and must include identification of issues encountered.	No changes made.
6.2	6-K (d)	Note that the requirement specifies '**any** incidents'. In the context of the AMD, it is more appropriate to require air releases and incidents called into the Response Centre.	Intended to be "air related incidents".	Changed to "air related incidents".
6.2	6-K (d) and 16 - L (e)	Annual Reports - identification and description of any incidents called into the Environmental Response Centre. See comments in RC15-J(d). This is a redundant task and unnecessary burden on monitoring organizations.	Annual reports provide a summary and overview of the monitoring carried out during the year, and must include identification of any incidents called in during the year.	No changes made.
6.2	6-K (e)	Discussion on operational status required for **any** start-ups, shutdowns, and upsets? Even if ambient data was not affected?	The clause specifies "that had an impact on source emissions or air quality".	No changes made.
6.3	6.3	Clarify: Is this clause meant for companies who manage their own air monitoring trailer or do all airshed members need to include this information?	Industry is required to report on what they monitor. If an airshed is conducting ambient monitoring on industry's behalf, then the airshed would report on that ambient monitoring. However, industry should be involved in the review of ambient data.	Added clarifying note to parts 1 and 2 and to the introduction.
6.3	6-L	RC 6-L(a) though (d): already done in monthly reports	The requirement for the annual report is to provide an annual summary of the data (i.e., annual ave, max, min, annual wind rose, etc. The monthly report requires a monthly summary.	No changes made.
6.4	6.4	Proposed Change: Repeat of data already provided in monthly report. Alter monthly reports so they are cumulative year to date so December would serve as the annual report	Monthly and annual reports are an approval requirement. The AMD does not change the timeframe for the information contained in the monthly report. They will reflect the previous month's monitoring.	Added "if not already submitted in monthly reports" to several clauses in section 6.4, to eliminate reporting of the same information.
6.5	6.5	Please refer to earlier comments on Section 5.5 as our concerns for this section are the same.	Understood	No changes made.
6.5	6-MM	Another potential issue is the requirement to report some information that is highly proprietary and of a confidential nature. If our understanding of the proposed RC 6-MM section is correct, cement plants would have to report daily cement production. The nature of this information is highly confidential. Guarantees for data security by AESRD may not protect the release of such data through future Freedom of Information requests.	Reporting of production information is only required if specified in the EPEA approval. Confidentiality can be requested under EPEA.	No changes made.

Section	Clause	Comment	Response	Action Taken
6.5	6-MM 6-NN	There are other requirements for production reporting, and ensuring alignment is a challenge for industry. We would prefer a single reporting window to manage this data. It is important to note that the accuracy of daily data reported on a monthly basis is a challenge from a quality assurance perspective - there are other non- environment requirements and processes that are connected to production reports that should be considered, and confidentiality of the data is a concern also.	Reporting of production information is only required if specified in the EPEA approval. Confidentiality can be requested under EPEA.	No changes made.
6.5	6-MM and 6-NN	RC 6-MM and RC 6-NN Production Reporting This requirement is a duplication of Monthly Reporting requirements. These data may be duplicative to those submitted to Petrinex, and to that required for the S-30 Monthly Gas Processing Plant Sulphur Balance Report.	Production information is only required to be reported if required to do so under the conditions of an approval and did not already do so via monthly reports.	Clause wording revised.
6.5	6-NN	RC 6-NN: already reported in monthly reports. Per previous comment, confidentiality should be assumed for competitive reasons as a minimum.	Reporting of production information is only required if specified in the EPEA approval. Confidentiality can be requested under EPEA.	No changes made.
6.6	6-OO	Proposed Change/deletion Change or delete wording. The wording if kept should focus on changes that affect regulated/permitted air emissions by more than 10% The wording should focus on significant expansions and modifications that increase air emissions.	Agreed.	Added "significant".
6.6	6-OO	Proposed Change: Change wording. “include a summary of any expansions or modifications to the industrial operation…” This should clarify that it’s in respect to significant expansions and modifications that affect air emissions.	Agreed.	Added "significant".
6.6	6-OO	RC 6-OO Expansions / Modifications What is the purpose of this requirement? Any material expansions or modifications are subject to obtaining amendments of the EPEA Approval or Registration.	The annual reports provide a summary of what is happening at the facility and how it relates to air releases or monitoring data. Including information on significant changes to an operation in an annual report is usually already being done.	No changes made.
6.7	6.7	Sulphur blocks Please include a definition of a sulphur block.	This is defined in the EPEA approvals. “sulphur block” means solid sulphur in storage.	No changes made.
6.9	6-SS	Annual Summary Sheet is new, just wondering what the intent of it is	The annual summary sheet has been removed as a requirement.	The annual summary sheet has been removed as a requirement.
6.9	6-SS	Noticed that there is no form that exactly matches this name. Should match exactly so there is no confusion.	The annual summary sheet has been removed as a requirement.	The annual summary sheet has been removed as a requirement.
6.9	6-SS	RC 6-SS: This data is already provided in the monthly reports in an excel spreadsheet. No need to aggregate it again in a yearly format. Should be done automatically via excel. Suggest you provide a workbook for monthly data, with an Annual data tab that aggregates the monthly sheets. Even better if you can provide an electronic submission capability similar to the CEMS.	The annual summary sheet has been removed as a requirement.	The annual summary sheet has been removed as a requirement.
6.9	6-SS	Proposed change: Repeat of data already provided in monthly report. Alter monthly reports so they are cumulative year to date so December would serve as the annual report	The annual summary sheet has been removed as a requirement.	The annual summary sheet has been removed as a requirement.
6.3.1	6-L and 16-M	For RC 6-L and RC 16-M, should not duplicate in both monthly and annual reports.	Agreed.	Added "if not already submitted in monthly reports" to RC 6-L and RC 16-M.
6.3.2	6-M	“RC 6-M (b) (i) a time series plot of the hourly average ambient air concentrations and (ii) a discussion of the time series plot, for each parameter monitored at an ambient air monitoring station; "Please clarify what data should be included in the plot graph. The graph for the hourly average concentration is included in the monthly report. There should be no need to provide the hourly average graph in the annual report again. Also, a plot graph showing hourly average data for a year will not provide much detail. Please clarify what discussion for the plot graph should be included in the annual report.	Will remove requirement for an hourly plot in the annual report.	Removed requirement for hourly plot in the annual report (clauses 6-M and 16-N).

Section	Clause	Comment	Response	Action Taken
6.3.2	6-M	6.3.2 Interpretation of Ambient Air Monitoring Results “Note: Site-specific meteorology should be used for wind rose. If site-specific meteorological data is not available, then the most representative meteorological data that are available must be used. Examples of sources of potentially representative meteorological data include a nearby ambient air monitoring station, airport, or Alberta Agriculture and Rural Development’s Agro-Climatic Information Service.” How can we ensure the accuracy of the meteorological data we refer from external sources? According to the AMD, the wind system is required to be checked and calibrated every two year to ensure the system’s functionality. Will this requirement to be applied to all facilities that publish their wind rose data so we can be confident to use the data in our report. Simply taking data from public sources and using it to interpret the ambient air data is very risky and is hard to know its accuracy.	This is looking for met data from the nearest location to the site in question when the air monitoring site does not collect met data, in order for a wind rose to be generated for the annual report. The wind rose should note that the data is from another location. This should still give a fairly good idea of the prevailing winds. For airsheds with multiple stations, this will not be necessary as there is always a station that has met data.	Clarified clause 6-M to say "closest proximity" for using meteorological data from another location, and added that this should be noted on the plot (i.e., that met data from another site was used to generate the wind rose).
6.3.2	6-M	6.3.2 Interpretation of Ambient Air Monitoring Results “RC 6-M (d) a time series of plot of the annual average ambient air concentrations for each monitored parameter at each ambient air monitoring station;” Please clarify what data should be included in the plot graph.	This should have said plot of annual average over the past 5 years.	Modified 6-M and 16-N to say "a plot of the annual average ambient air concentrations over the last five years for each monitored parameter at each ambient air monitoring station".
6.3.2	6-M	Item RC 6-M (f) requests annual average isopleth maps for passive samplers when more than eight exist. However, the value of this figure will be limited given spatial interpolation across the monitoring area. We would encourage that this requirement be removed as it would provide little value for the effort involved.	Will change to "spatial plot" to allow flexibility in how the information is presented.	Changed from isopleth to spatial plot to allow flexibility in how the information is presented.
6.3.2	6-M	RC 6-M (d) states that a time series plot of the annual average ambient air concentrations for each monitored parameter at each ambient air monitoring station • Please provide clarity on what the AMD is looking for in this clause as an annual average concentration on a time series plot would only provide one number for each monitored parameter.	This should have said plot of annual average over the past 5 years.	Modified 6-M and 16-N to say "a plot of the annual average ambient air concentrations over the last five years for each monitored parameter at each ambient air monitoring station".
6.3.2	6-M	RC 6-M (f) states that annual average isopleths using data collected with passive monitoring devices, for networks with more than eight passive sites must be included in the annual report. • Facilities may not have the software to produce isopleths.	Modified to require that some type of spatial plot of passive data is provided in report, without specifically requiring an isopleth. Bubble plots, as are commonly submitted currently, will be acceptable.	Changed clauses 6-M and 16-N to "an annual average spatial plot" for passive data rather than isopleths.
6.3.2	6-M	RC 6-M(a) through (h): already done in monthly reports or can be added as a YTD section in monthly report	The requirement for the annual report is to provide an annual summary of the data (i.e., annual ave, max, min, annual wind rose, etc). The monthly report requires a monthly summary.	No changes made.
6.3.2	6-M	RC 6-M: (d) – a time series plot of the annual average would only have one value, and is not useful.	This should have said plot of annual average over the past 5 years.	Modified 6-M and 16-N to say "a plot of the annual average ambient air concentrations over the last five years for each monitored parameter at each ambient air monitoring station".
6.3.2	6-M (b)	An annual time series plot of hourly values would have 8760 values, and be unreadable.	The requirement for an hourly plot in the annual report has been removed.	Removed requirement for hourly plot in the annual report (clauses 6-M and 16-N).
6.3.2	6-M (b) and 16-N (b)	Time series plots for hourly average ambient air concentrations and discussion of the time series plot for each parameter Our airshed has over 240 specific parameters in the monitoring network, discussions on each parameter will greatly increase the report preparation time. Secondly, our airshed's mandate is as a transparent, credible and independent air quality reporter. It is not our airshed's mandate to provide interpretation of data.	This is looking for any context or description that can be provided about anomalous data or events, if known by the person responsible. Changed "description of plot" and "interpretation" to "context, if known".	In 5.3.1, 6.3.2, 15.3.2 and 16.3.2, removed the word "interpretation". For "discussion of plots" in 5-L, 6-M, 16-L and 16-N, changed to "discussion of context around any data anomalies that person responsible is aware of".
6.3.2	6-M (d) and 16-N (d)	A time series plot of the annual average ambient air concentration for each monitored parameter. How do you do time series plot for one point. Or is the request for historical averages and for what timeframe?	This should have said plot of annual average over the past 5 years.	Modified 6-M and 16-N to say "a plot of the annual average ambient air concentrations over the last five years for each monitored parameter at each ambient air monitoring station".

Section	Clause	Comment	Response	Action Taken
6.3.2	6-M (e) and 16-N (e)	A description of the annual average concentration trends for all ambient air monitoring stations in operation for five years or longer Our airshed has over 240 specific parameters in the monitoring network, discussions on each parameter will greatly increase the report preparation time. Secondly, our airshed's mandate is as a transparent, credible and independent air quality reporter. It is not our airshed's mandate to provide interpretation of data.	This is looking for any context or description that can be provided about anomalous data or events, if known by the person responsible. Changed "description of plot" and "interpretation" to "context, if known".	In 5.3.1, 6.3.2, 15.3.2 and 16.3.2, removed the word "interpretation". For "discussion of plots" in 5-L, 6-M, 16-L and 16-N, changed to "discussion of context around any data anomalies that person responsible is aware of".
6.3.2	6-M (f) and 16-N(f)	Annual average isopleths using data collected with passive monitoring devices The passive sampling media provides approximate value for a parameter at a location and time interval. In cartography, a large dense grid of receptors and sample values are required to provide accurate isopleths. A network of 23 passive samples that covers approximately 60,000 sq.km is not adequate to provide accurate annual isopleths. Such plots are scientifically inaccurate and decisions based on these plots will lead to poorly based decisions. Please reconsider this requirement.	Modified to require that some type of spatial plot of passive data is provided in report, without specifically requiring an isopleth. Bubble plots, as are commonly submitted currently, will be acceptable.	Changed clauses 6-M and 16-N to "an annual average spatial plot" for passive data rather than isopleths.
6.3.2	6-M and 16.3.2	Annual Reports - Interpretation of Ambient Air Monitoring Reports Our airshed's mandate is as a transparent, credible and independent air quality reporter. It is not our airshed's mandate to provide interpretation of data.	This is looking for any context or description that can be provided about anomalous data or events, if known by the person responsible. Changed "description of plot" and "interpretation" to "context, if known".	In 5.3.1, 6.3.2, 15.3.2 and 16.3.2, removed the word "interpretation". For "discussion of plots" in 5-L, 6-M, 16-L and 16-N, changed to "discussion of context around any data anomalies that person responsible is aware of".
6.3.2	6-N	RC 6-N "For the annual report in RC 6-A the person responsible must include comparison of the measured ambient air concentration at each ambient air monitoring station to the AAAQOs corresponding to the monitored parameters" Provide some clarification for parameters monitored that do not have an AAAQO (e.g. Monthly Passive H2S concentration - there is no 30- day AAAQO for H2S)	For annual, you would compare your ambient monitoring results to any annual objectives for those pollutants you monitor for that have an annual objective. Continuous, intermittent and passive data can be averaged annually in order to compare to the AAAQOs.	No changes made.
6.3.2	6-O (b) and 16-P (b)	For RC 6-O (b) and RC 16-P (b), should not duplicate in both monthly and annual reports.	You would supply in annual report if not already provided in monthly.	Added "if not already submitted in monthly reports" to RC 6-O (b) and RC 16-P (b).
6.3.2	6-O (b) and 16-P(b)	Annual reports - Comparisons to AAAQO for monitored are required and identification and description of ambient air concentrations in excess of the AAAQOs. The part (b) request the reason(s) for any exceedance(s) identified. Our airshed's mandate is as a transparent, credible and independent air quality reporter. It is not our airshed's mandate to provide interpretation of data. It is not our airshed's mandate to attribute any exceedance to individual operators. It is also not our airshed's mandate to investigate these incidents. The latter mandates belong with ESRD and AER.	This requirement looks for context around exceedances identified, if any context is known (e.g., forest fire, temperature inversion, local source, etc.). Context around an event can help AEP to determine if management is required or if events are natural or not likely to happen again.	Changed "reason" to "context" and added "if known". Added examples of what is meant by "context" around exceedances. Clauses 5-N, 6-O, 15-N and 16-O.
6.3.2	6-P	Clarify: There is no table labelled “Table 2”.	The table is in Appendix A.	Change clauses 5-O and 15-O to point to Appendix A.
6.3.2	6-Q	RC 6-Q: already done in monthly reports or can be added as a YTD section in monthly report	The requirement for the annual report is to provide an annual summary of the data (i.e., comparison to annual AAAQOs). The monthly report requires comparison on hourly, daily or monthly AAAQOs.	No changes made.
6.3.2	6-R and 16-S	For the Annual Report in RC 6-A, if the industrial operation has been in operation for less than 5 years….must include the number of ambient air concentrations in excess of the AAAQOs for each of the previous years of operation. See comments in RC15-J(d). This is a redundant task and unnecessary burden on monitoring organizations.	Removed requirement as CASA Data Warehouse will be able to provide this.	Removed requirement for AQO exceedances over past 5 years (clauses 6-R, R-S, 16-S and 16-T).

Section	Clause	Comment	Response	Action Taken
6.3.2	6-S and 16-T	For the Annual Report in RC 6-A, if the industrial operation has been in operation for 5 years….must include the number of ambient air concentrations in excess of the AAAQOs for each of the previous five years of operation. See comments in RC15-J(d). This is a redundant task and unnecessary burden on monitoring organizations.	Removed requirement as CASA Data Warehouse will be able to provide this.	Removed requirement for AQO exceedances over past 5 years (clauses 6-R, R-S, 16-S and 16-T).
6.3.2	6-T	RC 6-T: already done in monthly reports or can be added as a YTD section in monthly report	Removed requirement for histograms and rather require that distribution of data is shown (e.g., through percentiles, frequency distribution table, histogram, etc.) as is currently provided in reports.	Removed clauses requiring a histogram and rather changed to require "a representation of data distribution (for example using a histogram, frequency distribution table or percentiles)" for parameters with a corresponding AAAQO (clauses 5-P, 5-Q, 6-T, 6-U, 15-P, 15-Q, 16-U and 16-T).
6.3.2	6-T	Value of requirement is not provided and will result in substantial additional resources to develop and support. Recommend requirement (and related RC 6-U) be deleted.	Looking for distribution of data (e.g., through percentiles, frequency distribution table, histogram, etc.) as is currently provided in reports.	Removed clauses requiring a histogram and rather changed to require "a representation of data distribution (for example using a histogram, frequency distribution table or percentiles)" for parameters with a corresponding AAAQO (clauses 5-P, 5-Q, 6-T, 6-U, 15-P, 15-Q, 16-U and 16-T).
6.3.2	6-T & 6-U (also 16-U, 16-V)	RC 6-T & 6-U (also RC16-U, RC 16-V): Which AAAQO (1-hr, 24-hr, 30-days, etc) is to be used for calculation of bin width? How to calculate the bin width if a parameter does not have AAAQO, for example THC?	Looking for distribution of data (e.g., through percentiles, frequency distribution table, histogram, etc.) as is currently provided in reports.	Removed clauses requiring a histogram and rather changed to require "a representation of data distribution (for example using a histogram, frequency distribution table or percentiles)" for parameters with a corresponding AAAQO (clauses 5-P, 5-Q, 6-T, 6-U, 15-P, 15-Q, 16-U and 16-T).
6.3.2	6-T and 16-U	For RC 6-T and RC 16-U, should not duplicate in both monthly and annual reports.	You would supply in annual report if not already provided in monthly.	Added "if not already submitted in monthly reports" to RC 6-T and removed RC 16-U.
6.3.2	6-T and 6-U	Items RC 6-T/U request histograms for each month. Please clarify what these histograms should include and whether this means there will be 12 histograms per monitored parameter within an annual report. If this is the intent, the requirement is cumbersome and adds a substantial level of unnecessary effort to the preparation of the annual reports.	Looking for distribution of data (e.g., through percentiles, frequency distribution table, histogram, etc.) as is currently provided in reports.	Removed clauses requiring a histogram and rather changed to require "a representation of data distribution (for example using a histogram, frequency distribution table or percentiles)" for parameters with a corresponding AAAQO (clauses 5-P, 5-Q, 6-T, 6-U, 15-P, 15-Q, 16-U and 16-T).
6.3.2	6-U	Histograms – The number of bins should be ten (10), so that the deciles of the data can be easily read. The Bin Width should be one tenth of the maximum value (not the AAAQO), so that the histogram goes from zero to the Max value, with ten bins.	Looking for distribution of data (e.g., through percentiles, frequency distribution table, histogram, etc.) as is currently provided in reports.	Removed clauses requiring a histogram and rather changed to require "a representation of data distribution (for example using a histogram, frequency distribution table or percentiles)" for parameters with a corresponding AAAQO (clauses 5-P, 5-Q, 6-T, 6-U, 15-P, 15-Q, 16-U and 16-T).
6.4.1	6-V	Zero and span forms should not be required in both monthly and annual reports.	You would supply in annual report if not already provided in monthly.	Added "if not already submitted in monthly reports" to Zero and Span clause.

Section	Clause	Comment	Response	Action Taken
6.4.1	6-V	How does this requirement fit with the CEMS Code? As a new (supplemental?) requirement, it is confusing to understand how the AMD and CEMS Code are related.	Annual reports provide a summary and overview of the monitoring carried out during the year, if not already included in monthly reports, annual reports must include information on out of control zero and span. Forms are necessary in order to collect summary information in a format that can be pulled into a regulator database. The AMD does not supersede the entire CEMS code, but rather provides direction on reporting; the AMD supersedes section 6.2 of the CEMS code only (as section 6.2 of the code specifies).	Added "if not already submitted in monthly reports" to several clauses in section 6.4, to eliminate reporting of the same information.
6.4.2	6-W	Are the Quarterly Reports described in the CEMS Code going to still be required?	Section 6.2 of CEMS Code is replaced by AMD, therefore the quarterly reports are replaced with monthly requirements.	Clarifying note added to section 3.2.1 of the Reporting Chapter.
6.4.2	6-W	RC 6-W states that the Annual Report must contain the results of complete and incomplete manual stack surveys, RATAs and CGAs using the corresponding AMD forms. The note in subsection 6.4.2 Stack Testing Results also states that submission of the reports for the manual stack surveys, RATAs and CGAs is also required in Section 9. • Submission of reports as well as the AMD forms is a duplication of data. The data should only be required to be submitted once and in one format. • Please clarify that the data is only required to be submitted once.	Will add "if not already submitted in monthly reports" to several clauses in section 6.4, to eliminate reporting of the same information.	Added "if not already submitted in monthly reports" to several clauses in section 6.4, to eliminate reporting of the same information.
6.4.2	6-W	RC 6-W: already done in monthly reports or can be added as a YTD section in monthly report	Will add "if not already submitted in monthly reports" to several clauses in section 6.4, to eliminate reporting of the same information.	Added "if not already submitted in monthly reports" to several clauses in section 6.4, to eliminate reporting of the same information.
6.4.2	6-W	Redundant requiring resubmission of the same forms when they have already been submitted in the monthly reports (RC 5.4.2). Recommend deleting.	Will add "if not already submitted in monthly reports" to several clauses in section 6.4, to eliminate reporting of the same information.	Added "if not already submitted in monthly reports" to several clauses in section 6.4, to eliminate reporting of the same information.
6.4.2	6-W	The same forms could be submitted up to three times. Please review and remove all redundancy.	Section 6.2 of CEMS Code is replaced by AMD, therefore the quarterly reports are replaced with additional monthly requirements. Will add "if not already submitted in monthly reports" to several clauses in section 6.4, to eliminate reporting of the same information.	Clarifying note added to section 3.2.1 of the Reporting Chapter. Added "if not already submitted in monthly reports" to several clauses in section 6.4, to eliminate reporting of the same information.
6.4.2	6-W	Reporting the results of completed stack surveys, RATAs and CGAs makes sense for the annual report, but including incomplete tests seems to add less value in an annual context.	Will add "if not already submitted in monthly reports" to several clauses in section 6.4, to eliminate reporting of the same information. The required content of the annual report for the source testing (section 6.4.3) will just be (if not already included in the monthly reports) identification of what testing was carried out, when and a brief discussion.	Added "if not already submitted in monthly reports" to several clauses in section 6.4, to eliminate reporting of the same information. The required content of the annual report for the source testing (section 6.4.3) will just be (if not already included in the monthly reports) identification of what testing was carried out, when and a brief discussion.
6.4.3	6-X	RC 6-X (l) states that the annual evaluation of the CEMS and QAP in accordance with section 5.3 of the CEMS Code must be included in the Annual Report. • Section 5.3 of the CEMS Code only requires that an evaluation be completed every 12 months. This section does not state that this evaluation has to be submitted. Section 6.2 only states that confirmation of whether the annual evaluation has been conducted and the date of completion are to be included in the annual report. o Please consider aligning the AMD with the CEMS Code for consistency.	RC 6-X has been reworded to just require identification of the date of the Quality Assurance Plan audit (if it occurred during the year) and identification of who performed the Quality Assurance Plan audit.	RC 6-X has been reworded to just require identification of the date of the Quality Assurance Plan audit (if it occurred during the year) and identification of who performed the Quality Assurance Plan audit.

Section	Clause	Comment	Response	Action Taken
6.4.3	6-X	RC 6-X(a-e): all of this data is available from the electronic submission. Annual reports on CEMS should be limited to summarizing analytical (QA, data, monitoring) issues and the corrective actions taken.	The AMD CEMS Summary Form collects summary information, not a duplication of the hourly CEMS data submitted electronically. While the submitted CEMS data could potentially be used by the Regulator to determine much of the summary information, it is not practical for the regulator to prepare summaries of all approval required CEMS operating in the province. Annual reports provide a summary and discussion of all the monitoring carried out by the industrial operation during the month. As with the other source monitoring and ambient monitoring carried out by the industrial operation, the Regulator requires the industrial operation to review, summarize and discuss the monitoring in the annual report and associated summary forms.	No changes made.
6.4.3	6-X	Our company's approval does not include a mass emissions limit for our stacks with CEMS. For emission calculations, CEMS monitoring data is used in conjunction with fuel analysis and calculated in other software package for emissions reporting (the same system aligns with NPRI and GHG reporting requirements). Our company currently calculates emissions on a monthly basis, so minimums and maximums could not be reported on a daily basis, and parts (c) and (d) are problematic for us to comply with.	This would be reported in the AMD CEMS Summary Form only if applicable.	Added "if applicable" to max and minimum emission rate in the AMD CEMS Summary Form.
6.4.3	6-X (c) & (d)	RC 6-X (c) & (d) The monthly (i) mass emission totals (ii) minimums and (iii) maximums for each source, for each pollutant monitored. The data requested in RC6-X has already been provided in 3 different reports and this totals the 4th request for the same data. The data has been provided in the (1) Monthly CEMS Electronic submission, (2) the AMD Monthly CEMS Form and in the (3) Monthly Report Summary Sheet and now in the Annual Report?. Stream line the data request with a focus on data quality, not quantity. It is in the industry interest to provide clear, correct, transparent data to both the government and the public. The request for multiple pieces of the same data is onerous to prepare and quality check. If AESRD has any questions about data they are encouraged to contact the industry directly.	The AMD CEMS Summary Form collects summary information, not a duplication of the hourly CEMS data submitted electronically. The AMD CEMS Summary Form is only required as part of the annual report, if is was not already provided with the monthly report.	Clause changed to only be if not already submitted in monthly reports.
6.4.3	6-X (c) & (d)	Streamline the data request with a focus on data quality, not quantity. It is in the industry interest to provide clear, correct, transparent data to both the government and the public. The request for multiple pieces of the same data is onerous to prepare and quality check.	The AMD CEMS Summary Form collects summary information, not a duplication of the hourly CEMS data submitted electronically. The AMD CEMS Summary Form is only required as part of the annual report, if is was not already provided with the monthly report.	Clause changed to only be if not already submitted in monthly reports.
6.4.3	6-X (c) & (d)	The data requested in RC 6-X has already been provided in 3 different reports and this totals the 4th request for the same data. The data has been provided in the (1) Monthly CEMS Electronic submission, (2) the AMD Monthly CEMS Form and in the (3) Monthly Report Summary Sheet and now in the Annual Report ?	The AMD CEMS Summary Form collects summary information, not a duplication of the hourly CEMS data submitted electronically. The AMD CEMS Summary Form is only required as part of the annual report, if is was not already provided with the monthly report.	Clause changed to only be if not already submitted in monthly reports.
6.4.3	6-Y and 6-Z	RC 6-Y and RC 6-Z "… the person responsible must …" These reporting requirements are redundant to those in Monthly Reports. Refer to comments on section 5.4.4 (above).	Clause changed to only be if not already submitted in monthly reports.	Clause changed to only be if not already submitted in monthly reports.
6.4.4	6-Y (b)	Remove daily totals.	Clause and form was updated.	Clause and form was updated.
6.4.4	6-Z	Please confirm that RC 6-Z doesn't apply to oil sands and In situ facilities .	It does apply to oil sands and in situ facilities.	No changes made.
6.4.5	6-AA	RC 6-AA "…Code of Practice registrations may have annual air emissions reporting requirements …" What Code of Practice reporting requirements are referenced here?	This will only apply to EPEA approved sites, unless an existing Code of Practice (or a new Code of Practice) requires reporting under the AMD.	No changes made.
6.4.6	6.4.6	"…material predictive emission.." What is meant by this?	This is referring to PEMS. (predictive emission monitoring systems), but this text was removed from the guidance paragraph in section 6.4.6.	Guidance text changed.

Section	Clause	Comment	Response	Action Taken
6.4.6	6-DD	Clarify the requirement Must compare the number of reading in excess to previous five years. For an hourly limit, would each hour count as 1 reading?	This is the number of exceedances for the reporting year per limit. For an hourly limit, each exceedance of the hourly limit must be counted.	No changes made.
6.4.6	6-DD	The requirement is overly onerous on companies and should be removed.	This is not a new requirement, as it was a requirement of the 1989 AMD.	No changes made.
6.4.6	6-DD	Clarify: Must compare the number of readings in excess to previous five years.	This is the number of exceedances for the reporting year per limit. For an hourly limit, each exceedance of the hourly limit must be counted.	No changes made.
6.4.6	6-DD	For an hourly limit, would each hour count as 1 reading? This is easy for a CEMS but not so simplistic if using estimations or Manual Stack Survey (SES).	This is the number of exceedances for the reporting year per limit. For an hourly limit, each exceedance of the hourly limit must be counted.	No changes made.
6.4.6	6-DD and 6-EE	RC 6-DD, RC 6-EE readings in excess of emission limits … for previous years of operation This is a new reporting requirement and is not justifiable.	Summarizing the number of limit exceedances over the previous five years is necessary to help identify ongoing issues with meeting the limits.	No changes made.
6.4.6	6-FF	Our company disagrees that this is required. Descriptions of any operational problems resulting in higher than normal stack emissions. Sometimes higher than normal is not caused by a problem. Why would we comment on higher than normal if we are still within our approval limit?	Looking for any operational problems impacting source emissions.	Changed to "any operational problems impacting source emissions".
6.4.6	6-FF	What does higher than normal mean?	Looking for any operational problems impacting source emissions.	Changed "higher than normal" to "impacting stack emissions".
6.4.6	6-FF	Determination of 'higher than normal stack emissions during the month' is problematic based on an annual stack test approach. Further, the concept of 'normal' is problematic, as plant production can change for a variety of reasons. Recommend removal of this clause (similar to RC 5-AA).	Looking for any operational problems impacting source emissions.	Changed to "any operational problems impacting source emissions".
6.4.6	6-FF	Object: Descriptions of any operational problems resulting in higher than normal stack emissions. Sometimes higher than normal is not caused by a problem. Why would we comment on higher than normal if we are still within our approval limit?	Looking for any operational problems impacting source emissions.	Changed to "any operational problems impacting source emissions".
6.4.6	6-HH	Please specify whether this pertains directly to air releases or all releases.	Air releases only.	Added clause to interpretation section to clarify "release" means "air release or release affecting air" unless otherwise specified in the Reporting Chapter.
6.4.6	6-HH	RC6-HH For the Annual Report in RC 6-A, if the industrial operations has been in operation for over five years, the person responsible must include comparisons of the number of uncontrolled, unauthorized and accidental releases to the previous five years of operation. Follow Up: Please specify whether this pertains directly to air releases or all releases.	Air releases only.	Added clause to interpretation section to clarify "release" means "air release or release affecting air" unless otherwise specified in the Reporting Chapter.
6.4.6	6-HH	The requirement is overly onerous on companies and should be removed.	Under the terms and conditions of an EPEA approval, any unauthorized or uncontrolled (when required to be controlled, factoring in other approval conditions) release is an approval contravention. This section is not for immediate reporting but for providing a summary of the release issues occurring at the industrial operation during the current and previous years. The number of release issues is important information related to the operation and performance of the industrial operation.	Clause wording revised. Clarifying note added for accidental releases.
6.4.6	6-HH	Are we required to discuss all uncontrolled/accidental releases for the last 5 years starting from this point on, or to go through a data review and compile data that may not necessarily have been tracked as specifically as is required by this clause (for the last 5 years)?	The 1989 AMD required that annual reports include the number of occurrences and duration of uncontrolled, unlicensed and accidental releases along with estimates of mass emissions of H2S and SO2 released per incident. Some of the required information for the previous years should be available from the information used to prepare the past annual reports. If records do not exist to provide all the required information for the previous years, the available information should be used and it must be identified that complete historical records were not available for the past years.	No changes made.

Section	Clause	Comment	Response	Action Taken
6.4.6	6-HH	Suggest that reporting of uncontrolled, unauthorized, and accidental releases be aligned with adverse effects and clause RC 4-A).	Under the terms and conditions of an EPEA approval, any unauthorized or uncontrolled (when required to be controlled, factoring in other approval conditions) release is an approval contravention. This section is not for immediate reporting but for providing a summary of the release issues occurring at the industrial operation during the current and previous years. The number of release issues is important information related to the operation and performance of the industrial operation.	Clause wording revised. Clarifying note added for accidental releases.
6.4.7	6-JJ	RC 6-JJ fugitive emissions monitoring Further discussion of fugitive emissions reporting is required. Annual reporting is not a current requirement of any approval, and is not included in the Code of Practice for Compressor and Pumping Stations and Sweet Gas Processing Plants.	This will only apply to EPEA approved sites, unless an existing Code of Practice (or a new Code of Practice) requires reporting under the AMD.	No changes made.
6.4.7	6-JJ	To build on the comment for RC 5-CC, including fugitive emissions monitoring results in the annual air report is better aligned with fugitive monitoring programs than including fugitive emissions in the monthly reports.	Fugitive reporting will be annually only.	Changed to annual report requirement only.
6.4.8	6-KK	RC 6-KK: already done in monthly reports or can be added as a YTD section in monthly report	Issues could be across months, and a discussion of the overall performance during the year should be included. Some of the information is now only required if not already submitted in monthly reports.	No changes made.
6.4.8	6-KK and 6-LL	RC 6-KK and RC 6-LL pollution control technologies and equipment Similar concerns as per comments for Section 5.4.8 (above).	Issues could be across months, and a discussion of the overall performance during the year should be included. Some of the information is now only required if not already submitted in monthly reports.	No changes made.
6.4.8	6-LL	RC 6-LL(c): need to know what the load is to a pollution control device to estimate the efficiencies. Without measuring, this is not a terribly useful reporting criterion. It will never change from year to year, and will be based on design specs only.	Should be the estimated control effectiveness or efficiency should be based on the best available information.	Added clarifying note "the estimated control effectiveness or efficiency should be based on the best available information".
6.4.8	6-LL(b)	Requirement (b) needs to be clarified - what is being asked here? I assume most Approvals and Codes of Practice requirements are such that pollution control equipment must be operational during all production activities, therefore the percentage operation time would be 100%.	Looking for a brief overview of the performance of the required pollution control technologies and equipment during the year.	Changed to "a brief overview of the performance of the required pollution control technologies and equipment during the year".

Industrial Emissions Inventory Reporting				
7.0	7.0	If ESRD requires additional information to what is submitted to NPRI, it should be requested on a one-off basis.	One-off data collections have been used in the past (both voluntary and mandatory) and the results have been mixed. All of the requested data is often not provided, or not provided within the required timelines. One-off data collections become dated fairly quickly and usually lack the necessary mechanism to keep them updated. One-off data collections are usually only done for specific projects, and the results may or may not be adaptable to other Regulator business requirements. This then leads to having to start over from scratch for other projects. In terms of administration and available resources, one-off data collections are usually more difficult to successfully complete. It is much more difficult for both industry and government to have the required time available and staff in place for one-off data collections. Regulatory reporting programs are ongoing and help establish expectations for what information will be required, timelines for reporting and resources that will be required. They are annually updated, although much of the information will not need to be updated annually and the same reporting form can be used. They also allow for the easy incorporation of new and modified sources and the removal of sources no longer emitting. They also represent higher-quality compliance data that has been certified by the individual operators who are most familiar with how their plants operate and emit to the atmosphere.	No changes made.

Section	Clause	Comment	Response	Action Taken
7.0	7.0	A significant increase in time and effort is required to fully comply with the requirements given in this section, especially on reporting “actual annual emissions” “normal” and “maximum” emissions for each point and non-point source at a facility. Currently, the majority of the Schedule 2 substances are not monitored and the emissions are primarily estimated and reported to NPRI using published emission factors. To report actual annual, normal and maximum emissions as required by the AMD, continuous monitoring would be required for all point and non-point sources at the facility which would bring significant costs and administrative burden to the industry.	Maximum and normal emission rates won't be required on non-point sources at this time. Reporting is not necessarily required for every schedule 2 substance, only the applicable substances as described in the AMD Reporting Chapter. Under EPEA, the person responsible is required to take reasonable steps to meet the requirements set out in EPEA and the associated regulations, codes, directives, standards, etc. Therefore reasonable effort must be made to comply with the AMD requirements. This would not require the industrial operation to attempt to physically measure air pollutant releases from all on-site release points and non-point sources. When physical measurements (e.g., CEMS) are already required under an industrial operation's EPEA approval conditions, such measurement data should be used in the emissions inventory. When no actual measurements are available (and where no specific method has been prescribed by the Director), the AMD simply requires using: available methodologies, emission factors, equations and calculations that are: (i) based on the best information available, (ii) applicable to the particular industrial operation and its operating conditions; and (iii) if applicable, widely used and accepted by the industrial sector to which the industrial operation belongs.	Maximum and normal emission rates won't be required for non-point sources at this time. Several non-NPRI reportable substances have been removed from AMD emissions inventory reporting. Several substances have been changed to require the same isomer/isomer group as the NPRI reportable substances. Clauses changed.
7.0	7.0	a) There are numerous elements that require industry to quantify maximum, normal and minimum release rates (via stacks for example). However, much of the data that is currently collected by facilities is derived from a single annual test. As such, much of this type of information is calculated versus measured, and does not fit within the context of routine reporting.	Under EPEA, the person responsible is required to take reasonable steps to meet the requirements set out in EPEA and the associated regulations, codes, directives, standards, etc. Therefore reasonable effort must be made to comply with the AMD requirements. This would not require the industrial operation to attempt to physically measure air pollutant releases from all on-site release points and non-point sources. When physical measurements (e.g., CEMS) are already required under an industrial operation's EPEA approval conditions, such measurement data should be used in the emissions inventory. When no actual measurements are available (and where no specific method has been prescribed by the Director), the AMD simply requires using: available methodologies, emission factors, equations and calculations that are: (i) based on the best information available, (ii) applicable to the particular industrial operation and its operating conditions; and (iii) if applicable, widely used and accepted by the industrial sector to which the industrial operation belongs.	Maximum and normal emission rates won't be required on non-point sources at this time.
7.0	7.0	Alberta's Specified Gas Reporting Regulation and Federal GHG inventory requirements are reported through the same system. Why can't there be alignment for air contaminant reporting? There is considerable administrative and reporting burden that comes with these requirements.	The AMD EI requirements are more detailed and have additional data elements not captured by the NPRI. The NPRI has incomplete source-level reporting, amalgamates various sources and excludes some emission sources (e.g., oil sands mine fleets). There are also differences in how the NPRI defines and regulates facilities versus how a facility is defined and regulated under an EPEA approval. There is currently no agreement in place between Alberta and Environment Canada on air emissions data collection and several past attempts at harmonizing the 1989 AMD NOx and SO2 emissions inventory reporting requirements with the NPRI were not successful. One obstacle to potential future harmonization with the NPRI is the lack of modern emissions reporting requirements in Alberta. AEP has critically examining the proposed emissions inventory requirements against feedback.	Have revised some of the AMD EI reporting requirements.
7.0	7.0	Also, our company would like to know the benefits that AESRD expects out of these emissions reporting that offset the cost and the administrative burden associated with this level of reporting.	The AMD emissions inventory data is required to support: regulatory management, air modelling, scientific assessments, policy development, regional planning, negotiating with the Federal Government on national AQ frameworks (such as AQMS/BLIERs), and the overall Cumulative Effects Management System. There may also be the opportunity to develop a standardized starting dataset for EIA application/renewal AQ modelling, which may help to reduce costs for developing emissions inventories for regulatory dispersion modelling.	No changes made.
7.0	7.0	Annual Emissions Inventory Report This requirement is a duplicate, redundant and parallel system to NPRI, and is a massive reporting burden on industry. It is recommended that: - This requirement be removed – necessary information be pulled by ESRD from the NPRI reporting system. ESRD should continue to utilize the established one-window reporting (SWIM) versus creating a duplicate system;	The AMD EI requirements are more detailed and have additional data elements not captured by the NPRI. The NPRI has incomplete source-level reporting, amalgamates various sources and excludes some emission sources (e.g., oil sands mine fleets). There are also differences in how the NPRI defines and regulates facilities versus how a facility is defined and regulated under an EPEA approval. There is currently no agreement in place between Alberta and Environment Canada on air emissions data collection and several past attempts at harmonizing the 1989 AMD NOx and SO2 emissions inventory reporting requirements with the NPRI were not successful. One obstacle to potential future harmonization with the NPRI is the lack of modern emissions reporting requirements in Alberta. AEP has critically examining the proposed emissions inventory requirements against feedback.	No changes made.

Section	Clause	Comment	Response	Action Taken
7.0	7.0	Annual Emissions Inventory reporting on substances that are already being reported in Greenhouse Gas reporting and NPRI creates significant duplication and requires high levels of input (a parallel program for inventory tracking and reporting) with questionable additional value. Our company is very much aligned with the position of our industrial associations on our concerns for this section related to the amount of effort and value that it adds.	The AMD EI requirements are more detailed and have additional data elements not captured by the NPRI. The NPRI has incomplete source-level reporting, amalgamates various sources and excludes some emission sources (e.g., oil sands mine fleets). There are also differences in how the NPRI defines and regulates facilities versus how a facility is defined and regulated under an EPEA approval. There is currently no agreement in place between Alberta and Environment Canada on air emissions data collection and several past attempts at harmonizing the 1989 AMD NOx and SO2 emissions inventory reporting requirements with the NPRI were not successful. One obstacle to potential future harmonization with the NPRI is the lack of modern emissions reporting requirements in Alberta. AEP has critically examining the proposed emissions inventory requirements against feedback.	No changes made.
7.0	7.0	Annual Emissions Inventory: Requires a lot of information and I'm not sure of the value. Source by source data is only useful if using for dispersion modeling, which also requires building data and source physical parameters. Is the intent to create a database for modeling. If yes, need more information, and data should be submitted to an electronic database. Need to review intent of this section. If to be used for dispersion modeling, then we need to reassess the data requirements. No value in repeating static information over and over again in a report that may or may not be read. This section needs to be worked collaboratively with industry to be effective.	The collected emissions inventory information will be used for a variety of purposes, including dispersion modelling. Release point and non-point source parameters are already included. The requirement to report relevant building dimensions, storage tank and exposed storage pile information has been added. The same reporting form can be used for each reporting year, allowing for industry to update as required and report emissions for the specific year. We welcome further input on the data elements needed to support dispersion modelling.	The requirement to report relevant building dimensions, storage tank and exposed storage pile information has been added.
7.0	7.0	As the requested information is very similar to Environment Canada's National Pollutant Release Inventory (NPRI), we would like to ensure opportunities to leverage existing information are considered to the greatest extent possible. Alignment of reporting agencies for systems and data formats is highly recommended to ensure consistency and eliminate duplicate reporting.	The AMD EI requirements are more detailed and have additional data elements not captured by the NPRI. The NPRI has incomplete source-level reporting, amalgamates various sources and excludes some emission sources (e.g., oil sands mine fleets). There are also differences in how the NPRI defines and regulates facilities versus how a facility is defined and regulated under an EPEA approval. There is currently no agreement in place between Alberta and Environment Canada on air emissions data collection and several past attempts at harmonizing the 1989 AMD NOx and SO2 emissions inventory reporting requirements with the NPRI were not successful. One obstacle to potential future harmonization with the NPRI is the lack of modern emissions reporting requirements in Alberta. AEP has critically examining the proposed emissions inventory requirements against feedback.	No changes made.
7.0	7.0	Data such as "normal" and "maximum" emissions would be better requested outside of an annual reporting requirement, as they will not typically change from one year to the next.	Maximum and normal emission rates won't be required for non-point sources at this time. The same reporting form can be used from one year to the next and industrial operations can simply update the information that has changed and report the additional information required for the specific calendar year.	Maximum and normal emission rates won't be required on non-point sources at this time.
7.0	7.0	Duplication: Section 7 is a duplication of the NPRI reporting effort; to the extent that the reporting forms, function model, equations and templates differ from those relating to NPRI, confusion and inconsistency may result.	The AMD EI requirements are more detailed and have additional data elements not captured by the NPRI. The NPRI has incomplete source-level reporting, amalgamates various sources and excludes some emission sources (e.g., oil sands mine fleets). There are also differences in how the NPRI defines and regulates facilities versus how a facility is defined and regulated under an EPEA approval. There is currently no agreement in place between Alberta and Environment Canada on air emissions data collection and several past attempts at harmonizing the 1989 AMD NOx and SO2 emissions inventory reporting requirements with the NPRI were not successful. One obstacle to potential future harmonization with the NPRI is the lack of modern emissions reporting requirements in Alberta. AEP has critically examining the proposed emissions inventory requirements against feedback.	No changes made.

Section	Clause	Comment	Response	Action Taken
7.0	7.0	Environment Canada adopts structured stakeholder consultations and an elaborate review of a substance before including it in the list of reportable substances. Was there any particular approach adopted by AESRD while determining the substance list given in Schedule 2 of the AMD?	The preliminary schedule 2 substance list was developed based on substances with AAAQOs that are directly emitted, select relevant toxics substances and substances that have associated approval limits. Several non-NPRI reportable substances have been removed from AMD emissions inventory reporting. Several substances have been changed to require the same isomer/isomer group as the NPRI reportable substances. In terms of consultation, the AMD Reporting Chapter will have gone through two formal public comment periods. Several webcasts have been carried out to present the information to stakeholders and allow for additional comments and questions to be submitted. There have also several face-to-face meetings with select industry stakeholders. Significant feedback has been provided by industry and the second public comment period will allow for additional comments to be provided. This is not the first attempt at modernizing emissions inventory reporting in Alberta. Previously provided feedback and input into proposed systems have been considered as well.	Several non-NPRI reportable substances have been removed from AMD emissions inventory reporting. Several substances have been changed to require the same isomer/isomer group as the NPRI reportable substances.
7.0	7.0	ESRD should continue to utilize the established one-window reporting (SWIM) versus creating a duplicate system.	The AMD EI requirements are more detailed and have additional data elements not captured by the NPRI. The NPRI has incomplete source-level reporting, amalgamates various sources and excludes some emission sources (e.g., oil sands mine fleets). There are also differences in how the NPRI defines and regulates facilities versus how a facility is defined and regulated under an EPEA approval. There is currently no agreement in place between Alberta and Environment Canada on air emissions data collection and several past attempts at harmonizing the 1989 AMD NOx and SO2 emissions inventory reporting requirements with the NPRI were not successful. One obstacle to potential future harmonization with the NPRI is the lack of modern emissions reporting requirements in Alberta. AEP has critically examining the proposed emissions inventory requirements against feedback.	No changes made.
7.0	7.0	For cases that facility boundary for NPRI reporting is not the same boundary as EPEA approval. What would be suggestions to complete Annual Emission Inventory Report?	The AMD emissions inventory requirements only apply to facilities with an EPEA approval. Industrial operations will be required to inventory and report according to how they are defined under EPEA and the AMD, not the NPRI. An industrial operation under the AMD is defined as "any facility, plant, site, mine, structure or thing where any activity listed in the Activities Designation Regulation occurs, including all the buildings, equipment, machinery and vehicles that are an integral part of the activity".	No changes made.
7.0	7.0	For example, the current proposal to add new substances to the list of reportable substances does not consider that emission factors may need to be developed and that thorough reviews of current processes will be required to ensure all sources are captured.	Several non-NPRI reportable substances have been removed from AMD emissions inventory reporting.	Several non-NPRI reportable substances have been removed from AMD emissions inventory reporting.
7.0	7.0	IEIR (Section 7) represents a duplicate and parallel system to NPRI, and this requirement would be a significant reporting burden on industry. The IEIR borrows heavily from the NPRI and the added benefit of a parallel system is of questionable incremental value versus the large required effort for facilities to complete. Single reporting window is desired for purposes of data accuracy and reporting compliance practicality.	The AMD EI requirements are more detailed and have additional data elements not captured by the NPRI. The NPRI has incomplete source-level reporting, amalgamates various sources and excludes some emission sources (e.g., oil sands mine fleets). There are also differences in how the NPRI defines and regulates facilities versus how a facility is defined and regulated under an EPEA approval. There is currently no agreement in place between Alberta and Environment Canada on air emissions data collection and several past attempts at harmonizing the 1989 AMD NOx and SO2 emissions inventory reporting requirements with the NPRI were not successful. One obstacle to potential future harmonization with the NPRI is the lack of modern emissions reporting requirements in Alberta. AEP has critically examining the proposed emissions inventory requirements against feedback.	No changes made.
7.0	7.0	If additional information is required, we would be open to working with the government to provide the data in an efficient manner, such that a second, parallel reporting system would not be required.	The existing annual air emissions inventory and reporting requirements are contained in the 1989 AMD. As these requirements have not been revised in 25 years, the modernization of this requirements has been quite extensive, but does still represent an update to the AMD. The annual emissions inventory reporting requirements were moved out of the annual report section of the AMD Reporting Chapter, simply to give industrial operations more time to prepare the information (i.e. Sept 30th submission deadline instead of March 15/31).	No changes made.

