

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

The following summarizes the main feedback provided by stakeholders during public review of the 2<sup>nd</sup> Draft of Chapter 9 of the AMD from September to October 2015.

### General Feedback

**1. The implementation date of the Reporting Chapter does not provide two years to prepare after release.**

The effective date of the Reporting Chapter has been changed to January 2019.

**2. Many of the requirements of the monthly and annual reports, in addition to the requirements of the Annual Emissions Inventory Report are highly administrative, cumbersome, and do not add much value. Chapter 9 creates significant duplication for industry to submit data through various portals to Alberta Environment. Alberta Environment should build on existing data collection systems.**

Significant changes have already been made in response to stakeholder comments in order to reduce the reporting burden as much as practical. Ultimately more information is needed than was in 1989. However, AEP has determined that most industrial operations are already be meeting most of the monthly/annual report requirements. The Reporting Chapter brings the minimum monthly and annual report requirements up to a consistent, standard level of reporting.

The Reporting Chapter has added electronic reporting forms in order to get summary information in an electronic format - so this is not raw, hourly data (as is sent via FTP), but summaries of data used for assessing compliance and tracking ongoing performance. The purpose of the forms was to take out elements that had been reported in pdf reports and put them in an electronic format that would facilitate querying, analysis and tracking by the Regulator. The format of reporting needs to be changed from paper/scanned documents to electronic reporting to eliminate the manual entry of data that Environment and Parks is currently carrying out.

Existing electronic reporting systems are intended for different reporting purposes (submission of hourly monitoring data, incident reporting, compliance purposes). The immediate incident reporting system is purposely kept separate and includes all media incident reporting, not just that for air. AEP does not intend to merge incident reporting with routine monthly/annual reporting.

**3. There is a lack of consistency in approval terms and conditions throughout the Province. With the AMD Chapter 9 trying to create a 'one-size-fits-all' document for a suite of approvals that all have different reporting requirements, it is challenging for industry to understand how to apply standardized reporting requirements to individual approvals.**

The approvals template has been, and will continue to be, updated for consistency with the requirements of the revised Air Monitoring Directive. Monitoring and reporting requirements are set out in approvals and approval conditions must be tailored to individual operations. However, the Air Monitoring Directive Reporting Chapter sets out the minimum reporting requirements to ensure that consistent reporting is carried out and that the

department obtains a baseline of information needed for compliance purposes, reporting against standards, supporting policy development and management decisions and reporting to the public. The approvals standard template will be updated following finalization of AMD Chapter 9.

**4. There is a lot of burdensome reporting required in the Reporting Chapter that doesn't add much value. How will all of this electronic data be used by the Regulator?**

Ch 9 has added electronic reporting forms in order to get summary information in an electronic format - so this is not raw, hourly data (as is sent via FTP), but summaries of data used for assessing compliance and tracking ongoing performance. The purpose of the forms was to take out elements that had been reported in pdf reports and putting them in an electronic format that would facilitate querying, analysis and tracking by the Regulator.

The summary data submitted under the AMD will be stored in a Regulator database in a useful and comprehensive format that will be accessible to policy makers, planners, approvals and compliance staff. This information will allow for queries of sector, facility or parameter (e.g., contraventions) that can be used for policy development, management/regional planning and approval applications/renewals. Comprehensive and accessible facility-level information allows for the development of robust policy which can be tailored to problem areas rather than broadly applied.

**5. There are a lot of redundancies in the new reporting requirements, including reporting the same information through multiple forums. There should be a single window reporting system used instead.**

While a more robust online reporting system would perhaps be ideal, it is beyond the current scope of the updates to the Air Monitoring Directive and likely a longer-term future solution. It may not be practical to spend significant funding on an ongoing basis to collect only air information, when water, land and other environmental data is also being reported to the department by various methods. Spreadsheets are a low cost, practical, solution that is achievable within the available timeframe, and provides an opportunity to test the new reporting requirements before moving to a longer-term reporting solution. Similar spreadsheet reporting forms are already used by industry to submit data under the Specified Gas Emitters Regulation.

**6. This policy is not ready for finalization nor implementation. Further engagement should be offered and stakeholders should be given more opportunity to provide input.**

The review process for the Reporting Chapter has already included:

- The first draft of Chapter 9 was posted for review in September 2014.
- Three stakeholder webcasts were conducted to present the drafts, go through the feedback received, present the department's response to the feedback and explain the rationale behind requirements in Chapter 9 (September 2014, February 2015 and September 2015).
- Meetings with individual industry groups and airsheds to better understand their concerns with the proposed reporting requirements (January and February 2015).
- Convening a Reporting Forms Task Team to go through the reporting forms with industry and airshed stakeholders (June 2015).
- A second draft was provided for stakeholder review, something not done for the revision of any of the other chapters of the Air Monitoring Directive.
- Teleconference calls were conducted with industry stakeholders in November 2015 to discuss outstanding concerns with Chapter 9.

Further engagement means that implementation of the new reporting requirements would be further delayed and AEP would need to take steps in the interim to acquire the necessary data to meet new and emerging policy and management planning demands.

**7. Alberta Environment and Parks should rely on the National Pollutant Release Inventory for emissions data rather than requiring dual reporting.**

The AMD emissions inventory 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.

## Feedback on Data Submission

**8. It is confusing to differentiate what applies to ambient air monitoring as a whole and what only applies to continuous ambient air monitoring. Clauses should be made more clear.**

AEP has re-examined the ambient data submission clauses. The wording in the clauses specifies either "all ambient air monitoring data" or "continuous ambient air monitoring data". Most clauses in Section 3 apply to all ambient air monitoring data.

**9. Section 3.2 implies that results must be submitted if source testing was conducted for a parameter or pollutant having 'approval conditions' or limits. We suggest that the reference to 'approval conditions' be removed to align with the standard approval clause that refers only to 'limits'.**

Wording has been revised to add the following guidance, in accordance with approval requirements: "If the approval holder monitors for any substances or parameters which are the subject of operational limits as set out in this approval more frequently than is required and using procedures authorized in this approval, then the approval holder shall provide the results of such monitoring as an addendum to the reports required by this approval."

**10. Can you define "analyzer actual measurement capability"?**

The measurement capability of a specific analyzer refers to how many significant figures an analyzer can confidently report, based on the precision and accuracy of the analyzer (manufacturer's specifications and how the analyzer is set up to operate). Analyzers may supply more decimal places than the analyzer may actual be capable of reporting (based on the analyzer's precision). The person responsible must use best judgment in determining how many significant figures to carry when reporting data from a continuous ambient analyzer.

**11. The number of significant figures required for comparing to AAAQOs must be the same as what is required for submission to the ambient data warehouse. Otherwise there would be inconsistency in the number of exceedances reported. It is not possible to carry an additional significant figure for some pollutant concentrations for comparing to AAAQOs (i.e., H<sub>2</sub>S analyzers do not provide concentrations at a high enough resolution to provide an additional decimal place).**

Agreed that the rounding convention used to determine whether or not an AAAQO has been exceeded should be the same for both reporting online to the ambient data warehouse and monthly/annual reports (that is, based on the analyzer's actual measurement capability). The rationale for this

requirement is that carrying 1 decimal place greater than the AAAQO allows a measure of whether that AAAQO was exceeded (i.e., any amount greater than the AAAQO is an exceedance of that AAAQO; so 9.7 does not exceed 10, but 10.1 does exceed). Examples are provided in RC 3-F. Rounding requirements to compare to AAAQOs creates a common/consistent cut-off in the data for determining whether or not an exceedance has taken place. Clauses RC 3-F and RC 13-F have been modified for the exception when an additional significant figure is not available from an analyzer for comparing to AAAQOs.

**12. Does clause RC 3-J imply that now ALL ambient analyzers must sample and report to actual conditions rather than standard temperature and pressure?**

Clause RC 3-J and RC 13-J requires that all ambient concentrations be reported to actual, ambient temperature and pressure to allow for comparability across monitoring methods, as well as for comparison to AAAQOs. The requirement is for reporting, and does not specify how to monitor. If an analyzer is sampling at standard temperature and pressure, conversion would be required prior to reporting to the Ambient Air Quality Data Warehouse or in monthly/annual reports. The caveat “unless otherwise authorized by the Director” was added to this clause to allow for those infrequent cases where reporting to actual ambient conditions is not possible.

**13. NO<sub>2</sub>, PM<sub>2.5</sub> and O<sub>3</sub> are required to perform an AQHI calculation. Is RC 13-S asking for data to be reported continuously to the Alberta Real-time Ambient Air Website even if a station does not have the required parameters to perform the AQHI calculation?**

Real-time reporting covers more than just AQHI. Yes, even if a station does not monitor for all the AQHI substances, real-time reporting is required if the pollutant(s) is measured continuously and is something being reported to the ambient data warehouse or in in monthly/annual reports. Real-time reporting of individual substances is used by AEP and Alberta Health for tracking air quality events.

**14. Facilities that have an operating approval are required to report CEMS emissions data using the AEP File Transfer Protocol (FTP). Some sections of AMD Chapter 9 require duplicate reporting of the information reported by FTP. Can't AEP summarize the data that is submitted via FTP?**

Hourly or minute-to-minute CEMS data is provided via FTP. Section 5.0 of Ch 9 provides the requirements for submitting monthly summary CEMS data, as per monthly reporting requirements in approvals. Chapter 9 sets the minimum standard for what must be included in a monthly report. Electronic reporting forms are being used in order to get summary information which had been reported in a pdf report in an electronic format - so this is not raw, hourly data (as is sent via FTP), but summaries of data used for assessing compliance and tracking ongoing performance. Summarizing CEMS data is not only useful for the Regulator to monitor a facility's performance, but should be used by the facility to evaluate their operations.

The Regulator is not able to summarize or analyze data that has been submitted in real-time through FTP (for 300+ facilities). The Regulator does not have the facility-level knowledge to know whether data is valid and what operating conditions were influencing the data. Industry is required to summarize CEMS data (e.g., uptime and comparison to limits) – this is not a new requirement. The electronic form is rather a new format to supply this information.

## Feedback on Exceedance and Performance Reporting

### 15. What is the intent of Section 4?

The clauses in Section 4 are very specific about what they cover (e.g., reporting of AAAQO exceedances, monitoring equipment issues, providing monitoring data during an emergency). The guidance at the beginning of Section 4 references immediate reporting required by EPEA and the Release Reporting Regulation. The guidance in Section 4 has been edited so that it still provides context on what needs to be reporting immediately, according to the reg, but the verbatim text from the reg has been removed. This section only has requirements for reporting of AAAQO exceedances (which needs consistency) and the reporting of any significant equipment or ambient monitoring disruption. A clause was also added to require the provision of data, when requested by the Director, during emergency events, where in the past it has been difficult to obtain this monitoring data (mainly ambient).

### 16. What is the justification for inclusion of release reporting in monthly air reports?

As stated in the interpretation section of the Reporting Chapter: the term “release” in the Reporting Chapter shall be interpreted as meaning an air release or a release affecting the air, unless otherwise specified. A “release” would include, but is not limited to, releases to the atmosphere and any uncontrolled, unauthorized or accidental releases that affect the air.

## Feedback on Monthly and Annual Reports

### 17. Throughout Section 5.0 (and 6.0) requirements appear to be mandatory regardless of what approval conditions. The inconsistent language could lead the reader to believe some requirements are musts and some are only required if the approval requires them.

This difference in requirements is intended. The EPEA approval sets out what monitoring is required and sets out some (but not necessarily all) the reporting that is required. The Air Monitoring Directive Reporting Chapter sets out the minimum reporting requirements to ensure that consistent reporting is carried out and that the department obtains a baseline of information needed for compliance purposes, reporting against standards, supporting policy development and management decisions and reporting to the public.

If a particular type of activity or monitoring is not required by your approval (such as CEMS), then you are not required to report the summary information outlined by the AMD (e.g., AMD CEMS Summary Form).

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 to the Regulator;
- standardize the types, content and format of air and emissions data, reports and summarized information;
- 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; and
- provide guidance on the reporting of air and emissions data, reports and summarized information.