Section	Clause	Comment	Response	Action Taken
7.0	7.0	If facilities were required to send in a copy of the report submitted to the NPRI SWIMS website, it would have the majority of the information that is required by Section 7, but in PDF format. Please consider aligning the requirements of the Industrial Emissions Inventory Reporting to the NPRI for efficiency and to reduce industry's reporting burden. This would allow facilities to report the same data to the NPRI as well as the AMD.	The AMD EI requirements are more detailed and have additional data elements not captured by the NPRI. The NPRI has incomplete source-level reporting, amalgamates various sources and excludes some emission sources (e.g., oil sands mine fleets). There are also differences in how the NPRI defines and regulates facilities versus how a facility is defined and regulated under an EPEA approval. There is currently no agreement in place between Alberta and Environment Canada on air emissions data collection and several past attempts at harmonizing the 1989 AMD NOx and SO2 emissions inventory reporting requirements with the NPRI were not successful. One obstacle to potential future harmonization with the NPRI is the lack of modern emissions reporting requirements in Alberta. AEP has critically examining the proposed emissions inventory requirements against feedback.	No changes made.
7.0	7.0	If we know the intent behind the changes, we can help streamline the process/get higher quality information.	The intent is to collect critical (and verified) emissions inventory data required to meet Regulator business requirements. In 2015, the GOA is still using the 2006-2008 source-level emissions data that was collecting through the Alberta Industrial Air Emissions Survey. There have also been numerous additional emissions inventory projects carried out over the last few years, which also demonstrate that what is currently being collected through EPEA approvals and the NPRI is not sufficient to meet key Regulator business requirements. The AMD emissions inventory data is required to support: regulatory management, air modelling, scientific assessments, policy development, regional planning, negotiating with the Federal Government on national AQ frameworks (such as AQMS/BLIERs), and the overall Cumulative Effects Management System.	No changes made.
7.0	7.0	Includes facilities that currently do not record or report these emission sources (which means that there may be data quality issues with including so many smaller facilities).	The Annual Emissions Inventory Reporting requirements only apply to EPEA approved facilities. As the revised CAC reporting thresholds are now more consistent with the CAC reporting thresholds of the NPRI, it is not expected there will be many facilities required to submit an AMD Annual Emissions Inventory Report who does not do some kind of air emissions reporting to the NPRI.	No changes made.
7.0	7.0	Industrial Emissions Inventory Reporting as required by the AMD is almost equivalent to the annual National Pollutant Release Inventory (NPRI) reporting with more stringent requirements. It is noted that around 17 substances given in Appendix C, Schedule 2 of the AMD are not NPRI reportable substances (e.g.: 1, 1,1, Trichloroethane, Beryllium (and its compound), etc.) that will require additional work to evaluate.	Several non-NPRI reportable substances have been removed from AMD emissions inventory reporting. Several substances have been changed to require the same isomer/isomer group as the NPRI reportable substances.	Several non-NPRI reportable substances have been removed from AMD emissions inventory reporting. Several substances have been changed to require the same isomer/isomer group as the NPRI reportable substances.
7.0	7.0	Is the inventory guidance document just guidance or will it have mandatory requirements?	Changed "Annual Emissions Inventory Report Guidance Document to "Annual Emissions Inventory Report Standard and Guidance Document" to reflect the fact that some requirements and methods will be mandatory, along with the guidance provided in the document.	Changed "Annual Emissions Inventory Report Guidance Document to "Annual Emissions Inventory Report Standard and Guidance Document" to reflect the fact that some requirements and methods will be mandatory, along with the guidance provided in the document.
7.0	7.0	It may be of benefit for the Government of Alberta to work collaboratively with the Government of Canada’s National Pollutant Release Inventory (NPRI), instead of duplicating the process. Would recommend that AESRD obtain the Annual Emissions Inventory Reporting data directly from Environment Canada to ensure consistency in emissions data across provincial and federal jurisdictions. Also starting 2011 yearly NPRI data is available in excel spreadsheet and prior to 2011 data is available in Microsoft Access Format in the NPRI Website.	The AMD EI requirements are more detailed and have additional data elements not captured by the NPRI. The NPRI has incomplete source-level reporting, amalgamates various sources and excludes some emission sources (e.g., oil sands mine fleets). There are also differences in how the NPRI defines and regulates facilities versus how a facility is defined and regulated under an EPEA approval. There is currently no agreement in place between Alberta and Environment Canada on air emissions data collection and several past attempts at harmonizing the 1989 AMD NOx and SO2 emissions inventory reporting requirements with the NPRI were not successful. One obstacle to potential future harmonization with the NPRI is the lack of modern emissions reporting requirements in Alberta. AEP has critically examining the proposed emissions inventory requirements against feedback.	No changes made.

Section	Clause	Comment	Response	Action Taken
7.0	7.0	Maybe move from annual to once every 3-5 years.	One-off data collections have been used in the past (both voluntary and mandatory) and the results have been mixed. All of the requested data is often not provided, or not provided within the required timelines. One-off data collections become dated fairly quickly and usually lack the necessary mechanism to keep them updated. One-off data collections are usually only done for specific projects, and the results may or may not be adaptable to other Regulator business requirements. This then leads to having to start over from scratch for other projects. In terms of administration and available resources, one-off data collections are usually more difficult to successfully complete. It is much more difficult for both industry and government to have the required time available and staff in place for one-off data collections. Regulatory reporting programs are ongoing and help establish expectations for what information will be required, timelines for reporting and resources that will be required. They are annually updated, although much of the information will not need to be updated annually and the same reporting form can be used. They also allow for the easy incorporation of new and modified sources and the removal of sources no longer emitting. They also represent higher-quality compliance data that has been certified by the individual operators who are most familiar with how their plants operate and emit to the atmosphere.	No changes made.
7.0	7.0	Missing information required for regulatory dispersion modelling.	Added requirement for information on building dimensions, storage tanks and exposed storage piles.	Added requirement for information on building dimensions, storage tanks and exposed storage piles.
7.0	7.0	NPRI follows a "reasonable effort" approach for the data refinement, which is "fit for purpose" and we support this approach. We would like to understand the "reasonability" of this report. This report will require a significant increase of time from the industry to ensure compliance, for not much more benefit. We support harmonization between the provincial and federal government, but this reporting requirement is very much misaligned.	Under EPEA, the person responsible is required to take reasonable steps to meet the requirements set out in EPEA and the associated regulations, codes, directives, standards, etc. Therefore reasonable effort must be made to comply with the AMD requirements. This would not require the industrial operation to attempt to physically measure air pollutant releases from all on-site release points and non-point sources. When physical measurements (e.g., CEMS) are already required under an industrial operation's EPEA approval conditions, such measurement data should be used in the emissions inventory. When no actual measurements are available (and where no specific method has been prescribed by the Director), the AMD simply requires using: available methodologies, emission factors, equations and calculations that are: (i) based on the best information available, (ii) applicable to the particular industrial operation and its operating conditions; and (iii) if applicable, widely used and accepted by the industrial sector to which the industrial operation belongs.	No changes made.
7.0	7.0	Object/Clarify: This information is very similar to NPRI with more reporting information required.	The AMD EI requirements are more detailed and have additional data elements not captured by the NPRI. The NPRI has incomplete source-level reporting, amalgamates various sources and excludes some emission sources (e.g., oil sands mine fleets). There are also differences in how the NPRI defines and regulates facilities versus how a facility is defined and regulated under an EPEA approval. There is currently no agreement in place between Alberta and Environment Canada on air emissions data collection and several past attempts at harmonizing the 1989 AMD NOx and SO2 emissions inventory reporting requirements with the NPRI were not successful. One obstacle to potential future harmonization with the NPRI is the lack of modern emissions reporting requirements in Alberta. AEP has critically examining the proposed emissions inventory requirements against feedback.	No changes made.
7.0	7.0	On an annual basis, will data even be able to be collected and analyzed by AER?	The submitted data will be pulled into a database and used to support a variety of Regulator business requirements. The AMD emissions inventory data is required to support: regulatory management, air modelling, scientific assessments, policy development, regional planning, negotiating with the Federal Government on national AQ frameworks (such as AQMS/BLIERs), and the overall Cumulative Effects Management System.	No changes made.

Section	Clause	Comment	Response	Action Taken
7.0	7.0	Our association has concerns regarding Section 7.0 of the Reporting Chapter. The required Annual Emission Inventory would be a daunting task requiring, in our opinion, unnecessary efforts from cement plants, without significant added benefit. Again, we believe that AESRD has already access to the data necessary to produce such an inventory through internal data as well as the NPRI. We support the collection and dissemination of accurate and standardized data, which the inventory seems to suggest, but we believe there are methods to accomplish this with available resources. Our association also has questions related to impartiality and ensuring that comprehensive data collection is accomplished.	In 2015, the GOA is still using the 2006-2008 source-level emissions data that was collecting through the Alberta Industrial Air Emissions Survey. The numerous additional emissions inventory projects carried out over the last few years also demonstrate that what is currently being collected through EPEA approvals and the NPRI is not sufficient to meet key Regulator business requirements. The AMD emissions inventory data is required to support: regulatory management, air modelling, scientific assessments, policy development, regional planning, negotiating with the Federal Government on national AQ frameworks (such as AQMS/BLIERs), and the overall Cumulative Effects Management System.	No changes made.
7.0	7.0	Our company has performed a review of the proposed changes to the ESRD AMD Chapter 9: Reporting (as released in draft in September, 2014). We have identified a number of items above with respect to which we have concerns or seek clarification on. Overall, our company is concerned that the new requirements for emissions inventory will result in a substantially greater level of effort and unnecessary administrative burden for data collection, calculation, systems development, and records management.	In 2015, the GOA is still using the 2006-2008 source-level emissions data that was collecting through the Alberta Industrial Air Emissions Survey. There have also been numerous additional emissions inventory projects carried out over the last few years, which also demonstrate that what is currently being collected through EPEA approvals and the NPRI is not sufficient to meet key Regulator business requirements. The AMD emissions inventory data is required to support: regulatory management, air modelling, scientific assessments, policy development, regional planning, negotiating with the Federal Government on national AQ frameworks (such as AQMS/BLIERs), and the overall Cumulative Effects Management System.	No changes made.
7.0	7.0	Our company is concerned that industry data quality could be compromised due to the substantial increase in the new reporting requirement prescribed in the AMD. We would like to better understand the rationale behind these asks and how and where AESRD intends to use this data.	In 2015, the GOA is still using the 2006-2008 source-level emissions data that was collecting through the Alberta Industrial Air Emissions Survey. There have also been numerous additional emissions inventory projects carried out over the last few years, which also demonstrate that what is currently being collected through EPEA approvals and the NPRI is not sufficient to meet key Regulator business requirements. The AMD emissions inventory data is required to support: regulatory management, air modelling, scientific assessments, policy development, regional planning, negotiating with the Federal Government on national AQ frameworks (such as AQMS/BLIERs), and the overall Cumulative Effects Management System.	No changes made.
7.0	7.0	Our company is unable to fully assess Chapter 9 without a review of all supporting documentation listed in the AMD, much of which has yet to be provided by the AESRD (e.g. Alberta's Ambient Air Quality Data Warehouse: Data Submitter's Guide, Annual Emissions inventory Guidance Document, etc.). Our company believes the AMD Chapter 9 should not be adopted until a complete review is done, which includes the release of the supporting documentation and reference documents.	Referenced guidance documents will go out for public comment once they are drafted, and will be available prior to their required use in reporting under the AMD.	No changes made.
7.0	7.0	Our company needs a clear strategy and communication from AESRD on the data that is being asked for, who will use the data and how the data will be used.	The emissions data is being collected under the authority of EPEA, the Substance Release Regulation and the Air Monitoring Directive. Any non-confidential data could potentially be accessed by the public. It is at the Director's discretion what non-confidential data is routinely published, and in what format. AEP has stated its future intent on publishing at least some of the collected data to support regulatory dispersion modelling, stakeholder regional modelling and AEMERA's role of informing the public. The AMD emissions inventory data is required for a variety of internal business requirements of AEP and the AER. The AMD emissions inventory data is required to support: regulatory management, air modelling, scientific assessments, policy development, regional planning, negotiating with the Federal Government on national AQ frameworks (such as AQMS/BLIERs), and the overall Cumulative Effects Management System.	No changes made.

Section	Clause	Comment	Response	Action Taken
7.0	7.0	Our company would be willing to work with ESRD to provide additional data as needed, but does not feel that the AMD is the appropriate place for this additional request. A regulatory requirement of this magnitude would likely better be introduced by new separate independent legislation rather than added to the AMD. A regulatory requirement of this magnitude would likely better be introduced by new separate independent legislation rather than added to the AMD. This would allow time for sufficient consultation with stakeholders.	The existing annual air emissions inventory and reporting requirements are contained in the 1989 AMD. As these requirements have not been revised in 25 years, the modernization of this requirements has been quite extensive, but does still represent an update to the AMD. The annual emissions inventory reporting requirements were moved out of the annual report section of the AMD Reporting Chapter, simply to give industrial operations more time to prepare the information (i.e. Sept 30th submission deadline instead of March 15/31). In terms of consultation, the AMD Reporting Chapter will have gone through two formal public comment periods. Several webcasts have been carried out to present the information to stakeholders and allow for additional comments and questions to be submitted. There have also several face-to-face meetings with select industry stakeholders. Significant feedback has been provided by industry and the second public comment period will allow for additional comments to be provided. This is not the first attempt at modernizing emissions inventory reporting in Alberta. Previously provided feedback and input into proposed systems have been considered as well.	No changes made.
7.0	7.0	Our company would like to better understand the purpose and intended use of the emissions inventory data requested as currently the benefits or outcomes associated with the extensive effort to meet these new emissions inventory reporting requirements are not understood.	In 2015, the GOA is still using the 2006-2008 source-level emissions data that was collecting through the Alberta Industrial Air Emissions Survey. There have also been numerous additional emissions inventory projects carried out over the last few years, which also demonstrate that what is currently being collected through EPEA approvals and the NPRI is not sufficient to meet key Regulator business requirements. The AMD emissions inventory data is required to support: regulatory management, air modelling, scientific assessments, policy development, regional planning, negotiating with the Federal Government on national AQ frameworks (such as AQMS/BLIERs), and the overall Cumulative Effects Management System.	No changes made.
7.0	7.0	Our company would like to extend an offer to send in one of our NPRI reports to show the similarities between it and the AMD Emissions Inventory Reporting to facilitate your evaluation of this comment. Please let us know if this would be something Alberta Environment and Sustainable Resource Development would be interested in.	The AMD EI requirements are more detailed and have additional data elements not captured by the NPRI. The NPRI has incomplete source-level reporting, amalgamates various sources and excludes some emission sources (e.g., oil sands mine fleets). There are also differences in how the NPRI defines and regulates facilities versus how a facility is defined and regulated under an EPEA approval. There is currently no agreement in place between Alberta and Environment Canada on air emissions data collection and several past attempts at harmonizing the 1989 AMD NOx and SO2 emissions inventory reporting requirements with the NPRI were not successful. One obstacle to potential future harmonization with the NPRI is the lack of modern emissions reporting requirements in Alberta. AEP has critically examining the proposed emissions inventory requirements against feedback.	No changes made.
7.0	7.0	Our company would like to propose that further engagement be undertaken between ESRD and industry regarding the frequency, thresholds, and content of the emissions inventory reporting.	In terms of consultation, the AMD Reporting Chapter will have gone through two formal public comment periods. Several webcasts have been carried out to present the information to stakeholders and allow for additional comments and questions to be submitted. There have also several face-to-face meetings with select industry stakeholders. Significant feedback has been provided by industry and the second public comment period will allow for additional comments to be provided. This is not the first attempt at modernizing emissions inventory reporting in Alberta. Previously provided feedback and input into proposed systems have been considered as well.	No changes made.
7.0	7.0	Overlapping provincial and federal requirements may result in similar data being reporting in the public domain. This has the potential to confuse the public.	As there are differences between the federal and provincial programs, there may be differences in the information being reported. AMD emissions inventory reporting will stand alone and will be separate from NPRI reporting. Data presented in reports and otherwise published will clearly identify the sources of the information and indicate that the data may be different from other reporting programs due to different regulatory reporting requirements, different facility definitions, different methodologies, etc.	No changes made.
7.0	7.0	Section 7 guidance document has not yet been released neither has chapter 4 of the AMD, both of which are referenced in this Section. This makes Section 7 difficult to review.	There will be the opportunity to review the guidance documents once they are drafted. The main reporting requirements are set out in the AMD, and you are encouraged to provide comments on these requirements. AMD Chapter 4 has since been released for 60-day public comment and comments have now been received.	No changes made.

Section	Clause	Comment	Response	Action Taken
7.0	7.0	Section 7 is very similar to the National Pollutant Release Inventory (NPRI) reporting requirements. In the webcast on September 23, 2014 it was stated that the AMD emissions inventory reporting requires more detailed information and contains additional elements not covered by the NPRI. The reports that are filled out electronically by facilities for the NRPI, through SWIM, contain the same information that the Air Monitoring Directive Section 7 requires. The information that can be searched on the NPRI website is a summary of the data submitted and does not contain specific information. • This includes each stack/point air releases and non-point source releases, storage and handling releases and fugitive releases, a method of estimation and a reason for changes from the previous year.	The AMD EI requirements are more detailed and have additional data elements not captured by the NPRI. Stack-level reporting in the NPRI is only for stacks taller than 50 metres. There are exemptions for some non-combustion sources. Non-point sources are in some cases too summarized and do not capture all non-point sources (e.g., mine fleets). The method of estimation is not for each individual point and non-point source and thus does not accurately represent the potentially different methods used for each individual source. The NPRI does not require consistent methodologies year-to-year and facilities are not necessarily defined the same between the NPRI and under EPEA. Changes in annual emissions may therefore differ between NPRI and AMD emissions inventory reporting.	No changes made.
7.0	7.0	Should the maximum emission rate based on limits be based on the normal limit or the emergency/upset limit?	This will be clarified in the Annual Emissions Inventory Report Standard and Guidance Document.	No changes made.
7.0	7.0	Some threshold reporting levels are different. This would be additional administrative task as another set of data sheets would be required.	This has been modified to 20 tonnes for NOx and SO2 for consistency with NPRI reporting.	This has been modified to 20 tonnes for NOx and SO2 for consistency with NPRI reporting.
7.0	7.0	The Annual Emissions Inventory Reporting appears to be a direct duplication of the National Pollutant Release Inventory.	The AMD EI requirements are more detailed and have additional data elements not captured by the NPRI. The NPRI has incomplete source-level reporting, amalgamates various sources and excludes some emission sources (e.g., oil sands mine fleets). There are also differences in how the NPRI defines and regulates facilities versus how a facility is defined and regulated under an EPEA approval. There is currently no agreement in place between Alberta and Environment Canada on air emissions data collection and several past attempts at harmonizing the 1989 AMD NOx and SO2 emissions inventory reporting requirements with the NPRI were not successful. One obstacle to potential future harmonization with the NPRI is the lack of modern emissions reporting requirements in Alberta. AEP has critically examining the proposed emissions inventory requirements against feedback.	No changes made.
7.0	7.0	The Annual Emissions Inventory should not be part of the AMD renewal. This is not an update; it is a new requirement that needs a corresponding policy change.	The existing annual air emissions inventory and reporting requirements are contained in the 1989 AMD. As these requirements have not been revised in 25 years, the modernization of this requirements has been quite extensive, but does still represent an update to the AMD. The annual emissions inventory reporting requirements were moved out of the annual report section of the AMD Reporting Chapter, simply to give industrial operations more time to prepare the information (i.e. Sept 30th submission deadline instead of March 15/31).	No changes made.
7.0	7.0	The inventory reporting workbook does not lend itself to automation, and the volume of data requested would make annual reporting too cumbersome (for both industry and government).	The use of locked Microsoft Excel forms will potentially allow for industrial operations to use VBA scripts to populate the reporting form. This ability will depend on how the industrial operation stores the information internally, but VBA scripts were how the 2006-2008 Alberta Industrial Air Emissions Survey forms were pre-populated prior to being distributed to facilities. Much of the information in the form will not change from one year to the next (e.g., list of sources, stack locations, etc), however, annual air emissions can vary from one year to the next. The same reporting form can be used from one year to the next and industrial operations can simply update the information that has changed and report the additional information required for the specific calendar year.	No changes made.
7.0	7.0	The National Emissions Inventory section expressly identifies PEMS and shared CEMS, should these also be in the other sections?	CEMS data submission and summary forms are covered in the other AMD RC sections. Predictive Emission Monitoring Systems (PEMS) are not that common and therefore probably don't need to be covered by the AMD at this time. If this type of monitoring is required under an approval, then the PEMS monitoring results and summaries should be reported as specified by the approval.	No changes made.

Section	Clause	Comment	Response	Action Taken
7.0	7.0	The new emissions inventory reporting requirements will result in substantial effort on behalf of operators to collect, calculate, and report this data. It will also involve the creation of new systems to collect, manage, and maintain data records. Our company is concerned that the level of detail and list of substances in Schedule 2 will result in an enormous volume of data required for submission. Large volumes of data may result in reduced quality of data which in turn could cause public scrutiny of emissions that may or may not be relevant. Our company encourages ESRD to consider reducing the data reporting requirements in an effort to improve the quality of data reported.	Reporting is not necessarily required for every schedule 2 substance, only the applicable substances as described in the AMD Reporting Chapter. The schedule 2 substance list has been revised somewhat.	The schedule 2 substance list has been revised somewhat.
7.0	7.0	The practicality of delivering on the volume of data required should be reviewed and the priorities and alternatives for reporting should be identified. In certain circumstances a leaner approach could be more practical and achievable. Our company has ideas on how this could be managed once the intent of the requirement is understood.	The intent is to collect critical (and verified) emissions inventory data required to meet Regulator business requirements. AMD emissions inventory requirements have been reviewed against submitted feedback and several changes have been made.	Various changes made to emissions inventory requirements.
7.0	7.0	The proposed changes are redundant and parallel to already existing annual reporting requirements under the Federal National Pollutant Reporting Inventory (NPRI).	The AMD EI requirements are more detailed and have additional data elements not captured by the NPRI. The NPRI has incomplete source-level reporting, amalgamates various sources and excludes some emission sources (e.g., oil sands mine fleets). There are also differences in how the NPRI defines and regulates facilities versus how a facility is defined and regulated under an EPEA approval. There is currently no agreement in place between Alberta and Environment Canada on air emissions data collection and several past attempts at harmonizing the 1989 AMD NOx and SO2 emissions inventory reporting requirements with the NPRI were not successful. One obstacle to potential future harmonization with the NPRI is the lack of modern emissions reporting requirements in Alberta. AEP has critically examining the proposed emissions inventory requirements against feedback.	No changes made.
7.0	7.0	The quantification document should include a map of the point and non-point sources at the facility.	Added requirement to include a map of release points and non-point sources at the industrial operation in the Quantification Methodology Document.	Added requirement to include a map of release points and non-point sources at the industrial operation in the Quantification Methodology Document.
7.0	7.0	The use of Chapter 9 of the Air Monitoring Directive to collect "air data" and "emissions inventory data" is not aligned with the purpose of the AMD as expressed in Chapter 1, which was to outline minimum requirements for collection and reporting of air monitoring data.	The stated purpose of the Reporting Chapter (see section 1.2) is to : • establish the minimum requirements for the reporting of air data and summarized information to the Regulator; • standardize the types, content and format of air data and reports; • establish minimum reporting frequencies and deadlines; • establish and/or reference procedures for the submission of air data and reports; and • provide guidance on the reporting of air data and interpreted information. The 1989 AMD outlined emissions inventory reporting requirements, as well as reporting of various types of source and ambient air data.	No changes made.
7.0	7.0	This entire section is extremely onerous and is redundant with Environment Canada's NPRI reporting. Acknowledge that ESRD is requiring additional information that is not included in NPRI submissions, however with limited resources, the time to compile the additional information required by ESRD is extensive.	In 2015, the GOA is still using the 2006-2008 source-level emissions data that was collecting through the Alberta Industrial Air Emissions Survey. There have also been numerous additional emissions inventory projects carried out over the last few years, which also demonstrate that what is currently being collected through EPEA approvals and the NPRI is not sufficient to meet key Regulator business requirements. The AMD emissions inventory data is required to support: regulatory management, air modelling, scientific assessments, policy development, regional planning, negotiating with the Federal Government on national AQ frameworks (such as AQMS/BLIERs), and the overall Cumulative Effects Management System.	No changes made.

Section	Clause	Comment	Response	Action Taken
7.0	7.0	This is a modified version of the NPRI reporting with much more stringent requirements, higher level of details and reduced thresholds. The 20,000 man hour NPRI threshold which differentiate the "large" facilities from "small" is not applicable which means that the same requirements apply despite the size of the facility. We support the NPRI approach of using the 20,000 man hours threshold to differentiate the "large" facilities from "small" facilities and reporting only CAC's, from combustion sources only, for the small facilities.	The AMD emissions inventory requirements only apply to facilities with an EPEA approval.	No changes made.
7.0	7.0	This is overly onerous on companies and should be removed - most of this information is available through other sources already such as NPRI. This would create an additional reporting requirement with essentially identical data being reported.	The AMD EI requirements are more detailed and have additional data elements not captured by the NPRI. The NPRI has incomplete source-level reporting, amalgamates various sources and excludes some emission sources (e.g., oil sands mine fleets). There are also differences in how the NPRI defines and regulates facilities versus how a facility is defined and regulated under an EPEA approval. There is currently no agreement in place between Alberta and Environment Canada on air emissions data collection and several past attempts at harmonizing the 1989 AMD NOx and SO2 emissions inventory reporting requirements with the NPRI were not successful. One obstacle to potential future harmonization with the NPRI is the lack of modern emissions reporting requirements in Alberta. AEP has critically examining the proposed emissions inventory requirements against feedback.	No changes made.
7.0	7.0	We encourage future discussions/consultations with AESRD to address these requirements.	In terms of consultation, the AMD Reporting Chapter will have gone through two formal public comment periods. Several webcasts have been carried out to present the information to stakeholders and allow for additional comments and questions to be submitted. There have also several face-to-face meetings with select industry stakeholders. Significant feedback has been provided by industry and the second public comment period will allow for additional comments to be provided. This is not the first attempt at modernizing emissions inventory reporting in Alberta. Previously provided feedback and input into proposed systems have been considered as well.	No changes made.
7.0	7.0	We request that ESRD clarify what their intended use of the reporting data is and if there are alternative methods to meet these needs.	In 2015, the GOA is still using the 2006-2008 source-level emissions data that was collecting through the Alberta Industrial Air Emissions Survey. There have also been numerous additional emissions inventory projects carried out over the last few years, which also demonstrate that what is currently being collected through EPEA approvals and the NPRI is not sufficient to meet key Regulator business requirements. The AMD emissions inventory data is required to support: regulatory management, air modelling, scientific assessments, policy development, regional planning, negotiating with the Federal Government on national AQ frameworks (such as AQMS/BLIERs), and the overall Cumulative Effects Management System.	No changes made.
7.0	7.0	We would like to understand the "reasonability" of this report. This report will require a significant increase of time from the industry to ensure compliance, for not much more benefit. We support harmonization between the provincial and federal government, but this reporting requirement is very much misaligned.	EPEA approved industrial operations should have the required information on their release points, non-point sources, air emissions of applicable substances, etc. or should be able to prepare the information with a reasonable effort as required by EPEA. In 2015, the GOA is still using the 2006-2008 source-level emissions data that was collecting through the Alberta Industrial Air Emissions Survey. There have also been numerous additional emissions inventory projects carried out over the last few years, which also demonstrate that what is currently being collected through EPEA approvals and the NPRI is not sufficient to meet key Regulator business requirements. The AMD emissions inventory data is required to support: regulatory management, air modelling, scientific assessments, policy development, regional planning, negotiating with the Federal Government on national AQ frameworks (such as AQMS/BLIERs), and the overall Cumulative Effects Management System. There may also be the opportunity to develop a standardized starting dataset for EIA application/renewal AQ modelling, which may help to reduce costs for developing emissions inventories for regulatory dispersion modelling.	No changes made.

Section	Clause	Comment	Response	Action Taken
7.0	7.0	What is the policy intent of the Section 7 Requirements (Annual Emissions Inventory)?	The intent is to collect critical (and verified) emissions inventory data required to meet Regulator business requirements. In 2015, the GOA is still using the 2006-2008 source-level emissions data that was collecting through the Alberta Industrial Air Emissions Survey. There have also been numerous additional emissions inventory projects carried out over the last few years, which also demonstrate that what is currently being collected through EPEA approvals and the NPRI is not sufficient to meet key Regulator business requirements. The AMD emissions inventory data is required to support: regulatory management, air modelling, scientific assessments, policy development, regional planning, negotiating with the Federal Government on national AQ frameworks (such as AQMS/BLIERs), and the overall Cumulative Effects Management System.	No changes made.
7.0	7.0	What is the process to communicate if the authorization boundaries and the National Emissions Inventory boundaries are not the same?	An industrial operation is defined in the AMD as "any facility, plant, site, mine, structure or thing where any activity listed in the Activities Designation Regulation occurs, including all the buildings, equipment, machinery and vehicles that are an integral part of the activity". The AMD emissions inventory requirements only apply to industrial operations with an EPEA approval and should capture what is specified in this definition. The NPRI defines a facility differently and there could well be differences in a facility's boundaries in that program. There is no need to notify either AEP/AER or Environment Canada of differences in facility boundaries, as these are separate regulatory reporting programs with different definitions and requirements.	No changes made.
7.0	7.0	Why is Section 7: "Industrial Emissions Inventory Reporting" included in the Air Monitoring Directive when emission inventory is not directly related to monitoring?	The existing annual air emissions inventory and reporting requirements are contained in the 1989 AMD. The definition of "monitoring" is very broad and is usually defined along the lines of "observing and checking the progress, quality or change of something over time". While many sources are not physically measured, the use of mathematical models and factors to estimate releases of pollutants to the atmosphere does constitute a type of monitoring. Emissions inventories are used to observe and track what is being released into the atmosphere in a given year and over time.	No changes made.
7.0	7.0	Will all schedule 2 substances need to be inventoried?	Reporting is not necessarily required for every schedule 2 substance, only the applicable substances as described in the AMD Reporting Chapter. Changed schedule 2 substance reporting requirements to "applicable substances" and added guidance on what constitutes an applicable schedule 2 substance.	Changed schedule 2 substance reporting requirements to "applicable substances" and added guidance on what constitutes an applicable schedule 2 substance.
7.0	7.0	With the changes proposed in Chapter 9, industry will be required to submit reports: monthly (AMD required + approval required as applicable + CEMS e-submissions) + quarterly (CEMS Summary) + annually (AMD required + approval required (incl. CEMS)) + GHG/SGER reporting by end of March (which includes a 3rd party verification) + NPRI + Environment Canada GHG due in June + AB Emissions Inventory Reporting in September The list above also doesn't contemplate the fact that industry also has reporting requirements for fugitive emissions, wastewater, groundwater, soils, and waste in addition to air. To say that this level of reporting is "onerous" on industry is an extreme understatement. The additional burden of the AB Emissions Inventory Report is a duplication of effort that does not appear to add additional value going forward. It is recommended that ESRD work with Environment Canada (NPRI) to get the emissions data needed. Remove 7.0 from Chapter 9.	The AMD EI requirements are more detailed and have additional data elements not captured by the NPRI. The NPRI has incomplete source-level reporting, amalgamates various sources and excludes some emission sources (e.g., oil sands mine fleets). There are also differences in how the NPRI defines and regulates facilities versus how a facility is defined and regulated under an EPEA approval. There is currently no agreement in place between Alberta and Environment Canada on air emissions data collection and several past attempts at harmonizing the 1989 AMD NOx and SO2 emissions inventory reporting requirements with the NPRI were not successful. One obstacle to potential future harmonization with the NPRI is the lack of modern emissions reporting requirements in Alberta. AEP has critically examining the proposed emissions inventory requirements against feedback.	No changes made.

Section	Clause	Comment	Response	Action Taken
7.0	7.0	Would industry be expected to add continuous monitoring in order to facilitate actual values for emission and non-emission release points?	Under EPEA, the person responsible is required to take reasonable steps to meet the requirements set out in EPEA and the associated regulations, codes, directives, standards, etc. Therefore reasonable effort must be made to comply with the AMD requirements. This would not require the industrial operation to attempt to physically measure air pollutant releases from all on-site release points and non-point sources. When physical measurements (e.g., CEMS) are already required under an industrial operation's EPEA approval conditions, such measurement data should be used in the emissions inventory. When no actual measurements are available (and where no specific method has been prescribed by the Director), the AMD simply requires using: available methodologies, emission factors, equations and calculations that are: (i) based on the best information available, (ii) applicable to the particular industrial operation and its operating conditions; and (iii) if applicable, widely used and accepted by the industrial sector to which the industrial operation belongs.	No changes made.
7.1	7.1	RC 7-A should be reworded for consistency with the wording in the Regulation.	Changed RC 7-A for consistency with the proposed changes to the Substance Release Regulation.	Changed RC 7-A for consistency with the proposed changes to the Substance Release Regulation.
7.1	7.1	RC 7-C and RC 7-D should be removed for consistency with the wording in the Regulation.	Removed RC 7-C and RC 7-D for consistency with the proposed changes to the Substance Release Regulation.	Removed RC 7-C and RC 7-D for consistency with the proposed changes to the Substance Release Regulation.
7.1	7-A	RC 7-A The target first year reporting timeline of September 2017 for reporting 2016 full year emissions inventory is too tight to accomplish considering the facility coverage and information details required; and given that the guidance document is not yet available. Would AESRD consider having a tiered approach to cover large facilities (e.g. Gas Plants and large Compressor Stations where NOx emissions are greater than 16 kg/hr.) for the first five- year of the inventory reporting (once the updated AMD becomes in effect) and inclusion of smaller facilities after initial five-years.	The AMD emissions inventory requirements only apply to facilities with an EPEA approval. The first year of the revised AMD emissions inventory reporting has been pushed back to 2018 (for reporting of 2017 emissions data).	The first year of the revised AMD emissions inventory reporting has been pushed back to 2018 (for reporting of 2017 emissions data).
7.1	7-A	RC-7-A "…the person responsible must annually conduct an inventory …" Is intent that an annual emissions inventory be prepared and submitted for all facilities with EPEA Approvals and Code of Practice registrations? This contradicts AMD Chapter 1, Section 1.0. Refer to comments above.	The AMD emissions inventory requirements only apply to facilities with an EPEA approval.	No changes made.
7.1	7-C	RC 7-C states that actual air emissions for the substances listed in Schedule 1 of the Air Monitoring Directive must be quantified.	Annual actual air emissions are defined in the AMD as "the actual, measured or estimated quantity of a substance being emitted to the atmosphere from a source during a specific calendar year". Industrial operations are not required to physically measure emissions from all sources. Where physical measurements are not elsewise being done, and where no methodology has been prescribed by the Director, appropriate estimations meeting the requirements set out in section 7 of the AMD Reporting Chapter are acceptable.	No changes made.

Section	Clause	Comment	Response	Action Taken
7.1	7-C	RC 7-C "… for each air emission release point and air emission non-point source at the industrial operation" Since there has been no requirement for reporting at an individual stack level, considerable investment will be required to develop reporting systems capable of reporting at an individual stack level and then to conduct reporting annually on that basis. How will the data be used, and what are the benefits that outweigh the cost and administrative burden associated with this level of reporting?	Under EPEA, the person responsible is required to take reasonable steps to meet the requirements set out in EPEA and the associated regulations, codes, directives, standards, etc. Therefore reasonable effort must be made to comply with the AMD requirements. This would not require the industrial operation to attempt to physically measure air pollutant releases from all on-site release points and non-point sources. When physical measurements (e.g., CEMS) are already required under an industrial operation's EPEA approval conditions, such measurement data should be used in the emissions inventory. When no actual measurements are available (and where no specific method has been prescribed by the Director), the AMD simply requires using: available methodologies, emission factors, equations and calculations that are: (i) based on the best information available, (ii) applicable to the particular industrial operation and its operating conditions; and (iii) if applicable, widely used and accepted by the industrial sector to which the industrial operation belongs. In 2015, the GOA is still using the 2006-2008 source-level emissions data that was collecting through the Alberta Industrial Air Emissions Survey. There have also been numerous additional emissions inventory projects carried out over the last few years, which also demonstrate that what is currently being collected through EPEA approvals and the NPRI is not sufficient to meet key Regulator business requirements. The AMD emissions inventory data is required to support: regulatory management, air modelling, scientific assessments, policy development, regional planning, negotiating with the Federal Government on national AQ frameworks (such as AQMS/BLIERs), and the overall Cumulative Effects Management System.	No changes made.
7.1	7-C	This is another example of redundant/excessive reporting. The requirement for “non-point source” reporting is potentially confusing for non-mining operations. Outside of fugitive emissions (which are already reported), what else is expected for non-point sources? Industry already provides fugitive emission monitoring results – this requirement appears to require industry to compile and resubmit the existing data in another form/format. It is recommended that the requirement for non-point source reporting be scoped to only non-point sources which include MORE THAN fugitive emissions.	The AMD Reporting Chapter requires the preparation of a complete facility inventory and reporting of air emissions from the release points and non-point sources at the industrial operation. If a facility only has fugitive emissions, then the reporting of this non-point source should not be that onerous. It is not practical for the Regulator to gather additional emissions data from separate monitoring reports for a variety of different sources at over 350 facilities to account for non-inventoried sources at EPEA approved sites. Examples of non-mining operation non-point sources include: materials handling, non-stationary equipment, plant fugitive leaks, storage tanks, road dust, space heating, etc.	No changes made.
7.1	7-C	Note the difficulty in quantifying 'annual actual' emissions for non-point sources.	Annual actual air emissions are defined in the AMD as "the actual, measured or estimated quantity of a substance being emitted to the atmosphere from a source during a specific calendar year". Industrial operations are not required to physically measure emissions from all sources. Where physical measurements are not elsewise being done, and where no methodology has been prescribed by the Direct, appropriate estimations meeting the requirements set out in section 7 of the AMD Reporting Chapter are acceptable.	No changes made.
7.1	7-D	Consider changing the word "actual" to "actual and/or estimated"	Annual actual air emissions are defined in the AMD as "the actual, measured or estimated quantity of a substance being emitted to the atmosphere from a source during a specific calendar year". Industrial operations are not required to physically measure emissions from all sources. Where physical measurements are not elsewise being done, and where no methodology has been prescribed by the Direct, appropriate estimations meeting the requirements set out in section 7 of the AMD Reporting Chapter are acceptable.	No changes made.
7.1	7-D	Focus should be on requesting information for those chemicals which are of particular interest to ESRD from an outcomes perspective.	Regulatory reporting programs are ongoing and help establish expectations for what information will be required, timelines for reporting and resources that will be required. They are annually updated, although much of the information will not need to be updated annually and the same reporting form can be used. They also allow for the easy incorporation of new and modified sources and the removal of sources no longer emitting. They also represent higher-quality compliance data that has been certified by the individual operators who are most familiar with how their plants operate and emit to the atmosphere.	Several non-NPRI reportable substances have been removed from AMD emissions inventory reporting. Several substances have been changed to require the same isomer/isomer group as the NPRI reportable substances.

Section	Clause	Comment	Response	Action Taken
7.1	7-D	If ESRD requires additional information beyond that submitted to NPRI, request it on a one-off basis and/or add it to the one-window reporting (SWIM) system.	One-off data collections have been used in the past (both voluntary and mandatory) and the results have been mixed. All of the requested data is often not provided, or not provided within the required timelines. One-off data collections become dated fairly quickly and usually lack the necessary mechanism to keep them updated. One-off data collections are usually only done for specific projects, and the results may or may not be adaptable to other Regulator business requirements. This then leads to having to start over from scratch for other projects. In terms of administration and available resources, one-off data collections are usually more difficult to successfully complete. It is much more difficult for both industry and government to have the required time available and staff in place for one-off data collections.	No changes made.
7.1	7-D	In addition to the required NPRI reporting, industry does a lot of voluntary reporting to NPRI. For example, industry may quantify and report annual emissions of an AMD Schedule 2 substance, even if it is below the NPRI reporting threshold. REQUIRING such reporting via the AMD could drive industry to report less via NPRI in order to reduce overall reporting requirements.	Reporting is not necessarily required for every schedule 2 substance, only the applicable substances as described in the AMD Reporting Chapter.	Clause changed.
7.1	7-D	In addition, where possible it is requested that Alberta align with NPRI on the substances (e.g. 1,1,2 versus 1,1,1 trichloroethylene)	Several non-NPRI reportable substances have been removed from AMD emissions inventory reporting. Several substances have been changed to require the same isomer/isomer group as the NPRI reportable substances.	Several non-NPRI reportable substances have been removed from AMD emissions inventory reporting. Several substances have been changed to require the same isomer/isomer group as the NPRI reportable substances.
7.1	7-D	It is recommended that the phase in of reporting for these substances be delayed by one year.	The first year of the revised AMD emissions inventory reporting has been pushed back to 2018 (for reporting of 2017 emissions data).	The first year of the revised AMD emissions inventory reporting has been pushed back to 2018 (for reporting of 2017 emissions data).
7.1	7-D	It is recommended that the redundant emissions inventory reporting be removed.	The AMD EI requirements are more detailed and have additional data elements not captured by the NPRI. The NPRI has incomplete source-level reporting, amalgamates various sources and excludes some emission sources (e.g., oil sands mine fleets). There are also differences in how the NPRI defines and regulates facilities versus how a facility is defined and regulated under an EPEA approval. There is currently no agreement in place between Alberta and Environment Canada on air emissions data collection and several past attempts at harmonizing the 1989 AMD NOx and SO2 emissions inventory reporting requirements with the NPRI were not successful. One obstacle to potential future harmonization with the NPRI is the lack of modern emissions reporting requirements in Alberta. AEP has critically examining the proposed emissions inventory requirements against feedback.	No changes made.
7.1	7-D	Item RC 7-D references the substances listed in Schedule 2. A review of this list indicates that the substances are not in-line with the NPRI substance list. Our company would like to understand what scientific basis ESRD used to determine the Schedule 2 list of substances, particularly in those instances which lack agreement with NPRI. We encourage ESRD to be consistent with NPRI.	The preliminary schedule 2 substance list was developed based on substances with AAAQOs that are directly emitted, select relevant toxics substances and substances that have associated approval limits. Several non-NPRI reportable substances have been removed from AMD emissions inventory reporting. Several substances have been changed to require the same isomer/isomer group as the NPRI reportable substances.	Several non-NPRI reportable substances have been removed from AMD emissions inventory reporting. Several substances have been changed to require the same isomer/isomer group as the NPRI reportable substances.
7.1	7-D	Please define what the Air Monitoring Directive considers an "air emission release point".	Air emission release point is defined in the AMD as "a stationary source responsible for the release of a substance to the atmosphere that can be practically traced back to a single identifiable source, such as, but not limited to, a smokestack".	No changes made.
7.1	7-D	RC 7-D (b) Need clarifications for the bullet (d)	Reporting is not necessarily required for every schedule 2 substance, only the applicable substances as described in the AMD Reporting Chapter.	Clause changed.
7.1	7-D	RC 7-D (b) Some substances which are not reported under NPRI because they did not trigger the NPRI threshold (employee hours, concentration of manufactured, processed and otherwise), may trigger the AMD reporting threshold. Should these substance reported if they are not part of the Approval or Code of Practice registration emission limits?	Reporting is not necessarily required for every schedule 2 substance, only the applicable substances as described in the AMD Reporting Chapter.	Clause changed.

Section	Clause	Comment	Response	Action Taken
7.1	7-D	RC 7-D (d) "… the air emissions of the substance have otherwise been quantified by the industrial operation for the same calendar year" Clarify intent. The emissions might have been quantified for the facility as a whole, but not at the resolution required under Section 7.1 (each air emission release point and air emission non-point source). Approach for small facilities needs to be different than for large facilities.	Reporting is not necessarily required for every schedule 2 substance, only the applicable substances as described in the AMD Reporting Chapter. The AMD emissions inventory requirements only apply to facilities with an EPEA approval.	Clause changed.
7.1	7-D	RC 7-D states that actual air emissions for the substances listed in Schedule 2 of the Air Monitoring Directive must be quantified as well. • Many of the substances in Schedule 1, and all of the substances in Schedule 2 are estimated using calculations and emission factors and are therefore, not "actual" emissions. The only emissions that could be considered actual are those emissions that come from CEMS data.	Annual actual air emissions are defined in the AMD as "the actual, measured or estimated quantity of a substance being emitted to the atmosphere from a source during a specific calendar year". Industrial operations are not required to physically measure emissions from all sources. Where physical measurements are not elsewise being done, and where no methodology has been prescribed by the Direct, appropriate estimations meeting the requirements set out in section 7 of the AMD Reporting Chapter are acceptable.	No changes made.
7.1	7-D	RC 7-D "… for the substances listed in Schedule 2" Schedule 2 requirements add new substances that are not currently monitored. Potentially, significant effort will be required to develop quantification methods for these new substances.	Under EPEA, the person responsible is required to take reasonable steps to meet the requirements set out in EPEA and the associated regulations, codes, directives, standards, etc. Therefore reasonable effort must be made to comply with the AMD requirements. This would not require the industrial operation to attempt to physically measure air pollutant releases from all on-site release points and non-point sources. When physical measurements (e.g., CEMS) are already required under an industrial operation's EPEA approval conditions, such measurement data should be used in the emissions inventory. When no actual measurements are available (and where no specific method has been prescribed by the Director), the AMD simply requires using: available methodologies, emission factors, equations and calculations that are: (i) based on the best information available, (ii) applicable to the particular industrial operation and its operating conditions; and (iii) if applicable, widely used and accepted by the industrial sector to which the industrial operation belongs.	Several non-NPRI reportable substances have been removed from AMD emissions inventory reporting. Several substances have been changed to require the same isomer/isomer group as the NPRI reportable substances.
7.1	7-D	There is very strong duplication in this clause… Rather than requiring us to report "if it has already been reported to another regulatory or non-regulatory program", we would prefer that regulators take a one-window approach to streamline reporting in a single format/regulator, and align with NPRI, NERM, etc.	The AMD EI requirements are more detailed and have additional data elements not captured by the NPRI. The NPRI has incomplete source-level reporting, amalgamates various sources and excludes some emission sources (e.g., oil sands mine fleets). There are also differences in how the NPRI defines and regulates facilities versus how a facility is defined and regulated under an EPEA approval. There is currently no agreement in place between Alberta and Environment Canada on air emissions data collection and several past attempts at harmonizing the 1989 AMD NOx and SO2 emissions inventory reporting requirements with the NPRI were not successful. One obstacle to potential future harmonization with the NPRI is the lack of modern emissions reporting requirements in Alberta. AEP has critically examining the proposed emissions inventory requirements against feedback.	Clause changed.
7.1	7-D and 7-E	RC7-D (c) and RC 7-E These requirements are duplicative.	Clause changed.	Clause changed.
7.2	7.2	A second point of clarity. If a trigger is hit for one substance, does the company report just report on that on substance or all the substances in Table 1.	If any of the thresholds are met for the schedule 1 substances, then all of the schedule 1 substances that are emitted must be reported. Threshold levels are not provided for the schedule 2 substances, as the facility is just required to report the applicable substances.	No changes made.
7.2	7.2	Also, it is noted that Schedule 2 has 17 substances that are not listed in the NPRI reportable substance list.	Several non-NPRI reportable substances have been removed from AMD emissions inventory reporting. Several substances have been changed to require the same isomer/isomer group as the NPRI reportable substances.	Several non-NPRI reportable substances have been removed from AMD emissions inventory reporting. Several substances have been changed to require the same isomer/isomer group as the NPRI reportable substances.
7.2	7.2	Annual Emissions Inventory Reporting The Annual Emissions Inventory Reporting appears to be a direct duplication of the National Pollutant Release Inventory. It may be of benefit for the Government of Alberta to work collaboratively with the Government of Canada's National Pollutant Release Inventory (NPRI), instead of duplicating the process. Would recommend that AESRD obtain the Annual Emissions Inventory Reporting data directly from Environment Canada to ensure consistency in emissions data across provincial and federal jurisdictions. Also starting 2011 yearly NPRI data is available in excel spreadsheet and prior to 2011 data is available in Microsoft Access Format in the NPRI Website.	The AMD EI requirements are more detailed and have additional data elements not captured by the NPRI. The NPRI has incomplete source-level reporting, amalgamates various sources and excludes some emission sources (e.g., oil sands mine fleets). There are also differences in how the NPRI defines and regulates facilities versus how a facility is defined and regulated under an EPEA approval. There is currently no agreement in place between Alberta and Environment Canada on air emissions data collection and several past attempts at harmonizing the 1989 AMD NOx and SO2 emissions inventory reporting requirements with the NPRI were not successful. One obstacle to potential future harmonization with the NPRI is the lack of modern emissions reporting requirements in Alberta. AEP has critically examining the proposed emissions inventory requirements against feedback.	No changes made.

Section	Clause	Comment	Response	Action Taken
7.2	7.2	Annual Emissions Inventory Reporting This inventory looks very much like NPRI reporting. Is NPRI reporting not working? Why is there a need to duplicate NPRI on a provincial scale. It is suggested that if changes to NPRI are required that ESRD work with the federal government on them instead of creating a duplicate system.	In 2015, the GOA is still using the 2006-2008 source-level emissions data that was collecting through the Alberta Industrial Air Emissions Survey. There have also been numerous additional emissions inventory projects carried out over the last few years, which also demonstrate that what is currently being collected through EPEA approvals and the NPRI is not sufficient to meet key Regulator business requirements. The AMD emissions inventory data is required to support: regulatory management, air modelling, scientific assessments, policy development, regional planning, negotiating with the Federal Government on national AQ frameworks (such as AQMS/BLIERs), and the overall Cumulative Effects Management System. The AMD EI requirements are more detailed and have additional data elements not captured by the NPRI. The NPRI has incomplete source-level reporting, amalgamates various sources and excludes some emission sources (e.g., oil sands mine fleets). There are also differences in how the NPRI defines and regulates facilities versus how a facility is defined and regulated under an EPEA approval. There is currently no agreement in place between Alberta and Environment Canada on air emissions data collection and several past attempts at harmonizing the 1989 AMD NOx and SO2 emissions inventory reporting requirements with the NPRI were not successful. One obstacle to potential future harmonization with the NPRI is the lack of modern emissions reporting requirements in Alberta. AEP has critically examining the proposed emissions inventory requirements against feedback.	No changes made.
7.2	7.2	Annual Emissions Inventory Reporting Why can this not be amalgamated with the NPRI annual reporting? A lot of duplication of effort and added administrative and reporting costs. Suggest federal and provincial systems should align and further discussion between government should take place to reconcile issues preventing this from happening.	The AMD EI requirements are more detailed and have additional data elements not captured by the NPRI. The NPRI has incomplete source-level reporting, amalgamates various sources and excludes some emission sources (e.g., oil sands mine fleets). There are also differences in how the NPRI defines and regulates facilities versus how a facility is defined and regulated under an EPEA approval. There is currently no agreement in place between Alberta and Environment Canada on air emissions data collection and several past attempts at harmonizing the 1989 AMD NOx and SO2 emissions inventory reporting requirements with the NPRI were not successful. One obstacle to potential future harmonization with the NPRI is the lack of modern emissions reporting requirements in Alberta. AEP has critically examining the proposed emissions inventory requirements against feedback.	No changes made.
7.2	7.2	Annual Emissions Inventory This section appears to be redundant and duplicates several other reports required. Please clarify and provide comparisons to existing requirements identifying where overlap and redundancy will be eliminated. Streamline and remove excess information requirements	The AMD EI requirements are more detailed and have additional data elements not captured by the NPRI or other reporting. In 2015, the GOA is still using the 2006-2008 source-level emissions data that was collecting through the Alberta Industrial Air Emissions Survey. There have also been numerous additional emissions inventory projects carried out over the last few years, which also demonstrate that what is currently being collected through EPEA approvals and the NPRI is not sufficient to meet key Regulator business requirements. The AMD emissions inventory data is required to support: regulatory management, air modelling, scientific assessments, policy development, regional planning, negotiating with the Federal Government on national AQ frameworks (such as AQMS/BLIERs), and the overall Cumulative Effects Management System.	Some revisions to the emissions inventory reporting requirements have been made.
7.2	7.2	Are maximums to be based on normal limits, or upset or emergency limits?	This will be clarified in the Annual Emissions Inventory Report Standard and Guidance Document.	No changes made.
7.2	7.2	Are stack heights to be actual built or minimums specified in EPEA approvals?	Added "required minimum height above grade" to EI form.	Added "required minimum height above grade" to EI form.
7.2	7.2	As a point of clarity, does a company only report the year that an exceedance occurred in or once the threshold is tripped; then, the company must report every year after that.	The assessment against the thresholds must be done each year. Therefore, a facility could meet the thresholds and report for one year, but not meet the thresholds the next year and not have to report. However, an annual emissions inventory is required to be carried out, regardless of whether the data actually needs to be submitted to the Regulator.	No changes made.
7.2	7.2	Associated units or equipment page 51 and Annual Emissions Inventory Reporting form, tab 2.2, 2.3 It should not be necessary to enter in the associated equipment on tabs 2.2 and 2.3 when it has already been entered on tab 2.1	Worksheet 2.1 is for release points that are shared by more than one unit, process or piece of equipment. If it is not a shared stack, then the required information is already provided in worksheet 2.0. However, worksheet 2.2 and 2.3 requires reporting of additional fields on limits and control technologies not captured in worksheet 2.0 and must be completed.	No changes made.

Section	Clause	Comment	Response	Action Taken
7.2	7.2	Confusing as to where Schedule 1 is. Perhaps can reference Schedule 1 in Appendix B or move Schedule I to be directly under the Clause box.	Added reference to the appendix for the substance schedules.	Added reference to the appendix for the substance schedules.
7.2	7.2	Confusing as to where Schedule 2 is. Two points to consider are either referencing Schedule 2 in Appendix C or move Schedule I to be directly after the Clause box.	Added reference to the appendix for the substance schedules.	Added reference to the appendix for the substance schedules.
7.2	7.2	Details about CEMS and stack testing page 51 and Annual Emissions Inventory Reporting form, tab 2.5 This information will already have been reported on the Annual Air Report and on Monthly Air Reports. A system whereby information is entered only once is highly preferred to duplicative reporting requirements.	This is to cross reference the inventory information to any source monitoring carried out. Without this information, it is difficult to match the source monitoring data with the specific inventory source and emissions information. The source monitoring measurements are not being reported in the inventory form, just a matching of the source monitoring carried out to the inventory sources.	No changes made.
7.2	7.2	Details about pollution control equipment (make, model, Installation and start-up dates of equipment) page 51 and Annual Emissions Inventory Reporting form, tab 2.3 Some of this information is unlikely to be available, especially at older facilities	Installation and start-up information is required for inventorying and tracking the control technologies operating at regulated facilities and their associated effectiveness. This information is required for regulatory management, scenario assessments and overall policy development. The information is also needed for examining changes in pollution control equipment over time. It is also used for assessing the vintage of control technologies operating in the province.	No changes made.
7.2	7.2	Does a guidance point need to be included to explain that as a company moves down the options list that the approaches become less “accurate”.	This guidance will be provided in the Annual Emissions Inventory Report Standard and Guidance Document.	No changes made.
7.2	7.2	Does the "Annual Emissions Inventory Report Guidance Document" exist yet?	This still needs to be developed and will be provided for public comment prior to finalization.	No changes made.
7.2	7.2	Installation and start-up dates of equipment page 51 and Annual Emissions Inventory Reporting form, tab 2.1 It is unlikely that detailed information about installation and start-up dates will be available, especially at older facilities. What is the environmental benefit of including that information?	Installation and start-up information is required for inventorying and tracking the processes, units and equipment operating at regulated facilities and their associated air emissions. This information is required for regulatory management, scenario assessments and overall policy development. The information is also needed for estimating historical emissions and examining changes in emissions and pollution sources over time. It is also used for assessing the vintage of sources and equipment emitting to the atmosphere.	No changes made.
7.2	7.2	Installation and start-up dates of release points page 51 and Annual Emissions Inventory Reporting form, tab 2.0 It is unlikely that detailed information about installation and start-up dates will be available, especially at older facilities. What is the environmental benefit of including that information?	Installation and start-up information is required for estimating historical emissions and examining changes in emissions and pollution sources over time. It is also used for assessing the vintage of sources and equipment emitting to the atmosphere.	No changes made.
7.2	7.2	It is unlikely that detailed information about installation and start-up dates will be available, especially at older facilities. What is the environmental benefit of including that information?	Installation and start-up information is required for estimating historical emissions and examining changes in emissions and pollution sources over time. It is also used for assessing the vintage of non-point sources emitting to the atmosphere.	No changes made.
7.2	7.2	Make, model, fuel, Type of technology of the release point page 51 and Annual Emissions Inventory Reporting form, tab 2.0 There might be more than one unit or process equipment associated with the release point. The information field cannot be completed for a shared stack and duplicates reporting requirements under tab 2.1 for single-equipment stacks.	The applicable information must be entered. If a field does not apply to a particular release point, n/a can be entered. Worksheet 2.1 is intended to allow for reporting of the make, model, fuel type, etc for the processes, units and equipment sharing a stack.	No changes made.
7.2	7.2	Maximum and normal rates won't be available for most non-point sources.	Maximum and normal emission rates won't be required on non-point sources at this time.	Maximum and normal emission rates won't be required on non-point sources at this time.
7.2	7.2	Mine face information page 52 and Annual Emissions Inventory Reporting form, tab 3.4.2 This information is required for mining facilities as part of other approval conditions. A system whereby information is entered only once is highly preferred to duplicative reporting requirements.	Some of the information may be available as part of the approval application and EIA, EPEA approval, monthly or annual reports, etc. However, it is often not compiled electronically and past attempts at reconciling such information with source-level emissions information proved very difficult and had the potential to introduce errors in the data due to incorrect matching or copying/data entry errors by those not familiar with a specific industrial operations sources.	No changes made.
7.2	7.2	Mine fleet information page 52 and Annual Emissions Inventory Reporting form, tab 3.4.0 This information is required for mining facilities as part of other approval conditions. A system whereby information is entered only once is highly preferred to duplicative reporting requirements.	Some of the information may be available as part of the approval application and EIA, EPEA approval, monthly or annual reports, etc. However, it is often not compiled electronically and past attempts at reconciling such information with source-level emissions information proved very difficult and had the potential to introduce errors in the data due to incorrect matching or copying/data entry errors by those not familiar with a specific industrial operations sources.	No changes made.

Section	Clause	Comment	Response	Action Taken
7.2	7.2	Non-Point type, non-point source type etc page 52 and Annual Emissions Inventory Reporting form, tab 3.0 The column headings are not self-explanatory. Additional guidance will be required (e.g. use of line versus volume non-source type; what is required to be entered in columns (d), (e), (f).	The different types of non-point sources will be further explained in the Annual Emissions Inventory Report Standard and Guidance Document.	No changes made.
7.2	7.2	Normal and maximum emissions for non-point sources page 53 and Annual Emissions Inventory Reporting form, tab 3.50-3.63 It is not clear how the concepts of "normal emissions" and "maximum emissions" apply to non-point sources, especially with respect to mining area sources. For the reporting year? At full build- out?	Maximum and normal emission rates won't be required on non-point sources at this time.	Maximum and normal emission rates won't be required on non-point sources at this time.
7.2	7.2	NOx and SO2 limits half of NPRI.	Changed EI reporting threshold in Section 7 to 20 tonnes for NOx and SO2 to match NPRI reporting thresholds.	Changed EI reporting threshold in Section 7 to 20 tonnes for NOx and SO2 to match NPRI reporting thresholds.
7.2	7.2	Please confirm that the 17 substances that are not in the NPRI list of substances are indeed required to be evaluated.	Several non-NPRI reportable substances have been removed from AMD emissions inventory reporting. Several substances have been changed to require the same isomer/isomer group as the NPRI reportable substances.	Several non-NPRI reportable substances have been removed from AMD emissions inventory reporting. Several substances have been changed to require the same isomer/isomer group as the NPRI reportable substances.
7.2	7.2	Release point exit velocity page 51 and Annual Emissions Inventory Reporting form, tab 2.0 Under what conditions (actual, normal or maximum)?	Added fields to the Annual Emissions Inventory Report Form for reporting of both average and maximum exit velocity and temperature (if the two are different).	Added fields to the Annual Emissions Inventory Report Form for reporting of both average and maximum exit velocity and temperature (if the two are different).
7.2	7.2	Reporting form, Identification of periods of exceedances page 51 and Annual Emissions Inventory Reporting form, tab 1.17 This information will already have been reported on the Annual Air Report, as well as for release reporting and follow-up and on Monthly Air Reports. A system whereby information is entered only once is highly preferred to duplicative reporting requirements.	This may capture some of the same operational information as is reported in monthly reports and the Approval Contradiction Form, but the operational information in the monthly reports is not submitted in an electronic form and the Approval Contravention Form is limited to just contraventions not all operational or upsets that affect air emissions during a year. DRAFT section 1.17 of the Annual Emissions Inventory Report Form ties the operational and exceedance information into the emissions inventory so that it can be factored into the modelling.	No changes made.
7.2	7.2	Revised emissions reporting will require a lot of data to be compiled for the first year of reporting.	Changed EI reporting requirements from reporting of 2016 emissions by Sept 30, 2017 to reporting of 2017 emissions by Sept 30, 2018.	Changed EI reporting requirements from reporting of 2016 emissions by Sept 30, 2017 to reporting of 2017 emissions by Sept 30, 2018.
7.2	7.2	Tailings pond information page 52 and Annual Emissions Inventory Reporting form, tab 3.4.1 This information is required for mining facilities as part of other approval conditions. A system whereby information is entered only once is highly preferred to duplicative reporting requirements.	Some of the information may be available as part of the approval application and EIA, EPEA approval, monthly or annual reports, etc. However, it is often not compiled electronically and past attempts at reconciling such information with source-level emissions information proved very difficult and had the potential to introduce errors in the data due to incorrect matching or copying/data entry errors by those not familiar with a specific industrial operations sources.	No changes made.
7.2	7.2	Temporal information for non-continuous sources page 51 and Annual Emissions Inventory Reporting form, tab 2.4 Many non-continuous sources operate on an emergency basis, and not on a scheduled basis, whereas this tab applies only to batch/scheduled type non-continuous sources. Provide clarification.	Added field to indicate if the source only operates during emergencies. If it is an emergency source only, then the number of hours operating during the year is required, but no other temporal information is required.	Added field to indicate if the source only operates during emergencies. If it is an emergency source only, then the number of hours operating during the year is required, but no other temporal information is required.
7.2	7.2	The requirement for a "certifying official" may require high-level sign-off at the company? Was this the intention?	Changed certifying official to person submitting the Annual Emissions Inventory Report.	Changed certifying official to person submitting the Annual Emissions Inventory Report.
7.2	7.2	What is the meaning of periods of start-up and shutdown for a mobile non-point source?	These would just be when a non-point source starts-up or shuts-down, and whether or not the non-point source is permanently shut down.	No changes made.

Section	Clause	Comment	Response	Action Taken
7.2	Annual Emissions Inventory Report Form (Page 50)	The emissions inventory report form requires a great level of detail, and will lead to significant administrative burden on operators to compile data and complete the form, particularly since automation of this form is difficult. We encourage ESRD to consider other options.	Excel reporting forms were previously used for the 2006-2008 Alberta Industrial Air Emissions Survey and are also used for baseline and compliance reporting under the Specified Gas Emitters Regulation. The use of locked Microsoft Excel forms will potentially allow for industrial operations to use VBA scripts to populate the reporting form. This ability will depend on how the industrial operation stores the information internally, but VBA scripts were how the 2006-2008 Alberta Industrial Air Emissions Survey forms were pre-populated prior to being distributed to facilities.	No changes made.
7.2	Annual Emissions Inventory Report Guidance Document	Our company would like to request that this document be provided for review and comment.	The guidance document will be provided for public review prior to being finalized.	No changes made.
7.2	AnnualAir Emissions Inventory Form-2014.xls	Column p: Effective release point height (m): why only the effective height is required, but the corresponding pseudo diameter, velocity, temperature are not required? In addition, the effective heights and other pseudo parameters will be changed upon the change of combusted gas flow rate and composition. What kind of condition under which effective height is required such as maximum, normal or actual? This type of information related to modelling parameters will be very difficult to compile when there is no modelling performed and/or information is not tracked for small emission sources or small facilities.	Removed effective stack height.	Removed effective stack height.
7.2	AnnualAir Emissions Inventory Form-2014.xls	Column u: Affected by Building Downwash (yes/No): Similar to the comment above this information will be very difficult to compile when there is no modelling performed and/or that information is not tracked for small emission sources or small facilities.	As per the Alberta Air Quality Model Guideline, if a stack is located on top of a building or adjacent to a tall building, it may potentially be affected by building downwash. As a general guide, building downwash problems may occur if the height of the top of the stack is less than 2.5 time the height of the building upon which it sits. It may also be necessary to consider adjacent buildings if they are within a distance of 5 times the lesser of the width or peak height of the stack. If the stack is located near more than one building, each building within the stack's region of influence should be assessed against the height of the stack.	No changes made.
7.2	AnnualAir Emissions Inventory Form-2014.xls	Column b to Column f and column h are same with the Tab 2.0 column X to column bb. These items are repeatable, why don't associate these two tables together?	This change to the form will be considered.	No changes made.
7.2	AnnualAir Emissions Inventory Form-2014.xls	Column c & d: Non-Point Source: what is different of column c): Non-point type and column d):Non-point source type? Could a drop-down list developed for a column d to help identifying the Non-point source type?	Non-point type just identifies if it is an area, line, volume or mobile source. Non-point source type is the more specific type of non-point source (e.g., tailings ponds, materials handling, non-stationary equipment, plant fugitive leaks, storage tanks, road dust, space heating, etc). Dropdowns will be provided for both of these fields in the Annual Emissions Inventory Report Form.	No changes made.
7.2	AnnualAir Emissions Inventory Form-2014.xls	Column i: Non-Point Temporarily shut-down (Yes/No): only yes/no is questioned. Is the information useful if shut-down hours are not required?	This field was intended to indicate when a source was not operational for the entire calendar year (and thus had no air emissions), but has not been formally decommissioned and therefore may be operational and emit again in future years. The individual shut-down periods will be identified in the "Identification of Shut-downs, Start-ups, Upsets and Elevated Air Pollutant Releases" worksheet.	Field renamed to "Non-Point Source Temporarily shut-down for the year".

Section	Clause	Comment	Response	Action Taken
7.2	AnnualAir Emissions Inventory Form-2014.xls	Column C &D: Sigma Y and Z: This information will be difficult to compile when there was no modelling performed for small facilities and for non-point sources. Would AESRD consider providing at the least equations for calculating Sigma Y and Z in the forms?	Sigma y and z for volume sources will not be required in the AMD emissions inventory requirements.	Sigma y and z for volume sources will not be required in the AMD emissions inventory requirements.
7.2	AnnualAir Emissions Inventory Form-2014.xls	Tabs 2.4 and 3.4. The equipment running hours for weekdays are requested in these tabs. In a year-round, the running hours for a weekday can be variable. What is the purpose of this information?	If sources operate only during specified periods of time, this needs to be accounted for in the modelling. As you point out, not all non-continuous sources will operate on a set schedule throughout the year. For these sources, an appropriate general usual schedule can be used. Even continuous operating sources may see some variation in operations during the year, so the temporal operational information is just an approximation of how sources operated and emitting during the year. If temporal information is not provided, sources will either emit the same every hour of the year, or will emit based on a default EPA operational profile. Information provided by industrial operations will be more representative and could be used to improve the default profiles used for regulated and non-regulated sources in Alberta.	No changes made.
7.2	AnnualAir Emissions Inventory Form-2014.xls	Tab 2.6.0 to Tab 2.6.3 : maximum emissions rates; Tab 2.7.0 to Tab 2.7.3: Normal emission rates; Tab 2.8.0 to Tab 2.8.3: Actual Emission rate. Why don't list three emissions side by side in one tab for a source?	This change will be considered for the Annual Emissions Inventory Report Form.	This change will be considered for the Annual Emissions Inventory Report Form.
7.2	AnnualAir Emissions Inventory Form-2014.xls	Tab 3.5.0 to 3.5.3 : maximum emissions rates; Tab 3.6.0 to 3.6.3: Normal emission rates; Tab 3.7.0 to 3.7.3: Actual Emission rate. Why don't list three emissions side by side in one tab for a source?	Maximum and normal emission rates won't be required on non-point sources at this time.	Maximum and normal emission rates won't be required on non-point sources at this time.
7.2	AnnualAir Emissions Inventory Form-2014.xls	Column h: Release Point Temporarily shut-down (Yes/No): only yes/no is questioned. How is it useful if shut-down hours are not required?	This field was intended to indicate when a source was not operational for the entire calendar year (and thus had no air emissions), but has not been formally decommissioned and therefore may be operational and emit again in future years. The individual shut-down periods will be identified in the "Identification of Shut-downs, Start-ups, Upsets and Elevated Air Pollutant Releases" worksheet.	Field renamed to "Release Point Temporarily shut-down for the year".
7.2	Table 2 Reporting Thresholds	Table 1 Reporting Threshold shows that the thresholds for sulphur dioxide and nitrogen oxides (expressed as N02) are 10 tonnes. • Consider changing this to 20 tonnes to remain consistent with the NPRI reporting program.	This has been modified to 20 tonnes for NOx and SO2 for consistency with NPRI reporting.	This has been modified to 20 tonnes for NOx and SO2 for consistency with NPRI reporting.
7.2.1	7.2.1	NOx and SO2 limits half of NPRI.	This has been modified to 20 tonnes for NOx and SO2 for consistency with NPRI reporting.	This has been modified to 20 tonnes for NOx and SO2 for consistency with NPRI reporting.
7.2.1	7.2.1	RC 7-G all three calculations are required for each substance?	Maximum and normal emission rates won't be required on non-point sources at this time.	Maximum and normal emission rates won't be required on non-point sources at this time.

Section	Clause	Comment	Response	Action Taken
7.2.1	7-F	Accept the Federal NPRI as equivalent to meet this requirement. We recommend that the Federal NPRI report be considered acceptable to meet this requirement to reduce governmental duplication and paperwork.	The AMD EI requirements are more detailed and have additional data elements not captured by the NPRI. The NPRI has incomplete source-level reporting, amalgamates various sources and excludes some emission sources (e.g., oil sands mine fleets). There are also differences in how the NPRI defines and regulates facilities versus how a facility is defined and regulated under an EPEA approval. There is currently no agreement in place between Alberta and Environment Canada on air emissions data collection and several past attempts at harmonizing the 1989 AMD NOx and SO2 emissions inventory reporting requirements with the NPRI were not successful. One obstacle to potential future harmonization with the NPRI is the lack of modern emissions reporting requirements in Alberta. AEP has critically examining the proposed emissions inventory requirements against feedback.	No changes made.
7.2.1	7-F	It is noted that the reporting thresholds in Table 1 on Page 49 are out of alignment with the NPRI, and thresholds are lower in some cases. Our company would like to understand how ESRD determined the thresholds for inclusion. We encourage ESRD to be consistent with NPRI.	This has been modified to 20 tonnes for NOx and SO2 for consistency with NPRI reporting.	This has been modified to 20 tonnes for NOx and SO2 for consistency with NPRI reporting.
7.2.1	7-F	Table 1 "Reporting Thresholds" SO2 = 10 tonnes, NOx = 10 tonnes It is noted that the thresholds are lower than for NPRI and RCE. What rational was used for the lower thresholds? We suggest that ESRD align with EC and NPRI.	This has been modified to 20 tonnes for Nox and SO2 for consistency with NPRI reporting.	This has been modified to 20 tonnes for Nox and SO2 for consistency with NPRI reporting.
7.2.1	7-F	Table 1 "Reporting Thresholds" Please define: what categories of emissions should be included to determine whether the emissions trigger the reporting thresholds? For example: should road dust, chemical usage emissions, fugitive emissions, loading emissions, etc. be considered for deciding the trigger of reporting threshold for upstream oil & gas industry?	The emissions inventory is to cover all release points and non-point sources at the industrial operation.	No changes made.
7.2.1	7-F	Table 1 "Reporting Thresholds" The substance thresholds and reporting conditions are different from those in the NPRI, resulting in near-duplicated reporting requirements to EC and AB. This results in significant administrative burden without clear environmental benefit.	This has been modified to 20 tonnes for NOx and SO2 for consistency with NPRI reporting. The AMD EI requirements are more detailed and have additional data elements not captured by the NPRI. The NPRI has incomplete source-level reporting, amalgamates various sources and excludes some emission sources (e.g., oil sands mine fleets). There are also differences in how the NPRI defines and regulates facilities versus how a facility is defined and regulated under an EPEA approval. There is currently no agreement in place between Alberta and Environment Canada on air emissions data collection and several past attempts at harmonizing the 1989 AMD NOx and SO2 emissions inventory reporting requirements with the NPRI were not successful. One obstacle to potential future harmonization with the NPRI is the lack of modern emissions reporting requirements in Alberta. AEP has critically examining the proposed emissions inventory requirements against feedback.	This has been modified to 20 tonnes for NOx and SO2 for consistency with NPRI reporting.
7.2.1	7-G	Clarify Must report actual, normal and maximum air emissions. How is this done for non-point which are measured once, or annually, or estimated? All 3 numbers would be the same.	Maximum and normal emission rates won't be required on non-point sources at this time.	Maximum and normal emission rates won't be required on non-point sources at this time.
7.2.1	7-G	How will this value be used, and what is the value in reporting it annually?	Normal air emissions are required for modelling, as actual air emissions may be skewed for a single year depending on single year operating problems or short-term market conditions affecting a facility or sector. If not modelling for the particular year, normal emissions will better represent what is normally emitting for a different year and can be used to maintain or predict future emission levels in modelling. One of the criticism received on some of the LUF regional air modelling carried out, is that the industrial air emissions survey collected actual emissions for 2008, which was the beginning of a recession and may not have been representative of more recent emission years. It is anticipated that normal emission rates will not need to be changed every year, facilities are only required to update these when the normal rate they previously reported is no longer representative.	No changes made.

Section	Clause	Comment	Response	Action Taken
7.2.1	7-G	Is it necessary to require “normal”, “maximum”, AND “actual” emissions? As “normal” operations don’t exactly exist, “normal” would likely become an average of a year or 5 years of “actual”. If normal is just an average of actual, is it a necessary value to report? It is recommended that “actual” emissions be the only emissions required to be reported on an annual basis.	Normal air emissions are defined in the AMD as "the rate at which a substance is emitted to the atmosphere from a source under normal operating conditions". Normal emission rates are meant to be representative of what is normally emitted from sources at a facility. They are required for modelling, as actual air emissions may be skewed for a single year depending on single year operating problems or short-term market conditions affecting a facility or sector. If not modelling for the particular year, normal emissions will better represent what is normally emitting for a different year and can be used to maintain or predict future emission levels in modelling. One of the criticism received on some of the LUF regional air modelling carried out, is that the industrial air emissions survey collected actual emissions for 2008, which was the beginning of a recession and may not have been representative of more recent emission years. It is anticipated that normal emission rates will not need to be changed every year, facilities are only required to update these when the normal rate they previously reported is no longer representative.	Maximum and normal emission rates won't be required on non-point sources at this time.
7.2.1	7-G	Item RC 7-G makes reference to actual, normal, and maximum emissions. Our company recommends that definitions differentiating these emissions categories be provided to ensure consistent interpretation across industry. We encourage ESRD to limit the reporting to only one emissions category.	Annual actual air emissions are defined in the AMD as "the actual, measured or estimated quantity of a substance being emitted to the atmosphere from a source during a specific calendar year". Normal air emissions are defined in the AMD as "the rate at which a substance is emitted to the atmosphere from a source under normal operating conditions". Maximum air emissions are defined in the AMD as "the maximum rate at which a substance is emitted to the atmosphere from a source factoring in emission limits, equipment specifications, or other relevant information".	Maximum and normal emission rates won't be required on non-point sources at this time.
7.2.1	7-G	Please define "normal air emissions" Also see RC 7-H	Normal air emissions are defined in the AMD as "the rate at which a substance is emitted to the atmosphere from a source under normal operating conditions".	No changes made.
7.2.1	7-G	RC 7-G (b) the normal air emissions Definitions "normal air emissions is the rate at which a substance is emitted to the atmosphere under normal operating conditions." A facility can have multiple operating modes, all of which are "normal" in that the facility was designed for those purposes. What are the "normal operating conditions" in those cases.	The dictionary definition of "normal" is something like: "usual, average, or typical state or condition". Although an industrial operation is designed to handle many operating modes and conditions, there should be some kind of usual, average or typical operating condition. There will be an emission rate that represents the usual, average, or typical operating conditions of a particular release point and its associated units/processes/equipment. Given this is not tied to any specific calendar year activity or the operating maximum/limit, this value will be somewhat different (although normal emission rates are often similar to the annual actual emission rate due to averaging out of changes in emission rates during an entire year). Ultimately it is up to the industrial operation to determine what their normal operating conditions are.	Added clarifying note on what normal air emissions are.
7.2.1	7-G	RC7-G (a)For the Annual Emission Inventory Report in RC 7-F, the person responsible must quantify, for each air emission release point and air emission non-point source at the industrial operation; (a) the annual actual air emissions. The NPRI reporting for many of the Category 2 substances are completed using emission factors and approved estimation methods. Please define “actual air emissions”. AESRD needs to provide more clarification on actual and normal emissions. Could AESRD provide more context on why this information is requested and how AESRD intend to use this information.	Annual actual air emissions are defined in the AMD as "the actual, measured or estimated quantity of a substance being emitted to the atmosphere from a source during a specific calendar year". Normal air emissions are defined in the AMD as "the rate at which a substance is emitted to the atmosphere from a source under normal operating conditions". Normal emission rates are meant to be representative of what is normally emitted from sources at a facility. They are required for modelling, as actual air emissions may be skewed for a single year depending on single year operating problems or short-term market conditions affecting a facility or sector. If not modelling for the particular year, normal emissions will better represent what is normally emitting for a different year and can be used to maintain or predict future emission levels in modelling. One of the criticism received on some of the LUF regional air modelling carried out, is that the industrial air emissions survey collected actual emissions for 2008, which was the beginning of a recession and may not have been representative of more recent emission years. It is anticipated that normal emission rates will not need to be changed every year, facilities are only required to update these when the normal rate they previously reported is no longer representative.	No changes made.

Section	Clause	Comment	Response	Action Taken
7.2.1	7-G	RC7-G (b) & (c) For the Annual Emission Inventory Report in RC 7-F, the person responsible must quantify, for each air emission release point and air emission non-point source at the industrial operation; (a) the annual actual air emissions; (b) the normal air emissions; and (c) the maximum air emissions; of any substance listed in Schedule 2. Most of the substances are calculated based on emission factors, MSDS Sheets and quarterly/annual sampling. Please explain how each facility would determine the normal/maximum air emissions for over 80 substances in a year? Will AESRD be providing a guidance document on sampling frequency/methods or best practices?	Under EPEA, the person responsible is required to take reasonable steps to meet the requirements set out in EPEA and the associated regulations, codes, directives, standards, etc. Therefore reasonable effort must be made to comply with the AMD requirements. This would not require the industrial operation to attempt to physically measure air pollutant releases from all on-site release points and non-point sources. When physical measurements (e.g., CEMS) are already required under an industrial operation's EPEA approval conditions, such measurement data should be used in the emissions inventory. When no actual measurements are available (and where no specific method has been prescribed by the Director), the AMD simply requires using: available methodologies, emission factors, equations and calculations that are: (i) based on the best information available, (ii) applicable to the particular industrial operation and its operating conditions; and (iii) if applicable, widely used and accepted by the industrial sector to which the industrial operation belongs. Quantification is not necessarily required for all schedule 2 substances, only the applicable substances released by the industrial operation as described in the AMD Reporting Chapter.	Maximum and normal emission rates won't be required on non-point sources at this time.
7.2.1	7-G	What are the "normal operating conditions" in those cases?	The dictionary definition of "normal" is something like: "usual, average, or typical state or condition". Although an industrial operation is designed to handle many operating modes and conditions, there should be some kind of usual, average or typical operating condition. There will be an emission rate that represents the usual, average, or typical operating conditions of a particular release point and its associated units/processes/equipment. Given this is not tied to any specific calendar year activity or the operating maximum/limit, this value will be somewhat different (although normal emission rates are often similar to the annual actual emission rate due to averaging out of changes in emission rates during an entire year). Ultimately it is up to the industrial operation to determine what their normal operating conditions are.	Maximum and normal emission rates won't be required on non-point sources at this time.
7.2.1	7-G	Will the Canadian Petroleum Products Institute Codes of Practice for Developing an “Emission Inventory for Refinery’s and Terminals” or the CAPP NPRI Guidance document be acceptable for calculating Category 2 substances?	If no estimation methodology has been prescribed by the Director, the AMD simply requires using: available methodologies, emission factors, equations and calculations that are: (i) based on the best information available, (ii) applicable to the particular industrial operation and its operating conditions; and (iii) if applicable, widely used and accepted by the industrial sector to which the industrial operation belongs. The CPPI Code of Practice and CAPP NPRI Guidance Document would likely be acceptable. Note that consistent estimation methods must be used from one reporting year to the next, unless authorization to use a different method has been given by the Director.	No changes made.
7.2.1	7-G	Will the Canadian Petroleum Products Institute Codes of Practice for Developing an “Emission Inventory for Refinery’s and Terminals” or the CAPP NPRI Guidance document be acceptable for calculating Category 2 substances?	If no estimation methodology has been prescribed by the Director, the AMD simply requires using: available methodologies, emission factors, equations and calculations that are: (i) based on the best information available, (ii) applicable to the particular industrial operation and its operating conditions; and (iii) if applicable, widely used and accepted by the industrial sector to which the industrial operation belongs. The CPPI Code of Practice and CAPP NPRI Guidance Document would likely be acceptable. Note that consistent estimation methods must be used from one reporting year to the next, unless authorization to use a different method has been given by the Director.	No changes made.
7.2.1	7-G	Clarify: Must report actual, normal and maximum air emissions. How is this done for non-point which are measured once, or annually, or estimated? All 3 numbers would be the same.	Maximum and normal emission rates won't be required on non-point sources at this time.	Maximum and normal emission rates won't be required on non-point sources at this time.
7.2.1	7-G (a)	Could AESRD provide more context on why this information is requested and how AESRD intends to use this information?	In 2015, the GOA is still using the 2006-2008 source-level emissions data that was collecting through the Alberta Industrial Air Emissions Survey. There have also been numerous additional emissions inventory projects carried out over the last few years, which also demonstrate that what is currently being collected through EPEA approvals and the NPRI is not sufficient to meet key Regulator business requirements. The AMD emissions inventory data is required to support: regulatory management, air modelling, scientific assessments, policy development, regional planning, negotiating with the Federal Government on national AQ frameworks (such as AQMS/BLIERs), and the overall Cumulative Effects Management System.	No changes made.

Section	Clause	Comment	Response	Action Taken
7.2.1	7-G (a)	Please define “actual air emissions”. AESRD needs to provide more clarification on the difference between actual and normal and maximum emissions.	Annual actual air emissions are defined in the AMD as "the actual, measured or estimated quantity of a substance being emitted to the atmosphere from a source during a specific calendar year". Industrial operations are not required to physically measure emissions from all sources. Where physical measurements are not elsewise being done, and where no methodology has been prescribed by the Direct, appropriate estimations meeting the requirements set out in section 7 of the AMD Reporting Chapter are acceptable. Normal air emissions are defined in the AMD as "the rate at which a substance is emitted to the atmosphere from a source under normal operating conditions". Maximum air emissions are defined in the AMD as "the maximum rate at which a substance is emitted to the atmosphere from a source factoring in emission limits, equipment specifications, or other relevant information".	No changes made.
7.2.1	7-G (a)	Will the Canadian Petroleum Products Institute Codes of Practice for Developing an “Emission Inventory for Refinery’s and Terminals” or the CAPP NPRI Guidance document be acceptable for calculating Category 2 substances?	If no measurements or estimation methodologies have been prescribed by the Director, the AMD simply requires using: available methodologies, emission factors, equations and calculations that are: (i) based on the best information available, (ii) applicable to the particular industrial operation and its operating conditions; and (iii) if applicable, widely used and accepted by the industrial sector to which the industrial operation belongs. The CPPI Code of Practice and CAPP NPRI Guidance Document would likely be acceptable. Note that consistent estimation methods must be used from one reporting year to the next, unless authorization to use a different method has been given by the Director.	No changes made.
7.2.1	7-G (b) & (c)	Please explain how each facility would define and determine the normal/maximum air emissions for over 80 substances in a year?	Quantification is not necessarily required for all schedule 2 substances, only the applicable substances released by the industrial operation as described in the AMD Reporting Chapter. Maximum and normal emission rates won't be required on non-point sources at this time.	Maximum and normal emission rates won't be required on non-point sources at this time. Several non-NPRI reportable substances have been removed from AMD emissions inventory reporting. Several substances have been changed to require the same isomer/isomer group as the NPRI reportable substances. Clause changed.
7.2.1	7-G (b) & (c)	Will AESRD be providing a guidance document on sampling frequency/methods or best practices?	Under EPEA, the person responsible is required to take reasonable steps to meet the requirements set out in EPEA and the associated regulations, codes, directives, standards, etc. Therefore reasonable effort must be made to comply with the AMD requirements. This would not require the industrial operation to attempt to physically measure air pollutant releases from all on-site release points and non-point sources. When physical measurements (e.g., CEMS) are already required under an industrial operation's EPEA approval conditions, such measurement data should be used in the emissions inventory. When no actual measurements are available (and where no specific method has been prescribed by the Director), the AMD simply requires using: available methodologies, emission factors, equations and calculations that are: (i) based on the best information available, (ii) applicable to the particular industrial operation and its operating conditions; and (iii) if applicable, widely used and accepted by the industrial sector to which the industrial operation belongs.	No changes made.
7.2.1	7-G and 7-H	Also, based on the inventory forms where maximum air emissions are asked in grams per second, please clarify that the purpose of the information is not to capture the instantaneous maximums. This is quite a lot of extra work to create and to document and is more work than NPRI, especially given that the thresholds are lower. We suggest that ESRD align with EC and NPRI.	Maximum emission rates are to be based on approval emission limits (when applicable). Approval emission limits are set in a variety of units and rates, but a standard reporting rate had to be selected. The intent was not to capture instantaneous maximums, just the appropriate maximum emission rate based on approval limits or other applicable information. All maximum emissions must be converted to the required units before being entered into the reporting form.	No changes made.
7.2.1	7-G and 7-H	How are persons responsible expected to determine these values?	Under EPEA, the person responsible is required to take reasonable steps to meet the requirements set out in EPEA and the associated regulations, codes, directives, standards, etc. Therefore reasonable effort must be made to comply with the AMD requirements. This would not require the industrial operation to attempt to physically measure air pollutant releases from all on-site release points and non-point sources. When physical measurements (e.g., CEMS) are already required under an industrial operation's EPEA approval conditions, such measurement data should be used in the emissions inventory. When no actual measurements are available (and where no specific method has been prescribed by the Director), the AMD simply requires using: available methodologies, emission factors, equations and calculations that are: (i) based on the best information available, (ii) applicable to the particular industrial operation and its operating conditions; and (iii) if applicable, widely used and accepted by the industrial sector to which the industrial operation belongs.	No changes made.

Section	Clause	Comment	Response	Action Taken
7.2.1	7-G and 7-H	In what units / time period?	The reporting units will be specified in the Annual Emissions Inventory Report Form.	No changes made.
7.2.1	7-G and 7-H	Must three emissions be reported for a source or could report be done based on whatever emissions are available in a reporting year?	For release points, the annual actual, normal and maximum is required. Under EPEA, the person responsible is required to take reasonable steps to meet the requirements set out in EPEA and the associated regulations, codes, directives, standards, etc. Therefore reasonable effort must be made to comply with the AMD requirements. This would not require the industrial operation to attempt to physically measure air pollutant releases from all on-site release points and non-point sources. When physical measurements (e.g., CEMS) are already required under an industrial operation's EPEA approval conditions, such measurement data should be used in the emissions inventory. When no actual measurements are available (and where no specific method has been prescribed by the Director), the AMD simply requires using: available methodologies, emission factors, equations and calculations that are: (i) based on the best information available, (ii) applicable to the particular industrial operation and its operating conditions; and (iii) if applicable, widely used and accepted by the industrial sector to which the industrial operation belongs.	Maximum and normal emission rates won't be required on non-point sources at this time.
7.2.1	7-G and 7-H	RC 7-G and RC 7-H requires the quantification of actual air emissions, normal air emissions and maximum air emissions. • All emissions are estimates unless the data comes from a CEMS. Consider changing the word "actual" to "actual/estimated" air emissions.	Annual actual air emissions are defined in the AMD as "the actual, measured or estimated quantity of a substance being emitted to the atmosphere from a source during a specific calendar year".	No changes made.
7.2.1	7-G and 7-H	RC 7-G, RC7-H annual actual, normal, maximum air emissions NPRI only requires that actual emissions be reported. Please provide the rational for three reporting cases for each source. What is the need for "normal" and "maximum" air emissions? How are these defined? Maximum = regulatory limit? Definitions for the annual actual air emissions, normal air emissions and maximum air emissions to be provided in the document for clarity.	Normal air emissions are defined in the AMD as "the rate at which a substance is emitted to the atmosphere from a source under normal operating conditions". Normal air emissions are required for modelling, as actual air emissions may be skewed for a single year depending on single year operating problems or short-term market conditions affecting a facility or sector. If not modelling for the particular year, normal emissions will better represent what is normally emitting for a different year and can be used to maintain or predict future emission levels in modelling. One of the criticism received on some of the LUF regional air modelling carried out, is that the industrial air emissions survey collected actual emissions for 2008, which was the beginning of a recession and may not have been representative of more recent emission years. It is anticipated that normal emission rates will not need to be changed every year, facilities are only required to update these when the normal rate they previously reported is no longer representative. Maximum emissions are required for modelling and regulatory assessments. They are defined in the AMD as "the maximum rate at which a substance is emitted to the atmosphere from a source factoring in emission limits, equipment specifications, or other relevant information". Yes, maximum will be the regulatory emission limit, where applicable. Reporting units will be specified in the form. Annual actual air emissions are defined in the AMD as "the actual, measured or estimated quantity of a substance being emitted to the atmosphere from a source during a specific calendar year". Annual emissions represent the emissions for a specific calendar year and are needed for regulatory management, air modelling, scientific assessments, policy development, regional planning, negotiating with the Federal Government on national AQ frameworks (such as AQMS/BLIERs), and the overall Cumulative Effects Management System.	Maximum and normal emission rates won't be required on non-point sources at this time.

Section	Clause	Comment	Response	Action Taken
7.2.1	7-G and 7-H	What is considered "normal" in terms of air emissions and how is this quantified? Is this monthly, daily or hourly?	Normal air emissions are defined in the AMD as "the rate at which a substance is emitted to the atmosphere from a source under normal operating conditions". The dictionary definition of "normal" is something like: "usual, average, or typical state or condition". Although an industrial operation is designed to handle many operating modes and conditions, there should be some kind of usual, average or typical operating condition. There will be an emission rate that represents the usual, average, or typical operating conditions of a particular release point and its associated units/processes/equipment. Given this is not tied to any specific calendar year activity or the operating maximum/limit, this value will be somewhat different (although normal emission rates are often similar to the annual actual emission rate due to averaging out of changes in emission rates during an entire year). Ultimately it is up to the industrial operation to determine what their normal operating conditions are. The reporting units will be specified in the Annual Emissions Inventory Report Form.	No changes made.
7.2.1	7-G and 7-H	What is the measurement for emissions when looking at "maximum" air emissions?	Maximum air emissions are defined in the AMD as "the maximum rate at which a substance is emitted to the atmosphere from a source factoring in emission limits, equipment specifications, or other relevant information". The maximum emission rate is to be based on the approval limit, if applicable. If no approval limit applies, the maximum emission rate can be based on: the design maximum, information from the equipment manufacturer, a historical maximum, an engineering estimate; or method authorized in writing by the Director. If there is no emission limit, the industrial operation should provide the maximum emission rate they feel is the most representative for their release point.	No changes made.
7.2.1	7-G 7-H 7-I	This is difficult to complete for large industrial facilities due to the complexity of sites with multiple emission sources, annual stack test data, and changes in production rate over time. These types of evaluations are better done for Approval renewals and major project proposals (air dispersion modeling for example) rather than in an annual report.	Under EPEA, the person responsible is required to take reasonable steps to meet the requirements set out in EPEA and the associated regulations, codes, directives, standards, etc. Therefore reasonable effort must be made to comply with the AMD requirements. This would not require the industrial operation to attempt to physically measure air pollutant releases from all on-site release points and non-point sources. When physical measurements (e.g., CEMS) are already required under an industrial operation's EPEA approval conditions, such measurement data should be used in the emissions inventory. When no actual measurements are available (and where no specific method has been prescribed by the Director), the AMD simply requires using: available methodologies, emission factors, equations and calculations that are: (i) based on the best information available, (ii) applicable to the particular industrial operation and its operating conditions; and (iii) if applicable, widely used and accepted by the industrial sector to which the industrial operation belongs.	No changes made.
7.2.1	7-H	Also what if only one case is quantified (e.g.. Actual) must we then estimate normal and maximum? We suggest alignment with EC and NPRI.	For release points, the annual actual, normal and maximum is required. Maximum and normal emission rates won't be required on non-point sources at this time. Under EPEA, the person responsible is required to take reasonable steps to meet the requirements set out in EPEA and the associated regulations, codes, directives, standards, etc.	Maximum and normal emission rates won't be required on non-point sources at this time.
7.2.1	7-H	RC 7-H "… for each of the substances listed …" The conditions duplicate the requirements in RC 7-D, making the AMD more difficult to follow.	Section 7.1 requires the preparation of an annual emissions inventory, but does not require any reporting. Section 7.2 requires the completion of the Annual Emissions Inventory Report Form if reporting threshold levels have been met. The inventory is to be used to determine whether reporting is required and (if reporting thresholds are met) to complete the Annual Emissions Inventory Report Form.	No changes made.
7.2.1	7-H	RC7-H "the air emission of the substance have otherwise been quantified by the industrial operation for the same calendar year." Reporting thresholds are needed. Many substances are screened for NPRI, therefore quantified, but not reported because they are under the reporting threshold. Under this scenario if we estimate them, we must report them.	Reporting is not necessarily required for every schedule 2 substance, only the applicable substances as described in the AMD Reporting Chapter.	Clause changed.
7.2.2	7-J	RC-7J Annual Emissions Inventory Report Form Is this form available for review and comment?	A preliminary draft was provided as part of the initial 60-day public review. A revised draft of the form will be provided for public review at a later date, as will the Annual Emissions Inventory Report Standard and Guidance Document.	No changes made.

Section	Clause	Comment	Response	Action Taken
7.2.2	7-J	RC-7J September 30th deadline We appreciate the selected submission deadline.	Thanks.	No changes made.
7.2.2	7-J	This section seems repetitive as the due dates are explained previously. It is recommended that this be removed in an effort to streamline the Chapter.	RC 7-J specifies the submission deadline for the Annual Emissions Inventory Report.	No changes made.
7.2.2	7-K	And the reporters should update the information every X years to reduce administrative burden.	Much of the information in the form will not change from one year to the next (e.g., list of sources, stack locations, etc), however, annual air emissions can vary from one year to the next. The same reporting form can be used from one year to the next and industrial operations can simply update the information that has changed and report the additional information required for the specific calendar year. One-off data collections have been used in the past (both voluntary and mandatory) and the results have been mixed. All of the requested data is often not provided, or not provided within the required timelines. One-off data collections become dated fairly quickly and usually lack the necessary mechanism to keep them updated. One-off data collections are usually only done for specific projects, and the results may or may not be adaptable to other Regulator business requirements. This then leads to having to start over from scratch for other projects. In terms of administration and available resources, one-off data collections are usually more difficult to successfully complete. It is much more difficult for both industry and government to have the required time available and staff in place for one-off data collections. Regulatory reporting programs are ongoing and help establish expectations for what information will be required, timelines for reporting and resources that will be required. They are annually updated, although much of the information will not need to be updated annually and the same reporting form can be used. They also allow for the easy incorporation of new and modified sources and the removal of sources no longer emitting. They also represent higher-quality compliance data that has been certified by the individual operators who are most familiar with how their plants operate and emit to the atmosphere.	No changes made.
7.2.2	7-K	Could ESRD get the annual emissions information from other bodies who govern reporting programs? Additional information that has not been reported to those programs could be provided by reporters.	The AMD EI requirements are more detailed and have additional data elements not captured by the NPRI. The NPRI has incomplete source-level reporting, amalgamates various sources and excludes some emission sources (e.g., oil sands mine fleets). There are also differences in how the NPRI defines and regulates facilities versus how a facility is defined and regulated under EPEA approval. There is currently no agreement in place between Alberta and Environment Canada on air emissions data collection and several past attempts at harmonizing the 1989 AMD NOx and SO2 emissions inventory reporting requirements with the NPRI were not successful. One obstacle to potential future harmonization with the NPRI is the lack of modern emissions reporting requirements in Alberta. AEP has critically examining the proposed emissions inventory requirements against feedback.	No changes made.
7.2.2	7-K	RC 7-K For the Annual Emissions Inventory Report RC 7-F, the person responsible must (a) use and (b) complete the Annual Emissions Inventory Form. Lots of detail must be provided to complete the Form, and some information would not change year over year such as Section 2.0 of the Form, Identification and Description of release points.	Much of the information in the form will not change from one year to the next (e.g., list of sources, stack locations, etc), however, annual air emissions can vary from one year to the next. The same reporting form can be used from one year to the next and industrial operations can simply update the information that has changed and report the additional information required for the specific calendar year.	No changes made.
7.2.2	7-K	The reporting form is cumbersome and doesn't lead itself to bulk loading of data from emissions estimating software systems. An alternative data format or reporting process should be developed to minimize administrative burden and to minimize the likelihood of inadvertent data transcription or data entry errors.	Excel reporting forms were previously used for the 2006-2008 Alberta Industrial Air Emissions Survey and are also used for baseline and compliance reporting under the Specified Gas Emitters Regulation. The use of locked Microsoft Excel forms will potentially allow for industrial operations to use VBA scripts to populate the reporting form. This ability will depend on how the industrial operation stores the information internally, but VBA scripts were how the 2006-2008 Alberta Industrial Air Emissions Survey forms were pre-populated prior to being distributed to facilities.	No changes made.
7.2.3	7-O (h)	Wording of RC 7-O (h) is inconsistent with the inventory form.	Changed RC 7-O (h) for consistency with reporting form.	Changed RC 7-O (h) for consistency with reporting form.