The AMD sets out minimum reporting requirements for all approval holders to ensure consistent reporting of some elements. Certain clauses specify that a requirement is based on approval conditions (that is only required if the approval requires it). There are some new requirements in Chapter 9 that are for everyone (i.e., not based on approval conditions).

**18. The proposed requirement is to provide ambient air station data and a summary of ambient air monitoring station audit findings and responses that affect data validity. For industries that rely on airsheds to provide this type of reporting, this requirement represents a duplication of effort.**

If airsheds are conducting ambient monitoring on behalf of industry, then the airshed would be reporting on this, not industry.

**19. Is the ambient monitoring station audit finding and response reporting requirement applicable to only AEMERA audits? If the industrial facility operator chooses to conduct ambient air monitoring station audits are these audits subject to this reporting requirement?**

This requirement would apply to any audit findings that affect data validity. So those audit findings that require some corrective action.

**20. Please clarify whether a monthly audit of ambient monitoring sites is required. If not, then recommend adding 'if applicable' to the end of RC 5-1(b).**

The Reporting Chapter deals with reporting, not the requirement to carry out audits. If there was no audit carried out, then there will be no "audit findings and responses that affected data validity" and the summary of the audit findings and responses would not be required. This clause requires that the results of any audits carried out are reported, if the results would affect data validity.

**21. Many approvals only have emissions limits that are challenged via annual stack surveys. Therefore a monthly discussion or comparison of operations to limits is not realistic.**

You would only report against emissions limits if there are emissions limits in your approval, and you had something to report that month. If you only compare to emissions limits when a stack survey is conducted, then you would include those comparisons in the corresponding monthly report(s).

**22. Including reference numbers in monthly reports should be sufficient when there is an exceedance on an emission limit.**

It is already common practice to include comparisons to applicable EPEA approval emission limits in monthly/annual reports. Including just a reference number would not directly provide the Regulator with the required discussion, or the total number of exceedances of each specific emission limit.

**23. The flow diagrams in the monthly and annual report sections are misleading, as they suggests many of the items are required even if not required by the approval.**

The flow charts are just guidance and clearly state that: "This diagram is guidance only and does not necessarily cover every possible category of information that may need to be included in a monthly or quarterly report, which is set out by the AMD Reporting Chapter, the approval and any applicable written notices from the Director..."

The AMD sets out minimum reporting requirements for all approval holders to ensure consistent reporting of some elements. Only specific clauses specify that a requirement is relevant only if required by approval conditions. You are correct in saying that some new requirements in Chapter 9 are minimum requirements for everyone (not based on approval conditions).

**24. For the reporting of unauthorized and accidental releases, releases are not defined. How does this relate to air?**

The interpretation section of the Reporting Chapter states that the term “release” in the Reporting Chapter shall be interpreted as meaning an air release or a release affecting the air, unless otherwise specified.

An EPEA approval sets out what sources are permitted to release to the atmosphere. Under the terms and conditions of the approval, any unauthorized or uncontrolled release (when required to be controlled, factoring in other approval conditions) is an approval contravention. In addition to being immediately reported, identification of such releases should already be being included in monthly/annual reports. The number of release issues that occurred during the year is important information related to the operation and performance of the industrial facility.

A clarifying note has been included in Chapter 9 indicating that accidental releases would not include routine fugitive or open source releases (such as, but not limited to, fugitive emissions from tailings ponds or dust from on-site roads), but would include releases from spills, leaks or other on-site accidents.

**25. The requirement to have a title page creates unnecessary administrative burden.**

A title page is a standard element of any report and it has been determined that air monitoring reports need to include a title page. Most monthly/annual reports being submitted already include a title page. This requirement ensures consistency of reports for identification and records purposes.

**26. A wind rose should only be required if meteorological data is monitored at the compliance station in question. Including a wind rose for the closest representative station is unnecessary effort.**

Wind roses are required to provide a general idea of what the prevailing winds are for the site for that month/year. If winds are not monitored at the station, the next closest station provides a best-estimate of winds. 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.

**27. CEMS data summarization and CEMS zero and span reporting appears to be a requirement for all monthly/quarterly reports whereas it should only be a requirement if an approval requires monthly CEMS reporting (not all approvals require monthly CEMS reporting even though the facility has a CEMS).**

CEMS data summarization and CEMS zero and span reporting are being required for all approval required CEMS monitoring. Submission of CEMS zero and span should already be being done if you are following the intent/principles of the CEMS Code.

**28. Information on source monitoring is already included in the source forms. Inclusion of this information in the body of the report will result in a format that is lengthy and wordy.**

It is already common practice to include summary information on source testing in monthly/annual reports. This is now being formalized in the Reporting Chapter. Only a couple of sentences are required to identify in the report the source sampling carried out and provided any commentary. The Excel summary forms are meant to capture data that can be imported into a database. An example is provided as guidance in Chapter 9:

"For RC 5-V (d), 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."

**29. Please indicate whether reporting of flaring information is a requirement only if it is an approval requirement to summarize flaring activity. Many flares may not have the necessary instrumentation or monitors to provide the requested data, especially in cases where this is not an approval requirement. There are significant costs and time constraints for industry to modify these monitoring systems (intrinsically safe installations, plant outage requirements, etc.).**

This section applies to all flaring, not just specific reporting of flaring required under an approval. Monitors are not required if not already installed, as estimated emissions can be reported.

**30. Further clarity is requested as to where the reporting requirements detailed in draft 2 of Chapter 9 differ from those under a facility's approval. In particular, the "AMD Sulphur Recovery and Removal Form" for facilities where the approval does not stipulate reporting of this activity.**

The AMD Sulphur Recovery and Removal Form applies to any industrial operation that is required by an approval to recover or remove sulphur. This minimum reporting requirement is meant to fill an information gap.

**31. It is not clear what is meant by "emissions data". Is CEMS data considered "emissions data"? The requirement to use the AMD Emissions Summary Form in addition to the CEMS Summary Form is excessive since both forms require the same information.**

The AMD Emissions Summary Form is to be filled out according to the monthly emissions reporting required under your approval. This may need to include totals from CEMS, if you are required to report monthly pollutant totals. There is likely only one field (mass emissions for month) that may be duplicative of the AMD CEMS Summary Form.