Section	Clause	Comment	Response	Action Taken
7.2.4	7.2.4 and 7-2-5	Environment Canada uses NPRI data to conduct modeling exercises, what gap is this requirement trying to address?	Environment Canada does utilize NPRI data (along with other data sources) for their large scale GEM-MACH AQ modelling, where shorter stacks and non-point sources are all treated and lumped together as ground-level sources. The GOA and its agencies need to model on smaller scales, with more focused regional photochemical modelling and very specific dispersion modelling. These types of modelling require more detailed, finer grained, information for the sources in Alberta. Even Environment Canada required detailed source-level (all stacks and individual non-point sources) for the oil sands GEM-MACH modelling and air quality forecasting they carried out for the Joint Oil Sands Monitoring (JOSM) work. NPRI data is also not sufficient for use in EIA regulatory dispersion modelling, except potentially for scaling historical source-level emissions data to more current emission levels.	No changes made.
7.2.4	7.2.4 and 7-2-5	identification of all air emission release point spatial locations This is a lot of work to collect after the fact and may not be very useful. Please provide a rational for why it is required. In terms of modeling, unless all other parameters and site details such as building information are provided, it is uncertain how useful the data would be.	The collected emissions inventory information will be used for a variety of purposes, including dispersion modelling. Release point and non-point source parameters are already included. The requirement to report relevant building dimensions, storage tank and exposed storage pile information has been added. The same reporting form can be used for each reporting year, allowing for industry to update as required and report emissions for the specific year. We welcome further input on the data elements needed to support dispersion modelling.	The requirement to report relevant building dimensions, storage tanks and exposed storage pile information has been added.
7.2.4	7-P	Item RC 7-P makes reference to “all emission release points”. It would be useful if a certain minimum threshold were defined for this, including clarity on whether or not part-time, low-use, and backup units are to be included. It would be appreciated if some clarification could be provided on the minimum emission limit for inclusion of a reportable source.	All sources must be identified, however, industrial operations can identify select sources as negligible and exclude them from emissions reporting. More information on negligible sources will be provided in the Annual Emissions Inventory Report Standard and Guidance Document.	No changes made.
7.2.4	7-P (a)	"Identification and description of all air emissions release points…" Including the word all is problematic for complex sites. Major emission release points are defined in Approvals, and there are categories of generic emission points that are also recognized but not defined. For example: laboratory fume hood vents, process analyzer vents, steam vents, exhaust air vents from plant air systems, lube oil reservoir vents, drum vents and sump vents, pressure safety vents for overpressure protection, fuel trip isolation vents, vents from stacks from emergency standby equipment, building vents, and maintenance exhausts fit into this requirement? All are identified in a general context in our Approval, but reporting on all specifically requires significant effort, especially in light of other reporting requirements already in place.	An air emission non-point source is defined in the AMD as "an area, on-road mobile, non-road mobile, volume, line or group of point sources which cannot be practically inventoried as separate individual sources or release points because they are too small, too large, too numerous, too geographically dispersed, or because they are non-stationary". The groups of small point sources that you mention could potentially fit within this definition, and could be categorized as non-point sources. They are likely too small and numerous to practically be inventoried as individual point sources. The approval categories of small point emission sources would likely be a good way of categorizing these non-point sources. All sources must be identified, however, industrial operations can identify select sources as negligible and exclude them from emissions reporting. More information on negligible sources will be provided in the Annual Emissions Inventory Report Standard and Guidance Document.	No changes made.
7.2.4	7-Q	Again, this is redundant reporting to NPRI. If pursuing this requirement, for the “methodology used” requirement, ESRD should be providing a drop-down option similar to NPRI and SGER reporting. It would be beneficial to have consistency in that matter. Remove the requirement for an AB Emissions Inventory Report, or at a minimum, it is recommended that the options for methodologies be standardized and align with the options provided in NPRI reporting.	This is similar to NPRI reporting, but is at the individual release point and non-point source level, not the NPRI source category level (stacks, fugitive, storage and handling, other, etc). Several different measurement/estimation methods could potentially have been used in determining the source category emissions, but only one estimation method can be entered in NPRI reporting. There is also the potential that the methods used in NPRI reporting could be different than those used for AMD emissions inventory reporting.	No changes made.
7.2.4	7-Q, 7-S, 7-AA and 7-BB	Items RC 7-Q, RC 7-S, RC 7-AA, and RC 7-BB request that the methodologies used to determine emissions be provided. Including this level of detail is very time intensive and adds to the already immense administrative burden of this new emissions inventory reporting requirement. We encourage ESRD to remove this requirement.	It is necessary to document the basis for the emission values (including sources inventoried, estimation methods, emission factors, data sources and references). Regardless of whether it is required to be submitted to the Regulator, each industrial operation should have a document outlining how they prepared their emissions inventory. This is necessary to back up the numbers being submitted and to ensure that consistent methodologies are used for future reporting years, as is required by the AMD.	No changes made.

Section	Clause	Comment	Response	Action Taken
7.2.4	7-Q7-S	The estimation of maximum emissions for release points is a difficult and subjective task (regardless of whether they are point or non-point sources). For example, fugitive emissions are tested annually, and the range of readings could be 0 -> 90,000 ppm for each component (our facility has close to 100,000 fugitive emissions points in the inventory). It would be a difficult task to report an estimated maximum emissions result for this program that would be meaningful; the calculation of actual emissions is a much better value with meaningful context.	Plant fugitives would be considered a non-point source, and maximum and normal emission rates won't be required for non-point sources at this time.	Maximum and normal emission rates won't be required on non-point sources at this time.
7.2.4	7-R	Item RC 7-R (g) makes reference to “information on mine fleets, mine faces, and tailings ponds”. It would be helpful if additional clarification could be provided on what type of information is expected.	This will be specified in the Annual Emissions Inventory Report Form and guidance will be provided in the Annual Emissions Inventory Report Standard and Guidance Document. Both of these will be published for public review prior to them being finalized.	No changes made.
7.2.5	7-S	Actual measurement of emissions from area sources such as mine and tailings pond show significant differences from sample to sample within the same source under the same year. A very huge margin of error could effect accuracy of normal and maximum air emissions.	Maximum and normal emission rates won't be required on non-point sources at this time.	Maximum and normal emission rates won't be required on non-point sources at this time.
7.2.5	7-S	How would ESRD recommend reporters to estimate maximum emissions?	Maximum and normal emission rates won't be required on non-point sources at this time. Maximum air emissions are defined in the AMD as "the maximum rate at which a substance is emitted to the atmosphere from a source factoring in emission limits, equipment specifications, or other relevant information". The maximum emission rate is to be based on the approval limit, if applicable. If no approval limit applies, the maximum emission rate can be based on: the design maximum, information from the equipment manufacturer, a historical maximum, an engineering estimate; or method authorized in writing by the Director. The industrial operation should provide the maximum emission rate they feel is the most representative for their release point.	Maximum and normal emission rates won't be required on non-point sources at this time.
7.2.5	7-S	How would ESRD recommend reporters to estimate normal emissions?	Maximum and normal emission rates won't be required on non-point sources at this time. Normal air emissions are defined in the AMD as "the rate at which a substance is emitted to the atmosphere from a source under normal operating conditions". Normal emission rates are meant to be representative of what is normally emitted from sources at a facility. They are required for modelling, as actual air emissions may be skewed for a single year depending on single year operating problems or short-term market conditions affecting a facility or sector. If not modelling for the particular year, normal emissions will better represent what is normally emitting for a different year and can be used to maintain or predict future emission levels in modelling. One of the criticism received on some of the LUF regional air modelling carried out, is that the industrial air emissions survey collected actual emissions for 2008, which was the beginning of a recession and may not have been representative of more recent emission years. It is anticipated that normal emission rates will not need to be changed every year, facilities are only required to update these when the normal rate they previously reported is no longer representative. The normal air emission rate can be determined using a variety of different ways (CEMS data, stack sampling data, an average of actual annual emissions, a recent actual annual emission rate, an engineering estimate, etc). The industrial operation is in the best position to determine what the normal (typical) emission rate of a particular substance is for the individual sources at their site.	Maximum and normal emission rates won't be required on non-point sources at this time.
7.2.5	7-S	RC 7-S (c) and RC 7-S (e) - the measured or estimated maximum air emissions from each air emission non-point source at the industrial operation for the substances quantified in (i) RC 7-G, (ii) RC 7-H, and (iii) RC 7-I; Please provide some clarification on purpose of used of the estimated normal and maximum air emissions from non-point source.	Maximum and normal emission rates won't be required on non-point sources at this time.	Maximum and normal emission rates won't be required on non-point sources at this time.
7.2.6	7-T	RC 7-T (c) Suggest that a definition of negligible source would be helpful, consistent with guidance provided in overlapping regulations (e.g. NPRI, SGRR).	Information on negligible sources will be specified in the Annual Emissions Inventory Report Form and guidance will be provided in the Annual Emissions Inventory Report Standard and Guidance Document. Both of these will be published for public review prior to them being finalized.	No changes made.

Section	Clause	Comment	Response	Action Taken
7.2.6	7-T	RC 7-T (d) The wording of this clause is such that any updates to this Annual Emissions Inventory Report Form can introduce new reporting requirements. This will require industry to monitor this Form for any changes to the regulatory requirements. As written, it would not require the government to inform, consult or get approval for a regulatory change.	The AMD emissions inventory requirements will no doubt need to evolve over time. Regulated industry would be informed of any change, as it would with any change to any of the AMD requirements. The process to update any part of the AMD in the future will need to involve some form of consultation.	No changes made.
7.2.6	7-T (a & b)	If we are already required to identify and explain 10% changes, do we really need to also capture changes as “plant changes”, or are they already inherently captured by reporting on 10% changes? It is recommended that RC 7-T (b) be removed as reporting on 10% changes in emissions should, from an outcomes perspective, be sufficient.	Identification of reasons for changes larger than 10% are specific to each pollutant, which may be from plant changes or from something else (shutdowns, changes in production levels, etc). Plant changes are more general and may effect several substances and provides more context than the short explanation of a >10% change for one specific pollutant.	No changes made.
7.2.7	7.2.7	Why is only one methodology prescribed by the Director?	The method prescribed is for consistently with existing policy for a specific sector and source type. Moved requirement to use CEMS as a surrogate for identical sources to the AEIR Standard/Guidance Document.	Moved requirement to use CEMS as a surrogate for identical sources to the AEIR Standard/Guidance Document.
7.2.7	7-AA	Creation of a Quantification Methodology Document is a major undertaking. We have created a similar validation documents for GHG reporting already, and this feels like significant duplication. A singe window reporting approach is much preferred.	It is necessary to document the basis for the emission values (including sources inventoried, estimation methods, emission factors, data sources and references). Regardless of whether it is required to be submitted to the Regulator, each industrial operation should have a document outlining how they prepared their emissions inventory. This is necessary to back up the numbers being submitted and to ensure that consistent methodologies are used for future reporting years, as is required by the AMD. If much of the same information is already included in your SGER quantification document, it can just be copied in to the AMD EI Quantification Methodology Document and adapted to accurately document how the emissions inventory for the AMD requirements was prepared. It should be noted that while many of the same activity data sources may apply, the measurements and emission factors in the AMD EI Quantification Methodology Document will be for the criteria air pollutants and the applicable schedule 2 air pollutants. Greenhouse gas emissions will not be included in the AMD emissions inventory.	No changes made.
7.2.7	7-AA & BB	The requirement of a QMD for Annual Emissions Inventory is unnecessary. On the SGER front, it makes sense since how individual companies run their GHG programs varies widely. The type of information BB is requesting for the QMD is ALREADY INCLUDED in the report form. It appears that ESRD is requesting we provide the information in the report form and in a word format as well (?). If ESRD was trying to standardize reporting in the manner it was done for SGER, the recommendation would be for the AMD team to review the industry feedback on all of the challenges associated with the SGER program. It is recommended that the requirement to submit a QMD be removed. If there are standard ways ESRD wants industry to estimate emissions, they should specify these and not request industry to repeat the standard methods ESRD requires in a separate document (QMD).	It is necessary to document the basis for the emission values (including sources inventoried, estimation methods, emission factors, data sources and references). Regardless of whether it is required to be submitted to the Regulator, each industrial operation should have a document outlining how they prepared their emissions inventory. This is necessary to back up the numbers being submitted and to ensure that consistent methodologies are used for future reporting years, as is required by the AMD. The calculation method fields are just to identify of the general method categories used and will be used to categorize and filter the emissions inventory information in the provincial inventory database. The general method category fields won't collect the specific information that needs to be captured in the AMD EI Quantification Methodology Document (such as specific emission factor used, source of activity data, equations, references, etc).	No changes made.
7.2.7	7-AA and 7-BB	RC 7-AA, RC 7-BB "Quantification Methodology Document" Does ESRD have the resources to review such a document for every reporting facility? If a methodology document is required, then the Calculation Method fields in the reporting form should not also be required as the result is duplicative reporting.	It is necessary to document the basis for the emission values (including sources inventoried, estimation methods, emission factors, data sources and references). Regardless of whether it is required to be submitted to the Regulator, each industrial operation should have a document outlining how they prepared their emissions inventory. This is necessary to back up the numbers being submitted and to ensure that consistent methodologies are used for future reporting years, as is required by the AMD. The calculation method fields are just to identify of the general method categories used and will be used to categorize and filter the emissions inventory information in the provincial inventory database. The general method category fields won't collect the specific information that needs to be captured in the AMD EI Quantification Methodology Document (such as specific emission factor used, source of activity data, equations, references, etc).	No changes made.

Section	Clause	Comment	Response	Action Taken
7.2.7	7-U	RC 7-U (c) We have not seen a draft of the guidance document referred to: "Annual Emissions Inventory Report Guidance Document". There is already a large amount of guidance documents re reporting (specifically NPRI and GHG). Depending on how prescriptive this guidance document is and if it covers topics already discussed in other guidance document or not, there is a possibility of overlap and conflicts/contradictions between the different documents would lead into having to keep 2 sets of books to calculate the same emissions for AMD and NPRI/GHG regulations.	The AMD emissions inventory guidance document will be provided for public review prior to being finalized. AMD emissions inventory reporting is completely separate from NPRI, Federal GHG and Provincial GHG reporting. Potentially some of the same activity data and air emission numbers could be used for AMD emissions inventory reporting, but this cannot be guaranteed (due to differences in facility definitions, estimation methods, type of facility, different substances, etc).	No changes made.
7.2.7	7-U	RC 7-U For the Annual Emissions Inventory in RC 7-A and the Annual Emissions Inventory Report in Rc 7-F, the person responsible must determine the (a) annual actual air emissions; (b) normal air emissions; and (c) maximum air emissions; using the measurement equipment, estimation methodologies, emission factors, equations and calculations that are specified by the Director in the Annual Emissions Inventory Report Guidance Document. RC 7-V (a) has identified that there will be no Guidance Document for the annual actual air emissions. What is the purpose of including RC 7-U (a) annual actual air emissions in the clause?	The Director can prescribe estimation methodologies for any of the three emission rate types. At this time though, only one method is going to be prescribed by the Director (the use of surrogate CEMS for identical sources, for consistency with existing AEP policy).	No changes made.
7.2.7	7-U	The Guidance document doesn't appear to be available for review. Also, if this Guidance document is a moving target like the SGER annual guidance documents, that poses a lot of issue for industry to try to keep up with constantly evolving requirements. Remove the requirement for an AB Emissions Inventory Report, or at a minimum, provide the document for review prior to finalizing Chapter 9.	The guidance document will be provided for public review prior to being finalized. The AMD emissions inventory requirements will no doubt need to evolve over time. Regulated industry would be informed of any change, as it would with any change to any of the AMD requirements. The process to update any part of the AMD in the future will need to involve some form of consultation.	No changes made.
7.2.7	7-V	RC-7V (a) no measurement equipment, estimation methodologies,…….have been specified by the Director in the Annual Emissions Inventory Report Guidance Document for determining the annual actual air emissions Please confirm that the Guidance Document will only apply to normal and maximum air emissions. Has the Guidance Document been published?	The Director can prescribe estimation methodologies for any of the three emission rate types. At this time though, only one method is going to be prescribed by the Director (the use of surrogate CEMS for identical sources, for consistency with existing AEP policy).	No changes made.
7.2.7	7-V	RC-7V (a) Some flexibilities may be required to allow a reporter to propose methodologies that may be more accurate and suitable to its operation.	When no actual measurements are available (and where no specific method has been prescribed by the Director), the AMD simply requires using: available methodologies, emission factors, equations and calculations that are: (i) based on the best information available, (ii) applicable to the particular industrial operation and its operating conditions; and (iii) if applicable, widely used and accepted by the industrial sector to which the industrial operation belongs. Note that the AMD requires the use of consistent methodologies across reporting years, unless given authorization by the Director.	No changes made.
7.2.7	7-W	RC-7W consistent measurements, methodologies, emission factors, equations, and calculations (1) We would prefer to be able to use better methodologies or emission factors as they become available but not be allowed to "backslide". Once a method or factor is selected it is then that or better. (2) NPRI allows for changes to methodologies. Please provide rational. What gap is this trying to address? Alignment with NPRI is suggested.	Better methods will be allowed, but any change in methodology must first be authorized by the Director. This is required to ensure consistency in reported emission numbers over time, and to understand when and why methods have changed to identify the impact on the overall emission trends. Depending on the level of the emissions data being looked at, NPRI data is not necessarily a good way to track emission levels over time. At the Canadian, and perhaps total provincial level, NPRI data can be used to track emission levels from large industrial, commercial and institutional facilities over time. When looking at a regional, subregional, sector or facility level, the NPRI is often not very useful for tracking emission levels over time, as there can be large changes in emission levels resulting just from changes in estimation methods, without detailed supporting information to help understand the change.	No changes made.

Section	Clause	Comment	Response	Action Taken
7.2.7	7-Y	RC 7-Y (b) Please clarify the definition of "recent". Does it mean the "recent stack sample results in a reporting year" or "recent stack sample results in the recent reporting years" ?	This is left somewhat broad to allow for flexibility for the industrial operation. The intent is to get the industrial operation to report a representative normal emission rate. Stack sampling is supposed to be carried out at normal operating conditions, so a single stack test may provide a representative normal emission rate. Given that a stack test is just a short snapshot in time, an average of several recent stack tests may provide a more representative normal emission rate. The industrial operation is in the best position to determine how many stack tests should be used to determine what a representative normal emission rate would be.	No changes made.
7.2.7	7-Y	RC 7-Y (c)ii-2: need a further clarification about the "last several years". How many years are allowed to be tracked back for the historical maximum air emission rate?	This is left somewhat broad to allow for flexibility for the industrial operation. The intent is get the industrial operation to report a representative maximum emission rate. Five years would likely be reasonable, as going back further than that may capture emission rates that are no longer representative of how the industrial operation is currently operating. The industrial operation is in the best position to determine how many years to go back to determine what a representative maximum emission rate would be (when no emission limit applies).	No changes made.
7.2.7	7-Y	RC 7-Y(b): Should be able to use a static factor based on multiple years' worth of data for "Normal" assessment where a CEMS is not in place. Annual stack surveys should either confirm the validity of that emission factor OR indicate a change requiring the factor to be updated or multiple factors applied throughout the year to account for out of norm conditions. Otherwise we end up chasing analytical variance vs. actual emission variance.	Normal emission rates can potentially be determined via the method you described. In RC 7-Y(b)(v), a representative annual actual air emission rate can be used for the normal emission rate. Annual actual air emissions is defined in the AMD as "the actual, measured or estimated quantity of a substance being emitted to the atmosphere from a source during a specific calendar year." An annual actual emission rate would need to be converted to the appropriate units and timescale for reporting the normal emission rate.	No changes made.
7.2.7	7-Y	The information required to meet this clause is more appropriate for an Approval Application (new facility) than to require for an annual report.	Much of the information in the form will not change from one year to the next (e.g., list of sources, stack locations, etc), however, annual air emissions can vary from one year to the next. The same reporting form can be used from one year to the next and industrial operations can simply update the information that has changed and report the additional information required for the specific calendar year.	No changes made.
7.2.7	7-Y (b) (ii)	Clarify "An average of several recent stack sample results". How do you define several? Recent? Is this not the same as 5 years' worth of results like the annual report?	This is left somewhat broad to allow for flexibility for the industrial operation. The intent is to get the industrial operation to report a representative normal emission rate. Stack sampling is supposed to be carried out at normal operating conditions, so a single stack test may provide a representative normal emission rate. Given that a stack test is just a short snapshot in time, an average of several recent stack tests may provide a more representative normal emission rate. The industrial operation is in the best position to determine how many stack tests should be used to determine what a representative normal emission rate would be.	No changes made.
7.2.7	7-Y (b) (ii)	Clarify: "an average of several recent stack sample results". How do you define several? Recent? Is this not the same as 5 years worth of results like the annual report?	This is left somewhat broad to allow for flexibility for the industrial operation. The intent is to get the industrial operation to report a representative normal emission rate. Stack sampling is supposed to be carried out at normal operating conditions, so a single stack test may provide a representative normal emission rate. Given that a stack test is just a short snapshot in time, an average of several recent stack tests may provide a more representative normal emission rate. The industrial operation is in the best position to determine how many stack tests should be used to determine what a representative normal emission rate would be.	No changes made.
7.2.7	7-Y (c) (i)	Proposed change Change wording because maximum air emissions could exceed the approval limit	Maximum air emissions are defined in the AMD as "the maximum rate at which a substance is emitted to the atmosphere from a source factoring in emission limits, equipment specifications, or other relevant information". The intent is that the maximum would not exceed the limits set out in EPEA approval conditions. While there may be upset or emergency situations which could result in emission levels exceeding approval limits, these are unusual events that will be identified in the "Shut-downs, Start-ups, Upsets and Elevated Air Pollutant Releases" section of the Annual Emissions Inventory Report form, but not reported as the maximum emission rates when an approval limit applies.	No changes made.
7.2.7	7-Y (c) (i)	Proposed changes: Change wording. Maximum air emissions is not necessarily the approval limit you could go over or be vastly under.	Maximum air emissions are defined in the AMD as "the maximum rate at which a substance is emitted to the atmosphere from a source factoring in emission limits, equipment specifications, or other relevant information". The intent is that the maximum would not exceed the limits set out in EPEA approval conditions. While there may be upset or emergency situations which could result in emission levels exceeding approval limits, these are unusual events that will be identified in the "Shut-downs, Start-ups, Upsets and Elevated Air Pollutant Releases" section of the Annual Emissions Inventory Report form, but not reported as the maximum emission rates when an approval limit applies.	No changes made.

Section	Clause	Comment	Response	Action Taken
7.2.7	7-Z	Is the company allowed to change approaches year after year?	Not without authorization from the Director.	No changes made.
7.2.7	7-Z	RC 7-Z (ii) the person responsible has received written authorization from the Director to use a different measurement, methodology, emission factor, equation or calculation. Could a certain % changes of emissions be used as a threshold to get written authorization from the Director (i.e. if an changing emission factor will cause the emission to change by XX%, written authorization from the Director is required)? If quantification methodology document has to be submitted annually with the Annual Emission Inventory Report , the details of calculation changes would be recorded/known. It seems redundant for changes that would not significantly effect emissions. Requirement to have written authorization from the Director to update methodologies will hamper the ability to updated emission factors/methodologies when get new data. Suggest you change this requirement to just inform of changes instead of needing to request written authorization.	This will be further dealt with in the guidance document. If the change in an emission factor has a negligible improvement on the emission value, it may not worthwhile changing the methodology and unnecessarily introducing inconsistency in the estimation methods. That being said, there will be some instances where a change in method will be required (due to changes in available activity data, processes, fuels used, etc) even though the change in the emission value is very small.	No changes made.

Industrial Notifications				
8.0	8.0	Industrial Notifications: Review and limit notifications to essential information.	See response to each clause comment.	No changes made.
8.0	8.0	The SES and RATA Notification Form needs to be revised to better reflect what information is required.	Updated Stack Survey and RATA Notification Form clause requirements for consistency with revised form.	Updated Stack Survey and RATA Notification Form clause requirements for consistency with revised form.
8.0	8 and 17	Are notifications required when replacing analyzers for routine maintenance or to maintain uptime requirements?	Added noted clarifying replacing an ambient analyzer or meteorological sensor with the exact same analyzer or sensor model, for the purposes of routine maintenance or to maintain equipment uptime, would not constitute a new analyzer or sensor. However, a new ambient monitoring station, adding a new analyzer or sensor for a parameter that was not previously being monitored at the station, and replacing an existing analyzer or sensor with a different method would all constitute a new analyzer or sensor and would require notification.	Added clarifying note.
8.0	8 and 17	Can a monitoring schedule for the entire year be submitted for notifications for portable monitoring?	Added note clarifying that is acceptable to submit a monitoring schedule for the entire year for portable monitoring stations, rather than notification of each individual relocation of the station.	Added note clarifying that is acceptable to submit a monitoring schedule for the entire year for portable monitoring stations, rather than notification of each individual relocation of the station.
8.0	8 and 17	Should change notification method from email to just say electronically.	Changed submitting notification "by email" to "electronically".	Changed submitting notification "by email" to "electronically".
8.0	8-B	RC 8-B – Notification should only require information related to source, date, test type (i.e. – compliance stack test, RATA, etc.). Notification should be limited to regulatory compliance testing, not voluntary testing over and above approval requirements. Should be explicit about this point in the requirement. Remove requirements (d) & (e), should only be using approved methods anyway.	Notification is not required for monitoring/sampling being carried out for the industrial operation's own purposes, but must meet the requirements of the AMD if they want the Regulator to consider the results. Note that in accordance with approval requirements, due diligence source testing results performed by a standard or a modified method are required to be submitted to the Director if the source testing performed was on a parameter or pollutant having approval conditions or limits.	Added clarifying note.
8.0	8-B (c)	Requiring the “specific date each source will be surveyed” is logistically challenging. Providing “week of” is more appropriate since surveys get routinely bumped a day or two depending on operational conditions or survey contractor availability or weather. It is recommended that RC 8-B (c) be reworded to provide more flexibility in notification requirements [e.g. “the proposed date range in which each source will be surveyed”].	This is required for the auditor to be able to come and audit a test.	No changes made.
8.0	8-B (d) & (e)	The methodologies used are stated in the survey reports. It is not clear what additional value it will add for ESRD to have this information up front. Also, it is a requirements of the approval to have any deviations from standard methods approved by the Director. ESRD should have these approvals in their file room. Requesting that industry provide copies of such authorizations is an unnecessary duplication of efforts. It is recommended that RC 8-B (d) & (e) be removed.	This is intended for the auditor to have advanced notice of the proposed methods (including promulgated methods)	No changes made.

Section	Clause	Comment	Response	Action Taken
8.0	8-B 8-C	It is difficult selecting specific dates for some surveys considering how dependent testing is on atmospheric and operational conditions. Dates could move several times if too specific, and a range of dates is better for planning. For example, our site might test in the order of 30 stacks over a 3-week period, and specific scheduling is a challenge to anticipate. Keeping the requirement for specific dates will require additional administrative notifications due to small schedule changes that will impact work load for both industry and government.	This is required for the auditor to be able to come and audit a test. However, for special cases authorization from the designated Director can be requested if more general notifications are needed.	No changes made.
8.0	8-C	For changes to previously scheduled surveys, does the notification of the change have to be submitted 14 days prior or can the change-notification be submitted 2 days prior (for example)? Logistically, surveys can be a moving target and providing daily updates can be an onerous task for both industry and ESRD, especially if 14 days notice is required. It is recommended that updates to previously scheduled surveys NOT be subject to 14 days notice. Language should be updated accordingly.	This is required for the auditor to be able to come and audit a test. However, for special cases authorization from the designated Director can be requested if more general notifications are needed.	No changes made.
8.0	8-D	RC 8-D: See no reason for this requirement. No value in requiring end of life replacement notifications, etc.	For RC 8-D, replacing an ambient analyzer or meteorological sensor with the exact same analyzer or sensor model, for the purposes of routine maintenance or to maintain equipment uptime, would not constitute a new analyzer or sensor. However, a new ambient monitoring station, adding a new analyzer or sensor for a parameter that was not previously being monitored at the station, and replacing an existing analyzer or sensor with a different method would all constitute a new analyzer or sensor and would require notification as per RC 8-D.	Added clarifying note.
8.0	8-D	The term 'new' analyzer should be defined: do we need to provide notification if a new spare is used temporarily, or if a similar model is swapped out for a malfunctioning analyzer? This would affect uptime, if we need to provide notification before changing out an analyzer. Suggest that the intent might be in the context of starting an 'additional' analyzer, or perhaps 'commissioning a new analyzer installation' would work.	For RC 8-D, replacing an ambient analyzer or meteorological sensor with the exact same analyzer or sensor model, for the purposes of routine maintenance or to maintain equipment uptime, would not constitute a new analyzer or sensor. However, a new ambient monitoring station, adding a new analyzer or sensor for a parameter that was not previously being monitored at the station, and replacing an existing analyzer or sensor with a different method would all constitute a new analyzer or sensor and would require notification as per RC 8-D.	Added clarifying note.
8.0	8-D & 8-F	Is 14 days/30 days (respectively) notification required for swapping out analyzers with extras? For example, if an ethylene analyzer goes down and we have a spare, is a 14 day/30 day notification required? Does this requirement only apply to BRAND NEW analyzers or analyzers for new parameters? It is recommended that this be applied to BRAND NEW installations; language should be updated accordingly. Requiring such notifications for swapping analyzers with spares puts unnecessary restrictions on industry that could create compliance issues (ex/ if 30 days notice is required but an analyzer fails, then industry is non-compliant with the 90% uptime requirement in order to facilitate a 14 or 30 day notice requirement).	For RC 8-D, replacing an ambient analyzer or meteorological sensor with the exact same analyzer or sensor model, for the purposes of routine maintenance or to maintain equipment uptime, would not constitute a new analyzer or sensor. However, a new ambient monitoring station, adding a new analyzer or sensor for a parameter that was not previously being monitored at the station, and replacing an existing analyzer or sensor with a different method would all constitute a new analyzer or sensor and would require notification as per RC 8-D.	Added clarifying note.
8.0	8-E	RC 8-E: For ambient monitoring periods defined in a facilities approval, there should be no need to complete an additional notification. No value, unnecessary work.	Notifications are required to inform when the short-term ambient monitoring commences. Two notifications should not be required, as a single notification should be able to meet both approval and AMD notification requirements.	No changes made.

Section	Clause	Comment	Response	Action Taken
8.0	8-G	4. Regulation of “Operations” Another ESRD streamlining initiative in recent years was to remove “operating requirements” from approval clauses. With the refocus on environmental outcomes, end-of-pipe emissions and limits became the focus in order to secure certain environmental outcomes. ESRD stepped away from prescribing how industry should operate and focused on prescribing the outcomes of the operations. Chapter 9 is a departure from that initiative as well, especially in regard to the requirement to provide 14 days notice prior to shut-downs and start-ups. It is recommended that: - ESRD remove RC 8-G as providing 14 days notice prior to shutdowns and start-ups may not be logistically possible. Overall, this puts restrictive conditions on facility operations that affect the economic viability of the operation. If a facility can execute a shutdown more efficiently than expected, it may be in a position to start up earlier than expected. Delaying to meet this restrictive clause in the AMD may result in losses of production and revenue. There is no benefit to the environment by including this clause; - ESRD review and remove any Chapter 9 requirements that impact HOW industry operates, and those operating requirements that are already covered by approval-related clauses (example: RC 4-H requires immediate reporting if pollution abatement equipment fails – this could be contrary to the approval which may allow a certain amount of downtime for the equipment).	This is required in some approvals. Changed to "when required by an approval to …".	Added "If required by an approval".
8.0	8-G	c) Past ESRD streamlining initiatives removed “operating requirements” from approval clauses refocusing on end-of-pipe emissions and limits to secure desired environmental outcomes. ESRD stepped away from prescribing how industry should operate and focused on the environmental outcomes of operations. Chapter 9 is a departure from that initiative, especially regarding the requirement to provide 14 days’ notice prior to shut-downs and start-ups. For example, it is advantageous if a facility can execute a shutdown more efficiently than expected, and start up earlier than expected. Delaying to meet this reporting clause requirement in the AMD would result in losses of production and revenue. There appears to be no benefit to the environment by including this clause. d) Administrative relaxation as an approval holder’s performance incentive was to be part of the continuous improvement Policy (see 2012-2013 Approval Policy). The current direction on administrative requirements is becoming a disincentive. Recommendations: - ESRD remove RC 8-G as providing 14 days’ notice prior to shutdowns and start-ups may not be logistically possible.	This is required in some approvals. Changed to "when required by an approval to …".	Added "If required by an approval".
8.0	8-G	ESRD remove RC 8-G as providing 14 days’ notice prior to shutdowns and start-ups may not be logistically possible.	This is a requirement of some EPEA approvals. Clause reworded to make it clear this only applies when required to provide this notification under EPEA approval conditions.	Clause reworded to make it clear this only applies when required to provide this notification under EPEA approval conditions.
8.0	8-G	Need to provide an example of a “shut down”. We have times where a section of a production unit may be taken down for 3 days or less – is that a scheduled shutdown? And, the requirement to provide 14 days notice of “commencing operations” – is this re-commencing operations AFTER a shutdown, or commencing operation of a new facility? In many cases this may not be logistically possible. Overall, this puts restrictive conditions on facility operations that affect the economic viability of the operation. If a facility can execute a shutdown more efficiently that expected, it may be in a position to start up earlier than expected. Delaying to meet this restrictive clause in the AMD may result in losses of production and revenue. There is no benefit to the environment by including this clause. It is recommended that RC 8-G be removed. If this is refused, then definitions should be provided for a “scheduled shut down” and “commencing operations” to clarify expectations.	This is required in some approvals. Changed to "when required by an approval to …".	Added "If required by an approval".

Section	Clause	Comment	Response	Action Taken
8.0	8-G	RC 8-G: Not sure why we would need to notify ESRD re: scheduled shutdowns. Need to define extent. Is it on a unit by unit basis (some facilities have a number of individual units within their boundaries), is it for the whole site. I don't see this adding any value. Incidents will be reported as required. Production data and ambient data will reflect shutdowns which are already in monthly/annual reports. If a facility fails to report a scheduled shutdown, then what?	This is required in some approvals. Changed to "when required by an approval to …".	Added "If required by an approval".
8.0	8-G	Recommendations: - ESRD remove RC 8-G as providing 14 days' notice prior to shutdowns and start-ups may not be logistically possible.	This is required in some approvals. Changed to "when required by an approval to …".	Added "If required by an approval".
8.0	8-G	TC 8-G Notification of industrial operation start-up or scheduled shutdown Clarification of intent: Is this required for a unit or equipment start up or shutdown within a facility, or only for the entire facility? What is the benefit of this notification under the Air Monitoring Directive?	This is required in some approvals. Changed to "when required by an approval to …".	Added "If required by an approval".
8.0	8-G	Clarify: In giving notice of shutdowns is this for facility wide shutdowns or operating unit shutdowns? What is the purpose of this notice?	This is required in some approvals. Changed to "when required by an approval to …".	Added "If required by an approval".
8.0	8-G and 8-H	Our company strongly disagrees with providing notifications of planned start-ups/shutdowns as long as permitted requirements are met. The requirement to provide notice to the director of 14 days (RC 8-G) and continuous updates when those dates change (RC 8-H) is very restrictive and onerous. It is unclear what the intent of this notification is? A facility should be able to operate within our permitted requirements for start-up and shutdown without providing advance notice to the director.	This is required in some approvals. Changed to "when required by an approval to …".	Added "If required by an approval".
8.0	8-G 8-H	Similar to section 5.5. This requirement adds administrative burden, and could create significant operational challenges if the facility could more efficiently shutdown and start-up earlier than expected. This requirement could therefore impact production and revenue and is a concern; suggest removing the clause.	This is required in some approvals. Changed to "when required by an approval to …".	Added "If required by an approval".
8.0	8-I	8.0 Industrial Notifications "RC 8-I The person responsible must notify the Director, by email using the AMD Notification Template, within thirty days of all equipment changes to any: (a) ambient analyzer; or (b) meteorological sensor." When unexpected issues occur and issues cannot be fixed in the field, replacing the analyzer or meteorological senor may be one of the corrective actions we will take in order to bring the monitoring program back on line. If this event occurs, the requirement of the thirty days notification cannot be met.	The 30 day notification is from when the equipment is actually changed, not when an issue is first encountered. Any significant disruptions to monitoring equipment would require immediate notification under section 4 of the Reporting Chapter.	No changes made.
8.0	8-I	Is it necessary to provide notice of equipment changes in a separate document, when this is already a requirement and reported within the monthly air monitoring report? (This would be slightly longer than 30 days when reported in the next month). It is also important to ensure that this requirement does not interfere with necessary ambient monitoring station operation to maintain uptime.	RC 8-I is just for notifications, while monthly reports provide an overview of all the monitoring going on and would also mention changes to monitoring equipment.	No changes made.

Industrial Source Monitoring Reporting				
9.0	9.0	It is not necessarily clear what elements of monitoring non-conformance (Section 9 - MSS, RATA or CGAs) might be immediately reportable. Is this more clear in other Chapters of the AMD?	It is as per approval and release regulations.	No changes made.
9.0	9.0	Process load, Load, plant load – often not available, and estimates are of spurious quality. For stack, RATA, CGA, load should not be required. Typically not measured. Actual air emission results are what our reporting requirements should be concerned with.	Process production rate should be know to meet the CEMS Code requirement. For stack sampling you need to know if you are under "normal" production as per the Stack Sampling Code. Emissions are relative to production.	No changes made.

Section	Clause	Comment	Response	Action Taken
9.0	9.0	The word 'expectation' is strong in the second paragraph; suggest that 'recommendation' would be better. Are companies going to be responsible for training their own air emissions professionals (specifically trained in source emissions measurement and evaluation per the text) when the emissions measurement and evaluation is provided by a third party specializing in the given field?	Refer to page III-6 of the Alberta Stack Sampling Code. The team lead "must be specifically trained in source sampling".	No changes made.
9.0	9.0	This section creates unnecessary administrative burden on industry. Submission of the survey, RATA or CGA report on its own, with a simple cover letter, should be sufficient. All other requirements of the Chapter are duplication of efforts. It is recommended that this section be removed. If not considered, then it should be streamlined to only request what is NEEDED and remove the additional administrative forms (which are simply a duplication of the information included in the reports) and requirements (cover letters, title pages, tables of contents, etc.)	The forms are needed to streamline and standardize the reporting format. The forms can be filled out by the third party. The approval holder is obligated to review and discuss the content of the third party reports. Many current source reports already meet most of the requirements, so the use of forms instead of summary tables in the reports should not significantly increase the work of the contractors.	No changes made.
9.0	9.0	We recommend that specific references to SAIT, NAIT, and Mount Royal University as training opportunities be removed from the document. Accreditation can be received from many training institutes across Canada, and completion of training alone is not indicative that individuals or companies are sufficiently experienced to complete these surveys. The comment about training may be misleading.	This is just guidance. The Alberta Stack Sampling Code specifies that person conducting stack sampling receive adequate training.	No changes made.
9.0	9-PPP	Suggest moving all of clause 9-PPP and associated note to under 9-TTT	Agreed.	Clauses moved.
9.1	9.1	e) It is unclear whether the AMD replaces Code requirements for CEMS and Stack sampling, or augments it. In certain places there is a reference to follow the Codes and in others it states other requirements. Multiple forms with the same information that are not linked could become a data assurance challenge.	The AMD doesn't replace the CEMS Code or the Stack Sampling Code, except for the quarterly reports required by the CEMS Code. Section 9.1 of the Reporting Chapter just specifies the requirements for what must be in the Manual Stack Survey Report.	No changes made.
9.1	9.1	It would be helpful if it is stated in this section whether or not this section replaces any reporting requirements specified in the Stack Sampling Code or the CEMS Code. These two documents contain many of the same reporting requirements as Section 9. If the AMD requirements are in addition to the existing reporting requirements, that is a duplication in effort that is not practical. We recommend that the AMD include either all requirements or none of the requirements of the Stack Sampling Code and CEMS Code since having requirements in multiple documents creates confusion.	It doesn't replace the Alberta Stack Sampling Code or CEMS Code with the exception of section 6.2 of the CEMS Code. Section 9.1 of the Reporting Chapter just specifies the requirements for what must be in the Manual Stack Survey Report.	No changes made.
9.1	9.1	Manual Stack Survey Reports Recommend removing comment right under 9.1 because we typically do not reference another jurisdictions requirements because they are outside of our control and mandate. Have to be careful that this is not seen as by-passing the Alberta Stack Survey Code. The Alberta Stack Survey Code is out-of-date and needs to be revised; but, it is currently the standard in place and referenced in the approval.	This is covered in AMD Chapter 4 - requirement to follow Stack Sampling Code and CEMS Code over and above any other methods. Alternate methods or changes to methods requires Director's authorization.	No changes made.
9.1	9.1	Manual Stack Survey Reports The use of both an AMD Stack Survey form and the Stack Survey Report adds to administrative burden and leads to potential confusion for reporters	The forms are needed to streamline and standardize the reporting format. The forms can be filled out by the third party. The approval holder is obligated to review and discuss the content of the third party reports. Many current source reports already meet most of the requirements, so the use of forms instead of summary tables in the reports should not significantly increase the work of the contractors.	No changes made.
9.1	9.1	Manual stack surveys conducted for small facilities are carried out via third party. The changes to the report and the re-stating of information contained in the report as part of the cover letter will mean additional resources.	The cover letters and report content can be prepared by the third party. A second cover letter, table of contents, etc is not required from the facility.	No changes made.
9.1	9.1	Stack and CEMS Reports: With regard to unit rate percentage, need to define as percentage of current max operating rate vs. original design (a number of units have undergone debottlenecks, so their new max operating rates have changed from the original)	Production (and rate) is specific to each facility. This should be defined in the facility's CEMS QAP for the purposes of meeting the 90% requirement	No changes made.
9.1	9.1	The majority of the information required by the cover letter is in the body of the report.	The cover letter is a summary only, not the details.	No changes made.
9.1	9.1	The SES summary form clause needs to be revised to better reflect what information is required.	Added minimum requirements for Manual Stack Survey Summary Form clause.	Added minimum requirements for Manual Stack Survey Summary Form clause.

Section	Clause	Comment	Response	Action Taken
9.1	9.1	The wording of the first paragraph almost implies that the US EPA promulgated methods are replacing the Alberta Stack Sampling Code, since it isn't also mentioned in the text.	EPA methods are in use in the province, but this reference is not meant to replace the Stack Sampling Code methods. Authorization from the Director is required for use of alternative methods.	Paragraph reworded to clarify.
9.1	9-B	The Form appears to be a repetition of what is already included in the report. In addition, the requirement for production rate during testing should be granted confidentiality. Plus, it is not entirely clear how the “production rate” is relevant in all cases. In some monitored sources, the relationship between production rate and emissions do not directly correlate. It is recommended that the requirement to submit an additional Manual Stack Survey Form be removed.	The form is an electronic summary of what the report contains and standardizes how the information is reported to the Department. Production rate is relevant and required. Confidentiality can be requested if you choose (according to EPEA/FOIPPA).	No changes made.
9.1	9-D 9-BB, 9-PP	"EPA promulgated methods" (in 9-D, above 9-BB and 9-PP) The current Alberta Stack Survey Code is out-of-date and needs to be updated. However, it is the currant standard in the Province. Caution should be exercised when specifically recognizing the requirements from another jurisdiction because it falls outside our mandate and control. Also, if a company chooses to use a different instrument method outside of the Stack Sampling Code, they must receive Director authorization before hand in accordance with the Stack Sampling Code, approval, etc. – if the document allows.	Dealt with in AMD Chapter 4. Must use CEMS Code or Stack Sampling Code first. If cannot use these, other methods are prescribed in Chapter 4 but will require authorization if not US EPA promulgated. Changes in methods require authorization by the Director.	No changes made.
9.1	9-E and 9-FF	Remove RC 9-E and 9-FF (on manual stack surveys and RATAs), as these are being moved to the Monitoring Chapter.	Agreed.	Moved to monitoring section. Remove section RC9-E and 9-FF. (section 9-D and 9-EE covers the requirement and the appendices.)
9.1	9-OOO	Should include identification of omissions and outliers in the summary section of the CGA Report.	Changed summary and discussion section clauses to "identification of any additional, omitted or outlying test results" for SES, RATA and CGA Reports.	Changed summary and discussion section clauses to "identification of any additional, omitted or outlying test results" for SES, RATA and CGA Reports.
9.2	9.2	May want to add in a clarification here: ‘consecutive’ doesn’t necessarily mean ‘on the same day’, but you can’t use RATA run #5 on Monday and RATA run #6 on Tuesday as representing a one-hour compliance run	Clarified guidance in section 9.2.	Clarified guidance in section 9.2.
9.2	9.2	Proposed change: Change wording. States that if SES is used in conjunction with a RATA it must be in 6 consecutive runs. Why not 3 sets of 2 consecutive runs?	The paragraphs at the beginning of section 9.2 are intended to make reporting consistent and to discourage using only the best results. These paragraphs are just guidance. If six consecutive runs are not used, an explanation must be included under RC 9-XX (h). Added note "‘consecutive’ doesn’t necessarily mean ‘on the same day’, but you can’t use RATA run #5 on Monday and RATA run #6 on Tuesday as representing a one-hour compliance run".	Added "an explanation must be included if six consecutive runs were not used" to RC 9-XX. Added note "‘consecutive’ doesn’t necessarily mean ‘on the same day’, but you can’t use RATA run #5 on Monday and RATA run #6 on Tuesday as representing a one-hour compliance run".
9.2	9.2	Proposed change: This section does not apply to parameters not listed in the CEMS code. Need wording change to include these parameters.	The AMD does not differentiate between specific parameters, performance specifications or QAP requirements; the CEMS Code does.	No changes made.
9.2	9.2	RATA Report The use of both an AMD RATA form and the RATA Report adds to administrative burden and leads to potential confusion for reporters.	The forms are needed to streamline and standardize the reporting format and collect summary data in an electronic format. The forms can be filled out by the third party. The approval holder is obligated to review and discuss the content of the third party reports. Most reports are already currently meeting most of the requirements. The forms simply replace the summary tables that are currently included in most reports.	Change made.
9.2	9.2	RATA Reports ADD: Dual Range analysers must be audited on both Ranges. When a RATA is being used to fulfill a manual stack survey, the source survey summary as described in section 9.1.2 must be included in the RATA report	Added "identification of whether the analyzer is dual range" and clarifying note to RATA Report summary content.	Added "identification of whether the analyzer is dual range" and clarifying note to RATA Report summary content.
9.2	9.2	The AMD does not appear to have been written in a way that includes CEMS which do not appear in the CEMS code nor does the summary include a way to report for a pass under footnote 7a of the CEMS Code section 4.2 Table 7. The CEMS Code allows for listing of parameters not in the CEMS Code to be listed in the CEMS QAP. Will facility CEMS QAPs need written authorization from the director to be followed?	The AMD does not differentiate between specific parameters, performance specifications or QAP requirements; the CEMS Code does. The AMD does not prevent footnote 7a.	No changes made.

Section	Clause	Comment	Response	Action Taken
9.2	9.2	The RATA summary form clause needs to be revised to better reflect what information is required.	Add minimum requirements for RATA Summary Form clause.	Add minimum requirements for RATA Summary Form clause.
9.2	9-BB	Provide clarification on what “incomplete” means. Please clarify.	Incomplete means a survey/RATA/CGA that was stopped/aborted prematurely.	No changes made.
9.2	9-CC	The RATA Form does not appear to offer any new information from the reports. The RATA result information is already contained in the Report. As for the technical specifications requirements of the Form, all that information should be in the ESRD file room as it is submitted when a CEMS is installed, per the requirements of the CEMS Code. Industry does not change out analyzers or change the operating conditions routinely enough to warrant that information being required at every RATA. It is recommended that the requirement to submit an additional RATA form along with the report be removed.	The form is an electronic summary of what the report contains and standardizes how the information is reported to the Department. It collects summary data in an electronic format.	No changes made.
9.3	9.3	CGA Reports The use of both an AMD CGA form and the CGA Report adds to administrative burden and leads to potential confusion for reporters.	The forms are needed to streamline and standardize the reporting format. They collect summary data is a useable electronic format. The forms can be filled out by the third party. The approval holder is obligated to review and discuss the content of the third party reports. Most reports are currently already meeting most of the requirements.	No changes made.
9.3	9.3	The CGA summary form clause needs to be revised to better reflect what information is required.	Add minimum requirements for CGA Summary Form clause.	Add minimum requirements for CGA Summary Form clause.
9.3	9.3	WRT CGA’s requiring process conditions to be operating at normal conditions. No reason for this limitation as CGA are standard gases that are passed through the probe to the instrument. Results are not impacted by process conditions. Only a measurement of the sampling system and instrumental aspects of a CEMS independent for the most part of process conditions.	As per section 5.2.4 and 5.1.3 (f) of the Alberta CEMS Code (1998), the facility is required to be at a minimum 90%; under normal conditions.	No changes made.
9.2.2	9-NN	The line "(j) for compliance surveys, a description of the six consecutive 30-minute runs used for calculations " should be inserted at (p)	Clauses renumbered.	Clauses renumbered.
9.1.1	9-H	It is noted that the cover letter requirements specified in Item RC 9-H are extremely detailed. As all of this information will be in the report itself, we would recommend reducing the cover letter requirements to reduce unnecessary administrative burden.	This is all necessary information.	No changes made.
9.1.1	9-H (d)	Object: Change wording to align with Stack Sampling Code. Unit should be operating under normal conditions for a SES not at a production level like a RATA.	This term is used in the Stack Sampling Code as well. During an audit, normal production is gauged by looking at past production data as well as production capacity. Added a subclause to "state whether unit was operating under normal conditions".	Added a subclause to "state whether unit was operating under normal conditions".
9.1.1	9-H (d)	What specifically is being requested when asking for the “percentage of the industrial process operating rate”? Is this the “normal” or does this refer to comparison of the last 30 days of operations? It is recommended that ESRD include a definition of “normal” conditions (similar to that in the CEMS Code) and be more specific regarding the information that is required.	This term is used in the Stack Sampling Code as well. During an audit, normal production is gauged by looking at past production data as well as production capacity. Added a subclause to "state whether unit was operating under normal conditions".	Added a subclause to "state whether unit was operating under normal conditions".
9.1.1	9-H (f) 9-H (g)	Variances from the code and authorizations should be left out of the AMD - there is already a process to manage these requirements.	Authorizations (and variances) are a reporting requirement under the AMD as is full disclosure of sampling methodology and procedures.	No changes made.
9.1.1	9-H (j) 9-L	See comment for RC 3-M. Assuming that industry is the appropriate 'person responsible' to certify the report in the cover letter, then who would be best suited to complete the report certification form? The contractor or industry representative?	Report certification form has been removed.	Report certification form has been removed.
9.1.1	9-H, 9-J & 9-S	It appears that we now have to submit a lot of the same information in 5 difference places: the report, the form, the cover page, the title page, the appendix. Current practice has all the information included in 1 place – the report. These requirements create further onerous and duplicate reporting requirements. It is recommended that the forms and additional requirements be removed; the report from the contractor has all this information, it should be sufficient.	Source sampling reports have always included a cover letter, title page, body and appendix. Only the summary form is additional data entry and these are similar to the summary tables being included in current reports.	No changes made.

Section	Clause	Comment	Response	Action Taken
9.1.1	9-I to 9-K	The amount of information required to submit a manual stack report is onerous, particularly for a smaller organization such as ours where resources are limited. Our company retains a 3rd party contractor to conduct the stack survey and provide the report. Our company first approves the contractor via a thorough review of the contractor's qualifications in accordance with internal company policies. Any reports generated by the contractor are thoroughly reviewed by our company's personnel prior to submission to ESRD. A title page, table of contents is additional information that our company feels is redundant and not necessary as the report generated by the contractor includes this information.	The report title page and content requirements can be met through the contractor report. AEP does not require a second title page, table of contents, etc from the industrial operation.	No changes made.
9.1.1	9-L	Report Certification form is new	Report certification form has been removed.	Report certification form has been removed.
9.1.1	9-M (f)	Clarify: Report must include a description of industrial process during SES including description of multiple unit operations contributing to the exhaust. What is the intent?	This should include an overview of the process and if multiple units feed into the exhaust. The intent is for facilities with complex operating conditions contributing to the exhaust to review and compare survey results over time.	No changes made.
9.1.1	9-M (k)	Clarify: Are we able to just assume stratification and sample accordingly?	Stratification testing is required as per the Alberta Stack Sampling Code (1995) and Alberta CEMS Code (1998).	No changes made.
9.1.1	9-M(e)	Add to clause "production rate AND percentage".	Percent production data is used to demonstrate normal operation.	Added to clause "production rate and percentage".
9.1.2	9-M (l)(iv)	"identification of whether the industrial process is in compliance with the applicable emission limits stated and performance specifications" - this is a RATA requirement	Removed "performance specifications" from the subclause.	Removed "performance specifications" from the subclause.
9.1.4	9-Q	Clarify It appears that this same information would be already required for the incident investigation provided to ESRD for exceeding a permitted requirement. Why do you want this information again?	This is just a summary to what related to the survey itself.	No changes made.
9.1.4	9-Q	Clarify: This is the same information that would be provided in current incident reporting, 7-day letter. Why the need for restatement of this information?	This is just a summary to what related to the survey itself.	No changes made.
9.1.4	9-Q (d)	Clarify: What does "inadequate sampling facilities" mean?	Proper port locations, platforms, eyebolts etc. as outlined in the Alberta Stack Sampling Code (1995)	No changes made.
9.1.5	9-AA	add (i) converter efficiencies when applicable	Change made.	Change made.
9.1.5	9-AA	Clarify: Appendix must include recent calibration of instrumentation. For an SES what does this mean?	The methods listed in the Alberta Stack Sampling Code (1995) include procedures for calibrating reference method equipment used during testing. Documentation showing calibration must be included in the appendix of the report.	No changes made.
9.1.5	9-AA (g) & 9-T (d)	RC Calibration of orifices and reporting of average orifice pressures won't be possible for systems used for moisture determination only (which are all of ours on our site). It is recommended that RC 9-AA include an "as applicable" statement to accommodate for the variety of systems in the province.	Added "as applicable" to RC 9-AA.	Added "as applicable" to RC 9-AA.
9.1.5	9-AA (g) & 9-T (d)	Some requirements may not pertain, depending on the facility and testing being performed.	Added "as applicable" to the clause.	Added "as applicable" to the clause.
9.1.5	9-S	There is a lot of technical information required by the appendix. Most of which will be repeated for EVERY report (i.e., the sampling port location details do not change and are often included in approval-related applications). The inclusion of much of this information will not be value-added on a regular basis. It is recommended that ESRD review the requirements of the appendix section and remove any duplicate requirements and streamline the remaining requirements such that only information that is NEEDED or will provide value is requested.	Technical Reports require technical information. Much of the information outlined is already included in the manual stack survey reports being prepared by the third party contractors.	No changes made.
9.1.5	9-S and 9-TT	What is a "finalized stack drawing"?	Added guidance on "finalized stack drawing" means.	Added guidance on "finalized stack drawing" means.
9.1.5	9-S and 9-TT	Why are stack drawings required?	Added note explaining why finalized stack drawings are required in RC 9-S and RC 9-TT and that providing these will also satisfy the requirement to provide port locations.	Added note explaining why finalized stack drawings are required in RC 8-S and RC 9-TT and that providing these will also satisfy the requirement to provide port locations.

Section	Clause	Comment	Response	Action Taken
9.1.5	9-U	As RC 9-U duplicates RC 9-W, replace RC 9-U with the following: RC 9-U For the appendix in RC 9-R, the person responsible must include an engineering drawing of the stack being testing.	Change made.	Change made.
9.1.5	9-U	Contractors already have detailed isokinetic test forms and this level of information should not be required in the regulator database.	Removed "using the Isokinetic Test Data Form as an example" from RC 9-U, as no form or template is going to be provided by AEP.	Removed "using the Isokinetic Test Data Form as an example" from RC 9-U, as no form or template is going to be provided by AEP.
9.1.5	9-U and 9-W	For both isokinetic and proportional surveys, stack testing firms (and “in-house” testing groups) already have their own customized field data sheets and data entry procedures. Not only would these extra forms be redundant, but also another potential source of error.	Form won't be provided.	Change made.
9.1.5	9-U and 9-W	Should require the engineering drawing of the source as an appendix to each stack survey report.	Change made.	Change made.
9.2.1	9-II	The cover letter requirements specified in Item RC 9-II are extremely detailed. All of this information will be in the RATA report itself; therefore repeating it in the cover letter is redundant.	This is all necessary information.	No changes made.
9.2.1	9-II (g)	"identification of whether the RATA is being used to fulfill Manual Stack Survey requirements" add "or a CGA"	Change made.	Change made.
9.2.1	9-II (L)	Clarify: How does this apply to parameters not listed in the CEMS code? Do we require written authorization for following our CEMS QAP?	The AMD does not differentiate between specific parameters, performance specifications or QAP requirements; the CEMS Code does.	No changes made.
9.2.1	9-II, 9-KK	It appears that we now have to submit a lot of the same information in 4 difference places: the report, the form, the cover page, the title page. Current practice has all the information included in 1 place – the report. These requirements create further onerous and duplicate reporting requirements. It is recommended that the forms and additional requirements be removed; the report from the contractor has all this information, it should be sufficient.	The reports have always included a cover letter, title page, body and appendix. Only the summary form is additional data entry, and is required to collect summary data in a useable electronic format.	No changes made.
9.2.2	9.2.2	Note: where “Process description and fuel details during the audit” are referenced, should be “process description and/or fuel details during the audit as applicable” - not all sources are fuel dependant (i.e. - sulphuric acid stacks, wet scrubbers, etc.)	Added "if applicable" to RC 9M (g). Fuel make up can affect pollutant results.	Added "if applicable" to the clause.
9.2.2	9-NN	Item RC 9-NN (m) indicates that process description and fuel details during the audit are required. If our online analyzer for natural gas is down for maintenance or calibration during the RATA, would this nullify the RATA test? Similarly, does ESRD expect that we coordinate manual gas samples for every RATA test that has gas being combusted? We currently take these manual samples once per month only.	For RATA/SES you need to determine the production and normal operation.	No changes made.
9.2.2	9-NN (m)	Clarify: “process description and fuel details” what information are you looking for here? For example, we conduct SESs on scrubbers what are the fuel details you are looking for?	Some approved sources have multiple fuel sources, and you need to specify what is being burned. For sources not combusting fuel, a description of the process being testing is required.	No changes made.
9.2.2	9-NN (o)	Requiring industry to assess stratification and cyclonic flow each time a test is conducted is onerous. Unless there are process condition changes, there should be no change from the previous RATA. If ESRD is requesting just a statement regarding the nature of the stack conditions evaluated at the time of installation of the sampling points, this could be provided. Please clarify or remove.	Stratification testing is required as per the Alberta Stack Sampling Code (1995) and Alberta CEMS Code (1998).	No changes made.
9.2.5	9-AAA	RC 9-AAA states that the normal production or throughput for the industrial operation over the 720 hour period immediately prior to the commencement of an audit needs to be included in the appendix of the RATA Report. • What is considered "normal" production or throughput? o Please provide a method to quantify this.	Removed the word "normal" and instead changed to "**total** production or throughput over the 720 hour periods".	Removed the word "normal" and instead changed to "**total** production or throughput over the 720 hour periods".
9.2.5	9-BBB	“RC 9-BBB For the appendix in RC 9-SS, the person responsible must include the continuous emission monitor data for (a) the corresponding audit period and (b) the 48 hour period prior to and immediately after the audit.” For the 48 hour period prior to and immediately after the audit, is raw or summary data required? Please confirm the data requirement for this section.	This is 1 minute data corresponding to the audit period and 12 hrs. before and 12hrs after in 1 hour increments. The data includes all CEMS parameters.	Added clarifying note.

Section	Clause	Comment	Response	Action Taken
9.2.5	9-BBB	It is currently a requirement of CEMS V2.0 User Manual to flag data during a RATA. This information is submitted monthly via the electronic data submission protocol. ESRD can see the flags and look 48 hours before and after to obtain the requested data per the AMD. Submitting it separately in the RATA report is a duplication of efforts. It is recommended that ESRD utilize their systems that are already in place for reporting CEMS data in order to obtain this information; remove redundant reporting.	Raw CEMS Data must be included in the appendix section of the report. This clause is looking for 1-minute data, not hourly as electronically submitted to the department. Added clarifying note.	Added clarifying note.
9.2.5	9-BBB	Clarify: Why must data be provided for 48 hours after a RATA? Will we be penalized if we drop load after testing?	No, you would not be penalized if you dropped load after testing. The data before and after the audit is used to report the conditions pre- and post- audit - 1-minute data.	No changes made.
9.2.5	9-TT (d)	Our company's approval does not include a mass emissions limit for our stacks with CEMS. For emission calculations, CEMS monitoring data is used in conjunction with fuel analysis and calculated in other software package for emissions reporting (the same system aligns with NPRI and GHG reporting requirements). Our ability to compare the CEMS emission values for relative accuracy (vii and viii) is a problem based on how our system is currently configured.	Added "as applicable" to RC 9-TT (d).	Added "as applicable" to RC 9-TT (d).
9.2.5	9-TT (d) (xi)	Clarify: “whether the industrial process is in compliance with the emission limits stated and performance specifications”. Does this mean we’re expected to convert our RATA results into an emission limit or is this only when a SES and RATA are completed simultaneously?	This would be based on the CEMS reading and if it exceeds the limits this needs to be reported.	No changes made.
9.2.5	9-UU (m)	Clarify: What does it mean “identification of all computer sources used during the RATA period”? Which computer sources?	Moved to a different section and reworded to state: RC 9- for the data in RC 9-BBB identify the source of data corresponding to the RATA period.	Moved to a different section and reworded to state: RC 9- for the data in RC 9-BBB identify the source of data corresponding to the RATA period.
9.2.5	9-UU 9-VV	Similar to the comment above (RC 9-TT), we are not required to complete flow measurement on the CEMS based on our Approval, so compliance with this clause introduces a change from our Approval requirements. Note that our emissions are calculated using fuel analysis equations.	If your unique authorization/approval terms and conditions do not require flow measurements then reporting of this information is not required in your report.	No changes made.
9.2.5	9-ZZ	Given that we are required to perform the RATA under normal conditions, this seems redundant to already established requirements. It is recommended that RC 9-ZZ be removed.	Removed clause RC-ZZ.	Removed clause RC-ZZ.
9.2.5	9-ZZ	Clarify: Why must we provide process load 168 hour prior to audit? What will this be used for? How is process load defined?	Removed clause RC-ZZ.	Removed clause RC-ZZ.
9.3.1	9-HHH	This clause requires that all information necessary for the CEMS code must be reported; however the new information required by the proposed AMD is much more specific and contains more detail than the code, which adds some administrative effort for industry.	This clause specifically refers to the CEMS Code requirements. However, the AMD set the detailed requirements on what must be included in CGA Reports. This does include more requirements than are specifically outlined in the CEMS Code.	No changes made.
9.3.1	9-KKK, 9-MMM, 9-NNN, 9-QQQ, 9-RRR, 9-TTT and 9-VVV	Currently, CGA’s are a 2 to 4 page submission. These new requirements will result in CGAs being 10-15 pages. Is it really necessary given the standardized nature of a CGA? What value will all of this information provide and who is going to review all that information? It is recommended that the following requirements be removed from the CGA report section: RC 9-KKK, RC 9-MMM, RC 9-NNN (signed cover letter should be sufficient), RC 9-QQQ, RC 9-RRR(a), RC 9-TTT(b), RC 9-VVV (this information should be contained elsewhere in the report).	CGAs were not covered by the 1989 AMD and AEP is now standardizing reporting for CGAs. All the required information is needed.	No changes made.
9.3.2	9-OOO	“RC 9-OOO (d)(vii) 2% Full Scale” 2% Full Scale is not appropriate for Total Reduced Sulphur (TRS) compounds as Table 9 of the Alberta CEMS Code details a 5% analyzer linearity allowance for TRS monitoring systems. This section should be updated to reflect the 5% Full Scale allowance for TRS analyzers.	Added "or as otherwise specified by the CEMS Code" to the subclause.	Added "or as otherwise specified by the CEMS Code" to the subclause.
9.3.2	9-OOO	Add note under 9-OOO: NOTE: RC 9-OOO (d) the model number must identify if the analyzer is for example a gas permeable probe design	Agreed.	Added clarifying note.

Section	Clause	Comment	Response	Action Taken
9.3.2	9-PPP	Note in middle of page: “The introduction of the CGA gas needs to challenge the system using the same path as the sample.” “RC 9-PPP (a) discussion of how the gas injection technique was performed (for example whether the gas was introduced in to the entire system or just the analyzer)” These two statements are contradictory to each other, as the first states the gas must challenge the system while the second introduces the option of challenging just the analyzer. These should be revised to remove this contradiction.	Clause removed.	Clause removed.
9.3.5	9-WWW (b)	Clarify: Include 1 min CEMS data for hour before the CGA, why? We are not required to be operating normally during a CGA.	This is to provide the baseline monitoring level for the hour preceding CGA.	No changes made.
Industrial Supplemental Monitoring Results				
10.0	10-A	RC 10-A "The person responsible must submit to the Director the results of any air monitoring required by an approval or Code of Practice registration…" Does ESRD have plans for requiring "supplemental monitoring" for facilities with EPEA Approvals and Code of Practice registrations?	This is only if the Approval dictates it, or if it is an additional Director initiated request. This section of the AMD just details what needs to be included in the submission, not the requirement to actually carry out the supplemental monitoring.	No changes made.
10.0	10-E	Having the AMD state that industry has to conduct monitoring and reporting per the requirements of their approval, and per the timelines of the approval, is repetitive since that is the point of the approval. In addition, the “extra” requirements of the AMD in RC 10-E may not align with the requirements of the additional monitoring programs/one-offs required by the approval. This can potentially create compliance issues for approval holders since the requirements of one-off programs are usually detailed in the approval. It is recommended that Section 10.0 be removed. Alternatively, Section 10.0 should provide clarification that the requirements of the approval supersede those of the AMD.	Supplemental monitoring activities may need to be conducted to satisfy the specific requirements of an approval or proposed plans. This section of the AMD just details what needs to be included in the submission, not the requirement to actually carry out the supplemental monitoring.	No changes made.
Amendments to Industrial Reports and Data				
11.0	11.0	It is not necessarily clear if data errors that require resubmission (Section 11) might also require immediate reporting, particularly if the AER gets complaints or there is an associated incident # for the time period. It would be beneficial to get the person responsible to identify if the method of replacement conforms with their QAP, and also identify the implications associated with the data replacement.	If the error identifies a limit exceedance or noncompliance with approval conditions, this would require immediate notification. The Corrective Action Report form should identify the method of replacement and identification of the root cause.	No changes made.
11.0	11.0	Section 11.0, pages 76-78 Different notification formats, templates and requirements apply to different reporting data types. It would be helpful to have a single point of contact and a single system through which to provide notifications and amended reports.	There is one contact point for AER and one for AEP facilities (air.reporting email address) for resubmitting reports. For CEMS data resubmission there is only one point of contact, the CEMS user coordinator. For continuous ambient data resubmission, there is only one point of contact for the Alberta Ambient Air Quality Data Warehouse. As environmental compliance reports, CEMS and continuous ambient data all go to different systems, contacts for resubmission must be different, but efforts have been made to minimum the number of contact points as much as possible.	No changes made.
11.0	11 and 19	Should change notification method from email to just say electronically.	Changed submitting notification "by email" to "electronically".	Changed submitting notification "by email" to "electronically".
11.1	11.1	Assumes the person responsible discovers the error. May want to reword or have a second clause addressing the situation when the Regulator finds an error and brings it to the person responsible’s attention. In this case, the person responsible must also follow the steps outlined here.	Added clauses for Regulator discovery of errors.	Added clauses for Regulator discovery of errors.
11.1	11.1	In order to make the statement more general, should it state “may apply” instead of “applies”.	Same report submission process must be followed, so will apply, not just may apply.	No changes made.

Section	Clause	Comment	Response	Action Taken
11.1	11-A	RC 11-A states that if errors are discovered in reports under the Reporting Chapter, the Director must be notified. • If errors are identified, is this a contravention?	Errors in a report are not necessarily a contravention of approval conditions. However, the AMD Reporting Chapter requires that if errors are found in past data/reports, the Director must be notified and corrected data/reports submitted.	No changes made.
11.1	11-A and 11-B	RC 11-A "Upon discovery of errors, omissions or other issues…" RC 11-B "… identification of all changes and corrections that will be made in response to the errors, omissions other issues." It is possible that an error or omission can be identified and that it is not obvious what changes and corrections will be required until further analysis has been conducted. Suggest rewording RC 11-B (b) to read "identification of all changes and corrections that are expected to be required in response to the errors, omissions or other issues that were encountered ."	Clause reworded.	Clause reworded.
11.1	11-D	RC 11-D "the person responsible must submit the amended report within thirty days of the initial discovery of the error, omissions or other errors." There will be circumstances in which it is not possible to complete and submit the amended report(s) within 30 days, especially given the cumbersome nature of the proposed reporting forms. Suggest extending the requirement to 60 days and also providing flexibility to have an extension in writing.	If the investigation takes longer than 30 days the Director must be contacted to authorize an extension .	No changes made.
11.3	11.3	For CEMS data resubmission, there are no timelines in the User Manual for submission of the CAR or the resubmission of the corrected data. In fact, data cannot be resubmitted until the CAR is approved and ESRD provides notification that the data can be resubmitted. Having timelines in this case is likely not appropriate. Please provide clarification on what timelines are being referenced. Also, if ESRD intends to impose timelines, ensure ESRD has the resources to manage report re-submissions. (Note: We submitted a CAR back in May 2014, and have yet to hear back from ESRD regarding the status of our data)	Clause reworded and clarifying note added.	Clause reworded and clarifying note added.
Alberta Airshed General Reporting Requirements				
12.0	12.0	Our feedback for the Alberta Airshed Reporting section is the same as that of the Industrial Reporting, which has been presented above.	Acknowledged.	No changes made.
12.0	12.0	Understand the AMD working group collectively decided to have two distinct industrial and airshed sections. In response to some of the feedback, is there consideration to group together some of the general sections pertaining to industrial and airshed monitoring and group the information together under one section.	It has been determined to keep the industry and airshed parts separate.	No changes made.
12.1	12-A (e)	All members of the airshed must have every operation that is a member listed on every report, even if they're voluntary members? That's potentially a lot of redundant information that is easily available elsewhere. What purpose does this serve?	Changed to just approval numbers/company names for which airshed is required to monitor on behalf of.	Changed to just approval numbers/company names for which airshed is required to monitor on behalf of.
12.1	12-A(f)	How does this differ from RD12-A (e)? Is not the data always getting reported on behalf of all airshed participants?	This will almost always be the same, but there could be instances when the airshed monitors, but an industrial operation reports some of the monitoring information. Added "if different than (f)".	Added "if different than (f)".
12.3	12-E	How does legal authority to transmit reports get transferred from Person Responsible – see Report Certification Form This currently reads that the person responsible must certify all reports. However the definition for Certifying Official allows a delegate of the person responsible. This statement should be changed to the "Certifying Official must certify… " or "Person responsible must ensure ….."	It is up to the person responsible to delegate whom will certify reports (provide signature) on behalf of the person responsible.	Removed reference to "certifying official" so that person responsible can delegate signing authority as they wish - as is currently done.
12.3	12-E	Clarify: See RC 2-E	It is up to the person responsible to delegate whom will certify reports (provide signature) on behalf of the person responsible.	Removed reference to "certifying official" so that person responsible can delegate signing authority as they wish - as is currently done.

Section	Clause	Comment	Response	Action Taken
12.3	12-H	The person responsible must submit to the Director under the AMD using the Certification Methodology of the Electronic Submission System What is "Certification Methodology of the Electronic Submission System"? Is this a separate document that exists or is being developed?	The “Certification Methodology of the Electronic Submission System” is defined in the AMD as "the mechanism by which data is certified during submission to an electronic reporting system. The certification methodology can include, but may not be limited to, authorized user-specific login credentials and digital sign off on the data prior to final submission."	No changes made.
12.3	12-H	What exactly is the “Certification Methodology of the Electronic Submission System”? Is it a separate document or a group of guides and templates?	The “Certification Methodology of the Electronic Submission System” is defined in the AMD as "the mechanism by which data is certified during submission to an electronic reporting system. The certification methodology can include, but may not be limited to, authorized user-specific login credentials and digital sign off on the data prior to final submission."	No changes made.
12.3	12-H	Clarify: See RC 2-H	The “Certification Methodology of the Electronic Submission System” is defined in the AMD as "the mechanism by which data is certified during submission to an electronic reporting system. The certification methodology can include, but may not be limited to, authorized user-specific login credentials and digital sign off on the data prior to final submission."	No changes made.
12.3	12-I	See comment for RC 12-H above	The "Certification Methodology of the Electronic Submission System” is defined in the AMD as "the mechanism by which data is certified during submission to an electronic reporting system. The certification methodology can include, but may not be limited to, authorized user-specific login credentials and digital sign off on the data prior to final submission."	No changes made.
12.3	12-I	What is "Certification Methodology of the Electronic Submission System"? Is this a separate document that exists or is being developed?	The “Certification Methodology of the Electronic Submission System” is defined in the AMD as "the mechanism by which data is certified during submission to an electronic reporting system. The certification methodology can include, but may not be limited to, authorized user-specific login credentials and digital sign off on the data prior to final submission."	No changes made.
12.3	12-J	Could the certified lab analysis report also be the data?	There is no form or template for the certified lab analysis report. The person responsible is simply required to submit the lab supplies.	Adding guidance under clause 12-J clarifying that there is no set form or template for the lab certification analysis report.
12.3	12-J	The person responsible must submit to the Director a digital copy of the certified laboratory analysis report with all passive, static and intermittent sample results. Please provide a copy or example of the certified laboratory analysis report	There is no form or template for the certified lab analysis report. The person responsible is simply required to submit the lab supplies.	Adding guidance under clause 12-J clarifying that there is no set form or template for the lab certification analysis report.
12.3	12-K	Certified laboratory analysis report must be signed by an authorized staff members of the laboratory. Please provide a copy or example of the certified laboratory analysis report	There is no form or template for the certified lab analysis report. The person responsible is simply required to submit the lab supplies.	Adding guidance under clause 12-J clarifying that there is no set form or template for the lab certification analysis report.
12.4	12-M	Digital Submission of Reports Clarification needed on "Acceptable formats for EPEA Approval and Code of Practice Records and Submission Coordinates"	This is included in the references and a link can be found on the AMD Toolbox website.	No changes made.
12.4	12-M	What are “Acceptable Formats for EPEA Approved and Code of Practice Records and Submission Coordinates”? Please specify	This is included in the references and a link can be found on the AMD Toolbox website.	No changes made.
12.4	12-N	“Manipulated” is a terrible word to use in reference to data, with negative connotations. Suggest using “machine readable”, or just indicate acceptable formats, like .xls or .csv	Changed to "digital, extractable".	Changed to "digital, extractable".
12.4	12-N	Digital Submission of Reports Manipulated not best term to use when talking about the processing of data	Changed to "digital, extractable".	Changed to "digital, extractable".
12.4	12-N	“Manipulated” is a terrible word to use in reference to data, with negative connotations. Maybe you mean “machine readable”, or just indicate acceptable formats, like .xls or .csv	Changed to "digital, extractable".	Changed to "digital, extractable".

Alberta Airshed Data Submission				
13.1	13.1	Is this too repetitious and can it be rolled into a general section for both source and airshed data?	As ambient and CEMS are submitted to completely different systems, it makes sense to keep the clauses for data submission and formatting separate.	No changes made.

Section	Clause	Comment	Response	Action Taken
13.1	13.1	Section 13.0, pages 83-87 Comments made regarding Section 3.1 apply to this Section as well: The person responsible must submit … collected at portable air monitoring stations by the end of the month following the month during which the data was collected … Additional time might be required to register a new location for a portable station into the data warehouse. Suggest an additional month (i.e. submit the data by the end of the second month following the month during which the data were collected).	Currently continuous, portable continuous and passive data is successfully submitted by airsheds in the 1-month time period. This will not change. A month should be sufficient to submit ambient data, as is currently done.	No changes made.
13.1	13-A	Commencing February 1, 2017, the person responsible must electronically submit to Alberta's Ambient Air Quality Data Warehouse all ambient air monitoring data…. see comments for "specific air studies", definition 64.	The person responsible is not required to submit data/results from monitoring that was conducted for their own purposes (i.e., not required).	Added the caveat in clause 3-A "except those collected for the person responsible's own purposes", and added guidance on special air studies.
13.18	13-U	New requirements for AQHI real time data submission for stations that meet AQHI requirements Please provide complete reporting instructions, technical requirements, and specifications for real-time data submission	This information will be provided in the "Alberta Ambient Air Real-time Data Submitter's Guide", which will be provided for public review prior to finalization.	No changes made.
13.1.1	13.1.1	References are made throughout this Chapter to the Alberta Ambient Air Quality Data Warehouse, which does not yet exist. Transition from the CASA Data Warehouse has not been discussed with stakeholders. If that has not occurred before Chapter 9 is finalized, then the text will have to address that issue.	The Alberta Ambient Air Quality Data Warehouse is formally defined in the AMD, including a reference to the CASA Data Warehouse being the current data warehouse. The CASA Data Warehouse will be upgraded as needed, but the function of the data warehouse will not change.	No changes made.
13.1.1	13.1.1	Rounding instructions for air monitoring data are more detailed than in other parts of Chapter 9 and should be obvious to the reader based on normal practices. the person responsible must (a) complete, (b) sign and (c) electronically submit to Alberta's Air Quality Data Warehouse, the Ambient Data Validation and Certification Form. For clarity the Ambient Data Validation and Certification Form must be submitted at the same time as the associated dataset is submitted to Alberta's Ambient Air Quality Data Warehouse.	Rather than assume everyone knows, having requirements stated will ensure consistency of reporting.	No changes made.
13.1.1	13-B	Submission Deadline for Ambient Air Monitoring Data Please confirm that select airsheds will still have 45 days to submit report following the month in which data was collected	The clause says "unless otherwise authorized by the Director". If a specific airshed has authorization from the Director to submit within 45 days of the month of data collection, then they are permitted 45 days to submit.	No changes made.
13.1.1	13-D	Commencing February 1, 2017, the person responsible must electronically submit to Alberta's Ambient Air Quality Data Warehouse all ambient air monitoring data collected by (a) passive, (b) intermittent ….. Please provide updated guideline and data submission methods for passive and intermittent samples.	The data submitter's guide will cover this. The updated guide will be distributed for feedback prior to finalization.	No changes made.
13.1.2	13.1.2	The increased level of significant figures in the data to be reported also increases the data load. While higher data resolution is a nice thing to have does not seem realistic. The Feds at Environment Canada are very familiar with computer infrastructure issues (i.e. computer data storage space limitations) and have struggled with it for years. Their main means of managing the data is to lower the resolution level. We would like to point out that increased data load may cause issues with data management and usage.	This requirement should not increase data load. This may change the data points being reports by one or two decimal places. What we don't want is data being reporting with trailing decimal places, when the instrument is not capable of reporting to that precision level. If anything, this will reduce the "resolution" of data.	No changes made.
13.1.2	13-E	The person responsible must round all ambient air monitoring data to the appropriate number of significant figures, based on an analyzer's actual measurement capability Please define the term, " analyzer's actual measurement capability". The reporting precision should be reviewed based on actual analyzer operations in field conditions and a consistent significant figures for reporting should be adopted.	Simply, what is meant by these clauses is that the person responsible should only report the number of significant figures/decimals as corresponds to the accuracy and precision of the analyzer. You should not report additional decimal places if the instrument is not capable of reporting at that precision. It is true that this many mean that different analyzers will provide data with varying significant figures, but the user will have a more accurate representation of the data. The clause says "based on an analyzer's actual measurement capability, or the method used to obtain the data" so this would include both the analyzer and the data acquisition system.	No changes made.

Section	Clause	Comment	Response	Action Taken
13.1.2	13-E/F	Rounding conventions This clause needs to be expanded to include significant figures and rounding to be consistent with Alberta Ambient Air Quality Objectives. Inconsistencies between significant figures between reporting requirements and the AAAQO limits will lead to confusion and mis-interpretation of information. Need to keep significant figures and rounding consistent between AAAQOs and data reporting.	Agreed.	Modified clauses 3-E and 13-E and added clauses to specify that when comparing to AAAQOs, you must round the ambient air monitoring data to one decimal place greater than the significant figures of the AAAQO.
13.1.4	13-J	Chapter assumes all data needs to be submitted. Is there no case where an airshed may conduct some monitoring that doesn't need to be reported? Method co locates? New analyzer verifications? Method testing?	Air monitoring conducted by the airshed for its own purposes (i.e., not mandated by the Regulator) do not need to be submitted to the Regulator. However, if the airshed chooses to submit results to the Regulator, the air monitoring must have been conducted in accordance with the AMD in order for the Regulator to accept the data.	Added guidance on this.
13.1.4	13-J	Object: Assumes all data needs to be submitted. Is there no case when an airshed may conduct monitoring that doesn't need to be reported?	Air monitoring conducted by the airshed for its own purposes (i.e., not mandated by the Regulator) do not need to be submitted to the Regulator. However, if the airshed chooses to submit results to the Regulator, the air monitoring must have been conducted in accordance with the AMD in order for the Regulator to accept the data.	Added guidance on this.
13.1.4	3-J and13-J	Date and Time stamp for ambient Air data: How is daylight savings handled (applicable to CEMS data as well)	Clause should rather say "must report all ambient air monitoring data using the file format specified in Alberta's Ambient Air Quality Data Warehouse: Data Submitter's Guide". The guide will specify the format for time.	Changed clauses 3-J and 13-J to say "file format" rather than "time labels".
13.1.5	13.1.5	The Ambient Data Validation and Certification Form requires certification that the submitted data are complete and accurate, but the form must be submitted at the same time as the data are submitted. Either time needs to be allowed for QA/QC of the submitted data, or the certifier can only certify that the data prepared for submission are complete and accurate.	The data must be QA/QC'd prior to submission to the Ambient Data Warehouse. Airsheds have been able to meet timelines for submission, so industry so also be able to meet the data submission deadlines as well.	No changes made.
13.1.5	13-L	Ambient Data Validation and Certification form Some data validation procedures may not have been completed at the time the data is submitted (e.g.. Level 3). How is it possible to submit the Ambient Data Validation and Certification Form at same time as data report submission and what if the person responsible is different then the person submitting (3rd party audit)?	The requirement for "Level 3 Validation" from AMD Chapter 6 is for someone independent of the initial validation steps to go through the data (a cursory review only) to (a) look for anything strange or missing, (b) verify that all previous validation steps have been carried out, (c) sign off that the data being submitted has been verified, validated and reviewed – in a sense, endorsement that valid data is being provided to AEMERA/AEP/public. This step needs to be completed before data is submitted to the data warehouse and made available for use. AEP wants to know that data that is being submitted has undergone all necessary verification and validation (as prescribed by the AMD) before it is made public on the data warehouse. We also need, for audit purposes, to be able to show documentation that these steps have taken place. This is where the AMD Ch. 9 Ambient Data Validation Form comes into play. Lev 3 does not need to be completed by a third party, or anyone external to the airshed or contractor; it just needs to be someone independent of Lev 0-2 validation and data collection. This could be the airshed Executive Director, Program Manager, someone from the technical committee, or an alternate member of the consultant group that performs the primary data collection/validation. The intent is not to repeat primary validation tasks, but rather to assure that data have undergone a final independent QA review and endorsement before data are submitted. Review should include cursory review of hourly data (i.e., the hourly data tables that were formerly required as part of monthly report) as well as plots, including a check to make sure data is flagged if need be and suspect data is identified – overall, this review is assuring and signing off to the effect that all steps in Level 0-2 have been completed (as per AMD Ch. 6).	No changes made.

Section	Clause	Comment	Response	Action Taken
13.1.5	13-L	How is this managed if the person responsible does not actually do the data submitting? Can never be submitted “at the same time” if a different person is doing each. If a boiler plate from gets submitted on behalf of the person responsible then what purpose does it actually serve? i.e. What good is it?	The requirement for “Level 3 Validation” from AMD Chapter 6 is for someone independent of the initial validation steps to go through the data (a cursory review only) to (a) look for anything strange or missing, (b) verify that all previous validation steps have been carried out, (c) sign off that the data being submitted has been verified, validated and reviewed – in a sense, endorsement that valid data is being provided to AEMERA/AEP/public. This step needs to be completed before data is submitted to the data warehouse and made available for use. AEP wants to know that data that is being submitted has undergone all necessary verification and validation (as prescribed by the AMD) before it is made public on the data warehouse. We also need, for audit purposes, to be able to show documentation that these steps have taken place. This is where the AMD Ch. 9 Ambient Data Validation Form comes into play. Lev 3 does not need to be completed by a third party, or anyone external to the airshed or contractor; it just needs to be someone independent of Lev 0-2 validation and data collection. This could be the airshed Executive Director, Program Manager, someone from the technical committee, or an alternate member of the consultant group that performs the primary data collection/validation. The intent is not to repeat primary validation tasks, but rather to assure that data have undergone a final independent QA review and endorsement before data are submitted. Review should include cursory review of hourly data (i.e., the hourly data tables that were formerly required as part of monthly report) as well as plots, including a check to make sure data is flagged if need be and suspect data is identified – overall, this review is assuring and signing off to the effect that all steps in Level 0-2 have been completed (as per AMD Ch. 6).	No changes made.
13.1.5	13-M	What are “primary data validation activities”? It’s been previously indicated that as long as the QA/QC and report writing personnel are not involved in data collection (station operation) and initial data vetting, they are appropriate signoffs.	Primary data validation activities refers to Levels 0, 1 and 2 data verification and validation from AMD Chapter 6 (i.e., day to day station operations; data flagging, review and adjustments as needed).	No changes made.
13.1.5	13-M	Ambient Data Validation and Certification form Some data validation procedures may not have been completed at the time the data is submitted (e.g.. Level 3). How is it possible to submit the Ambient Data Validation and Certification Form at same time as data report submission and what if the person responsible is different then the person submitting (3rd party audit)?	The requirement for “Level 3 Validation” from AMD Chapter 6 is for someone independent of the initial validation steps to go through the data (a cursory review only) to (a) look for anything strange or missing, (b) verify that all previous validation steps have been carried out, (c) sign off that the data being submitted has been verified, validated and reviewed – in a sense, endorsement that valid data is being provided to AEMERA/AEP/public. This step needs to be completed before data is submitted to the data warehouse and made available for use. AEP wants to know that data that is being submitted has undergone all necessary verification and validation (as prescribed by the AMD) before it is made public on the data warehouse. We also need, for audit purposes, to be able to show documentation that these steps have taken place. This is where the AMD Ch. 9 Ambient Data Validation Form comes into play. Lev 3 does not need to be completed by a third party, or anyone external to the airshed or contractor; it just needs to be someone independent of Lev 0-2 validation and data collection. This could be the airshed Executive Director, Program Manager, someone from the technical committee, or an alternate member of the consultant group that performs the primary data collection/validation. The intent is not to repeat primary validation tasks, but rather to assure that data have undergone a final independent QA review and endorsement before data are submitted. Review should include cursory review of hourly data (i.e., the hourly data tables that were formerly required as part of monthly report) as well as plots, including a check to make sure data is flagged if need be and suspect data is identified – overall, this review is assuring and signing off to the effect that all steps in Level 0-2 have been completed (as per AMD Ch. 6).	No changes made.

Section	Clause	Comment	Response	Action Taken
13.1.6	13.1.6	"Keeping metadata and account information up to date means that it should be updated when the information changes. This includes changes such as when there are staff changes, changes to a monitor or its signing, or other changes … Suggest that some time allowance be provided as it is not practical to expect that metadata and account information be updated instantaneously "when the information changes."	The time required to make changes to meta data is understood. It is not required immediately. When data is uploaded, changes should be made to meta data if there have been any changes so that meta data is in sync with the data submitted.	Added guidance that metadata should be updated when the data is submitted (by the end of the month following the month the change was made).
13.1.6	13.1.6	Keeping meta data and account update Does the monitoring organization need to provide staff changes as part of the meta data and account update?	Update to staff changes was meant to provide an up-to-date contact.	In 3.1.6 and 13.1.6, changed guidance from "when there are staff changes" to "personnel contact information".
13.1.6	13.1.6	Metadata: Why are staff changes included. Should be limited to instrumental or location. Staff changes should be managed at the site level. Not relevant for ESRD.	Update to staff changes was meant to provide an up-to-date contact.	In 3.1.6 and 13.1.6, changed guidance from "when there are staff changes" to "personnel contact information".
13.1.7	13-P	Clause is not needed. If a form must be used and completed in R13-Q and submitted as in RC 13-R it follows that somewhere along the line it must first be prepared	The AMD Calibration Chapter (Chapter 7) provides requirements for calibration reports. Calibration report templates are posted on the AMD website. These are provided as templates only, and it is acceptable to use custom developed forms, as long as the applicable content requirements of the template forms are met.	Changed clauses 3-Q and 13-Q to refer to AMD Chapter 7 (Calibration) rather than referring to a form and added guidance to clarify.
13.1.7	13-P	Submission of Calibration Report Please provide a copy of the new report	The AMD Calibration Chapter (Chapter 7) provides requirements for calibration reports. Calibration report templates are posted on the AMD website. These are provided as templates only, and it is acceptable to use custom developed forms, as long as the applicable content requirements of the template forms are met.	Changed clauses 3-Q and 13-Q to refer to AMD Chapter 7 (Calibration) rather than referring to a form and added guidance to clarify.
13.1.7	13-Q	Is this a mandatory format report? If so how will it be submitted?	The AMD Calibration Chapter (Chapter 7) provides requirements for calibration reports. Calibration report templates are posted on the AMD website. These are provided as templates only, and it is acceptable to use custom developed forms, as long as the applicable content requirements of the template forms are met.	Changed clauses 3-Q and 13-Q to refer to AMD Chapter 7 (Calibration) rather than referring to a form and added guidance to clarify.
13.1.7	13-Q	Submission of Calibration Report Please provide a copy of the new report	The AMD Calibration Chapter (Chapter 7) provides requirements for calibration reports. Calibration report templates are posted on the AMD website. These are provided as templates only, and it is acceptable to use custom developed forms, as long as the applicable content requirements of the template forms are met.	Changed clauses 3-Q and 13-Q to refer to AMD Chapter 7 (Calibration) rather than referring to a form and added guidance to clarify.
13.1.7	13-R	Submission of Calibration Report Please provide a copy of the new report	The AMD Calibration Chapter (Chapter 7) provides requirements for calibration reports. Calibration report templates are posted on the AMD website. These are provided as templates only, and it is acceptable to use custom developed forms, as long as the applicable content requirements of the template forms are met.	Changed clauses 3-Q and 13-Q to refer to AMD Chapter 7 (Calibration) rather than referring to a form and added guidance to clarify.
13.1.7	13-S	Alberta's Ambient Air Quality Data Warehouse: Data Submitter's Guide This guide should be updated to include new requirements. Please provide a copy of the IDEF methods on your website.	The data submitter's guide will be updated and distributed for feedback prior to finalization.	No changes made.
13.1.8	13.1.8	Might want to include an overarching statement that this section pertains only to the AQHI.	Real-time reporting is focussed on the AQHI, but reporting for individual pollutants is still included.	No changes made.
13.1.8	13.1.8	Should this statement be broadened to include various areas across the Province and not just near where people live? Someone may live in one part of the province and have an interest in the air quality in another.	Wording revised.	Wording revised.
13.1.8	13-V	I find RC 13-V unclear in its meaning.	Revised real-time reporting requirements to make them more concrete, rather than only referring to the data submitter's guide.	Clauses revised to require that any airshed monitoring ambient parameters in real time (for parameters that are already reported to the Data Warehouse) must report in real-time.
13.1.8	13-V	New requirements for AQHI real time data submission for stations that do not meet AQHI requirements Please provide complete reporting instructions, technical requirements, and specifications for real-time data submission	This information will be provided in the "Alberta Ambient Air Real-time Data Submitter's Guide", which will be provided for public review prior to finalization.	No changes made.
13.1.8	13-W	Real Time Data Submission What is the submission deadline?	This information will be provided in the "Alberta Ambient Air Real-time Data Submitter's Guide", which will be provided for public review prior to finalization. Will not be different than current timing for real-time data submission (parameters for AQHI calculation need to be provided in a certain timeframe in order to make the cut for hourly reporting online).	No changes made.
13.1.8	13-W	What "submission deadline" will be specified in the Guide?	This information will be provided in the "Alberta Ambient Air Real-time Data Submitter's Guide", which will be provided for public review prior to finalization.	No changes made.

Section	Clause	Comment	Response	Action Taken
13.1.8	13-X	The clause implies all reportable parameters listed in the guide MUST be reported. So for example, an airshed must add CO as it is listed in the Data Submitters Guide even though the Airshed has no need to monitor it. Is this the intent? Or is better wording: “data for all reportable parameters as measured by the Airshed.” i.e.	Added more concrete criteria for which parameters need to be reported in real-time.	Clauses revised to require that any airshed monitoring ambient parameters in real time (for parameters that are already reported to the Data Warehouse) must report in real-time.

Alberta Airshed Exceedance and Performance Reports				
14.0	14.0	Alberta Exceedance and Performance Reporting Does this supersede Airshed's own existing Exceedance Reporting Protocols? This guide needs details about ambient air concentrations exceedance protocols. Much of the monitoring conducted by airsheds is not for compliance purposes and some flexibility on "immediate". Can this type of monitoring not require reporting exceedance until next business day, especially analyzer outages. Immediate reporting will incur significant expense for airsheds who must pay contractors to have somebody on call at all hours	Immediate means as soon as it is known. Does not require 24-7 or on-call reporting by airsheds.	Added guidance.
14.0	14.0	Object: This is similar to Part 1 requirements for industries. It is onerous as much airshed monitoring is not done for compliance or regulatory reasons. What is the purpose of reporting immediately analyzer outages? If there is no compliance or regulatory reason to call in could it not wait until the following morning?	Exceedance of any AQO may cause an adverse effect and therefore must be reported. Significant disruptions to part of the provincial monitoring network must be immediately reported, as monitoring won't be being carried out. Immediate means as soon as it is known. Does not require 24-7 or on-call reporting by airsheds.	Added guidance.
14.0	14-A	These are not always due to “releases” many 24hr AAAQO exceedances are due to meteorological conditions affecting an urban area. Is it really necessary to report a 24hr average exceedance of PM2.5 immediately after midnight? There will be no action taken on any of them by anyone in Gov’t or airshed until the following day anyway if at all! Airsheds incur extra cost for overtime and lost time the following day due to technician fatigue. Could these PM2.5 exceedances at Calgary, Edmonton or Fort Saskatchewan get reported the following morning at 08:00h?	The intent is to have an issue or exceedance called in as soon as it becomes known. For example, a facility may not be immediately be aware of some kind of equipment failure or leak, but once it is aware, and if there is a contravention of an approval condition, then it must be called in. The same is true for ambient monitoring and exceedance of AAAQOs. Although not exactly an air quality “event”, we do have 24-hour objectives and exceeding them must still be called in, once the exceedance is known (i.e., not just in the monthly report). Reporting AQO exceedances does not require 24-7 or on-call reporting by airsheds.	Added guidance for clauses 14A - 14-E, explaining that immediate constitutes due diligence and that AAAQO exceedance need to be reported once known.
14.0	14-A	Propose Change: These are not always due to “releases” many 24hr AAAQO exceedances are due to meteorological conditions affecting an urban area. Is it really necessary to report a 24hr average exceedance of PM2.5 immediately after midnight? Airsheds incur extra cost for overtime and lost time the following day due to technician fatigue. Could these PM2.5 exceedances at Calgary, Edmonton or Fort Saskatchewan get reported the following morning at 08:00h?	The intent is to have an issue or exceedance called in as soon as it becomes known. For example, a facility may not be immediately be aware of some kind of equipment failure or leak, but once it is aware, and if there is a contravention of an approval condition, then it must be called in. The same is true for ambient monitoring and exceedance of AAAQOs. Although not exactly an air quality “event”, we do have 24-hour objectives and exceeding them must still be called in, once the exceedance is known (i.e., not just in the monthly report). Reporting AQO exceedances does not require 24-7 or on-call reporting by airsheds.	Added guidance for clauses 14A - 14-E, explaining that immediate constitutes due diligence and that AAAQO exceedance need to be reported once known.
14.0	14-A,B,C	“immediate” in the literal sense is not achievable so, rather than have every report in conflict with these AMD requirements, a wording change or definition of immediate is imperative.	Immediate means as soon as it is known. Does not require 24-7 or on-call reporting by airsheds.	Added guidance.
14.0	14-All	RC 14-E “immediate action to correct...to the satisfaction of the Regulator” is also unrealistic; remote locations suffer communications and power outages that self-correct given time. With no compliance requirements attached to a given station, why apply such pressure? Will somebody be funding field techs to hop in a truck at 0100h to drive over to a station and get to work on an analyzer?	This clause does not require immediate fixes, when not practical to do so. It does require some action be taken. An example of immediate correction (RC 14-E) would be ordering a replacement part when it becomes known that equipment is not working properly; that is, some action is taken to begin to address a discovered issue or deficiency.	Added guidance.