**32. The Approvals Contravention Form should be aligned with the AER format or vice versa.**

The Approval Contravention Form is based around the types of contravention summary tables currently submitted as part of monthly/annual reports. It does contain more fields than are currently submitted, but the fields represent the minimum information that should be summarized as part of monthly/annual reports and are broken down to allow for storage in the Regulator database. Contraventions should not be occurring every month, therefore this form will not need to be submitted very often and would usually only contain a small number of contraventions.



A representative of the AER was present at the AMD Reporting Forms Task Team meetings in June and the AER has been involved in the review of the AMD Reporting Chapter. The AER has directives and regulations that may require additional/different contravention reporting, either with or separate from EPEA approval monthly/annual reports.

**33. The majority of the information requested in the Approvals Contravention Form should be available to AEP through the 7-day letters. AEP should reply on their own database rather than requiring industry to submit the same information in two different places.**

The information gathered when contraventions are called in (through ERC) and the pdf 7-day letters do not supply data in electronic format that can be tied with other reporting summary information being collected under the AMD. The Regulator requires the one set of immediate reporting for compliance purposes and immediate response to incidents. The forms in Chapter 9 of the AMD are reporting required by monthly and annual reports – this information is already being provided in monthly/annual reports. These forms are just extensions of the monthly and annual reports, providing data in electronic format instead of pdf. 7-day letters hold the industrial operation accountable for outlining their follow up and corrective actions after a contravention, whereas the summary form provides a record of past contraventions that can be queried using a database. AEP does not intend to merge incident reporting with routine monthly/annual reporting. Incident reporting covers all media, not just air. Industrial operations should not be required to complete and submit the contravention form each month – only when contraventions occur, which hopefully will be minimal.

**34. There appears to be a requirement for ALL monthly/quarterly reports on include information on issues with pollution control equipment, whereas it should only be a requirement if an approval requires this monthly discussion.**

It is already common practice to include information on pollution controls in monthly/annual reports. This is now being formalized in the Reporting Chapter. If the approval requires the use of the pollution control technology, the AMD is requiring the reporting of the performance of these technologies.

**35. It is unclear what value reporting on maintenance of equipment brings to the monthly report. Maintenance programs are typically outside of approval-related items and up to the approval holder to ensure due diligence. Unless AEP intends to regulate equipment maintenance, this requirement should be removed.**

The clause has been reworded to just require a discussion of any significant maintenance activities on approval required pollution control equipment that occurred during the month. This is important contextual information that relates to the release and monitoring information for the facility, and this type of information is already typically included in monthly reports.

**36. The requirement for spatial plots and data distributions are excessively burdensome for the minimal value that they add. As AEP will have all of the data they need in a digital extractable format, AEP should create these plots on an as-needed basis, rather than placing the burden on industry to create plots for each and every facility.**

Monthly/annual reports provide a summary and overview of the monitoring carried out during the month/year. Summarization of ambient data (e.g., data distribution) is a current requirement for monthly/annual reports that was taken from the 1989 AMD.

**37. Exceedances of AAAQOs are required to be immediately reported and also result in the submission of a 7-day letter, therefore they should not need to be identified in monthly/annual reports.**

It is already common practice to include information on exceedances of AAAQOs in monthly/annual reports. This is important contextual information related to the monitoring conducted at the facility. This requirement is now being formalized in the Reporting Chapter.

**38. Contravention information is available in the ERC database. If AEP wants to compare number of contraventions over a 5 year period, then they should look rely on their own database.**

Annual reports are intended to highlight performance and ongoing issues at the industrial operation, and provides an opportunity to provide context and summarization of past events. This requires summarization of industry performance over the year. Existing electronic reporting systems are intended for different reporting purposes (submission of hourly monitoring data, incident reporting, compliance purposes). Summarization of performance and monitoring results is a requirement of the industrial operation. A summary of contraventions over time demonstrates to the Regulator how an industrial operation's performance varies over time and is used in approval renewals and policy development. AEP does not intend to modify incident tracking systems in order to meet industry reporting requirements for the AMD. Contraventions reporting is limited if the number of contraventions are kept minimal.

**39. There should be a materiality threshold below which an error/issue would not require reissuing the current report.**

A materiality threshold cannot be provided. Any discovered error or issue requires corrective action. Due diligence must be exercised.

## **Feedback on Source Reports**

**40. The requirement to notify the Director a minimum of 14 days prior to a Stack Survey or RATA is an accepted, albeit burdensome, practice. Often times, exact dates for surveys are not known and can move a day or two within a given week, or get moved by more than 7 days. It is challenging to continue to have to meet the 14 day advance notification requirement given these scheduling difficulties.**

The timeline for notification of source testing is set out in the individual approvals and is included just as guidance in the Reporting Chapter.

**41. For clause RC 9-E, does “as found or unadjusted” findings refer to the plant CEMS data? Plant CEMS data does not need to be reported for Manual Stack Surveys, unless that data has been generated as part of a RATA. Promulgated instrument method stack test data is adjusted based on the requirements of US EPA Method 7E, which includes 3-point calibrations, system bias tests, drift tests, and the calculation of correction factors which are then applied to the raw data. The promulgated instrument method stack test data is not considered as found or unadjusted; therefore it can't meet this statement. This requirement should be modified to clarify the intent.**

This clause has been removed.

**42. For RATA Reports, what is required? 48 hours of data before and after the audit, or 12 hours of data before and after the audit? Please clarify.**

Clause reworded to 12 hours and guidance note removed.

## Feedback on Emissions Inventory Requirements

### **43. A minimum of 2 years should be provided to get ready for the emissions inventory reporting requirements, and this 2 years should be after the guidance document and form are released.**

The effective date for the emissions inventory reporting requirements has been pushed back to 2019, and cannot be pushed back any further without needing to collect emissions data in the interim. Environment and Parks is still relying on 2008 emissions data that was collected through a mandatory air emissions survey. An additional air emissions survey was planned for 2014, but was not carried out as the revised Reporting Chapter requires the submission of the same information. An additional one-off data collection would likely end up costing both industry and Environment and Parks more than just proceeding with the modernized emissions inventory reporting requirements contained in the Reporting Chapter.