Section	Clause	Comment	Response	Action Taken
14.0	14-All	This is a stripped down version of the Industrial version and is unnecessarily onerous, as much airshed monitoring is not done for compliance or regulatory reasons. “Immediate” reporting of not only exceedances but analyzer outages (RC 14-A and –B) serves what purpose exactly? What benefit is gained by calling in a high value at 0100h vs. at 0800h if there is no compliance or regulatory reason to do so?	The intent is to have an issue or exceedance called in as soon as it becomes known. For example, a facility may not be immediately be aware of some kind of equipment failure or leak, but once it is aware, and if there is a contravention of an approval condition, then it must be called in. The same is true for ambient monitoring and exceedance of AAAQOs. Although not exactly an air quality “event”, we do have 24-hour objectives and exceeding them must still be called in, once the exceedance is known (i.e., not just in the monthly report). Reporting AQO exceedances does not require 24-7 or on-call reporting by airsheds.	Added guidance for clauses 14A - 14-E, explaining that immediate constitutes due diligence and that AAAQO exceedance need to be reported once known.
14.0	14-All	This is a stripped down version of the requirements in Part 1 for industries. It is unnecessarily onerous, as much airshed monitoring is not done for compliance or regulatory reasons. “Immediate” reporting of not only exceedances but analyzer outages (RC 14-A and –B) serves what purpose exactly? What benefit is gained by calling in a high value at 0100h vs. at 0800h if there is no compliance or regulatory reason to do so?	Exceedance of any AQO may cause an adverse effect and therefore must be reported. Immediate means as soon as it is known. Does not require 24-7 or on-call reporting by airsheds.	Added guidance.
14.0	14-B	Each of these requires a definition of ‘significant”	Clarifying note added.	Clarifying note added.
14.0	14-B-E	Immediate Reporting Why do all of these conditions have to be reported immediately? If everything indicated here requires immediate reporting, with the # of stations in the province system may grind to a halt	Exceedance of any AQO may cause an adverse effect and therefore must be reported. Significant disruptions to part of the provincial monitoring network must be immediately reported, as monitoring won't be being carried out. Immediate reporting is just a notification and should not grind the provincial system to a halt. Immediate means as soon as it is known. Does not require 24-7 or on-call reporting by airsheds.	Added guidance.
14.0	14-D	Not all exceedances are “releases”. Some acknowledgement must be made for urban conditions causing PM exceedances for example.	Exceedance of any AQO may cause an adverse effect and therefore must be reported. Immediate means as soon as it is known. Does not require 24-7 or on-call reporting by airsheds.	Added guidance.
14.0	14-D	Object: Not all exceedances are “releases”. Some acknowledgement must be made for urban conditions causing PM exceedances for example.	Exceedance of any AQO may cause an adverse effect and therefore must be reported. The issue may not be resulting from the particular industrial operation but must still be reported when detected.	No changes made.
14.0	14-E	“immediate action to correct…to the satisfaction of the Regulator” is also unrealistic; remote locations suffer communications and power outages that self-correct given time. With no compliance requirements attached to a given station, why apply such pressure? Will somebody be funding field techs to hop in a truck at 0100h to drive over to a station and get to work on an analyzer?	This clause does not require immediate fixes, when not practical to do so. It does require some action be taken. An example of immediate correction (RC 14-E) would be ordering a replacement part when it becomes known that equipment is not working properly; that is, some action is taken to begin to address a discovered issue or deficiency.	Added guidance.
14.0	14-E	Immediate Reporting Does not consider remoteness of some stations and sometime sporadic nature of cellular communication with stations	Immediate means as soon as it is known. Does not require 24-7 or on-call reporting by airsheds. This clause does not require immediate fixes, when not practical to do so. It does require some action be taken. An example of immediate correction (RC 14-E) would be ordering a replacement part when it becomes known that equipment is not working properly; that is, some action is taken to begin to address a discovered issue or deficiency.	Added guidance.

Alberta Airshed Monthly Reports				
15.0	15.0	Airshed Monthly Reports Section 15.0, pages 88-92 Comments made regarding Section 5 apply to this Section as well	Understood.	No changes made.
15.1	15-C	Do all of the approvals have the same deadlines for monthly reports? Why was this written this way? Why wouldn’t it remain at the end of the following month in which the data was collected?	Some approvals have different deadlines for monthly reports. Monthly reports are due at the end of the month following the month the data was collected, unless an approval provides an alternate deadline.	No changes made.

Section	Clause	Comment	Response	Action Taken
15.1	15-C	If monthly report is being prepared on behalf of an EPEA approved facility, must submit in accordance with the details specified in the respective approval. Monitoring organizations usually provide reports for Industry and regional stations, please review requirements to ensure the reporting requirements are consistent to avoid duplication of work and unnecessary burden on monitoring organizations. Alternatively, AESRD could provide additional funding for these additional tasks and requirements.	Some ambient air monitoring that is required under EPEA approvals are actually carried out by Alberta airsheds on behalf of some member industrial operations. In these cases, it is not necessary for industrial operations to submit the same ambient air data collected and already submitted by the Alberta airshed, as the Alberta airshed is submitting the required ambient air monitoring data on their behalf. It is also not necessary to discuss the ambient air monitoring results in the industrial operation's monthly and annual reports, provided the Alberta airshed has included the required discussion of the results in their monthly or annual report. The Alberta airshed can carry out the required ambient air reporting on behalf of its industrial operation members. Some industrial operations are members of Alberta airsheds but still carry out some of the ambient air monitoring required under their EPEA approval. Submission of the ambient air monitoring data from these industry operated stations should be carried out the industrial operations, as they are the ones conducting the monitoring. Discussion of the monitoring results is also required to be included in the industrial operation's monthly and annual reports.	Clarifying note and section added.
15.1	15-C	Clarify: Do all of the approvals have the same deadlines for monthly reports? Why was this written this way? Why wouldn't it remain at the end of the following month in which the data was collected?	Some approvals have different deadlines for monthly reports. Monthly reports are due at the end of the month following the month the data was collected, unless an approval provides an alternate deadline.	No changes made.
15.2	15-F (d)	What is the purpose of this clause? Should specify special studies carried out in that month or part of the month. And as with our objection to clause RC 13-J, this should only apply to studies where data will be reported to Alberta.	Clauses 15-F and 16-H refer to special studies carried out by the airshed for which the data/results will be supplied to the Regulator. Special studies that are done for the airshed's own purposes are not required to be reported to the Regulator. If the airshed wishes to submit data/results from a special air study to the Regulator, that monitoring must be conducted in accordance with the AMD. Special air studies are defined as "any additional air monitoring studies carried out by an industrial operation or Alberta airshed that go beyond their normal routine air monitoring (e.g., to satisfy an EPEA approval requirement, a written notice from the Director, or to study a particular issue or stakeholder concern). Clarification added.	Edited clauses 15-F(d) and 16-H (d) to clarify "any special air studies for which data or results are being provided to the Director", and added guidance below clause.
15.2	15-I (b)	The monthly report must include a summary of ambient air monitoring station audit findings and responses that affected data validity The current audit process has the requirement for audit summary findings and responses that affected data validity. The audit response letter already addresses this information need.	Monthly reports provide a summary and overview of the monitoring carried out during the month, and must include identification of any audit findings affecting the monitoring data.	No changes made.
15.4	15-R	Monthly Report Summary Sheet Please provide more details on the Monthly Report Summary Sheet	Removed requirement for Monthly Report Summary Sheet.	Removed requirement for Monthly Report Summary sheet
15.4	15-R	What information is expected/required in a Monthly Report Summary Sheet?	Removed requirement for Monthly Report Summary Sheet.	Removed requirement for Monthly Report Summary sheet
15.3.1	15-K (a) & (b)	Duplication of work required in Resubmission Requirements. Section 19	Monthly reports provide a summary and overview of the monitoring carried out during the month, and must include identification of any resubmitted data. The actual resubmission of the data is covered by section 18 of the AMD RC.	No changes made.
15.3.2	15 N-(b)	Comparisons to AAAQO for monitored are required and identification and description of ambient air concentrations in excess of the AAAQOs. The part (b) request the reason(s) for any exceedance(s) identified. It is not our airshed's mandate to attribute any exceedance to one member over another and in many cases given the regional nature of or other purpose for ambient monitoring, it is not possible to definitively ascertain the source of all exceedances	This requirement looks for context around exceedances identified, if any context is known (e.g., forest fire, temperature inversion, local source, etc.). Context around an event can help AEP to determine if management is required or if events are natural or not likely to happen again.	Changed "reason" to "context" and added "if known". Added examples of what is meant by "context" around exceedances. Clauses 5-N, 6-O, 15-N and 16-P.
15.3.2	15-L	I see only plots and general statistics about data here, nothing about tables of hourly averages. Is this intended or an oversight?	Only summary stats need to be provided in the monthly reports going forward (data availability, ave, max, min and percentiles). Hourly data will all be submitted to the Data Warehouse.	No changes made.
15.3.2	15-L	Only plots and general statistics about data needed? Nothing about tables of hourly averages. Is this intended or an oversight?	Only summary stats need to be provided in the monthly reports going forward (data availability, ave, max, min and percentiles). Hourly data will all be submitted to the Data Warehouse.	No changes made.

Section	Clause	Comment	Response	Action Taken
15.3.2	15-L (b) (ii)	“Discussion” of plots? I don’t believe it is the responsibility of airsheds to interpret data beyond identifying irregular or abnormal readings and the (potential) causes thereof. It has never been our mandate to interpret data beyond whether it is valid or not, interpretation is for other users of the data.	This is looking for any context or description that can be provided about anomalous data or events, if known by the person responsible (e.g., forest fire, local source/event, inversion, etc.). Clarified what is meant and replace the word "interpretation".	In 5.3.1, 6.3.2, 15.3.2 and 16.3.2, removed the word "interpretation". For "discussion of plots" in 5-L, 6-M, 16-L and 16-N, changed to "discussion of context around any data anomalies that person responsible is aware of".
15.3.2	15-L (b) (ii)	A discussion of the time series plot for each parameters monitored at an ambient air monitoring station. This report will greatly increase reporting time and our airshed does not see its responsibility to interpret every piece of data it collects. This would require each airshed to hire its own air quality scientist at tremendous extra cost. What purpose does this serve?	This is looking for any context or description that can be provided about anomalous data or events, if known by the person responsible (e.g., forest fire, local source/event, inversion, etc.). Clarified what is meant and replace the word "interpretation".	In 5.3.1, 6.3.2, 15.3.2 and 16.3.2, removed the word "interpretation". For "discussion of plots" in 5-L, 6-M, 16-L and 16-N, changed to "discussion of context around any data anomalies that person responsible is aware of".
15.3.2	15-L (b) (ii)	If discussion means a cursory sentence or two about a graph, what purpose does it serve over the visual already apparent? If discussion refers to an in-depth analysis, does it now become the responsibility of airsheds to interpret data beyond identifying irregular or abnormal readings and the (potential) causes thereof? It has never been Airshed’s mandate to interpret data beyond whether it is valid or not, interpretation is for other users of the data. Airsheds do not have infinite resources to embark on lengthy breakdowns on what each graph in a report shows.	This is looking for any context or description that can be provided about anomalous data or events, if known by the person responsible (e.g., forest fire, local source/event, inversion, etc.). Clarified what is meant and replace the word "interpretation".	In 5.3.1, 6.3.2, 15.3.2 and 16.3.2, removed the word "interpretation". For "discussion of plots" in 5-L, 6-M, 16-L and 16-N, changed to "discussion of context around any data anomalies that person responsible is aware of".
15.3.2	15-L 16-N	Sections 15.3.2 and 16.3.2, Note: airport data are not compatible with air monitoring standards and should not be combined with data collected under the AMD. The wind speed and direction are especially troublesome, as the instantaneous readings done at airports are not representative of actual meteorological conditions. We should not allow airport data to be submitted to the Data Warehouse.	The use of wind data from another location is for the production of a wind rose for monthly or annual reports, not for submission to the CASA Data Warehouse. The idea is to give a general idea of what the prevailing winds are for the site for that month/year.	No changes made.
15.3.2	15-N (b)	“reasons” are not always identifiable. Encoding that we must be able to know the reason is folly. Many can only be guessed at.	This requirement looks for context around exceedances identified, if any context is known (e.g., forest fire, temperature inversion, local source, etc.). Context around an event can help AEP to determine if management is required or if events are natural or not likely to happen again.	Changed "reason" to "context" and added "if known". Added examples of what is meant by "context" around exceedances. Clauses 5-N, 6-O, 15-N and 16-P.
15.3.2	15-N (b)	Change wording to: the attribution of any exceedance(s). However: • When exceedances are due to on-site activity of an approval holder. The airshed is usually not privy to the reason for an exceedance if it was due to. The draft clause will in effect necessitate approval holders to submit their own monthly reports. The draft clause will in effect necessitate approval holders to submit their own annual report. Could the airshed just refer to the industrial facilities report or do they also have to include this information? • If an exceedance is due or suspected to be due to other industrial facilities not part of an airshed, or even outside the airshed boundaries this clause supposes that airshed staff somehow become expert sleuth/investigators. Seriously? • Encoding that airsheds must be able to know the reason is folly. Very often the reason(s) for exceedances can only be conjecture. E.g. A 1-hr PM2.5 exceedance during a fall evening at a monitoring station in a small town. Is it someone’s fire pit? A farming activity across the road? A railway siding? At best we can say it “may be” or is simply unknown. Remember airsheds do more than compliance monitoring! Given the above, the wording of the clause must be changed to allow for unknowns.	This requirement looks for context around exceedances identified, if any context is known (e.g., forest fire, temperature inversion, local source, etc.). Context around an event can help AEP to determine if management is required or if events are natural or not likely to happen again.	Changed "reason" to "context" and added "if known". Added examples of what is meant by "context" around exceedances. Clauses 5-N, 6-O, 15-N and 16-P.

Section	Clause	Comment	Response	Action Taken
15.3.2	15-N (b)	Object: Change wording to: the attribution of any exceedance(s). The airshed is usually not privy to the reason for an exceedance if it was due to on-site activity of an approval holder. The draft clause will in effect necessitate approval holders to submit their own monthly reports.	This requirement looks for context around exceedances identified, if any context is known (e.g., forest fire, temperature inversion, local source, etc.). Context around an event can help AEP to determine if management is required or if events are natural or not likely to happen again.	Changed "reason" to "context" and added "if known". Added examples of what is meant by "context" around exceedances. Clauses 5-N, 6-O, 15-N and 16-P.
15.3.2	15-O	A Table 2 is referenced for appropriate averaging period. Please provide Table 2 .	The table is in Appendix A.	Change clauses 5-O and 15-O to point to Appendix A.
15.3.2	15-O	No table labelled as Table 2 in appendix. Provide appendix number	The table is in Appendix A.	Change clauses 5-O and 15-O to point to Appendix A.
15.3.2	15-O	Sorry; but, I could not find this table.	The table is in Appendix A.	Change clauses 5-O and 15-O to point to Appendix A.
15.3.2	15-P	Histograms This can be done as a report on data residing in the data warehouse if needed, what additional value is derived by including this in report.	Removed requirement for histograms and will just require that distribution of data is shown (e.g., through percentiles, frequency distribution table, histogram, etc.) as is currently provided in reports.	Removed clauses requiring a histogram and will just require "a representation of data distribution (for example using a histogram, frequency distribution table or percentiles)" for parameters with a corresponding AAAQO (clauses 5-P, 5-Q, 6-T, 6-U, 15-P, 15-Q, 16-U and 16-T).
15.3.2	15-P	Why? All data is available in CASA, generate them as needed at the user end.	Removed requirement for histograms and will just require that distribution of data is shown (e.g., through percentiles, frequency distribution table, histogram, etc.) as is currently provided in reports.	Removed clauses requiring a histogram and will just require "a representation of data distribution (for example using a histogram, frequency distribution table or percentiles)" for parameters with a corresponding AAAQO (clauses 5-P, 5-Q, 6-T, 6-U, 15-P, 15-Q, 16-U and 16-T).
15.3.2	15-P	Why? All data is available in CASA, generate them as needed at the user end.	Removed requirement for histograms and will just require that distribution of data is shown (e.g., through percentiles, frequency distribution table, histogram, etc.) as is currently provided in reports.	Removed clauses requiring a histogram and will just require "a representation of data distribution (for example using a histogram, frequency distribution table or percentiles)" for parameters with a corresponding AAAQO (clauses 5-P, 5-Q, 6-T, 6-U, 15-P, 15-Q, 16-U and 16-T).
15.3.2	15-Q	If we’re going down that road, the formula is unnecessarily complicated. Why is Bin Width not just AAAQO x 1/8?	Removed requirement for histograms and will just require that distribution of data is shown (e.g., through percentiles, frequency distribution table, histogram, etc.) as is currently provided in reports.	Removed clauses requiring a histogram and will just require "a representation of data distribution (for example using a histogram, frequency distribution table or percentiles)" for parameters with a corresponding AAAQO (clauses 5-P, 5-Q, 6-T, 6-U, 15-P, 15-Q, 16-U and 16-T).
15.3.2	15-Q	Formula is senselessly complicated. Why is Bin Width not just AAAQO*1/8?	Removed requirement for histograms and will just require that distribution of data is shown (e.g., through percentiles, frequency distribution table, histogram, etc.) as is currently provided in reports.	Removed clauses requiring a histogram and will just require "a representation of data distribution (for example using a histogram, frequency distribution table or percentiles)" for parameters with a corresponding AAAQO (clauses 5-P, 5-Q, 6-T, 6-U, 15-P, 15-Q, 16-U and 16-T).

Section	Clause	Comment	Response	Action Taken
Alberta Airshed Annual Reports				
16.0	16.0	Airshed Annual Reports Section 16.0, pages 92-97 Comments made regarding Section 6 apply to this Section as well	Understood.	No changes made.
16.1	16-A	Annual Report Person responsible is usually not the person collecting the data.	The person responsible (e.g., the specific Alberta airshed) is the legal entity responsible for the report. The person responsible can delegate whom they wish to collect the data and prepare the report, but the person responsible is still accountable for the report being submitted and whether it is submitted on time, contains the required information, etc.	No changes made.
16.1	16-A	Person responsible does not “collect” ambient air monitoring data. He/she is only responsible for it and to see that it is collected	The person responsible (e.g., the specific Alberta airshed) is the legal entity responsible for the report. The person responsible can delegate whom they wish to collect the data and prepare the report, but the person responsible is still accountable for the report being submitted and whether it is submitted on time, contains the required information, etc.	No changes made.
16.1	16-B	See comment for R 16-A above. Could this clause not be combined with 16-A?	For clarity, these are separated to ensure it is clear when an airshed must prepare an annual report.	No changes made.
16.1	16-E	Some airsheds have stations that are tied to operating approvals and others that are not, why wouldn’t this be consistent i.e. the end of the month following the month the data was collected?	Some approvals have different deadlines for monthly reports. Monthly reports are due at the end of the month following the month the data was collected, unless an approval provides an alternate deadline.	No changes made.
16.2	16-H (b)	Annual Reports - identification and description of any previous correspondence related to the reporting of ambient air concentration in excess of AAAQOs. A repeat of monthly report requirement. A listing of exceedances are provided in the monthly reports. This is a redundant task and unnecessary burden on monitoring organizations.	For annual, you would compare your ambient monitoring results to any annual objectives for those pollutants you monitor for that have an annual objective. Continuous, intermittent and passive data can be averaged annually in order to compare to the AAAQOs.	No changes made.
16.2	16-H (d)	Annual Report - identification and description of any special air studies carried out. see comments relating definition 64 " special air studies"	Clauses 15-F and 16-H refer to special studies carried out by the airshed for which the data/results will be supplied to the Regulator. Special studies that are done for the airshed's own purposes are not required to be reported to the Regulator. If the airshed wishes to submit data/results from a special air study to the Regulator, that monitoring must be conducted in accordance with the AMD. Special air studies are defined as "any additional air monitoring studies carried out by an industrial operation or Alberta airshed that go beyond their normal routine air monitoring (e.g., to satisfy an EPEA approval requirement, a written notice from the Director, or to study a particular issue or stakeholder concern).	Edited clauses 15-F(d) and 16-H (d) to clarify "any special air studies for which data or results are being provided to the Director", and added guidance below clause.
16.2	16-H (d)	Annual Report - identification and description of any special air studies carried out. see comments relating definition 64 " special air studies"	Clauses 15-F and 16-H refer to special studies carried out by the airshed for which the data/results will be supplied to the Regulator. Special studies that are done for the airshed's own purposes are not required to be reported to the Regulator. If the airshed wishes to submit data/results from a special air study to the Regulator, that monitoring must be conducted in accordance with the AMD. Special air studies are defined as "any additional air monitoring studies carried out by an industrial operation or Alberta airshed that go beyond their normal routine air monitoring (e.g., to satisfy an EPEA approval requirement, a written notice from the Director, or to study a particular issue or stakeholder concern).	Edited clauses 15-F(d) and 16-H (d) to clarify "any special air studies for which data or results are being provided to the Director", and added guidance below clause.
16.2	16-K (a)	Duplication of work required in Resubmission Requirements. Section 19	Annual reports provide a summary and overview of the monitoring carried out during the year, and must include identification of any resubmitted data. The actual resubmission of the data is covered by section 18 of the AMD RC.	No changes made.
16.2	16-K (d)	Annual Reports - a summary of ambient air monitoring station audit findings and responses that affected data validity. See comments from RC5-I and RC15-I. A summary of audit findings that affect validity is provided in the monthly reports. This is a redundant task and unnecessary burden on monitoring organizations.	If there is an audit failure, or some issue raised from an internal audit, the annual report is a place to summarize those and report on what action, if any, was taken, or to state that an issue has been resolved. Monthly reporting timeframes may not capture this as it usually takes time to resolve an issue.	No changes made.
16.2	16-K (e)	Annual Reports - Report Certification Form Please provide more details on the new reporting certification form.	Removed report certification form. Signature on cover letter of reports will act as certification of what is contained in report.	Removed Report Certification Form.

Section	Clause	Comment	Response	Action Taken
16.2	16-L (e)	Annual Reports - identification and description of any incidents called into the Environmental Response Centre. Redundant task already done in monthly report	Provides a summary of entire year. Is an important check for compliance purposes (Are all ambient stations meeting objectives? How many incidents per year?)	No changes made.
16.4	16-W	What information is expected/required in a Annual Report Summary Sheet?	Removed requirement for Annual Report Summary sheet.	Removed requirement for Annual Report Summary sheet
16.3.2	16-N	Annual Reports - Interpretation of Ambient Air Monitoring Reports This report will greatly increase reporting time and our airshed does not see its responsibility to interpret every piece of data it collects. This would require each airshed to hire its own air quality scientist at tremendous extra cost. What purpose does this serve?	This is looking for any context or description that can be provided about anomalous data or events, if known by the person responsible. Changed "description of plot" and "interpretation" to "context, if known".	In 5.3.1, 6.3.2, 15.3.2 and 16.3.2, removed the word "interpretation". For "discussion of plots" in 5-L, 6-M, 16-L and 16-N, changed to "discussion of context around any data anomalies that person responsible is aware of".
16.3.2	16-N (b)	time series plots for hourly average ambient air concentrations and discussion of the time series plot for each parameter This report will greatly increase reporting time and our airshed does not see its responsibility to interpret every piece of data it collects. This would require each airshed to hire its own air quality scientist at tremendous extra cost. What purpose does this serve?	Removed requirement for hourly plot in the annual report (clauses 6-M and 16-N).	Removed requirement for hourly plot in the annual report (clauses 6-M and 16-N).
16.3.2	16-N (b) (ii)	See comment for RC-15-L (b) (ii) above	Removed requirement for hourly plot in the annual report (clauses 6-M and 16-N).	Removed requirement for hourly plot in the annual report (clauses 6-M and 16-N).
16.3.2	16-N (d)	...a time series plot of the annual average ambient air concentration for each monitored parameter. How do you do time series plot for one point. Assume this is a request for historical averages. How long? 5 Years?	This should have said plot of annual average over the past 5 years.	Modified 6-M and 16-N to say "a plot of the annual average ambient air concentrations over the last five years for each monitored parameter at each ambient air monitoring station".
16.3.2	16-N (d)	Must specify the length of time desired otherwise you'll get just 1 dot or bar	This should have said plot of annual average over the past 5 years.	Modified 6-M and 16-N to say "a plot of the annual average ambient air concentrations over the last five years for each monitored parameter at each ambient air monitoring station".
16.3.2	16-N (e)	A description of the annual average concentration trends for all ambient air monitoring stations in operation for five years or longer This report will greatly increase reporting time and our airshed does not see its responsibility to interpret every piece of data it collects. This would require each airshed to hire its own air quality scientist at tremendous extra cost. What purpose does this serve?	This is looking for any context or description that can be provided about anomalous data or events, if known by the person responsible. Changed "description of plot" to "context, if known".	In 5.3.1, 6.3.2, 15.3.2 and 16.3.2, removed the word "interpretation". For "discussion of plots" in 5-L, 6-M, 16-L and 16-N, changed to "discussion of context around any data anomalies that person responsible is aware of".
16.3.2	16-N (e)	This is unnecessary when, assuming RC 16-N (d) is for multiple years, the graphical depiction in RC 16-N (d) will tell the tale.	This is looking for any context or description that can be provided about anomalous data or events, if known by the person responsible. Changed "description of plot" to "context, if known".	In 5.3.1, 6.3.2, 15.3.2 and 16.3.2, removed the word "interpretation". For "discussion of plots" in 5-L, 6-M, 16-L and 16-N, changed to "discussion of context around any data anomalies that person responsible is aware of".
16.3.2	16-N (f)	Allow other map based graphical representations. Bubble plots on a map graphic provide a better picture than isopleths when there is little difference in results across sites.	Modified to require that some type of spatial plot of passive data is provided in report, without specifically requiring an isopleth. Bubble plots, as are commonly submitted currently, will be acceptable.	Changed clauses 6-M and 16-N to "an annual average spatial plot" for passive data rather than isopleths.
16.3.2	16-N (f)	annual average isopleths using data collected with passive monitoring devices Isopleth maps not the best choice for graphically representing differing concentrations. A bubble plot is better for more accurately representing concentrations observed at individual sites and how they compare with other sites.	Modified to require that some type of spatial plot of passive data is provided in report, without specifically requiring an isopleth. Bubble plots, as are commonly submitted currently, will be acceptable.	Changed clauses 6-M and 16-N to "an annual average spatial plot" for passive data rather than isopleths.
16.3.2	16-P	Clarify: Some exceedances are due to industrial facilities, can the airshed just refer to the industrial facilities report or do they also have to include this information?	If airsheds have called in an exceedance, they can provide the reference number. If industry calls in, it is not the airshed's responsibility to report. An airshed can provide context if they know.	Guidance added to section 1 to clarify roles of reporting.

Section	Clause	Comment	Response	Action Taken
16.3.2	16-P (b)	Annual reports - Comparisons to AAAQO for monitored are required and identification and description of ambient air concentrations in excess of the AAAQOs. The part (b) request the reason(s) for any exceedance(s) identified. For part be see comments in RC 15 N-(b)	This is looking for any context or description that can be provided about anomalous data or events, if known by the person responsible (e.g., forest fire, local source/event, inversion, etc.). Clarified what is meant and replaced the word "interpretation".	Changed "reason" to "context" and added "if known". Added examples of what is meant by "context" around exceedances. Clauses 5-N, 6-O, 15-N and 16-P.
16.3.2	16-P (b)	See comment for RC 15-N (b) above	This is looking for any context or description that can be provided about anomalous data or events, if known by the person responsible (e.g., forest fire, local source/event, inversion, etc.). Clarified what is meant and replaced the word "interpretation".	Changed "reason" to "context" and added "if known". Added examples of what is meant by "context" around exceedances. Clauses 5-N, 6-O, 15-N and 16-P.
16.3.2	16-Q	No table labelled Table 2 in the appendix	The table is in Appendix A.	Change clauses 5-O and 15-O to point to Appendix A.
16.3.2	16-S	For the Annual Report in RC 6-A, if any ambient air monitoring station has been over 5 years….must include the number of ambient air concentrations in excess of the AAAQOs for each of the previous years of operation. This is a redundant task and unnecessary burden on monitoring organizations.	Removed requirement, as CASA Data Warehouse will be able to provide this.	Removed requirement for AQO exceedances over past 5 years (clauses 6-R, R-S, 16-S and 16-T).
16.3.2	16-S and 16-T	What is the purpose of including up to the previous five years of data in one annual report when the information can be easily accessed in previous years reports?	Removed requirement, as CASA Data Warehouse will be able to provide this.	Removed requirement for AQO exceedances over past 5 years (clauses 6-R, R-S, 16-S and 16-T).
16.3.2	16-S and 16-T	Clarify: What is the purpose of including up to the previous five years of data in one annual report when the data can be pulled from previous years reports?	Removed requirement, as CASA Data Warehouse will be able to provide this.	Removed requirement for AQO exceedances over past 5 years (clauses 6-R, R-S, 16-S and 16-T).
16.3.2	16-T	For the Annual Report in RC 6-A, if the industrial operation has been in operation for less than 5 years….must include the number of ambient air concentrations in excess of the AAAQOs for each of the previous five years of operation. This is a redundant task and unnecessary burden on monitoring organizations.	Removed requirement, as CASA Data Warehouse will be able to provide this.	Removed requirement for AQO exceedances over past 5 years (clauses 6-R, R-S, 16-S and 16-T).
16.3.2	16-U	See comment for RC 15-P above	Removed requirement for histograms and will just require that distribution of data is shown (e.g., through percentiles, frequency distribution table, histogram, etc.) as is currently provided in reports.	Removed clauses requiring a histogram and will just require "a representation of data distribution (for example using a histogram, frequency distribution table or percentiles)" for parameters with a corresponding AAAQO (clauses 5-P, 5-Q, 6-T, 6-U, 15-P, 15-Q, 16-U and 16-T).
16.3.2	16-V	See comment for RC 15-Q above	Removed requirement for histograms and will just require that distribution of data is shown (e.g., through percentiles, frequency distribution table, histogram, etc.) as is currently provided in reports.	Removed clauses requiring a histogram and will just require "a representation of data distribution (for example using a histogram, frequency distribution table or percentiles)" for parameters with a corresponding AAAQO (clauses 5-P, 5-Q, 6-T, 6-U, 15-P, 15-Q, 16-U and 16-T).

Section	Clause	Comment	Response	Action Taken
Alberta Airshed Notifications				
17.0	17.0	Alberta Airshed Notifications A monitoring airshed such as ours has over 240 parameters in operation currently and continues to grow. In a typical month, preventative maintenance, analyzer or sensor malfunctions, capital replacement programs require shutdowns, offsite maintenance, relocation, or replacement for 5 to 10 percent of its inventory. If these change notifications are required to be made to AESRD in the timeframes provided, it will cause an unnecessary burden on a monitoring organization. These changes are reflected in the calibration forms that are currently provided with the monthly reports to AESRD. If calibration reports are provided on a monthly basis that reflects these changes, why is there a need for this additional administrative task? These changes are also reflected in site documentations and are audited during operational audits by AEMERA. What is the intent of this notification process and what useful information or in real-time information is it going to provide to the Director? Alternatively, create a tool to update site documents to the new Alberta's Ambient Air Data Warehouse and require annual updates of site documentation.	Notification is only required for significant disruptions to monitoring or data transmission. This is not intended to report on any regular maintenance or station upkeep. Notification would be required when a new monitoring method is being used (SHARP vs. TEOM for PM2.5), a new parameter or station is coming online, or when a station is going offline (decommissioning or shut down for an extended time). Notification on the siting or rotation of portables can be submitted annual, as a proposed schedule for the whole year. Notification would then be provided if there were significant changes to the portable monitoring schedule during the year.	Added guidance to section 17.0 explaining that notification is for significant changes to monitoring equipment and provided examples. Added note on changes to the siting of portables. Changed clause 17-F to say "significant equipment changes" rather than "all equipment changes".
17.0	17.0	Alberta Airshed Notifications Many of the notification requires do not recognize the actual operations of airshed monitoring networks. It is not always possible to plan many of these activities in advance and they occur in response in to analyzer/sensor problems	Notification is only required for significant disruptions to monitoring or data transmission. This is not intended to report on any regular maintenance or station upkeep. Notification would be required when a new monitoring method is being used (SHARP vs. TEOM for PM2.5), a new parameter or station is coming online, or when a station is going offline (decommissioning or shut down for an extended time).	Added guidance to section 17.0 explaining that notification is for significant changes to monitoring equipment and provided examples. Added note on changes to the siting of portables. Changed clause 17-F to say "significant equipment changes" rather than "all equipment changes".
17.0	17-A	Is the term ‘new’ in this clause referring to beginning to monitor for a new parameter at a site, a replacement analyzer or a swapping out a failed for a spare analyzer? If it the latter, 14 days notice is not sufficient. What is the purpose of this clause?	This is not intended to report on any regular maintenance or station upkeep. Notification would be required when a new monitoring method is being used (SHARP vs. TEOM for PM2.5), a new parameter or station is coming online, or when a station is going offline (decommissioning or shut down for an extended time).	Added noted on routine maintenance.
17.0	17-A	Minimum 14 days notice to Director prior to commencing operation of a new (a) ambient analyzer or (b) meteorological sensor see comments RC17.0 and does this clause apply to capital replacement programs or analyzer malfunctions and replacements?	Notification is only required for significant disruptions to monitoring or data transmission. This is not intended to report on any regular maintenance or station upkeep. Notification would be required when a new monitoring method is being used (SHARP vs. TEOM for PM2.5), a new parameter or station is coming online, or when a station is going offline (decommissioning or shut down for an extended time).	Added guidance to section 17.0 explaining that notification is for significant changes to monitoring equipment and provided examples. Added note on changes to the siting of portables. Changed clause 17-F to say "significant equipment changes" rather than "all equipment changes".
17.0	17-A	Minimum 14 days notice to Director prior to commencing operation of a new (a) ambient analyzer or (b) meteorological sensor See comments RC17.0 and does this clause apply to capital replacement programs or analyzer malfunctions and replacements?	Notification is only required for significant disruptions to monitoring or data transmission. This is not intended to report on any regular maintenance or station upkeep. Notification would be required when a new monitoring method is being used (SHARP vs. TEOM for PM2.5), a new parameter or station is coming online, or when a station is going offline (decommissioning or shut down for an extended time).	Added guidance to section 17.0 explaining that notification is for significant changes to monitoring equipment and provided examples. Added note on changes to the siting of portables. Changed clause 17-F to say "significant equipment changes" rather than "all equipment changes".

Section	Clause	Comment	Response	Action Taken
17.0	17-A	Clarify: The term 'new' in this section is this referring to a replacement analyzer or a spare analyzer as well? If it refers to swapping out analyzers with spares 14 days notice is not sufficient.	This is not intended to report on any regular maintenance or station upkeep. Notification would be required when a new monitoring method is being used (SHARP vs. TEOM for PM2.5), a new parameter or station is coming online, or when a station is going offline (decommissioning or shut down for an extended time).	Added guidance to section 17.0 explaining that notification is for significant changes to monitoring equipment and provided examples. Added note on changes to the siting of portables. Changed clause 17-F to say "significant equipment changes" rather than "all equipment changes".
17.0	17-B	Minimum 14 days notice to Director prior to commencement of these continuous ambient monitoring programs This should be addressed with a monitoring plan as suggested in Chapter 2. This is a redundant task.	An airshed may have information on a new station or parameter in their monitoring plan, with a tentative start date. This notification is to let the Director know that the new parameter or station is ready to come online so that, for example, the real-time website and other reporting mechanisms can be updated.	No changes made.
17.0	17-B	Minimum 14 days notice to Director prior to commencement of these continuous ambient monitoring programs This should be addressed with a monitoring plan as suggested in Chapter 2. This is a redundant task.	An airshed may have information on a new station or parameter in their monitoring plan, with a tentative start date. This notification is to let the Director know that the new parameter or station is ready to come online so that, for example, the real-time website and other reporting mechanisms can be updated.	No changes made.
17.0	17-C	Minimum 30 days notice to Director prior to scheduled shut-down or relocation of any (a) ambient analyzer or (b) meteorological sensor Can you please identify the need for this information? Analyzers and sensors in the field are replaced, shut-down or relocated based on maintenance priority and operational uptime requirements. Predictability of such schedules are unforeseen in real operational networks. Please reconsider this requirement.	This information is necessary to understand planned changes to the provincial ambient monitoring network. In the case of portable monitoring programs, notice of the planned monitoring schedule can be submitted annually, rather than sending notification prior to each relocation. If a change needs to be made to a notification previously provide, notification of the change just needs to be provided. The required notifications are not intended to limit the ability of airsheds to operate their monitoring networks in an efficient manner. Replacing an ambient analyzer or meteorological sensor with the exact same analyzer or sensor model, for the purposes of routine maintenance or to maintain equipment uptime, would not constitute a new analyzer or sensor. However, a new ambient monitoring station, adding a new analyzer or sensor for a parameter that was not previously being monitored at the station, and replacing an existing analyzer or sensor with a different method would all constitute a new analyzer or sensor and would require notification.	No changes made.
17.0	17-C	Minimum 30 days notice to Director prior to scheduled shut-down or relocation of any (a) ambient analyzer or (b) meteorological sensor Can you please identify the need for this information? Analyzers and sensors in the field are replaced, shut-down or relocated based on maintenance priority and operational uptime requirements. Predictability of such schedules is impossible in real operational networks. Please reconsider this requirement.	This information is necessary to understand planned changes to the provincial ambient monitoring network. In the case of portable monitoring programs, notice of the planned monitoring schedule can be submitted annually, rather than sending notification prior to each relocation. If a change needs to be made to a notification previously provide, notification of the change just needs to be provided. The required notifications are not intended to limit the ability of airsheds to operate their monitoring networks in an efficient manner. Replacing an ambient analyzer or meteorological sensor with the exact same analyzer or sensor model, for the purposes of routine maintenance or to maintain equipment uptime, would not constitute a new analyzer or sensor. However, a new ambient monitoring station, adding a new analyzer or sensor for a parameter that was not previously being monitored at the station, and replacing an existing analyzer or sensor with a different method would all constitute a new analyzer or sensor and would require notification.	No changes made.
17.0	17-D	New AMD Notification Template for changes to any reported dates already submitted to Director Please provide rationale and common sense approach to gathering such information.	This information is necessary to understand changes to the provincial ambient monitoring network. The changes to notifications simply keeps the department apprised of changes to the previous notifications. The notification templates simply provide guidance on what content to include in the notification letters.	No changes made.

Section	Clause	Comment	Response	Action Taken
17.0	17-D	New AMD Notification Template for changes to any reported dates already submitted to Director Please provide rationale and common sense approach to gathering such information.	This information is necessary to understand changes to the provincial ambient monitoring network. The changes to notifications simply keeps the department apprised of changes to the previous notifications. The notification templates simply provide guidance on what content to include in the notification letters.	No changes made.
17.0	17-E	Notify Director once become aware of any ongoing issues preventing real-time submission of ambient air monitoring data Please provide the complete requirements of the Alberta Ambient Air Real-Time Data Submitter's Guide.	This information will be provided in the "Alberta Ambient Air Real-time Data Submitter's Guide", which will be provided for public review prior to finalization.	No changes made.
17.0	17-E	Notify Director once become aware of any ongoing issues preventing real-time submission of ambient air monitoring data Please provide the complete requirements of the Alberta Ambient Air Real-Time Data Submitter's Guide.	This information will be provided in the "Alberta Ambient Air Real-time Data Submitter's Guide", which will be provided for public review prior to finalization.	No changes made.
17.0	17-F	Notify Director using the AMD Notification Template within 30 days of all equipment changes to (a) ambient analyzer, or (b) meteorological sensor. see comments RC 17.0 and RC17-C.	This information is necessary to understand planned changes to the provincial ambient monitoring network. In the case of portable monitoring programs, notice of the planned monitoring schedule can be submitted annually, rather than sending notification prior to each relocation. If a change needs to be made to a notification previously provide, notification of the change just needs to be provided. The required notifications are not intended to limit the ability of airsheds to operate their monitoring networks in an efficient manner. Replacing an ambient analyzer or meteorological sensor with the exact same analyzer or sensor model, for the purposes of routine maintenance or to maintain equipment uptime, would not constitute a new analyzer or sensor. However, a new ambient monitoring station, adding a new analyzer or sensor for a parameter that was not previously being monitored at the station, and replacing an existing analyzer or sensor with a different method would all constitute a new analyzer or sensor and would require notification.	No changes made.
17.0	17-F	Notify Director using the AMD Notification Template within 30 days of all equipment changes to (a) ambient analyzer, or (b) meteorological sensor. see comments RC 17.0 and RC17-C.	This information is necessary to understand planned changes to the provincial ambient monitoring network. In the case of portable monitoring programs, notice of the planned monitoring schedule can be submitted annually, rather than sending notification prior to each relocation. If a change needs to be made to a notification previously provide, notification of the change just needs to be provided. The required notifications are not intended to limit the ability of airsheds to operate their monitoring networks in an efficient manner. Replacing an ambient analyzer or meteorological sensor with the exact same analyzer or sensor model, for the purposes of routine maintenance or to maintain equipment uptime, would not constitute a new analyzer or sensor. However, a new ambient monitoring station, adding a new analyzer or sensor for a parameter that was not previously being monitored at the station, and replacing an existing analyzer or sensor with a different method would all constitute a new analyzer or sensor and would require notification.	No changes made.
17.0	17-F	Too onerous. For what purpose do we need to report this? What will government use it for? Quality Systems as specified by other AMD chapter already require this is documented. This information would be accessible if required. Is this report where someone with government would first look if there was an investigation into questionable data or more likely, the airshed would be asked to detail that information again at that time? If the latter then why is this report required at all?	This is just looking for significant changes to monitoring equipment (e.g., removing a parameter, change to monitoring method, adding a parameter, etc.). This information is necessary to understand changes being made to the provincial ambient monitoring network.	Added guidance to section 17.0 explaining that notification is for significant changes to monitoring equipment and provided examples. Changed clause 17-F to say "significant equipment changes" rather than "all equipment changes".

Section	Clause	Comment	Response	Action Taken
Alberta Airshed Supplemental Monitoring Results				
18.0	18.0	It is not clear why this section is needed and why this reporting would not fall under sections 13-16. Better definitions or guidance is needed for this section and conversely sections 13-16. Maybe give examples in the first paragraph to help understanding of the difference.	This section is not applicable to airsheds.	Removed section 18.0.
18.0	18-E (d)	Define “incident”. Assuming this requirement is for incidents reported by the Airshed directly, not incidents reported by approval holders within an airshed.	This section is not applicable to airsheds.	Removed section 18.0.
Amendments to Alberta Airshed Reports and Data				
19.0	19.0	Report Resubmissions - Notify Director using the AMD Notification Template as soon as the errors, omissions or other issues are identified In our 15 year history providing data to CASA Data Warehouse, errors to date have been the result of data warehouse failures and inadequate support from personnel in charge of the database.	The new ambient data warehouse and the transition to AEMERA should provide an improved experience for data submitters.	No changes made.
19.0	19.0	Report Resubmissions - Notify Director using the AMD Notification Template as soon as the errors, omissions or other issues are identified In our 15 year history providing data to CASA Data Warehouse, many of the errors to date have been the result of Data warehouse failures and inadequate support from personnel in charge of the database.	The new ambient data warehouse and the transition to AEMERA should provide an improved experience for data submitters.	No changes made.
19.1	19-D	RC 19-D "the person responsible must submit the amended report within thirty days of the initial discovery of the error, omissions or other errors." There will be circumstances in which it is not possible to complete and submit the amended report(s) within 30 days, especially given the cumbersome nature of the proposed reporting forms. Suggest extending the requirement to 60 days and also providing flexibility to have an extension in writing.	If the investigation takes longer than 30 days the Director must be contacted to authorize an extension .	No changes made.
19.2	19-I	RC 19-I and J refer to timelines in given in submitters guide documents. Without having all completed/revised documents to refer to its hard if not impossible to provide complete comments. This leaves the door open to getting unintentionally blind-sided after the AMD chapter is released by contents or stipulations in some part of those documents yet to be revised.	On the side of real-time data submission, our main focus is to ensure that those submitting real-time data do so in under the time constraints to post to our site and to Environment Canada, and that submission of erroneous data is minimized and reported so that we can make corrections as needed. This is what we have been presenting to airsheds over the past year. We want the data to get out to the public and we want to provide credible data (as best we can in the real-time format). Our intent is not to blindside airsheds into agreeing with requirements that they were not aware of. Real-time data submission will not be changing from current state, unless AEMERA decides to make changes later in the future. We need to make the AMD flexible enough to allow for any changes in data submission to AEMERA later on. The guides will be made available when we have them and that airsheds will be consulted when they are available.	No changes made.
19.2	19-I	What “submission deadline” will be specified in the Guide?	This information will be provided in the "Alberta Ambient Air Real-time Data Submitter’s Guide", which will be provided for public review prior to finalization.	No changes made.
19.2	19-J	Data Resubmission What is the "submission deadline"	This information will be provided in the "Alberta Ambient Air Real-time Data Submitter’s Guide", which will be provided for public review prior to finalization.	No changes made.
19.2	19-J	What “submission deadline” will be specified in the Guide?	This information will be provided in the "Alberta Ambient Air Real-time Data Submitter’s Guide", which will be provided for public review prior to finalization.	No changes made.
Appendix A - Alberta Ambient Air Quality Objective Guidelines				
Appendix A	Appendix A	Alberta Ambient Air Quality Objectives Calculation Guidelines Recommend retaining averaging periods for hourly, monthly and annual averages. Remove 8 hour, 24 hour and 3 day averages as they are excessive and add little value to data completeness criteria.	All averaging periods are provided in the table to cover off any current and/or future AAAQOs with various averaging times. You would compare to the AAAQO that is applicable, and use the corresponding averaging time and data completeness criteria from the table.	No changes made.