The main requirements of AMD emissions inventory reporting are stated in the AMD Reporting Chapter. The Annual Emissions Inventory Report Form simply provides the exact format and fields for reporting and industry will have the opportunity to review the form before it is finalized. The Annual Emissions Inventory Report Standard and Guidance Document will provide guidance and clarification to help with preparing the inventory and filling in the reporting form. Industry will have the opportunity to review the Guidance Document before it is finalized. As previously stated:

- No additional substances are anticipated to be added via the Annual Emissions Inventory Report Standard and Guidance Document for at least the first few years.
- Only one estimation methodology is anticipated as being specified in the Annual Emissions Inventory Report Standard and Guidance Document (use of CEMS for equivalent boilers at select SAGD operations, for consistency with current policy) for at least the first few years.

### **44. The use of spreadsheets to collect this type and volume of emissions data is concerning. As the spreadsheets will be protected, any changes to the format of the spreadsheet from year to year will require re-entering all of the static facility and stack data into the new spreadsheet or copying it from the previous year cell-by-cell. This is the current situation with SGER and it presents a constant challenge. An on-line database application with a prefill function and bulk upload data capacity is desirable.**

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. At some point down the road, it may be necessary to overhaul and replace the existing form, which may require re-entering of data. At that point, AEP would consider developing an import tool to help transfer data between the old form and the new form.

While a more robust online reporting system would perhaps be ideal, it is beyond the scope of the updates to the Air Monitoring Directive and likely a longer-term future solution. Spreadsheets are a low cost, practical, solution that is achievable within the available timeframe, and provides an opportunity to test the new reporting requirements before moving to a longer-term reporting solution.

**45. The revised AMD requires that emissions be reported at the source level. Currently for NPRI, facilities are able to meter the total fuel to multiple combustion sources and determine the total emission from the combined sources. To comply with the new AMD, do facilities need to add meters? Adding meters on each line will be a substantial cost to industry and will require time to budget and install with field operations.**

Adding meters to all individual sources will not be required. There are several acceptable methods of allocating activity data for a group of sources to the individual associated sources. Guidance will be provided in the Annual Emissions Inventory Report Standard and Guidance Document and is already available as part of emissions inventory reporting programs in other jurisdictions.

**46. Will the AMD emissions inventory methodologies in the guidance document align with NPRI methodologies?**

The Annual Emissions Inventory Report Standard and Guidance Document will mainly provide guidance on what methodologies should be used. At this time, 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).

**47. Will the guidance document allow the industrial operator to select the methodologies applicable to the facility's unique characteristics?**

Yes, with the exception of the prescribed surrogate CEMS method and the use of CEMS/stack sampling monitored emissions data, an industrial operator can select the method they feel is most appropriate for their facility's unique characteristics.

**48. The requirement for methodology changes to be approved in writing by the Director will add administrative tasks to both industry and government. In order to calculate the most reasonable emissions estimates year over year, methods must be adjusted depending on available information and conditions.**

Specific criteria for changing methodologies will be outlined in the Annual Emissions Inventory Report Standard and Guidance Document. It is unlikely that any request to change a methodology that meets these criteria would be rejected. Criteria will likely include: (a) the previous method is no longer acceptable to use because of process/equipment/fuel changes at the source; (b) source monitoring information (CEMS, stack sampling) is now available in place of the previously estimated emissions; etc. All approved changes in estimation methods will also be documented in the Quantification Methodology Document. Limiting methodology changes from year to year ensures more consistent emissions data. Changes to methodology need to be rationalized.

**49. Development of a Quantification Methodology Document is a significant undertaking given the amount of information required by Section 7. Many facilities have developed internal procedures and documents that guide the annual data collection process, but that documentation may not be as comprehensive as is required herein, and it may involve many individual documents that make up the entire system.**

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, to ensure that consistent methodologies are used for future reporting years, and for supporting personnel change.

**50. Is it true that if the approval holder does not meet any of the thresholds identified in Table 1, then no annual emissions inventory report is required even if the facility has emissions of chemicals listed in the other schedule of the Appendices? Then, if the thresholds are met, is it true that a report is required not only on those substances listed in Table 1, but ALL the other substances listed in Appendix C, of which there are no threshold amounts listed? This seems highly onerous.**

Table 1 sets out the reporting thresholds. If a facility does not meet any of these reporting thresholds, then submission of an Annual Emissions Inventory Report Form is not required. Reporting is not necessarily required for every Schedule 2 substance (Appendix C), only the substances applicable to the industrial operation, as explained in Section 7 of the AMD Reporting Chapter.

**51. It is still unclear what substances are required for emissions inventory reporting as Chapter 9 refers to AEIRSG document, NPRI, Appendix B Schedule 1, and Appendix C Schedule 2. Not all of these are referenced in the regulatory compliance notes and there are redundancies in this. It is recommended that a single list be created, similar to that for NPRI, to improve clarity and make compliance with Section 7 less dependant on interpretation.**

Schedule 1 and Schedule 2 provide the list of reportable substances. No additional substances are anticipated to be added via the Annual Emissions Inventory Report Standard and Guidance Document for at least the first few years. Schedule 2 substances have an additional condition of whether or not they are "applicable" to the specific industrial operation. This is why these substances are presented in a separate list from Schedule 1. Section 7 provides guidance on how to determine which substances are particular to an industrial operation. With the wide variety of facilities and processes, it is not possible to provide a one-size-fits-all list of substances for the emissions inventory. Additional guidance may be provided in the Annual Emissions Inventory Report Standard and Guidance Document.

**52. In Section 7.2.1, reference is made to "amounts that can be quantified with reasonable effort". Who decides what is reasonable? Do these requirements force the installation of additional meters or measurement equipment?**

Generally speaking, "reasonable effort" is that which a reasonable person would do to meet the requirement. This differs from "best effort", which would require doing almost anything if something is remotely possible. For example, 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.

Adding meters to all individual sources is not required. However, reasonable effort would require the use of other estimation methods (e.g., emission factors, engineering judgments, source allocation, information from equipment manufacturer, etc.) to quantify the approximate emissions for substances that the facility is actually emitting (based on criteria such as approval conditions, previous NPRI reporting, other quantification carried out by the facility, etc.).