Section	Clause	Comment	Response	Action Taken
Appendix C - Schedule 2: Additional Substance List				
Appendix C	Appendix C	AMD emissions inventory requirements cover different isomers than the NPRI, meaning there may not be available estimation methods for these.	Changed 1,1,1 Trichloroethane to 1,1,2-Trichloroethane and changed CAS number to 79-00-5.	Changed 1,1,1 Trichloroethane to 1,1,2-Trichloroethane.
Appendix C	Appendix C	AMD emissions inventory requirements cover different isomers than the NPRI, meaning there may not be available estimation methods for these.	Changed Butadiene to 1,3-Butadiene.	Changed Butadiene to 1,3-Butadiene.
Appendix C	Appendix C	AMD emissions inventory requirements cover different isomers than the NPRI, meaning there may not be available estimation methods for these.	Changed Dichloroethane to 1,2-Dichloroethane.	Changed Dichloroethane to 1,2-Dichloroethane.
Appendix C	Appendix C	AMD emissions inventory requirements cover different isomers than the NPRI, meaning there may not be available estimation methods for these.	Changed Methylcholanthrene to 3-Methylcholanthrene.	Changed Methylcholanthrene to 3-Methylcholanthrene.
Appendix C	Appendix C	AMD emissions inventory requirements cover different isomers than the NPRI, meaning there may not be available estimation methods for these.	Changed Trimethylbenzene to 1,2,4-Trimethylbenzene.	Changed Trimethylbenzene to 1,2,4-Trimethylbenzene.
Appendix C	Appendix C	AMD emissions inventory requirements cover substances that are not NPRI reportable substances, meaning there may not be available estimation methods for these..	Removed, Beryllium and Compounds, Ethylene Dibromide, Ethyltoluene, Isobutylbenzene, Methylcyclopentane, Polychlorinated Biphenyl, Sulphur Trioxide, Tellurium, Thallium, Total Aldehydes and Total hydrocarbons from the schedule 2 AMD EI substance list.	Removed, Beryllium and Compounds, Ethylene Dibromide, Ethyltoluene, Isobutylbenzene, Methylcyclopentane, Polychlorinated Biphenyl, Sulphur Trioxide, Tellurium, Thallium, Total Aldehydes and Total hydrocarbons from the schedule 2 AMD EI substance list.
Appendix C	Appendix C	AMD emissions inventory requirements cover substances that are not NPRI reportable substances, meaning there may not be available estimation methods for these..	Removed 2-Ethylhexanol, Acetic Acid, Dimethyl ether, Hydrogen Chloride, Monoethylamine, Pentachlorophenol, Fluorides from EI substance list for better consistency with NPRI reportable substances.	Removed 2-Ethylhexanol, Acetic Acid, Dimethyl ether, Hydrogen Chloride, Monoethylamine, Pentachlorophenol, Fluorides from EI substance list for better consistency with NPRI reportable substances.
Definitions				
Def	9	Recommend that you avoid listing the specific Airshed zones, as the AMD will become dated if and when the zones change in the future.	This definition is already in the published AMD Introduction Chapter and will be updated if any new airsheds are created in the future.	No changes made.
Def	10	Alberta's Ambient Air Quality Data Warehouse One of the major benefits of CASA is that it is a multi-stakeholder organization. The addition of this definition implies that there may be plans for ESRD or AEMERA to take ownership of CASA and/or create a new data warehouse. This is worrisome as there could be a potential to lose the multi-stakeholder nature of the organization. If a new data warehouse is developed, would industry then have to submit data in multiple places? This would be onerous. It is recommended that the CASA data warehouse, as a multi-stakeholder organization, remain as the sole data warehouse to which airsheds, and ultimately industry, would submit ambient air data.	The CASA part of the CASA Data Warehouse has been in name only for the past several years, as Alberta Environment & Parks has managed and funded the data warehouse. Input from existing data providers has been considered in the modernization of the warehouse, but the system will be managed and run by AEMERA. There will not be two ambient data warehouses. The existing CASA Data Warehouse will transition to the new system and this should be complete prior to industrial facilities being required to submit ambient data warehouse under the AMD RC requirements.	No changes made.
Def	10	Is ESRD going to replace the CASA Data Warehouse? Role of CASA Operations Steering Committee has been connected to the Data Warehouse in the past, and we're not sure what the current status is today.	The existing CASA Data Warehouse has already been brought in-house and is in the process of being modified. AEMERA will be taking the lead on the new data warehouse. The CASA Operations Steering Committee for the CASA Data Warehouse has not met in several years and is not currently involved in the development of the new ambient data warehouse.	No changes made.
Def	15	What value is the use of the word **actual** if it includes estimated results? What would be considered 'non-actual'?	This is simply meant to distinguish it from the normal and maximum emissions, as the timescale (annual vs. daily vs. hourly rate) could apply to any of the types of emissions. The difference is that the annual actual are meant to represent one specific calendar year, while normal air emissions are meant to represent the normal/average emission rate (not specific to any one year) and the maximum emissions are meant to represent the maximum emission rate (either based on a limit or other criteria) not necessarily specific to any one year.	No changes made.

Section	Clause	Comment	Response	Action Taken
Def	23	It would be helpful to clarify the relationship between the CEMS Code and the AMD, as Chapter 9 includes numerous specific CEMS requirements.	These are two separate documents, incorporated via reference in EPEA approvals. The AMD will also be incorporated into the Substance Release Regulation.	No changes made.
Def	24	See comment for 23 (above)	These are two separate documents, incorporated via reference in EPEA approvals. The AMD will also be incorporated into the Substance Release Regulation.	No changes made.
Def	25	Certification Methodology of the Electronic Submission System Please explain digital sign-off on the data by an authorized person. Is this an electronic signature or an AESRD specific log-in credentials? Is AESRD allowed to gather personal information such as signatures and will the new Alberta's Ambient Air Quality Data Warehouse have security features and protection from theft of these personal information?	The exact digital sign-off will depend on the specific reporting system (ambient or CEMS). It has not been determined what digital sign-off will be used in the new ambient air quality data warehouse.	No changes made.
Def	33	Cylinder Gas Audit "traceable to standard reference materials (SRMs) of the U.S. National Institute of Standards and Technology (NIST) according to Protocol 1 of the US EPA": This definition endorses or references a particulate brand for standard reference materials. While U.S. NIST is still a credible source of SRMs, they have not been able to produce products to SRM criteria that can meet customer demands. There are credible SRMS products from other sources that are currently in use by Environment Canada, AESRD and monitoring organizations that meet the gas certification criteria of the US EPA	NIST is specified in the CEMS Code and this is a standard not a particular brand.	No changes made.
Def	37	Please clarify if "performance criteria" includes downtime, opacity and similar requirements.	This would include opacity. Downtime issues would be a contravention.	No changes made.
Def	41	"maximum air emissions" means the maximum rate at which a substance is emitted to the atmosphere from a source, factoring in emission limits, equipment specifications, or other relevant information. This definition is not clear. How are the limits, specifications or other information to be factored in? For instance, if an operating approval includes an emission limit for a substance, and the plant is operated so that a maximum of 50% of the limit is expected to be emitted, would the "maximum air emissions" be equal to the emission limit or to the operational limit?	The maximum emission rate is intended to be the emission limit, converted to the required timescale (e.g., daily emission limit to an hourly emission rate). The limit itself is also reported in the inventory form, so the original timescale information is still captured. Operational information could be used to help determine the normal emission rate, for example a source may on average emit at 50% of the emission limit. If no approval limit applies, the maximum emission rate can be based on: the design maximum, information from the equipment manufacturer, a historical maximum, an engineering estimate; or method authorized in writing by the Director. If no approval limit applies, the industrial operation should provide the maximum emission rate they feel is the most representative for their release point.	No changes made.
Def	41	How is this information to be used?	Maximum emissions are required for modelling and regulatory assessments.	No changes made.
Def	45	Define '**normal**' - industrial facilities can have variable production rates. In our industry, the base load on our compressors requires approx. 55-60% plant rate, so normal could be 55-110% production, for example.	The dictionary definition of "normal" is something like: "usual, average, or typical state or condition". Although an industrial operation is designed to handle many operating modes and conditions, there should be some kind of usual, average or typical operating condition. There will be an emission rate that represents the usual, average, or typical operating conditions of a particular release point and its associated units/processes/equipment. Given this is not tied to any specific calendar year activity or the operating maximum/limit, this value will be somewhat different (although normal emission rates are often similar to the annual actual emission rate due to averaging out of changes in emission rates during an entire year). Ultimately it is up to the industrial operation to determine what their normal operating conditions are.	No changes made.
Def	49	The “person responsible” is not clear. Responsibilities of "Person responsible and Certifying official " are not clear Would recommend a clear definition of “person responsible” and certifying official and their responsibilities. We would also recommend to provide examples likely corporate personnel who will be filling these roles.	The AMD defines the “person responsible” as the owner of a facility that is the subject of an approval or other authorization under the Environmental Protection and Enhancement Act, (ii) the holder of an approval or other authorization under the Environmental Protection and Enhancement Act, iii) the Alberta airshed, or iv) any other person specified in any other part of the AMD. Essentially it is the legal entity required to follow the AMD. The term and definition for certifying official has been removed.	The term and definition for certifying official has been removed.

Section	Clause	Comment	Response	Action Taken
Def	49	The person responsible definition is defined as the: (i) The owner of a facility that is the subject of an approval or other authorization under the Environmental Protection and Enhancement Act, (ii) The holder of an approval or other authorization under the Environmental Protection and Enhancement Act ….Etc.” The “person responsible” at some companies, this would be the VP. Chapter 9 states that the “person responsible” has a wide range of duties from emailing reports to calling in exceedances. Would recommend that the definition of “person responsible” be changed to the “person responsible or designate person responsible” be used.	The AMD defines the “person responsible” as the owner of a facility that is the subject of an approval or other authorization under the Environmental Protection and Enhancement Act, (ii) the holder of an approval or other authorization under the Environmental Protection and Enhancement Act, iii) the Alberta airshed, or iv) any other person specified in any other part of the AMD. Essentially it is the legal entity required to follow the AMD. The person responsible can delegate whom they wish to sign-off on the data and reports. However, the person responsible is ultimately accountable for the information being submitted and whether it meets the requirements of the AMD.	The term and definition for certifying official has been removed.
Def	52	Proposed Change: “pollution control technology or equipment” is defined in very broad terms (does this include mobile and stationary?). This definition should allow for each site to define what they view as pollution control and should be limited to significant technologies or equipment that are reported to another regulatory or non-regulatory reporting program.	Added "required" to pollution technologies and equipment in the monthly and annual reports sections. The emissions inventory section covers both EPEA required and other installed pollution control technologies and equipment.	Added "required" to pollution technologies and equipment in the monthly and annual reports sections.
Def	64	"Special air studies" Not all monitoring undertaken by an Airshed can be classified as ambient air monitoring. Need a more specific definition of "special air studies".	The definition uses "air monitoring studies" and is not specific to just ambient air monitoring. “Ambient air monitoring data” includes, but is not limited to, measured ambient air concentrations, speciation, deposition, meteorological parameters, method codes, units of measurement, time period of measurement and any required data flags.	No changes made.
Def	64	"Special air studies" The current definition broadly applies to all monitoring conducted in a network. Some monitoring organizations provide mobile monitoring to its stakeholders and routinely these monitoring locations are not characterized as "ambient air monitoring". Monitoring organizations also conduct technical projects for scientific research and product evaluation based on particular issues or stakeholder concern. These types monitoring activities highlight that not all monitoring conducted by a monitoring organizations are classified as ambient air monitoring and should be included in the current definition of the "special air studies".	The definition uses "air monitoring studies" and is not specific to just ambient air monitoring. “Ambient air monitoring data” includes, but is not limited to, measured ambient air concentrations, speciation, deposition, meteorological parameters, method codes, units of measurement, time period of measurement and any required data flags.	No changes made.
Def	64	Clarify definition of “special air studies”. “special air studies” appears to imply that no air studies can be undertaken where results remain “internal”. We recommend that definition delete “to study a particular issue or stakeholder concern” from definition.	Special air studies conducted by the Alberta airshed for its own purposes do not need to be reported to the Regulator. However, if the Alberta airshed chooses to submit results from a special air study to the Regulator, the air monitoring for the special air study needs to be conducted in accordance with the AMD in order for the Regulator to accept the data.	Clarifying note added.
Def	64	Clarify: “special air studies” indicates that all air testing is required to be reported, what is the purpose? This implies that no studies can be undertaken where results remain “internal”. Is this the intent?	Special air studies conducted by the Alberta airshed for its own purposes do not need to be reported to the Regulator. However, if the Alberta airshed chooses to submit results from a special air study to the Regulator, the air monitoring for the special air study needs to be conducted in accordance with the AMD in order for the Regulator to accept the data.	Clarifying note added.
Def	64	This definition indicates that all air testing is required to be reported, what is the purpose? Implies no studies can be undertaken where results remain “internal”. Is this the intent?	Special air studies conducted by the Alberta airshed for its own purposes do not need to be reported to the Regulator. However, if the Alberta airshed chooses to submit results from a special air study to the Regulator, the air monitoring for the special air study needs to be conducted in accordance with the AMD in order for the Regulator to accept the data.	Clarifying note added.
Def	26 and 27	‘Certified’ currently says formally signed-off by the person responsible however ‘certifying official’ means the individual designated by the person responsible. ‘Certified’ should be defined as formally signed-off by the Certifying Official.	The definition and use of the term certifying official has been removed.	The definition and use of the term certifying official has been removed.
Def	26 and 27	“certified” currently means formally signed-off by person responsible however “certifying official” means the individual designated by the person responsible. It is recommended that “certified” should be defined as formally signed-off by the “certifying official”.	The definition and use of the term certifying official has been removed.	The definition and use of the term certifying official has been removed.
Def	26 and 27	Clarify: This is a bit confusing. Data is to be certified by the “person responsible” but a “certifying official” can be appointed to complete the certification of the data. For smaller sites can this be the same person?	The person responsible can delegate whom they wish to sign-off on the data and reports. However, the person responsible is ultimately accountable for the information being submitted and whether it meets the requirements of the AMD. Note that ambient data requires a separate third party to complete the level 3 data validation. Certifying official has been removed.	The definition and use of the term certifying official has been removed.

Section	Clause	Comment	Response	Action Taken
Def	26 and 27	Proposed Change: “certified” currently says formally signed-off by person responsible however “certifying official” means the individual designated by the person responsible. Proposed Change: “certified” should be defined as formally singed-off by the certifying official.	The definition and use of the term certifying official has been removed.	The definition and use of the term certifying official has been removed.
Def	50 and 51	PM10 (50) and PM2.5 • Consider clarifying that this is ''filterable'' particulate matter and not condensable. Filterable particulate matter is routinely measured in stack surveys. • Consider clarifying that PM10 also includes PM2.5 as facilities were not including this previously for NPRI calculations.	This was just an explanation of the acronyms "PM10" and "PM2.5", but these acronyms have now been removed.	These acronyms were removed.
Def	50 and 51	There is no definition for Total Particulate Matter (TPM) • Consider adding a definition for TPM. The EPA Method 201A contains definitions for primary particulate, as well as PM10 and PM2.5 • Example: "Total particulate matter means the total amount of filterable particulates that enter the atmosphere as a direct emission from a stack or an open source, including PM10 and PM2.5".	The acronym "TPM" is not used in the AMD Reporting Chapter. The Annual Emissions Inventory Report Standard and Guidance Document may include formal definitions for the substances (such as total particulate matter), but the AMD Reporting Chapter will not.	No changes made.
Def	Def	The definition for an industrial operation needs to be clarified.	Updated definition of industrial operation.	Updated definition of industrial operation.
Def	Def	The requirement for a "certifying official" may require high-level sign-off at the company? Was this the intention?	Removed definition of certifying official	Removed definition of certifying official
Def	Def	We suggest that ESRD define certain terms in the document applicable to reporting and data requirements to ensure consistent interpretation and application across industry.	Some revisions have been made to definitions.	Some revisions have been made to definitions.

Forms				
Form	Ambient Data Validation Form	A signature of the independent reviewer (for Level 3 validation) is required as per Ch. 6; it is possible that this could be the same person who signs/certifies the bottom of the form?	Who signs/certifies this form is up to the person responsible to designate (could be the airshed Executive Director, could be the Monitoring Program Manager, could be a contractor) – this person is signing off that all of the above data verification and validation steps are complete and the data being submitted is valid, flagged, etc. The person who signs needs to know this to be true.	No changes made.
Form	Ambient Data Validation Form	For industrial monitoring carried out by industry, does the industrial facility need to perform the ambient data certification?	If the airshed does the monitoring, then the airsheds would submit and certify the data. If the industrial operation does the monitoring, then the industrial operation would submit and certify the data	No changes made.
Form	Ambient Data Validation Form	How and where is this form supposed to be submitted?	The Ambient Data Validation Form will be submitted each time continuous ambient data is submitted to the ambient data warehouse by airsheds and industry (or by the contractors working on behalf of airsheds/industry). The procedure for submission will be specified in the data submitters guidance document.	No changes made.
Form	Ambient Data Validation Form	Industry will need training on how to submit ambient data to the CASA Data Warehouse.	Updated guidance documents and training will be developed and provided. The format and timelines of training still need to be determined.	No changes made.
Form	Ambient Data Validation Form	It will be difficult to physically pass the Ambient Data Validation Form around for initials as each validation exercise is performed.	Removed the “date” and “initials” fields from the form and changed to a checklist.	Removed the “date” and “initials” fields from the form and changed to a checklist.
Form	Ambient Data Validation Form	The Word format of this form will be difficult to work with and likely won't allow for digital signing. It is recommended that this form be changed to a PDF form.	Form changed to a pdf form and will allow for digital signing.	Form changed to a pdf form and will allow for digital signing.

Section	Clause	Comment	Response	Action Taken
Form	Ambient Data Validation Form	What is the purpose of the Ambient Data Validation Form?	The purpose of the form is to certify that all of the data verification and validation steps from AMD Chapter 6, Data Quality, have been completed when continuous ambient data is submitted to the data warehouse.	No changes made.
Form	Approval Contravention Form	AEP should pick one or other – 7-day letter or this form; the form may be too detailed for some operations to fill out	What is documented through the ERC call-in does not contain all the information required by the form. The 7-day letters are not in a format that allows for summary information to be compiled into a database. It may not be possible to change these existing systems within the timelines of the AMD revisions - the form and the 7-day letter serve different purposes; the form could be appended to the letter, but likely won't cover all requirements of a 7-day letter as it is only a summary. Approval contraventions should not be occurring every month. The form just requires summary information of the contravention. Not all fields on the form will be necessary for every type of contravention.	No changes made.
Form	Approval Contravention Form	Approval contraventions are already automatically provided (called in); why is this form required? The call gives immediate info and 7-day letter provides all the details required in the form (exceedances, downtime, cause, action taken, etc.)	What is documented through the ERC call-in does not contain all the information required by the form. The 7-day letters are not in a format that allows for summary information to be compiled into a database. It may not be possible to change these existing systems within the timelines of the AMD revisions - the form and the 7-day letter serve different purposes; the form could be appended to the letter, but likely won't cover all requirements of a 7-day letter as it is only a summary. Information on any air related contraventions that occurred during the month should already be being identified in monthly reports, and usually are. The AMD contravention form simply standardizes the way this information is being submitted, and collect it in a manner than can be pulled into the Regulator database.	No changes made.
Form	Approval Contravention Form	Are airsheds required to complete the Approval Contravention Form?	No. This form is only required for EPEA approval holders, not airsheds.	No changes made.
Form	Approval Contravention Form	Contraventions are already searchable on gov't database	What is documented through the ERC call-in does not contain all the information required by the form. The 7-day letters are not in a format that allows for summary information to be compiled into a database.	No changes made.
Form	Approval Contravention Form	Could potentially create a guidance document for what information you want in the 7-day letter and the format of the letter	It may not be possible to change these existing systems within the timelines of the AMD revisions. Additional guidance and changes to release and contravention reporting will be examined in the future.	No changes made.
Form	Approval Contravention Form	Could the form be submitted with the 7-day letter? (would compliance have any issues with that?); make form to match the requirements of the 7-day letter to make it easier to complete (and reduce duplication of efforts); guidance could be added to Ch. 9 to use the Excel form	If it seems appropriate to incorporate the form as an appendix to the letter, then there shouldn't be an issue using it, as long as the information required by the Reg and the Guide to Release Reporting are being met. Note that the form itself likely won't cover all requirements of a 7-day letter, as it is only a summary.	No changes made.
Form	Approval Contravention Form	Could the form just be a summary of the event (e.g., 4 or so columns) and leave the detail to the 7-day letter, or keep the summary to the monthly and annual report (table of ref. number and summary of event)?	This form should only be used occasionally, as contraventions should not be occurring every month. The fields required by this form were partly based on the contravention summary tables included in some monthly/annual reports, but does contain a few additional fields.	No changes made.

Section	Clause	Comment	Response	Action Taken
Form	Approval Contravention Form	Could this form be only an annual summary of all contraventions in year to provide summary of what results were? (include date, type of contravention, brief summary, ref #, action taken); the annual report could refer to this form and the req could be removed from the cover letter	This form is required in monthly reports for industrial operations required to submit monthly reports, and in annual reports if only required to submit annual reports. The requirements of the cover letter have been changed to just an identification of any previous correspondence related to the contravention.	The requirements of the cover letter have been changed to just an identification of any previous correspondence related to the contravention.
Form	Approval Contravention Form	Cover letter in monthly/annual report also requires summary of contraventions with reference numbers from call-in.	The requirements of the cover letter have been changed to just an identification of any previous correspondence related to the contravention.	The requirements of the cover letter have been changed to just an identification of any previous correspondence related to the contravention.
Form	Approval Contravention Form	If we had no contraventions during a month, are we still supposed to submit a blank form?	If there were no contraventions during the month, a blank form would not need to be submitted, but you should mention in your monthly report somewhere that there were no contraventions. This will make it clear to the Regulator that the form is not missing, but simply was not applicable for that particular month.	No changes made.
Form	Approval Contravention Form	Is the Approval Contravention Form required as part of both monthly and annual reports?	This form is required in monthly reports for industrial operations required to submit monthly reports, and in annual reports if only required to submit annual reports.	No changes made.
Form	Approval Contravention Form	Some of the provided fields in the form may not allow for enough space to provide adequate description of events and responses.	The form just requires summary information. The detailed information should be included in the 7-day letter.	No changes made.
Form	Approval Contravention Form	The existing ERC call-in and 7-day letter systems should be used to provide contravention information.	What is documented through the ERC call-in does not contain all the information required by the form. The 7-day letters are not in a format that allows for summary information to be compiled into a database. It may not be possible to change these existing systems within the timelines of the AMD revisions - the form and the 7-day letter serve different purposes; the form could be appended, but it couldn't cover all requirements of a 7-day letter as it is only a summary.	No changes made.
Form	Approval Contravention Form	This form asks for too much information and will be onerous to prepare each month.	This form should only be used occasionally, as contraventions should not be occurring every month. The fields required by this form were partly based on the contravention summary tables included in some monthly/annual reports, but does contain a few additional fields.	No changes made.
Form	Approval Contravention Form	This type of reporting is tied to approval conditions. Why is this form required?	Monthly reports provide a summary of contraventions, however the current approval contravention tables submitted in PDF reports and the information descriptions in the report cannot be pulled into a database. This form collects a summary of air related contraventions in a format that can be compiled into a database.	No changes made.
Form	Approval Contravention Form	What is the purpose of the Approval Contravention Form?	Monthly reports need to provide a summary of contraventions. Current approval contravention tables submitted in PDF monthly reports and the information descriptions in the monthly report cannot be pulled into a database. This form collects a summary of air related contraventions in a format that can be compiled into a database. Just like with the other monthly forms, AEP is seeking a summary of information to bring into one consistent database and format – in the cast of this form, for air-related contraventions.	No changes made.
Form	Calibration	Should add CEMS to the name of the Daily Calibration Form to keep it separate from the other calibration forms. Also change this in the clause references in the AMD Reporting Chapter.	Change made.	Change made.

Section	Clause	Comment	Response	Action Taken
Form	Calibration	Where is the calibration report form for AMD air data? Wasn't able to find it.	Sample calibration forms for ambient air data are on the AMD Website, on the "AMD Toolbox" page. These templates are examples - it is not mandatory to use these templates for calibration reports.	No changes made.
Form	CEMS Summary Form	Facilities review their hourly CEMS data, but don't review it on a monthly basis or otherwise summarize the CEMS data, as we have not been required to do so.	Facilities should be reviewing their monitoring data regardless of required reporting.	No changes made.
Form	CEMS Summary Form	Having cells that remain constant over time could induce error if it becomes habit to skip over these cells and something does actually change.	The content of the forms should always be reviewed before they are submitted. If using a form from the last reporting period is a problem, a blank form can always be downloaded and filled out.	No changes made.
Form	CEMS Summary Form	How does AESRD propose industry submit the CEMS form in a legible manner using the required AMD CEMS Form?	The provided AMD CEMS Summary Form must be used.	No changes made.
Form	CEMS Summary Form	It is hard to go backwards to do a summary of CEMS data that has been submitted through ftp: would have to pull data into an excel spreadsheet to do analysis.	CEMS data is used for monthly and annual reporting, as well as for NPRI reporting purposes. Utilizing their own CEMS information shouldn't really be an issue for facilities.	No changes made.
Form	CEMS Summary Form	Missing data is already flagged on ftp site; if there is multiple missing data points, we would need more room on form.	Additional instances of missing data should be put on the next line, with the parameter and associated other information copied down as well.	No changes made.
Form	CEMS Summary Form	Rather than asking for more data and forms, isn't it better to modify the CEMS database to provide the needed summary information? That would be most consistent – everyone with a CEMS is providing hourly data as per the CEMS Code. Industry recommends AEP fix the electronic CEMS data system to be able to generate these summaries themselves.	Enhancing the existing CEMS electronic system would be a large undertaking and may require changing the information required to be submitted electronically by industry. These enhancements could require significant changes for both CEMS reporters and the internal systems at AEP. It may not be possible to change these systems within the timelines of the AMD revisions. The CEMS Summary Form will be required in the interim.	No changes made.
Form	CEMS Summary Form	This form seems onerous.	The CEMS Summary Form has a lot of cells that won't change over time, unless there is a change to the analyzer or monitored parameter. Only a small amount of summary information is required to be updated and reported each month.	No changes made.
Form	CEMS Summary Form	This form seems to duplicate what is reported electronically via ftp. Can AEP amend the CEMS database so that summary data can be extracted, since all the data is there?	The existing system does not necessary capture all the required fields, and monthly reports are supposed to "provide a summary and evaluation of the monitoring performed and data collected during the month".	No changes made.
Form	CEMS Summary Form	What about CEMS monitoring plans? They have some of this data/info.	They would have some of the required information, but not all of it. Also, they are in PDF format and data cannot be pulled out to utilize it. Improvements to the content requirements of CEMS monitoring plans are needed as well, but this will need to be dealt with outside of the AMD revisions.	No changes made.
Form	CEMS Summary Form	What is the purpose of this form?	There is the need to standardize what information on the CEMS results comes in via monthly/annual reports and should be in a useable format; there is also the need to standardize and improve the CEMS monitoring plans (which will need to be dealt with outside of the AMD revisions).	No changes made.
Form	CEMS Summary Form	When will the CEMS Code be updated?	Updating the CEMS Code is on the Air Policy work plan, but has not begun. We don't yet have firm timelines for revisions. Updating the CEMS Code will be done with input from the facilities required to monitor with CEMS and report electronically.	No changes made.
Form	CEMS Summary Form	Will CEMS quarterly reports still be required, in addition to this form?	The revised AMD reporting requirements supersede the current CEMS quarterly reporting requirements – as stated in 6.1 of the CEMS Code; therefore once Ch. 9 comes into effect, quarterly CEMS reports are no longer required.	No changes made.
Form	CEMS Zero and Span Summary Form	How should we deal with CEMS out of control periods?	Your QAP should outline how to deal with out-of-control periods.	No changes made.

Section	Clause	Comment	Response	Action Taken
Form	CEMS Zero and Span Summary Form	Is "out of control" as defined in the CEMS Code?	Added note: "Out of Control" is as defined in the CEMS Code or if the CEMS Code does not apply the QAP."	Added note: "Out of Control" is as defined in the CEMS Code or if the CEMS Code does not apply the QAP."
Form	CEMS Zero and Span Summary Form	Our company has non-CEMS Code following CEMS. Would this form need to be filled out for those non-CEMS Code CEMS?	All CEMS monitoring must be done in accordance with the CEMS Code, unless specific authorization has been granted to deviate. If a facility's QAP does not state how data quality is to be assessed then the entire system's validity would be in question.	No changes made.
Form	CEMS Zero and Span Summary Form	The CEMS manual details how to flag and properly report to the ftp site, the form shouldn't be needed if everyone was properly reporting and flagging. If this form helps deal with the outliers who do not report CEMS correctly, doesn't having to fill out this form penalize those who do report correctly?	This form asks for summary information that should already be being included in monthly reports. The Zero Span Form should not need to be submitted often, as these are occasional events.	No changes made.
Form	CEMS Zero and Span Summary Form	When is this form required?	This form is only required for out-of-control zero-span (as defined the CEMS Code).	No changes made.
Form	CEMS Zero and Span Summary Form	Zero and span are submitted through FTP and dealt with in QAP audit annually, so why is this form needed?	This form is for the Regulator's data checks, for our review and checks (to be sure that data is being reported correctly).	No changes made.
Form	Certified Lab Analysis Form	Our airshed uses a US lab that is a certified by the USEPA but is not ISO certified. The lab has high quality standards and is nationally recognized. Can we continue to use this lab?	To demonstrate compliance with the AMD (Chapter 5 Quality System and Chapter 9 Reporting), when submitting data to the data warehouse, a certificate of analysis must be submitted, and the airshed should demonstrate what the lab's quality assurance protocols are and how they compare to the requirements of AMD Chapter 5, Chapter 4 for intermittent monitoring, and Alberta's Lab Data Quality Assurance Policy, as amended. AEP will determine the process for airsheds to get approval for using non-ISO certified (but equivalently qualified) labs in the US.	AEP will determine the process for airsheds to get approval for using non-ISO certified (but equivalently qualified) labs in the US.
Form	Certified Lab Analysis Form	Where is the "Certified Lab Analysis Form"?	This was referred to in the first draft of Ch. 9 but is not actually a form that needs to be filled out. The lab provides a "certification of analysis" with the results of their analysis; this needs to be provided electronically with the data, each time data from lab results is submitted.	No changes made.
Form	CGA Summary Form	Are dual range analyzers supposed to be reported on the same form?	CGA Summary Form modified so that dual analyzers can be reported on one form.	CGA Summary Form modified so that dual analyzers can be reported on one form.
Form	CGA Summary Form	Can the CGA Summary Form just be included in the CGA Report?	The Excel form could potentially be copied into the CGA Report as a table, or included in the appendix, however, this form will be required in addition to the report currently required. Contractors can complete this form to ensure consistent information is reported in an electronic/accessible format. The CGA Reports require more than what this form has; will still need to have additional descriptive text information on the test methods, discussion of the results, specific appendix content, etc. as specified in section 9.3 of the AMD Reporting Chapter.	No changes made.

Section	Clause	Comment	Response	Action Taken
Form	CGA Summary Form	How were the CGA Summary Form requirements determined?	The CGA Summary Form is similar to the table summaries currently included in many CGA Reports.	No changes made.
Form	CGA Summary Form	Missing gas serial # and manufacturer on the CGA Summary Form.	Added gas serial # and manufacturer on the CGA Summary Form.	Added gas serial # and manufacturer on the CGA Summary Form.
Form	CGA Summary Form	Need to add a second table to the CGA Summary Form to allow reported of information for second analyzer ranges (when applicable).	Added a second table to the CGA Summary Form to allow reported of information for second analyzer ranges (when applicable).	Added a second table to the CGA Summary Form to allow reported of information for second analyzer ranges (when applicable).
Form	CGA Summary Form	On the CGA Summary Form, Gas 1, 2, 3 should really be Low, Mid and High Level.	Changed Gas 1, 2 and 3 to Low Level Gas, Mid Level Gas and High Level Gas.	Changed Gas 1, 2 and 3 to Low Level Gas, Mid Level Gas and High Level Gas.
Form	CGA Summary Form	Some facilities with non-CEMS Code CEMS are not currently submitting CGA Reports. Are CGA Reports now going to be required for these facilities?	If you are following the intent and principles of the CEMS Code, and are carrying out CGAs, then CGA Reports should be submitted, along with this summary form.	No changes made.
Form	CGA Summary Form	We see the value in standardizing these CGA reporting requirements.	Thanks.	No changes made.
Form	CGA Summary Form	Why has the CGA Report requirements become more detailed?	Based on current summaries from third parties, reports from contractors are not consistent and highly variable in content; CGA Report content was not covered by the 1989 AMD, which has lead to confusion as to what is expected in the reports, and a wide variety of information being provided in the reports	No changes made.
Form	Contravention Form	Fields in the AMD Contravention Form should be made more consistent with the requirements of the 7-day letter.	Fields and wording of AMD Contravention Form revised to improve consistency with 7-day letter requirements.	Fields and wording of AMD Contravention Form revised to improve consistency with 7-day letter requirements.
Form	Contravention Form	Would the approval contravention form need to be cover non-air contraventions? What about late reports and data submissions?	The directions of the AMD Contravention Form has been revised to clarify that the form is for air related approval contraventions, including late air reports and data submissions.	The directions of the AMD Contravention Form has been revised to clarify that the form is for air related approval contraventions, including late air reports and data submissions.
Form	Emissions Summary	A manual stack survey is a short-term measurement that is then used with other information to estimate emissions for the entire year. Would this be considered a measurement or an estimation on the emissions summary form? Other than CEMS, what is considered a measurement?	Combined the measurement/estimation and the estimation method fields into a single field for identifying the quantification methodology used to determine the emissions.	Combined the measurement/estimation and the estimation method fields into a single field for identifying the quantification methodology used to determine the emissions.
Form	Emissions Summary	AEP should add something more to clarify what is needed for the estimation and calculation methods; could add examples	Combined the measurement/estimation and the estimation method fields into a single field for identifying the quantification methodology used to determine the emissions.	Combined the measurement/estimation and the estimation method fields into a single field for identifying the quantification methodology used to determine the emissions.
Form	Emissions Summary	Data submitted through CEMS/ftp is real time data, why can't the system get the summary data? Why is this form needed?	This form does not require hourly emissions data and covers more than just CEMS monitored stacks. This is a separate approval requirement from the requirement to electronically submit CEMS data.	No changes made.
Form	Emissions Summary	Do we need daily totals at all? Maybe difference between CEMS and non-CEMS sources? Treat differently in form since CEMS already provides hourly data?	This form does not require hourly emissions data and covers more than just CEMS monitored stacks. This is a separate approval requirement from the requirement to electronically submit CEMS data. The specific reporting period (daily, monthly, annual, etc) is set out in the approval.	No changes made.

Section	Clause	Comment	Response	Action Taken
Form	Emissions Summary	If this form applies only for what our approval requires (i.e., what is in the reportable table for substances/sources) – this needs to be made more clear in the chapter clauses/guidance.	Monthly and annual emissions summary clauses revised and a flow chart has been added to show all requirements for monthly and annual reports and which requirements are mandatory for all and which are based only on what your approval dictates.	Monthly and annual emissions summary clauses revised and a flow chart has been added to show all requirements for monthly and annual reports and which requirements are mandatory for all and which are based only on what your approval dictates.
Form	Emissions Summary	Need to put right on the form that it is ok if the form has blanks – you are not expected to fill in every field; they may not all be applicable to each facility.	Clarifying notes added to the Emissions Summary Form.	Clarifying notes added to the Emissions Summary Form.
Form	Emissions Summary	This form asks for daily emissions, even though CEMS provides hourly. Please clarify if SO2 is daily and NOx is monthly/annually.	This form is only required for reporting emissions information that is required to be reported by EPEA approval requirements. The specific reporting period (daily, monthly, annual, etc) is set out in the approval.	No changes made.
Form	Emissions Summary	This form has calculated vs. measured, but what about calculated/estimated from measured data (interpolated)? Sometimes measured parameters are used to calculate emissions totals; estimation methods should just be general categories, similar to those used by the NPRI.	Combined the measurement/estimation and the estimation method fields into a single field for identifying the quantification methodology used to determine the emissions.	Combined the measurement/estimation and the estimation method fields into a single field for identifying the quantification methodology used to determine the emissions.
Form	Emissions Summary	What about fugitive emissions – should they be captured here?	Fugitive emissions monitoring is an annual reporting requirement (summarized in annual reports). The Emissions Summary Form will not capture fugitive emission source.	No changes made.
Form	Emissions Summary	What emissions information needs to be reported via this form?	This form is only required for reporting emissions information that is required to be reported by EPEA approval requirements. It is intended to allow for the electronic collection of data that is currently reported in PDF reports and manually entered into the internal department database.	No changes made.
Form	Emissions Summary	What if all we have to report is an average of hourly concentrations of emissions? Does this need to be reported on this form?	This form is only required for reporting emissions information that is required to be reported by EPEA approval requirements. The specific reporting period (daily, monthly, annual, etc) is set out in the approval. As per clause RC 2-D, if a specific form cannot be used for a particular instance of reporting, the information can be submitted in an alternate format in the monthly/annual report (e.g., a table in the report).	No changes made.
Form	Emissions Summary	You should add more source identifiers on the form (more columns; up to 30 sources).	Additional columns for sources have been added.	Additional columns for sources have been added.
Form	Flare Stack Form	Could this form ask for flare total on a monthly basis rather than daily?	This form asks for both daily and monthly volumes and emissions.	No changes made.
Form	Flare Stack Form	Flaring form should also ask for %H2S content of the flared gas.	Added "% of H2S Contained in the Flared Gas" to the AMD Flare Stack Form.	Added "% of H2S Contained in the Flared Gas" to the AMD Flare Stack Form.
Form	Flare Stack Form	Should add % H2S to the form.	Added % of H2S Contained in the Flared Gas.	Added % of H2S Contained in the Flared Gas.
Form	Flare Stack Form	Sulphur/SO2 are already asked for in the monthly emissions form and the sulphur recovery form; why are they asked for again on the flare form?	This form applies to industrial operations that flare. It collects information related to flaring. The Emissions Summary Form is dependant on the specific approvals monthly/annual reporting requirements.	No changes made.

Section	Clause	Comment	Response	Action Taken
Form	Form	AMD reporting forms and templates are available from the AMD website. The specified forms (provided on the website) are difficult to use, administratively burdensome and require manual data entry, which increases the likelihood of data transcription or data entry errors. Please consider: Options for bulk data entry; Functionality to produce a summary report for data entry QA/QC and for certification.	AEP has established a Forms Task Team, consisting of industry, airshed and AEP representatives to go through the reporting forms and recommend how to improve them (reduce redundancy, streamline, etc.). The reporting forms were introduced as a way to have summary data and information submitted in an electronic format for extraction into a database. This will eliminate the need for manual data extraction and data entry which AEP currently carries out. The forms are intended to remain in Excel format so that the data can be extracted using scripts. The reporting forms will not be converted to PDF for reporting to AEP.	No changes made.
Form	Form	As all information that is requested in the forms is already included in the reports, the requirement to fill out the forms is an unnecessary extra effort. Our company encourages ESRD to remove the duplication and limit the reporting to one format or the other (i.e., forms or reports). Furthermore, data entry into the specified forms could lead to transcription errors, particularly since the forms are not linked. If there are multiple forms with the same information requirements, we would like to suggest that these forms be linked in order to reduce unnecessary effort and lessen the risk of data entry errors.	AEP has established a Forms Task Team, consisting of industry, airshed and AEP representatives to go through the reporting forms and recommend how to improve them (reduce redundancy, streamline, etc.). The reporting forms were introduced as a way to have summary data and information submitted in an electronic format for extraction into a database. This will eliminate the need for manual data extraction and data entry which AEP currently carries out. The forms are intended to remain in Excel format so that the data can be extracted using scripts. The reporting forms will not be converted to PDF for reporting to AEP.	No changes made.
Form	Form	Chapter 9 introduces reporting requirements using multiple forms. In some cases the AMD requires more than one form to be used each month for related purposes (e.g. manual stack testing or CEMS data). Development of a single approach for this type of data entry would greatly simplify data entry, review and would reduce the potential for inadvertent data entry or data resubmission or correction errors.	AEP has established a Forms Task Team, consisting of industry, airshed and AEP representatives to go through the reporting forms and recommend how to improve them (reduce redundancy, streamline, etc.). The reporting forms were introduced as a way to have summary data and information submitted in an electronic format for extraction into a database. This will eliminate the need for manual data extraction and data entry which AEP currently carries out. The forms are intended to remain in Excel format so that the data can be extracted using scripts. The reporting forms will not be converted to PDF for reporting to AEP.	No changes made.
Form	Form	For comments fields in forms, will there be a limit on characters?	Overall, these are summary forms so the information should be kept brief, Excel however can accommodate large strings of characters; if larger comments are required can state “refer to report”.	No changes made.
Form	Form	Forms should be such that they can be easily populated (i.e. by a DAS) to minimize transcription error.	Excel reporting forms were previously used for the 2006-2008 Alberta Industrial Air Emissions Survey and are also used for baseline and compliance reporting under the Specified Gas Emitters Regulation. The forms will have scripts run to pull out the data as it is submitted. The forms are not intended to be printed in hardcopy form, as they are just a method of collecting required summary information in a format that can be pulled into the regulator database. They are equivalent to an online electronic reporting system or coded reporting format, which usually cannot be easily printed in hardcopy format.	No changes made.
Form	Form	Generally, the reporting forms and templates are not in a format that can easily be printed for file or for internal company distribution and review. The forms will need to be printed for validation and review by auditors.	Excel reporting forms were previously used for the 2006-2008 Alberta Industrial Air Emissions Survey and are also used for baseline and compliance reporting under the Specified Gas Emitters Regulation. The forms will have scripts run to pull out the data as it is submitted. The forms are not intended to be printed in hardcopy form, as they are just a method of collecting required summary information in a format that can be pulled into the regulator database. They are equivalent to an online electronic reporting system or coded reporting format, which usually cannot be easily printed in hardcopy format.	No changes made.

Section	Clause	Comment	Response	Action Taken
Form	Form	How is ambient data to be submitted to the CASA Data Warehouse? Will training be provided for industry?	Submission of ambient data will be very similar to how airsheds are currently submitting to the CASA Data Warehouse. Files are in a standardized XML format, with a data validation tool provided to check the formatting prior to submission. Submission is done through an FTP site; there will be a guidance document provided. There will be training provided to both industry and airsheds on the revised system, including how to format files, create and maintain an account and submit through the FTP site; this training will likely be carried out through an interactive web demonstration, which will be recorded and posted on the Ambient Data Warehouse website. There will also be a detailed guidance document provided on the Ambient Data Warehouse website.	No changes made.
Form	Form	In some cases, the AMD requires more than one form be used each month for related purposes (e.g. manual stack testing and CEMS data). Developing a single approach for this type of data entry would simplify the process and reduce the potential for errors.	The reporting forms were introduced as a way to have summary data and information submitted in an electronic format for extraction into a database. This will eliminate the need for manual data extraction and data entry which AEP currently carries out. The forms are intended to remain in Excel format so that the data can be extracted using scripts. The reporting forms will not be converted to PDF for reporting to AEP.	No changes made.
Form	Form	Likewise, it appears that the AMD team did not consult with the operations sections of ESRD which, at a minimum, has resulted in the creation of many unnecessary forms – (example: standard stack survey reports already provide the detail required by the new AMD Forms and associated requirements for submission of the report).	An extensive internal review of the AMD Reporting Chapter was carried out. While the reports and summary forms may contain some of the same information, the forms are necessary to collect the data in usable electronic format to eliminate manual data entry by the Regulator. Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.
Form	Form	Many of the forms are cumbersome and contain data that has been submitted in multiple other places in the reporting submissions (monthly, annual and CEMS). Most of the AMD form template layouts do not convert to a PDF in a legible manner. How does AESRD propose industry submit the CEMS form in a legible manner using the required AMD CEMS Form? Streamline forms with required information. Provide an improved design of the forms so they can be adequately converted to a PDF. The redundancy of data reporting needs to be addressed if we are providing the data in these forms then the reports should be massively simplified with no need to report on data unless it is summary, review, explanation, or trending.	The reporting forms were introduced as a way to have summary data and information submitted in an electronic format for extraction into a database. This will eliminate the need for manual data extraction and data entry which AEP currently carries out. The forms are intended to remain in Excel format so that the data can be extracted using scripts. The reporting forms will not be converted to PDF for reporting to AEP.	No changes made.
Form	Form	Most of the AMD form template layouts do not convert to a PDF in a legible manner.	Excel reporting forms were previously used for the 2006-2008 Alberta Industrial Air Emissions Survey and are also used for baseline and compliance reporting under the Specified Gas Emitters Regulation. The forms will have scripts run to pull out the data as it is submitted. The forms are not intended to be printed in hardcopy form, as they are just a method of collecting required summary information in a format that can be pulled into the regulator database. A copy of the original submitted file will be kept as a record of the submission. The industrial operation should also keep a copy of the submitted forms for their records, to comply with record retention requirements.	No changes made.
Form	Form	Our company does not support submission of data in a format that can be "manipulated" along with the report. It is preferable to allow industry to submit one copy of the data in a secured format.	Excel reporting forms were previously used for the 2006-2008 Alberta Industrial Air Emissions Survey and are also used for baseline and compliance reporting under the Specified Gas Emitters Regulation. The forms will have scripts run to pull out the data as it is submitted. A copy of the original submitted file will be kept for a record of the submission.	No changes made.

Section	Clause	Comment	Response	Action Taken
Form	Form	Streamline forms with required information. Provide an improved design of the forms so they can be adequately converted to a PDF. The redundancy of data reporting needs to be addressed if we are providing the data in these forms then the reports should be massively simplified with no need to report on data unless it is summary, review, explanation, or trending.	Excel reporting forms were previously used for the 2006-2008 Alberta Industrial Air Emissions Survey and are also used for baseline and compliance reporting under the Specified Gas Emitters Regulation. The forms will have scripts run to pull out the data as it is submitted. The reporting forms were introduced as a way to have summary data and information submitted in an electronic format for extraction into a database. This will eliminate the need for manual data extraction and data entry which AEP currently carries out. The forms are intended to remain in Excel format so that the data can be extracted using scripts. The reporting forms will not be converted to PDF for reporting to AEP.	No changes made.
Form	Form	Timelines for forms: need to give enough time to test the forms before submission is required; also reporters need enough advance notice so that they can begin acquiring the data needed to report (or change systems to provide needed data); form testing period should be in 2016 and be at least six months prior to forms being needed for compliance with the revised Reporting Chapter	Forms will be provided with sufficient timelines for testing prior to required use, as well as an online training webinar.	No changes made.
Form	Form	Way too many forms are required to be completed for the reporting which will require an excessive amount of time for each facility every month.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements. While the reports and summary forms may contain some of the same information, the forms are necessary to collect the data in usable electronic format to eliminate manual data entry by the Regulator.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.
Form	Form	What are the maximum characters allowed in the forms? Is there adequate room for comments?	The maximum characters that can be entered, will be the maximum allowable in an Excel cell. However, there is also a limit on how much information can be stored in the Regulator database, depending on the data type that is set for the imported information. The Excel forms are not intended to collect long paragraphs of information. That is the level of information that should be included in the monthly, annual or source reports not the forms. If it necessary to provide lengthy written comments as part a form that is not part of a monthly, annual or source report, a separate PDF document should be submitted and a reference to the additional document should be made in the comment field on the form.	No changes made.
Form	Form	When will training be provided?	As the Ambient Data Warehouse is currently being upgraded, training cannot commence until the new system is complete; training will be provided prior to required submission to the new system, and will allow for volunteer industrial operations and airsheds to practice submitting a few months prior to AMD Reporting Chapter coming into force.	No changes made.
Form	Form	Where is the "Acceptable Formats for EPEA Approval and Code of Practice Records and Submission Coordinates, for Energy Projects located ? "	This is a document published by the AER: https://www.aer.ca/documents/applications/AcceptableFormatsRecordsSubmission.pdf	No changes made.
Form	Form	Will forms have a naming convention requirement?	Yes, the approval naming protocol document will be updated to include form naming (versions, dates, etc.).	No changes made.
Form	Form	Will passive data need to be submitted to the Ambient Data Warehouse?	Yes, passive data will need to be submitted to the Ambient Data Warehouse within one year of data collection.	No changes made.
Form	Manual Stack Survey and RATA Forms	The manual stack survey and RATA forms are redundant of what is required to be included in the report and the cover letter. Having a requirement for the same data in multiple places unnecessarily increases the administrative burden and the likelihood of transcription errors.	The required content of the monthly report for the source testing (section 5.4.3) will just be identification of what testing was carried out, when and a brief discussion. Section 9 requires the submission of a report and a summary form that collects select information for importing into the regulator database. While the report and summary form may contain some of the same information, the form is necessary to collect the data in usable electronic format and has been based on the summary sheets currently being included by most third party contractors in the source testing reports. The third party contractor can prepare both the source testing report and the summary form. The cover letter is a summary only, not details. The cover letter is needed for a quick identification of any issues that may have occurred. The cover letter will also provide certification/sign-off on the report contents.	No changes made.