As the emissions inventory requirements apply to EPEA approved industrial facilities, facilities should know what substances they typically emit to the atmosphere, and also which typically must be tracked and/or reported according to their approval, the NPRI or other reporting programs.

**53. Do road dust and space heating emissions need to be quantified? Space heating emissions are rarely quantified and road dust is not calculated for NPRI unless the on-site distance travelled on unpaved roads is greater than 10,000 km in the calendar year. Will the expectation be the same for Chapter 9?**

Depending on the type of the operation, these sources could be large enough to warrant quantification. 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.

**54. Since the reporting thresholds in Table 1 are the same as the NPRI reporting thresholds, there should be a specification for TPM, PM10 and PM2.5 that these substances refer to filterable particulate matter to be consistent with NPRI reporting.**

This will be clarified in the Annual Emissions Inventory Report Standard and Guidance Document, likely as filterable particulate matter for consistency with the NPRI. However, the US EPA and many US state agencies have added condensable PM for PM2.5 emissions reporting and the NPRI has also been considering adding this as well. The AMD emissions inventory requirements may also add condensable PM at some point in the future.

**55. What is the difference between annual “actual” emissions and “normal” 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". 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. These two types of emissions reporting are required for modeling. 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. Normal emissions are better to use in modeling to represent what is normally emitted (i.e., not for one particular year) and can be used to maintain or predict future emission levels in modelling. 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 of their operating conditions.

**56. The emissions inventory should focus on reporting actual emissions only. From an industrial operating and reporting perspective, trying to assess ‘normal’ and ‘maximum’ emissions doesn’t add value in the context of routine reporting. Rather, this type of information is appropriate for approval applications and renewals, where operating rates, design, and emissions modeling are considered. In cases where an emissions limit is defined in an approval, what other maximum emissions rate would make sense for an industrial facility to report?**

It is anticipated that normal and maximum emission rates will not need to be changed every year, facilities are only required to update these when the normal and maximum rates they previously reported are no longer representative of their 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 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 a 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 defined in the AMD as "the rate at which a substance is emitted to the atmosphere from a source under normal operating conditions". One of the criticism 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. Normal emission rates are meant to be representative of what is normally emitted from sources at a facility.

**57. It is recommended that the requirement for normal and maximum emissions be deleted. Typically these emissions will be calculated based on estimates of feed compositions or process knowledge and typically these substances will not have specific site emission limits. Providing normal and maximum emission rates would suggest a degree of knowledge that is not typically available for these substances.**

Although not necessarily common to all sectors, there are emission limits on several Schedule 2 substances. There are many sources and pollutants that can have higher uncertainty on quantities being released, whether they be annual actual, normal or maximum rates. Higher uncertainty does not mean they should be excluded from an emissions inventory. The users of the inventory information must be aware of these higher uncertainties, but all relevant sources and emissions must still be accounted for. 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 emission rates are meant to be representative of what is normally emitted from sources at a facility and a representative normal rate should be reported for the specific source at the facility. For modeling and preparing emissions forecasts, AEP currently has to estimate normal and maximum emissions. The facility is better equipped to estimate these emissions than AEP is. It is anticipated that normal and maximum emission rates will not need to be changed every year, facilities are only required to update these when the normal and maximum rates they previously reported are no longer representative.

**58. The AMD emissions inventory requirements ask for a "description of all air emission release points at the industrial operation;". Clarification should be provided around what is considered a release point.**

The term "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". Sources releasing to the atmosphere that cannot be traced back to a single point would fall under the definition of an "air emission non-point source".

**59. RC 7-L (a) "(i) identification and (ii) description of all air emission release points at the industrial operation", the use of the word "all" is expansive. For example, an approval acknowledges that there are a number of emission points described in the application, including things like building ventilation vents, maintenance exhausts, etc. As written, the annual reporting of the emissions inventory is an enormous undertaking if industry is mandated to include all 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. The groups of small point sources that are mentioned could potentially be grouped and categorized as non-point sources. They are likely too small and numerous to practically be inventoried as individual point sources. The approval categories of groups of small point sources would likely be a good way of categorizing these as non-point sources.

**60. Requirements RC 7-L (d) and RC 7-N (d) which require the identification and description of all processes, units, and equipment at the industrial operation which emit to the atmosphere using the air emission release points is excessive and it is suggested that it be removed.**

The processes, units and equipment emitting via a release point is critical information for a source-level emissions inventory. Facilities are required to report descriptive information about these processes, units and equipment, but will not have to report emissions prior to release to the atmosphere (reporting emissions values will only be required for the release points themselves).

Example: Two boilers emit to the atmosphere using a single stack. Air emissions must be reported for the stack, but only descriptive information is required for the two boilers (such as: manufacturer, model number, fuel type, design capacity, year of manufacture, year of installation, power rating, load rating, hours of operation, etc.).

Most of this descriptive information will not change from one year to the next, and the same reporting form can be used from one year to the next. An industrial operator can use the previous year's reporting form and simply update any information that has changed (and report the additional information required for the specific calendar year).

**61. In RC 7-P (a), the proposed requirement would have facilities provide an identification and description of any emissions changes from the previous year greater than 10%. The estimation process is such that for most of the Schedule 2 substances, the explanation will be simply that the process throughput for the unit changed. For this reason, it is recommended that this information only be required for Schedule 1 substances.**

A change in process throughput would be an acceptable explanation for changes in emissions for sources whose emissions are calculated that way. As with any source, if the activity associated with the release changes there will likely be some change in the associated air pollutants being released. The purpose of this requirement is to provide rationale for any major changes in emissions so that the Regulator can understand whether the changes were, for example, a result of changes in feed composition/operating conditions, changes in estimation methodology, or a plant upset.

**62. In addition to other formats, please consider allowing the building and boundary location information to be provided in an AutoCAD or GIS format.**

Requiring GIS or AutoCAD formats could be problematic, as not all industrial operators will necessarily have the required licensed programs. Also, standardizing things like projections, field naming and ordering, and metadata would be required. Without such standardization the submitted files would be difficult to use and to combine together. Requiring simplified lat/long or UTM locations will allow for the generation of standardized shape files and are also better suited for use in an inventory geodatabase. AEP will consider whether to allow other location file types and this will be clarified in the Annual Emissions Inventory Report Standard and Guidance Document.



## Feedback and Responses for Air Monitoring Directive Chapter 9 Reporting (Draft 2)

The following table provides the feedback that was received during the 30-day public review (September - October 2015) 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 16, 2015 version of Chapter 9 and may differ from the final version of the Chapter. Comments are arranged by section and general feedback can be found at the end of the document.

Section	Clause	Comment	Response	Action Taken
<b>Industrial General Reporting Requirements</b>				
2	RC 2-M	Item RC 2-M refers to requiring data in a digital, extractable format. Please clarify if .csv and .xls are considered digital extractable formats.	This refers to data that is in an extractable format (i.e., not pdf or paper). Yes, .xls and .csv are examples of digital, extractable data formats.	No change made.
2.3	RC 2-1 (b)	Wondering why there is reference to static sampling when this is being eliminated, static sampling is also mentioned in RC 3-D (c), RC 6-J (c) (iii), RC 9-S (b), RC 9-TT (b).	Until such time as static sampling has ceased, it must be submitted to the Regulator.	No change made.
2.4	RC 2-M	It can be assumed that .xls or .csv files are recommended but we need to be more specific currently only submit in .pdf and then the prescribed forms if this needs to change then we need more detailed information, it is odd to provide information in this format.	Ch 9 provides electronic forms for most data and information so that this data can be saved in a database and used for querying and easy storage and access. RC 2-M is a requirement for any other data that may need to be submitted (under approval conditions), but that is not covered by the AMD forms in Chapter 9. The Regulator also requires this data in a usable, non-pdf format. Note this is for the submission of data, not reports.	No change made.
<b>Industrial Data Submission</b>				
3	3	How are we supposed to report results duplicate/replicate passives? Average or maximum? Reporters are likely doing differently and there should be mandated consistency.	All passive data results need to be reported, that is all replicates need to be reported to the Regulator. Averages are not original data, but part of data analysis. When producing a spatial plot of passive data, then an average could be used to represent replicates (since two data points can not be represented spatially for the same location), but when reporting data results, all results need to be included.	Guidance added below RC 3-D, RC 6-N, 13-D and 16-O.
3	3	It is confusing to differentiate what applies to ambient air monitoring as a whole and what only applies to continuous ambient air monitoring. I think it may warrant some revision of wording to make it clear what portions are applicable to continuous ambient monitoring and what are applicable to passive/static monitoring only.	AEP re-examined the ambient clauses. The wording in the clauses is specifically either "all ambient air monitoring data" or "continuous ambient air monitoring data". Most clauses in section 3 apply to all ambient air monitoring data.	No change made.
3	3.2	The 2006 AMD has a clause requiring electronic reporting of CEMS data as of 2007, but this is missing in the 2015 AMD Reporting Chapter.	Clauses covering electronic reporting of CEMS data have been added to the AMD Reporting Chapter.	Clauses covering electronic reporting of CEMS data have been added to the AMD Reporting Chapter.
3.2	3.2	The opening paragraph states: 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.  This is different than the standard-template approval requirement that states: If the approval holder monitors for any substances or parameters which are the subject of operational limits as set out in this approval more frequently than is required and uses procedures authorized in this approval, then the approval holder shall provide the results of such monitoring as an addendum to the reports required by this approval.  Recommendation: Modify the AMD language to align with the standard-clause language of the approval. Specifically, remove the reference to "approval conditions" as it should only be those parameters that have "limits".	Agreed. Will modify wording.	Revised wording to:  The exception to not having to submit special air studies is, in accordance with approval requirements, "If the approval holder monitors for any substances or parameters which are the subject of operational limits as set out in this approval more frequently than is required and using procedures authorized in this approval, then the approval holder shall provide the results of such monitoring as an addendum to the reports required by this approval."

Section	Clause	Comment	Response	Action Taken
3.2	3.2	Section 3.2 - The statement on page 25 implies that results must be submitted if the source testing was on a parameter or pollutant having 'approval conditions' or limits. We suggest that the reference to 'approval conditions' be removed to align with the standard approval clause that refers only to 'limits'.	Agreed. Will modify wording.	Revised wording to:  The exception to not having to submit special air studies is, in accordance with approval requirements, "If the approval holder monitors for any substances or parameters which are the subject of operational limits as set out in this approval more frequently than is required and using procedures authorized in this approval, then the approval holder shall provide the results of such monitoring as an addendum to the reports required by this approval."
3.2	3.2	In Section 3.2, AEP indicates that due diligence source testing results need to be submitted if they are performed on a parameter or pollutant having "approval conditions or limits". We would suggest that AEP change the wording to "approval limits" to align with the standard wording in approval requirements. Similarly, we suggest that the term due diligence be changed or defined.	Agreed. Will modify wording.	Revised wording to:  The exception to not having to submit special air studies is, in accordance with approval requirements, "If the approval holder monitors for any substances or parameters which are the subject of operational limits as set out in this approval more frequently than is required and using procedures authorized in this approval, then the approval holder shall provide the results of such monitoring as an addendum to the reports required by this approval."
3.1.2	RC 3-E	<p>When using analyzer analog outputs that are going to a data logger – the voltage to engineering unit's conversion by the data logger has selectable SF's that have no relevance to what the face plate of the analyzer reads. The units and the # of decimals the face plate reads are adjustable. Also, given the analyzer specifications from the manual (see below), the AMD suggests use of the following:</p> <p>Lower detectable limit = 1.0 ppb (60 sec avg. time)  Precision = 1% of reading or 1 ppb (whichever is greater)  Linearity = ± 1% of full-scale ≤100 ppm ± 5% of full-scale &gt; 100 ppm</p> <p>This provides no certain guidance of what number of significant figures to use when looking at these specifications as a whole. Given that all analyzers have standardized minimum performance specifications from chapter 4 would it not make more sense to standardize reporting significant figures for each parameter monitored based on the analyzer full scale?</p>	<p>In the example given (looks to be from a Thermo D15 manual) the precision of this analyzer is at best 1.0ppb; this would result in data being rounded to the whole number. The number of significant figures recorded by the data system is user selectable and while the values on the analyzer display and DAS should match, the values recorded by the DAS are what ultimately matter as this is the data that is reported.</p> <p>Section 3 of Chapter 9 focuses on the reporting of data to the ambient data warehouse or in monthly/annual reports - it is not dictating the resolution of data collected or stored by the DAS. The idea here was to stress that even though an analyzer may send data to the DAS with many decimal places, it doesn't mean that the analyzer is actual capable of reporting to that precision level.</p> <p>AEP/AEMERA will not be prescribing significant figures for the major parameters because, although Chapter 4 of the AMD mandates minimum performance specifications for continuous analyzers, this is only a minimum standard. Analyzers in use may have greater precision and accuracy as there is a difference between different brands and generations of continuous analyzers. It is up to the data provider to determine what precision the analyzer is capable of reporting and what significant figures can confidently be reported to the data warehouse and in monthly/annual reports.</p>	No change made.