Section	Clause	Comment	Response	Action Taken
Form	Manual Stack Survey Summary Form	AEP should replace the “% of industrial process” field with two fields, “industrial process/activity quantity” and “industrial process/activity units”, in order to better capture what is being used to represent the normal operating rate for the testing.	Changed “% of industrial process” to “industrial process/activity quantity” and “industrial process/activity units”.	Changed “% of industrial process” to “industrial process/activity quantity” and “industrial process/activity units”.
Form	Manual Stack Survey Summary Form	For the “% of industrial process” field, there is no associated note for the asterisk.	The asterisk note is in a comment, which was mistakenly not set to be always visible (it says: “production rate should be as a percentage of the previous 30-day production rate average”). Comment made visible on the form.	Comment made visible on the form.
Form	Manual Stack Survey Summary Form	Percentage for production may not be the best indicator of this (e.g., some heaters only run in winter) – it may not always be tied to production. Production field will only apply to about 80% of the stacks; this field won’t work for things like glycol heaters.	The Stack Sampling Code requires that the test be run at “normal”, and percent production gives indication of what normal is. AEP just needs to know what normal is for the specific source being testing. This can be by % production or something additional provided in the comments.	No changes made.
Form	Manual Stack Survey Summary Form	We are ok with this form. It will be passed onto contractors to complete.	Thanks.	No changes made.
Form	Manual Stack Survey Summary Form	What if the previous 30 days are not representative? (e.g., shut down)	Added "Production Rate During Test" to the form. If the previous 30 days is not representative, you should describe in the comments why this is the case. The Manual Stack Survey Report will provide a full description of the normal production/activity rate during the test.	Added "Production Rate During Test" to the form.
Form	Notification Template	Administratively, it could be very difficult to provide 30-day notification of a new monitoring station or some replacements.	30 day notice will only be for scheduled shut-downs and relocations of ambient analyzers/sensors/stations. If notification needs to be changed after it is submitted, this can be done using another notification.	Clause revised.
Form	Notification Template	For a request for variance for shut down notification, add “if applicable”.	Added some instances of "if applicable".	Added some instances of "if applicable".
Form	Notification Template	For notification of analyzer shut down (clause 8-F), the requirement is for “scheduled shut downs”. What notification is required for non-scheduled shut downs?	If not scheduled, you should notify when known that analyzers that will be offline for an extended period or permanently.	Clarifying note added.
Form	Notification Template	For portable monitoring, do we need to notify each time the station is moved, or can we just submit a schedule for the entire year?	A clarifying note was added to indicate that it is acceptable to just submit a single notification for the monitoring location schedule for portable monitoring stations once at the start of the year. You will only need to notify again for that year if the submitted schedule needs to be changed.	Clarifying note added.
Form	Notification Template	If approval sets out notifications of changes to an ambient monitoring station, do we need to send two notifications, one as per the approval and one as per the AMD?	No, the AMD notification could be used to satisfy both the notification requirements. Note that if the approval requires more stringent notification timelines than the AMD Reporting Chapter, the approval notification timelines would take precedence.	No changes made.
Form	Notification Template	In clause RC-8D (notification for changes in analyzers), change “model” to “method”.	Added clarifying note. Notification is required if a monitoring method is changed (e.g., TEOM to SHARP); analyzer models can be changed without notification as long as it is the same monitoring method.	Clarifying note added.
Form	Notification Template	Is the notification a form like the other Excel forms?	This is a template to show the type of content expected for electronic/email notification to the Director. It is not a form to be filled out, but does specify minimum content requirements for each type of non-source testing notification.	No changes made.

Section	Clause	Comment	Response	Action Taken
Form	Notification Template	New parameters are sometime added on the fly, therefore notice would not be possible (e.g., adding PM monitoring during a fire event).	Notification should be given when it is known the change is being made. If the additional parameters are not going to be reported (for airshed or industrial operation's own purposes), then notification is not required.	Clarifying note added.
Form	Notification Template	Notification of facility shut downs (clause 8-G) should just be based on approval requirements (not all approvals require notification of shut down/start-up, and for those that do, requirements differ).	Clause changed to just refer to approval requirements.	Clause changed to just refer to approval requirements.
Form	Notification Template	Rather than providing letter-type examples with address blocks, etc. in the template, it would be more helpful to just provide a bulleted list of what needs to be in the notification – then the airshed/industry can simply type up an email with those bullets covered.	Changed template examples to bulleted lists. Kept one example letter, as a PDF letter is required for notifications, not just an email (for record keeping requirements).	Changed template examples to bulleted lists.
Form	Notification Template	Several clarifying notes were added to the notification section of the AMD Reporting Chapter. These should also be included in the Notification Template.	Clarifying notes added to the AMD Notification Template.	Clarifying notes added to the AMD Notification Template.
Form	Notification Template	Some of the notification templates require fields that won't be applicable in all circumstances; should add "if applicable" to those that won't apply in every circumstance.	Added some instances of "if applicable".	Added some instances of "if applicable".
Form	Notification Template	Start up or shut down timelines are not exact and can change at a moment's notice – can there be more flexibility in providing notification (perhaps a time window rather than a specific day?, e.g., week of ___)?	Industrial operation start-up and shut-down minimum notification timelines are set out in the approval, changing them in the AMD Reporting Chapter may not help address this issue. This needs to be addressed by discussion between the facility and their approvals engineer.	Clause changed to just refer to approval requirements.
Form	Notification Template	Would routine maintenance be considered a change to an ambient analyzer?	A clarifying note was added to indicate that routine maintenance would not constitute a change to an analyzer or sensor.	Clarifying note added.
Form	Production Form	Daily production data as requested in the "AMD Production Form" is excessive. What is the value in getting this daily production information when the industry is already submitting the monthly data?	Production reporting requirements are based on what the approval states (monthly total or daily total).	No changes made.
Form	Production Form	Daily production data requested in this form is already submitted to the regulator via Petrinex. This is not a realistic request. What is the value in getting this information?	Production reporting requirements are based on what the approval states (monthly total or daily total). Submitting to Petrinex is separate - approval requirements still need to be met.	No changes made.
Form	Production Form	Is this form mandatory for all EPEA approved facilities?	Industrial operations are not required to report production data unless required by EPEA approval.	No changes made.
Form	Production Form	Our company is seeking clarification on how ESRD defines a product in the production form. This definition could have confidentiality consequences, for example if ESRD is seeking product streams to be broken down.	This is only required if your approval says production data must be reported. The required production information that must be reported is set out in the approval.	No changes made.
Form	Production Form	Should change "Name of Product" to something more general to allow for power plants reporting the same product (electricity generated) for several individual generating units.	Field changed to accommodate for production reporting at multiple units, production trains, etc.	Field changed to accommodate for production reporting at multiple units, production trains, etc.
Form	Production Form	What if a facility has 3 stacks and 3 units – would separate forms be needed for each unit?	Field changed to accommodate for production reporting at multiple units, production trains, etc.	Field changed to accommodate for production reporting at multiple units, production trains, etc.
Form	Production Form	What production information needs to be put into this form?	Industrial operations are required to report production data as set out by their approval (what type of data, frequency, etc.). This form should be used to report the production data the same way you are currently reporting using the 1989 AMD sector specific reporting forms (if applicable). The AMD Production Form is just a modernized cross-sector version of the old forms.	No changes made.
Form	RATA Summary Form	For some facilities relative accuracy is defined in their QAP, as they are not required to monitor according to the CEMS Code.	If your EPEA approval requires you to monitor as per your QAP, then use relative accuracy as defined in your QAP; if your EPEA approval requires you to monitor according to the CEMS Code, then you must use relative accuracy as defined in the CEMS Code.	No changes made.
Form	RATA Summary Form	If running a RATA and stack survey at the same time, do both forms need to be filled out?	No, you are not required to fill out both – just fill out RATA and complete the lower section for when a RATA is used towards a compliance test.	No changes made.

Section	Clause	Comment	Response	Action Taken
Form	RATA Summary Form	It also may not be practical to operate at high in order to carry out the RATA at high conditions; some sources never actually operate at high, so we shouldn't need to do a RATA for the high rate.	The CEMS Code states that for multi-range analyzers all applicable operating ranges must be verified. AESO does not penalize for running higher for a RATA; even if the source only occasionally operates at high, you need quality assurance of the data at that range. You must quality assure both ranges. If the upper range no longer applies to your facility, this issue should be discussed with your approvals engineer. Your CEMS Monitoring Plan and QAP would need to be updated to reflect the removal of auditing of the upper range. RATAs must meet specific load conditions (normal production rate). Note revised for consistency with wording in the CEMS Code.	Note revised.
Form	RATA Summary Form	Our staff testing this form found it hard to tell which row they need to enter information into since the first column isn't locked in place.	First column has been locked in place.	First column has been locked in place.
Form	RATA Summary Form	Should change the "Limit" field to be "Performance Specification".	Changed second "Limit" field to "Performance Specification".	Changed second "Limit" field to "Performance Specification".
Form	RATA Summary Form	The note on multi-range analyzers is confusing.	If required to do a RATA at specific ranges, then you must report for the RATAs at both ranges – requirements are not changing (you don't need to supply more than the CEMS Code requires). Note revised.	Note revised.
Form	RATA Summary Form	What is the RATA Test #?	RATA Test # field is just identification of which RATA runs are being used for the Compliance Manual Stack Survey (e.g., runs 1-3, 5-7, etc.).	No changes made.
Form	RATA, CGA, Manual Stack Forms	AMD RATA Form/RATA Reporting, AMD CGA Form/CGA Reporting, AMD Manual Stack Form, Manual Stack Reporting etc. Why is there repetitive reporting requirements? For example for RATA information there is RATA reporting as indicated in Section 9 as well as AMD Rata Form as part of the Section 5 and 6 reporting. There seems to be a lot of added administrative burden based on these new forms. (Ex. RATA, CGA, Flare, Manual Stack etc.) All information is submitted as per the reports, the "Forms" are added administrative time to submit the same information.	The required content of the monthly report for the source testing (section 5.4.3) will just be identification of what testing was carried out, when and a brief discussion. Section 9 requires the submission of a report and a summary form that collects select information for importing into the regulator database. While the report and summary form may contain some of the same information, the form is necessary to collect the data in usable electronic format and has been based on the summary sheets currently being included by most third party contractors in the source testing reports. The third party contractor can prepare both the source testing report and the summary form. The cover letter is a summary only, not details. The cover letter is needed for a quick identification of any issues that may have occurred. The cover letter will also provide certification/sign-off on the report contents.	No changes made.
Form	Report Certification	Report Certification Form – Is this level of detail and administrative burden necessary?	Report Certification Form has been removed.	Report Certification Form has been removed.
Form	Report Certification	Report Certification Form should have a location for the report name, again for review, filing and auditing ease.	Report Certification Form has been removed.	Report Certification Form has been removed.
Form	S-30 Form	"103 m3" should be "103 m3" and the double line borders should be around the outside.	Change made.	Change made.
Form	S-30 Form	How is this form different from the current paper S-30 form?	This form is the same as the current paper form, except in Excel format.	No changes made.
Form	S-30 Form	Who needs to complete this form?	AER Directive 17 requires submission of this form to AEP for gas processing plants with less than 1 tonne per day sulphur inlet.	No changes made.
Form	Stack Survey and RATA Notification Form	Can you submit this notification form annually, advance of all tests?	Yes, if planned annually, the notification form can be sent to cover surveys/audit plans for the whole year, then only resend the notification if any changes need to be made.	No changes made.

Section	Clause	Comment	Response	Action Taken
Form	Stack Survey and RATA Notification Form	Do you still submit a notification letter in addition to this form?	No, this form replaces the letter.	No changes made.
Form	Stack Survey and RATA Notification Form	Does a failed RATA need to be submitted?	Yes, you must submit the failed RATA and must include an explanation for why it failed.	No changes made.
Form	Stack Survey and RATA Notification Form	For columns F to I in the form (methods/deviation), would authorization only be required once? How long would an authorization last?	This question should be directed to your approvals engineer, as it would depend on the specific authorization (e.g., could last up a specified date, could be up to next approval renewal, etc).	No changes made.
Form	Stack Survey and RATA Notification Form	If an audit/survey is failed/incomplete, would you need approval to reschedule (if 2 weeks advance notice is not provided)?	The 14-day advanced notice is a requirement set out in approvals, so you would need to speak to your approvals engineer to work this out.	No changes made.
Form	Stack Survey and RATA Notification Form	Instead of “proposed date” can a range be given (e.g., week of ___?, maybe 5 business days)? Stack sampling companies are limited and sampling dates often are changed.	The notification requirement is used to facilitate unannounced audits by the Regulator. Authorization for a ‘range’ may be requested in writing on a case-by-case basis, but since the majority of notifications are for one stack on one or two days, this will not be applied to all approval holders. AEP is interested in maintaining the intent of the notification, which includes the methodical date selection, scheduling and notification of a survey so that both representative sampling and auditing can be achieved (and also so any changes to the schedule can be accounted for).	No changes made.
Form	Stack Survey and RATA Notification Form	There may be different consultants per survey so we need to add this to the table as a column field.	Moved the testing company field to be in the table for each test, to allow for different testing companies for each test being carried out.	Moved the testing company field to be in the table for each test, to allow for different testing companies for each test being carried out.

Section	Clause	Comment	Response	Action Taken
Form	Stack Survey and RATA Notification Form	When test dates change and new notification is given, how will the database reconcile new vs. updated test dates? Don't want previous dates to be overridden, but rather to show that changes have been made.	This will be addressed in the database planning and development.	No changes made.
Form	Sulphur Recovery Form	Oil sands plants won't have the typical feedstock, you should therefore change "feedstock" to some kind of general inlet for oil sands plants.	Changed to "Sulphur Inlet / Sulphur Content Mass".	Changed to "Sulphur Inlet / Sulphur Content Mass".
Form	Sulphur Recovery Form	Should add a definition of sulphur recovery.	This is defined in approvals.	No changes made.
Form	Sulphur Recovery Form	Should add to form: operating hours of the sulphur recovery unit, bypass duration and bypass reason.	Added operating hours of the sulphur recovery unit, bypass duration and bypass reason.	Added operating hours of the sulphur recovery unit, bypass duration and bypass reason.
Form	Sulphur Recovery Form	There are only 3 columns on this form that are not already on the S30 form; this form should maybe be combined with the S30 form.	Industrial operations that need to complete the AMD S30 Form (small gas processing plants with less than 1 tonne/day inlet) don't have to do sulphur recovery and won't need to complete the Sulphur Recovery and Removal Form; facilities required to do sulphur recovery will have a sulphur inlet greater than 1 tonne/day and won't have to complete the S30 form. Therefore a S30 and Sulphur Recovery and Removal Form would only ever be completed independently.	No changes made.
Form	Sulphur Recovery Form	This form could potentially be combined with the Flaring Form.	The Flaring Form just collects flaring information, while the Sulphur Recovery and Removal Form goes beyond just flaring.	No changes made.
Form	Sulphur Recovery Form	This would be new reporting, as some approvals don't require reporting of sulphur recovery, only reporting of SO2; e.g., refinery that recovers sulphur (not under AER).	This was identified as a gap by AEP engineers; there is a wide variety of information that is currently being reported (or not reported) versus what should be reported on approval required sulphur recovery.	No changes made.
Form	Summary Sheet	In the AMD Summary Sheet, it is unclear what is considered a pollutant. Are pollutants defined as what's stated in our EPEA approval or does it include substances in Schedule 1 and Schedule 2?	Schedule 1 and Schedule 2 do not apply here. Schedules 1 and 2 only apply to emissions inventory reporting, not monthly or annual report emissions information. Annual summary sheet has been removed.	Annual summary sheet has been removed.

General Ch 9 Feedback				
-	-	• A number of the requirements that the AMD is proposing to add are covered in other Alberta reporting requirements. To ensure ongoing clarity of requirements, the AMD should strive not to duplicate requirements that are covered elsewhere (e.g. Directive 60, site operating permits, etc.).	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.
-	-	• We encourage ESRD to make use of existing reporting data submitted to other regulatory bodies which will ensure data consistency and avoid duplicative effort.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.

Section	Clause	Comment	Response	Action Taken
-	-	1. Currently, we are already providing similar data that is being asked in the AMD to multiple regulatory agencies (e.g.: air monitoring data to Joint Oil Sands Monitoring (JOSM) and through annual reporting to comply with EPEA Approvals, air emissions reporting to Environment Canada via NRPI reporting and production data to Petrinex etc.). Our company wishes to avoid redundancies in the data submission to multiple regulatory agencies and thus mitigate the administrative burden for both industry and the regulators. Our company supports the concept of single window reporting and strongly feels that this should be applied here.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.
-	-	1. Duplication of Efforts (Forms) There is A LOT of duplication of information requirements between the different elements of a given report and amongst the various reports. For example, the annual reporting requirements appear to be exactly the same as the monthly reporting requirements (except for some data trending); for manual stack survey submissions, the AMD Form information is duplicated in the Report, the Appendices, the Cover Letter, the Title Page, the Report Certification Form… These are but a few examples. Every single report required by the AMD Chapter 9 includes some amount of duplication of information within a given submission and as required by another report or AMD form or other required submission to ESRD (i.e., monthly electronic CEMS submissions). It is recommended that: - ESRD review the information requirements of the Chapter and streamline them - evaluate what information is actually NEEDED and WHY; - The level of detail required by the Forms be reviewed and streamlined and remove forms which require duplication of information; - The prescriptive/duplicate requirements of the required reports (ex/ need for title page, cover letter, table of contents, etc.) be removed.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements. While the reports and summary forms may contain some of the same information, the forms are necessary to collect the data in usable electronic format to eliminate manual data entry by the Regulator. The forms tasks team has provided further input into the form requirements.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements. The forms tasks team has provided further input into the form requirements.
-	-	b) There is significant duplication of information required from element to element of a given report and between various reports. For example, the annual reporting requirements appear to be exactly the same as the monthly reporting requirements (except for some data trending) – for manual stack survey submissions, the AMD Form information (duplicated in the Report), the Appendices, the Cover Letter, the Title Page, and the Report Certification Form. Every report required by the AMD Chapter 9 includes some amount of duplication of information within a given submission and as required by another report, AMD form or other required submission to ESRD (e.g. monthly electronic CEMS submissions).	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements. While the reports and summary forms may contain some of the same information, the forms are necessary to collect the data in usable electronic format to eliminate manual data entry by the Regulator.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.
-	-	c) Requirements in Chapter 9 do not appear to align with the other data-collection arms of ESRD, which has resulted in requesting information that is already being submitted elsewhere (example: via the CEMS electronic data submissions). Likewise, this misalignment will result in the creation of many unnecessary forms (example: standard stack survey reports already provide the detail required by the new AMD Forms and associated requirements for submission of the report).	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.
-	-	Chapter 9 also introduces requirements for duplicate submission of the same data in slightly different formats to different Alberta reporting systems. For example, flaring data are submitted as part of production accounting information (PETRINEX), but are also required for reporting under the AMD. Development of a single approach for this type of data entry would greatly simplify data entry, review and would reduce the potential for inadvertent data entry or data resubmission or correction errors.	EPEA approvals require the submission of monthly/annual reports. PENTRINEX covers reporting under AER Directives and legislation. Currently reporting is separate, but could potentially be streamlined in the future.	No changes made.
-	-	Duplication and Workload: The current draft of the AMD would result in a significant increase in the administrative burden, without an indication that the increase in data will improve environmental performance.	Much of the AMD Reporting Chapter is 25 years old and substantial revisions were required. Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.

Section	Clause	Comment	Response	Action Taken
-	-	Evaluate data and reports currently being collected and compare them against Chapter 9 requirements, in order to remove any duplicate information requirements.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.
-	-	Firstly, the proposed reporting amendments would create unnecessary duplication with existing reporting requirements. In many cases, the requested information and data is already provided to Alberta Environment and Sustainable Resource Development (AESRD) through various mechanisms such as the electronic reporting of CEMS data, stack surveys and the National Pollutant Release Inventory (NPRI). We submit that information already reported to the Alberta Government should not be included in the Alberta Air Monitoring Directive reporting requirements.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements. While the reports and summary forms may contain some of the same information, the forms are necessary to collect the data in usable electronic format to eliminate manual data entry by the Regulator. The AMD EI requirements are more detailed and have additional data elements not captured by the NPRI. The NPRI has incomplete source-level reporting, amalgamates various sources and excludes some emission sources (e.g., oil sands mine fleets). There are also differences in how the NPRI defines and regulates facilities versus how a facility is defined and regulated under an EPEA approval. There is currently no agreement in place between Alberta and Environment Canada on air emissions data collection and several past attempts at harmonizing the 1989 AMD NOx and SO2 emissions inventory reporting requirements with the NPRI were not successful. One obstacle to potential future harmonization with the NPRI is the lack of modern emissions reporting requirements in Alberta. AEP has critically examining the proposed emissions inventory requirements against feedback.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.
-	-	Huge amount of copying and forwarding reports that add no value unless someone is truly going to read and assess. Examples include, but are not limited to: o Much of the data requested should be via electronic reporting systems similar to the CEMS program. Need to reduce the paper burden as much as possible.	Summary forms will collect the information in a usable electronic format. It is not practical at this time to develop a more robust electronic reporting system for the AMD Reporting Chapter.	No changes made.
-	-	o Assess the needs vs. the wants. A lot of information seems to be nice to have vs. need to have. Only require data and information that is going to be reviewed in a timely fashion.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.
-	-	o Consider requiring facilities to maintain much of the extra “meta” data required, and have available for auditing. Not sure what value there is to send QA data to ESRD. Any issues should be addressed via report discussion sections or via incident reporting. Reporting should be exception based in these instances.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.
-	-	Of concern to our association and its member companies is the fact that the proposed revisions to Chapter 9 of the AMD introduce reporting redundancy due to existing provincial and federal reporting requirements. This duplication will result in a drastic increase in administrative burden for all parties. Based on an initial review of the new reporting requirements in Chapter 9, our members have identified reporting redundancies between the AMD and existing requirements under the Specified Gas Emitters Regulation, JOSM, AEMERA, AQMF, CAAQS, Air Sheds, EPEA Approvals/Codes of Practice, NPRI, and Petrinex. The administrative burden of this duplication is amplified by the fact that Chapter 9 details reporting requirements that use multiple forms. In addition, where reporting requirements are duplicated from other reporting channels, the formats are slightly different. The development of a single approach for this type of reporting would simplify the entry and review of the information requested and would greatly reduce the potential for inadvertent errors.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements. While the reports and summary forms may contain some of the same information, the forms are necessary to collect the data in usable electronic format to eliminate manual data entry by the Regulator. The AMD EI requirements are more detailed and have additional data elements not captured by the NPRI. The NPRI has incomplete source-level reporting, amalgamates various sources and excludes some emission sources (e.g., oil sands mine fleets). There are also differences in how the NPRI defines and regulates facilities versus how a facility is defined and regulated under an EPEA approval. There is currently no agreement in place between Alberta and Environment Canada on air emissions data collection and several past attempts at harmonizing the 1989 AMD NOx and SO2 emissions inventory reporting requirements with the NPRI were not successful. One obstacle to potential future harmonization with the NPRI is the lack of modern emissions reporting requirements in Alberta. AEP has critically examining the proposed emissions inventory requirements against feedback.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.

Section	Clause	Comment	Response	Action Taken
-	-	Our company believes that Chapter 9 creates a significant amount of duplication and extra effort for industry to meet this new standard. Specifically to obtain this new data and generate monthly/regular reports on air emissions which is currently not required. Remove monthly reporting requirement and align industry air data to existing Federal NPRI data that is already collected and provided. Industry to provide an annual report to ESRD only (unless there is a permitted exceedance).	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements. The AMD EI requirements are more detailed and have additional data elements not captured by the NPRI. The NPRI has incomplete source-level reporting, amalgamates various sources and excludes some emission sources (e.g., oil sands mine fleets). There are also differences in how the NPRI defines and regulates facilities versus how a facility is defined and regulated under an EPEA approval. There is currently no agreement in place between Alberta and Environment Canada on air emissions data collection and several past attempts at harmonizing the 1989 AMD NOx and SO2 emissions inventory reporting requirements with the NPRI were not successful. One obstacle to potential future harmonization with the NPRI is the lack of modern emissions reporting requirements in Alberta. AEP has critically examining the proposed emissions inventory requirements against feedback.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.
-	-	Our members would be willing to work with the government to understand what data are required and why, with the intent of proposing alternative, more efficient data collection options.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.
-	-	The AMD changes introduce reporting redundancy due to existing repetitive provincial and federal reporting requirements. Examples: JOSM, AEMERA, AQMF, CAAQS, Air Sheds, EPEA Approvals/Codes, NRPI, Petrinex.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements. While the reports and summary forms may contain some of the same information, the forms are necessary to collect the data in usable electronic format to eliminate manual data entry by the Regulator. The AMD EI requirements are more detailed and have additional data elements not captured by the NPRI. The NPRI has incomplete source-level reporting, amalgamates various sources and excludes some emission sources (e.g., oil sands mine fleets). There are also differences in how the NPRI defines and regulates facilities versus how a facility is defined and regulated under an EPEA approval. There is currently no agreement in place between Alberta and Environment Canada on air emissions data collection and several past attempts at harmonizing the 1989 AMD NOx and SO2 emissions inventory reporting requirements with the NPRI were not successful. One obstacle to potential future harmonization with the NPRI is the lack of modern emissions reporting requirements in Alberta. AEP has critically examining the proposed emissions inventory requirements against feedback.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.
-	-	The level of detail required by the Forms be reviewed and streamlined and remove forms which are duplicating information. (e.g.: need for title page, cover letter, table of contents, etc.)	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements. While the reports and summary forms may contain some of the same information, the forms are necessary to collect the data in usable electronic format to eliminate manual data entry by the Regulator.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.
-	-	There are some repetitive reporting requirements in terms of monthly submissions. Facilities are required to submit certain reports and monthly data. However, this Chapter of the AMD now requires additional submission of forms which contain the same information (e.g. Stack Surveys, RATAs, CGAs). This additional reporting is only different in terms of the format in which it is requested. Consider having one form of submission versus many different forms that include the same information.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements. While the reports and summary forms may contain some of the same information, the forms are necessary to collect the data in usable electronic format to eliminate manual data entry by the Regulator.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.

Section	Clause	Comment	Response	Action Taken
-	-	There are some repetitive sections/clauses for monthly/annual. Please consider grouping monthly reporting and annual reporting requirements to show consistencies between the reports, rather than separating them out. Separating the reporting requirements out by month and by annual not only increases the size of the document, it also makes it appear as though there are many more requirements in the entire chapter.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.
-	-	There is a considerable amount of duplicate reporting that will take place in order to meet the requirements as per this chapter. What is the need for reporting information in reports if they are easily accessible in the summaries?	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements. While the reports and summary forms may contain some of the same information, the forms are necessary to collect the data in usable electronic format to eliminate manual data entry by the Regulator.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.
-	-	4. The proposed changes are proposed to come into force in 2017, but there is no indication as to the basis for enforcement associated with these proposed changes or how the changes will interact with existing legislation. This is particularly relevant in view of the overlapping nature of the AMD with existing requirements.	The AMD is an enforceable document under EPEA approvals, as well as funding contracts between AEP/AEMERA and airsheds. It is intended that adherence to the AMD will also be covered by reference in a regulation. The reference to the AMD in the regulations would clarify the responsibilities of approval holders as well as non-regulated air monitoring organizations (such as airsheds).	No changes made.
-	-	Clarify whether or not policy/regulatory changes will be made to support this "ask" of industry. Example: The Environmental Code of Practice for Compressor and Pumping Stations and Sweet Gas Processing Plants does not currently include provisions for monthly or annual emissions reporting. Does ESRD intend to require monthly and annual emissions reporting for facilities registered under this Code of Practice? Is ESRD planning amendments to this Code of Practice? What is the review process and timeline for amending the Code of Practice?	AEP/AER do not intend to modify existing Codes of Practice as part of the current round of AMD revisions, however, individual approvals or registrations could be amended at any time, as per the discretion of the Director. Revisions to an existing Code of Practice, or the development of a new Code of Practice, would be done in consultation with industrial stakeholders, as per the established process.	No changes made.
-	-	In addition, there has been no indication as to how the AMD will be implemented and who will administer the changes. Our association and member companies would like to stress the importance of an implementation plan that includes industry input and engagement. Our association members would also like to inquire as whether the AER or ESRD are planning to carry out policy or regulatory amendments to support the increased reporting requirements as outlined in the AMD renewal.	The AMD is an existing policy that is now being modernized. Much of the AMD Reporting Chapter is 25 years old and substantial revisions were required. Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements. It is intended that adherence to the AMD will be covered by reference in a regulation, in addition to reference in individual EPEA approvals.	No changes made.
-	-	The proposed AMD changes do not currently provide an indication of how the AMD will be aligned with existing requirements or how it will be enforced.	The AMD is an enforceable document under EPEA approvals, as well as funding contracts between AEP/AEMERA and airsheds. It is intended that adherence to the AMD will also be covered by reference in a regulation. The reference to the AMD in the regulations would clarify the responsibilities of approval holders as well as non-regulated air monitoring organizations (such as airsheds). The AMD is administered by AEP, however, it will be implemented by the Regulator (being both AER and AEP).	No changes made.
-	-	There is currently no indication on how the AMD will be enforced and who will regulate the changes. There needs to be an implementation plan and discussion of whether there is a requirement for changes to Alberta regulations.	The AMD is an enforceable document under EPEA approvals, as well as funding contracts between AEP/AEMERA and airsheds. It is intended that adherence to the AMD will also be covered by reference in a regulation. The reference to the AMD in the regulations would clarify the responsibilities of approval holders as well as non-regulated air monitoring organizations (such as airsheds). The AMD is administered by AEP, however, it will be implemented by the Regulator (being both AER and AEP).	No changes made.
-	-	To date, it still remains unclear who will be administering the Air Monitoring Directive, AESRD or AEMERA.	The AMD is administered by AEP, however, it will be implemented by the Regulator (being both AER and AEP).	No changes made.

Section	Clause	Comment	Response	Action Taken
-	-	"Code of Practice registration" is not defined (e.g. in AMD Chapter 1). Which Codes of Practice are referred to? The Code of Practice for Compressor and Pumping Stations and Sweet Gas Processing Plants (under the Substance Release Regulation, and EPEA) does not currently have any provisions to require reporting, as proposed in the Draft AMD Chapter 9. Does ESRD plan to amend this Code of Practice? If so, how? What legal authority is in place to require the additional reporting for registered facilities, as proposed? Does ESRD plan to amend the legislation and the Codes of Practice? Issue written notices from the Director? Refer to comments under individual Chapter 9 sections (below). The oil and gas industry has many (hundreds of) facilities with Code of Practice registrations. Additional monitoring and reporting requirements for these facilities could be impose significant costs and administrative burden to industry.	The AMD only applies to EPEA approved facilities and Alberta airsheds. It could apply to new or revised Code of Practice registered facilities, if the new or revised Code requires reporting according to the AMD.	No changes made.
-	-	5. Misalignment with Existing ESRD Systems Chapter 9 seems to be rather punitive to those industries who have worked very hard to establish trust and credibility with the regulator. Chapter 9 repeats a lot of approval requirements and does not align with others, especially in regards to “immediate reporting” requirements.	Exceedance and performance reporting is covered in legislation. Changed clauses 4-A, B, C, G, H and I to guidance.	Changed clauses 4-A, B, C, G, H and I to guidance.
-	-	Departures from Historical Regulatory Approaches: a) This Chapter’s approach and language does not align with the messaging from government officials who regularly assure industry that the various ministries, and teams within a given ministry, work together in order to develop consistent policy and to reduce the burden on industry.	An extensive internal review of the AMD Reporting Chapter was carried out. Much of the AMD Reporting Chapter is 25 years old and substantial revisions were required. Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.
-	-	ESRD review and remove any Chapter 9 requirements that impact HOW industry operates, and those operating requirements that are already covered by approval-related clauses.	Some revisions to section 9 clauses made.	Some revisions to section 9 clauses made.
-	-	ESRD to consider alignment between jurisdictions when setting instructions for all crossover requirements.	Alignment will be considered, but may not always be practical.	Alignment will be considered, but may not always be practical.
-	-	Given the amount of data required we would suggest that ESRD provides some clarification and elaborates on the rationale behind all these changes. Suggest a consultation process with the industry explaining from the statistical point of view how is this data going to be used at what cost and benefit.	Much of the AMD Reporting Chapter is 25 years old and substantial revisions were required. Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements. In terms of consultation, the AMD Reporting Chapter will have gone through two formal public comment periods. Several webcasts have been carried out to present the information to stakeholders and allow for additional comments and questions to be submitted. There have also several face-to-face meetings with select industry stakeholders. Significant feedback has been provided by industry and the second public comment period will allow for additional comments to be provided. This is not the first attempt at modernizing emissions inventory reporting in Alberta. Previously provided feedback and input into proposed systems have been considered as well. There may also be the opportunity to develop a standardized starting dataset for EIA application/renewal AQ modelling, which may help to reduce costs for developing emissions inventories for regulatory dispersion modelling.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.
-	-	It appears that the AMD team did not reach out to/consult with the other data-collection arms of ESRD which has resulted in Chapter 9 requesting information that is already being submitted elsewhere (example: via the CEMS electronic data submissions).	An extensive internal review of the AMD Reporting Chapter was carried out. Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.
-	-	It is recommended that: ESRD evaluate data and reports currently being collected and compare against Chapter 9 requirements. Remove any duplicate information requirements;	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.

Section	Clause	Comment	Response	Action Taken
-	-	Overall, our company is concerned that additional, prescriptive reporting requirements with unclear drivers for change will significantly increase our administrative burden with little environmental improvement. We ask that ESRD look to align with existing Federal NPRI reporting to reduce the provincial reporting burden.	The AMD EI requirements are more detailed and have additional data elements not captured by the NPRI. The NPRI has incomplete source-level reporting, amalgamates various sources and excludes some emission sources (e.g., oil sands mine fleets). There are also differences in how the NPRI defines and regulates facilities versus how a facility is defined and regulated under an EPEA approval. There is currently no agreement in place between Alberta and Environment Canada on air emissions data collection and several past attempts at harmonizing the 1989 AMD NOx and SO2 emissions inventory reporting requirements with the NPRI were not successful. One obstacle to potential future harmonization with the NPRI is the lack of modern emissions reporting requirements in Alberta. AEP has critically examining the proposed emissions inventory requirements against feedback.	No changes made.
-	-	Section 1.0 of the AMD specifies "The AMD outlines the methods acceptable to the Regulator for air monitoring and reporting, as required by an Alberta EPEA Approval, Code of Practice registration, or any other air monitoring and reporting activities for which data is submitted to the Regulator or other person acting on its behalf." However, the Draft Chapter 9: Reporting could be interpreted so that persons responsible for Code of Practice registrations will be required to complete monthly reports, annual reports, annual emissions inventories, ambient air monitoring, source monitoring, and/or supplemental monitoring; when these facilities (to date) have had no such requirements.	The AMD only applies to EPEA approved facilities and Alberta airsheds. It could apply to new or revised Code of Practice registered facilities, if the new or revised Code requires reporting according to the AMD.	No changes made.
-	-	Should all clauses be enacted as drafted, reports will take significantly longer to produce causing increased resource demands. And for what purpose when many of the reporting clauses require information that is easily accessible in other submissions to government or data base. It seems an un-necessary duplication of work.	Much of the AMD Reporting Chapter is 25 years old and substantial revisions were required. Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.
-	-	The oil and gas sector is highly regulated, and significant effort is required to maintain compliance with all current reporting requirements. The current draft of Chapter 9 will result in a substantial increase in administrative burden without any indication that the increase in data will improve environmental performance	Much of the AMD Reporting Chapter is 25 years old and substantial revisions were required. Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.
-	-	The proposed changes to the reporting will add additional administrative requirements to industry without any clear or perceived benefit to the environment or human health. The proposed revisions to the AMD will require reporting that is duplicative, both within the context of the AMD and when considered within the broader provincial and federal regulatory requirements.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.
-	-	There is a very real disconnect that has occurred with the release of this Chapter and it does not align with the messaging from government officials who constantly assure industry that the various ministries and teams within a given ministry work together in order to develop consistent policy and to reduce the burden on industry.	An extensive internal review of the AMD Reporting Chapter was carried out. Much of the AMD Reporting Chapter is 25 years old and substantial revisions were required. Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.
-	-	Why is there the need for the increased amount and frequency of reporting of ambient monitoring information?	Met with airsheds and select industry group to better understand where major workload increases were. Much of the AMD Reporting Chapter is 25 years old and substantial revisions were required. Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.	Chapter has been edited with the intent of reducing duplication and unnecessary workload increases.

Section	Clause	Comment	Response	Action Taken
-	-	There are a number of concerns raised by the draft revisions of Chapter 9 that will require further engagement by our association and member companies with ESRD. Firstly, our association and member companies would like to request that ESRD clarify the policy intent behind the proposed changes. This would include a broader discussion as to how Chapter 9 aligns with the intent of the AMD as outlined in Chapter 1.	The stated purpose of the Reporting Chapter is to: • establish the minimum requirements for the reporting of air and emissions data, reports and summarized information and interpreted information to the Regulator; • standardize the types, content and format of air and emissions data, reports and summarized information data and reports; • establish and/or reference the minimum reporting frequencies and deadlines for air and emissions data, reports and summarized information; • establish and/or reference the procedures for the submission of air and emissions data, reports and summarized information data and reports; and • provide guidance on the reporting of air and emissions data, reports and summarized information data and interpreted information.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.
-	-	Above all else, it is important to note that there is considerable ambiguity in the 2014 AMD Amendments as currently drafted. Since this ambiguity could lead to further unnecessary confusion, it should be addressed before the Reporting Chapter is implemented.	We appreciate the review by our industry and airshed stakeholders to help us refine this chapter and remove ambiguity as much as possible before release. Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.	No changes made.
-	-	ESRD review and remove any Chapter 9 requirements that impact HOW industry operates, and those operating requirements that are already covered by approval-related clauses	Some revisions to clauses made.	Some revisions to clauses made.
-	-	f) From our association member perspectives, ESRD sets Air policy in Alberta, including monitoring, reporting, and evaluation. Under the OGCA and OSCA and AER Directives certain “regulated activities” may have duplicated reporting requirements, as in the example of OSCA Processing Plant licenses, and instructions for reporting. ESRD to consider alignment between jurisdictions when setting instructions for all crossover requirements.	This chapter of the AMD is mainly just for EPEA approval (and airshed) related reporting. Different agencies and levels of government may have different data needs and requirements. Alignment is considered, but cannot always be achieved.	No changes made.
-	-	I have completed a quick look at the chapter and found the draft comprehensive and well done. I have no meaningful suggestions at this time. I have no problem in making the document public for their review and comments.	Thank you	No changes made.
-	-	In general, the Air Monitoring Directive revisions build on a process begun a decade ago, in advance of the 2006 Amendments to the Air Monitoring Directive. At that time the Chemistry sector was involved in the development process as a stakeholder, and we applaud the ESRD for moving forward with the additional sections that were contemplated at that time. “The Association” supports the development of legislation that is risk-based and scientifically sound so that our environment is protected for generations to come.	Thank you	No changes made.
-	-	Inconsistent page numbering; numerals to p.13, numbers subsequent	Numerals are used in the preface of the chapter (table of contents, etc.), then regular numbers are used after that. This matches the current page numbering of all other AMD Chapters. All AMD chapters will undergo a redesign amendment with the AMD revision is complete. Page number design may be modified at that time.	No changes made.
-	-	Is there any plan to grandfather in modifications to methodologies and stratification determination that are currently used? Companies who have been using the same methodologies for many years may not have easy access for determining when authorization to use those methodologies was obtained.	With the revision to the AMD, we are looking for consistency in monitoring and reporting. In many cases, the current methodologies used would be acceptable, however, there may be methodologies used which are not up to date and not in line with new AMD requirements. First and foremost, the AMD requirements must be met, or equivalency must be demonstrated. It is best to err on the side of caution and check in with your approvals rep.	No changes made.
-	-	It is our understanding that the AMD chapters being worked on in 2014 are meant to REPLACE the entire 1989 version and 2006 amendments. The comments in draft Chapter 9 (and all previous chapters) about repealing individual clauses in those out of date versions are a bit confusing (Ex RC 1-G, H, I). Please clarify whether or not there will be any elements of the 1989 AMD and 2006 AMD amendments that will still be in effect following the release of all chapters of the 2014/2015 AMD.	When the AMD revision is complete, the entire 1989 and 2006 AMD will be repealed and replaced. Since the revised AMD chapters have various implementation or compliance dates, the 1989 and 2006 AMD requirements will be in place until the new AMD chapters take full effect. Please see AMD website for a table with all the compliance dates.	No changes made.

Section	Clause	Comment	Response	Action Taken
-	-	One suggestion is to consider the creation of an overall map – one for monthly reports and the other for annual reports – to show what are the elements of each document. This may help in making the document easier to read.	Reporting flow diagrams have been created for monthly and annual reports, for both industry and airsheds.	Reporting flow diagrams have been created for monthly and annual reports, for both industry and airsheds.
-	-	There was no consultation with industry on the increased reporting and potential policy changes prior to release of the draft documents.	The same process for public review and consultation has been used for all nine chapters of the Air Monitoring Directive. The release of the draft documents provides 60 days for all interested stakeholders to review the document and submit comments and questions. In terms of consultation on the AMD Reporting Chapter, two formal public comment periods will have been provided. Several webcasts have also been carried out to present the information to stakeholders and allow for additional comments and questions to be submitted. There have also several face-to-face meetings with select industry stakeholders. Significant feedback has been provided by industry and the second public comment period will allow for additional comments to be provided.	No changes made.
-	-	Why is there the need for the increased amount and frequency of reporting of ambient monitoring information?	Spoke to this at the Airshed Council meeting. There should not be a great increase in reporting for airsheds, but rather we are "leveling the playing field" - making reporting requirements consistent so that each airshed is providing the same information.	No specific changes made, although reporting requirements for airsheds have been reduced in the second draft.
-	-	• Certification Methodology of the Electronic Submission System* • Acceptable Formats for EPEA approval and Code of Practice records and Submission Coordinates* *In some cases it is unclear if a document with the same title is referred to or just a series of steps or accepted procedure. Suggest using a different font or other markings to clarify when a document or form title is noted in the AMD.	The "Certification Methodology of the Electronic Submission System" is defined in the AMD as "the mechanism by which data is certified during submission to an electronic reporting system. The certification methodology can include, but may not be limited to, authorized user-specific login credentials and digital sign off on the data prior to final submission". Acceptable Formats for EPEA approval and Code of Practice records and Submission Coordinates is the same document that currently provides information on where to submit monthly and annual reports to AEP. This document will be updated to cover documents being submitted under the AMD Reporting Chapter. Documents referenced in the Reporting Chapter are also listed in the "References" section of the Reporting Chapter.	No changes made.
-	-	Are other documents mentioned in the reporting Chapter part 2 available yet? AMD Notification Template? Or Report forms or Templates mentioned in RC 12-C Report Certification Form? Certification Methodology of the Electronic Submission System?	AEP provided draft forms on the AMD Toolbox website on Sept. 14. A note was sent out via the AMD email distribution list. The forms will be provided for review during the second round of public comment on the AMD Reporting Chapter. The Report Certification Form has been removed as a requirement. The "Certification Methodology of the Electronic Submission System" is defined in the AMD as "the mechanism by which data is certified during submission to an electronic reporting system. The certification methodology can include, but may not be limited to, authorized user-specific login credentials and digital sign off on the data prior to final submission".	The Report Certification Form has been removed as a requirement.
-	-	Are other documents mentioned in the reporting Chapter part 2 available yet? AMD Notification Template? Or Report forms or Templates mentioned in RC 12-C Report Certification Form? Certification Methodology of the Electronic Submission System?	Not all guides and supplemental document were made available on the AMD website for this draft review. AEP will be updating these guides before compliance with the Reporting Chapter is required. These guidance documents will be provided for public comment once they are updated. The Report Certification Form has been removed as a requirement. The "Certification Methodology of the Electronic Submission System" is defined in the AMD as "the mechanism by which data is certified during submission to an electronic reporting system. The certification methodology can include, but may not be limited to, authorized user-specific login credentials and digital sign off on the data prior to final submission".	The Report Certification Form has been removed as a requirement.

Section	Clause	Comment	Response	Action Taken
-	-	Documents referred to in the AMD Chapter 9 draft yet to be posted or reviewed to generate applicable comments are: • Alberta's Ambient Air Quality Data Warehouse: Data Submitters Guide • Alberta's Ambient Real-time Data Submitters Guide • AMD Notification Template • Report forms or Templates mentioned in RC 12-C • Report Certification Form • Certification Methodology of the Electronic Submission System	AEP provided draft forms on the AMD Toolbox website on Sept. 14. A note was sent out via the AMD email distribution list. The forms will be provided for review during the second round of public comment on the AMD Reporting Chapter. AEP provided draft forms on the AMD Toolbox website on Sept. 14. A note was sent out via the AMD email distribution list. The forms will be provided for review during the second round of public comment on the AMD Reporting Chapter. Not all guides and supplemental document were made available on the AMD website for this draft review. AEP will be updating these guides before compliance with the Reporting Chapter is required. These guidance documents will be provided for public comment once they are updated.	No changes made.
-	-	Documents referred to in the AMD Chapter 9 draft yet to be posted or updated are below. • Alberta's Ambient Air Quality Data Warehouse: Data Submitters Guide • Alberta's Ambient Real-time Data Submitters Guide • AMD Notification Template • Report forms or Templates mentioned in RC 12-C	Not all guides and supplemental document were made available on the AMD website for this draft review. AEP will be updating these guides before compliance with the Reporting Chapter is required. These guidance documents will be provided for public comment once they are updated.	No changes made.
-	-	I'd suggest delaying the closing date for comments until 2 months after all the documents and templates are updated and released. We do not yet have the complete picture on what we are commenting.	Not all guides and supplemental document were made available on the AMD website for this draft review. AEP will be updating these guides before compliance with the Reporting Chapter is required. These guidance documents will be provided for public comment once they are updated.	No changes made.
-	-	In addition, there are several areas in the proposed chapter requiring more clarity. Finally, several documents referenced in this chapter have not yet been updated or developed. Consequently, it is currently not possible to assess the actual consequences of the proposed requirements on the cement industry.	Not all guides and supplemental document were made available on the AMD website for this draft review. AEP will be updating these guides before compliance with the Reporting Chapter is required. These guidance documents will be provided for public comment once they are updated.	No changes made.
-	-	In reviewing the Reporting Chapter of the AMD, there is a lot of reference to Alberta's Ambient Air Quality Data Warehouse : Data Submitters Guide and Real-Time Data Submitters Guide. Could you please provide a copy of these guides. A review of these guides and its methodology will enable me to provide appropriate comments on the requirements of the Reporting Chapter.	These documents need to be updated to reflect the revised AMD requirements and ongoing system changes to the Ambient Data Warehouse. The current version of the CASA Data Warehouse Submitters Guide is available on the CASA Data Warehouse Data Submitter's website. These guidance documents will be provided for public comment once they are updated.	No changes made.
-	-	Is there a copy of the Alberta Ambient Air Real Time Submitters Guide and Alberta Ambient Air Quality data Warehouse: Data Submitters Guide; available on line?	This documents need to be updated to reflect the revised AMD requirements and ongoing system changes to the Ambient Data Warehouse. These guidance documents will be provided for public comment once they are updated.	No changes made.
-	-	Part 2: Several documents referred to in the Draft AMD chapter have not yet been updated or developed. It is difficult to provide complete comments in this case.	AEP provided draft forms on the AMD Toolbox website on Sept. 14. A note was sent out via the AMD email distribution list. Not all guides and supplemental document were made available on the AMD website for this draft review. AEP will be updating these guides before compliance with the Reporting Chapter is required. These guidance documents will be provided for public comment once they are updated. The CASA Data Warehouse will be rebuilt in the next year, so the data submitters guide will be updated to reflect any changes in data submission.	No changes made.
-	-	Several documents referred to in the Draft AMD chapter have not yet been updated or developed. It is difficult to provide accurate complete comments to the chapter clauses that require following the provisions in other documents not yet released.	AEP provided draft forms on the AMD Toolbox website on Sept. 14. A note was sent out via the AMD email distribution list. Not all guides and supplemental document were made available on the AMD website for this draft review. AEP will be updating these guides before compliance with the Reporting Chapter is required. These guidance documents will be provided for public comment once they are updated. The CASA Data Warehouse will be rebuilt in the next year, so the data submitters guide will be updated to reflect any changes in data submission.	No changes made.

Section	Clause	Comment	Response	Action Taken
-	-	The DRAFT AMD Chapter 9 says that there are examples available of what the monthly and annual AMD reports are going to look like from an information-requirement perspective. I cannot seem to find those on the AMD website or the AMD tool box. Can you please provide a link to their location?	The example reports will depend on the requirements set out in the AMD Reporting Chapter and thus cannot be provided until reporting requirements have been finalized. Example reports will be posted on the AMD website, prior to required submission of reports in 2017.	No changes made.
-	-	We recommend that ESRD consider the full extent of the effort involved in meeting the cumulative data collection and reporting requirements contained in the AMD to ensure they do not result in unnecessary administrative burden on parties subject to the AMD. It should also be recognized that the volume of data requested will have a substantial impact on resources, both on the industry and government sides. Therefore, further discussions are warranted to ensure value for the level of effort that this reporting will require.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.	Based on comments submitted and meetings with stakeholders, the requirements of the AMD Reporting Chapter have been revised to attempt to reduce some of the duplication and improve the reporting requirements.