Section	Clause	Comment	Response	Action Taken
3.1.3	RC 3-J	Does this now imply that ALL monitors are to sample and report to actual conditions instead of standard temperature and pressure?	<p>The Reporting Chapter does not specify monitoring to standard or actual conditions. Rather this was to specify how to report concentrations. Yes this is requiring that all ambient concentrations be reported to actual, ambient temperature and pressure to allow for comparability across monitoring methods, as well as for comparison to AAAQOs. If an analyzer is sampling at standard temperature and pressure, conversion would be required prior to reporting to the Ambient Air Quality Data Warehouse or in monthly or annual reports.</p> <p>It should be noted that calibration gas and dilution flows are required to be corrected to standard conditions (AMD Chapter 7).</p>	Changed clauses RC 3-J and RC 13-J to state "all ambient air concentrations", not just continuous. Added "unless otherwise authorized by the Director".
3.1, 5.2, 6.2	3.1, 5.2, 6.2	This statement is not very clear, what type of special tests are you referring to, this seems to contradict the former statement.	This is guidance clarifying that there is an exception to RA 3-A. Monitoring data collected by the person responsible for its own internal use do not need to be submitted to the Director, except when otherwise required by an approval (other source tests for pollutants with limits).	No change made.
3.2, 5.2, 6.2	3.2, 5.2, 6.2	This seems to contradict the proceeding statement, need some clarity to be provided.	This is guidance clarifying that there is an exception to RA 3-A. Monitoring data collected by the person responsible for its own internal use do not need to be submitted to the Director, except when otherwise required by an approval (other source tests for pollutants with limits).	No change made.
3.2.1	3.2.1	Section 3.2.1 refers to the 1998 version of the CEMS Code. Considering that AEP will be updating the CEMS Code soon, we encourage any reference to older versions of the CEMS Code be removed to reduce confusion going forward.	The 1998 CEMS Code is current policy and this section of the Reporting Chapter specifically refers to the 1998 version, as the CEMS Code has a section (6.2) that applies until the AMD is updated. As the AMD is now being updated that section of the 1998 CEMS Code will no longer apply.	No change made.
3.2.2	RC 3-S	Can you define "analyzer actual measurement capability"?	The measurement capability of a specific analyzer refers to how many significant figures an analyzer can confidently report, based on the precision and accuracy of the analyzer (manufacturer's specifications and how the analyzer is set up to operate). Analyzers may supply more decimal places than the analyzer may actual be capable of reporting (based on the analyzer's precision). The person responsible must use best judgement in determining how many significant figures to carry when reporting data from a continuous ambient analyzer.	No change made.
3	RC 3-E	Statement (a) is acceptable and makes sense, the exception in b does not make sense, it contradicts (a).	The exception only applies when monitoring data is compared to AAAQOs and this comparison is reported in monthly/annual reports. For reporting to the Data Warehouse, you would report the number of sig figs that each analyzer is able to provide, based on the analyzer's actual measurement capability/resolution. Since (b) provides the requirements for comparing to AAAQOs, the exception in (a) will be removed.	Removed "except when comparing to AAAQOs" from RC 3-E(a) and RC 13-E(a).
3	RC 3-F	This a very confusing explanation on rounding. It also implies the precision of the analyzer should be ignored for this process, and does not align with the specifications in chapter 4.	<p>Agree. This clause is trying to prescribe a consistent way of comparing monitoring values to AAAQOs for determining whether or not there has been an exceedance. Ideally, analyzers would provide enough precision to be able to compare to the AAAQOs with one extra decimal place, however we understand that this is not always the case.</p> <p>The specifications in Chapter 4 are minimum requirements. Chapter 4 specifies the minimum specs for operation of analyzers, while Chapter 9 is prescribing the number of significant figures for reporting (they are not one and the same) - more decimal places may be available from the analyzer than would actually be reported. It is up to the data provider to determine what precision the analyzer is capable of reporting and what significant figures can confidently be reported to the data warehouse and in monthly/annual reports.</p> <p>The rationale for carrying an additional decimal place when comparing to AAAQOs is that any amount greater than the AAAQO is an exceedance (so 10.1 is greater than 10 and therefore is an exceedance of 10).</p> <p>Clauses 13-E and 13-F will be amended accordingly.</p>	RC 3-F and RC 13-F have been re-worded to provide more clarity and guidance was added below.

Section	Clause	Comment	Response	Action Taken
<b>Industrial Exceedance and Performance Reporting</b>				
4	4	<p>What is the intent of section 4?</p> <p>It is all over the place talking about releases to water courses and then appears to be referencing only ambient monitoring but then it talks about monitoring in the case of an emergency situation.</p> <p>The AMD is fairly organized and easy to read but this section is all over the place.</p> <p>I would highly recommend this be rewritten to enhance clarity.</p>	<p>Section 4 used to have more clauses in it but these were duplicating the requirements found in the Release Reporting Reg. We have changed the requirements to guidance so that it still provides context on what needs to be reporting immediately, according to the rag, but this section only has requirements for reporting of AAAQO exceedances (which we would like to be consistent carried out) and the reporting of any significant equipment or ambient monitoring disruption. A clause was also added to require the provision of data, when requested by the Director, during emergency events, where in the past it has been difficult to obtain monitoring data (mainly ambient).</p>	No change made.
4	4	<p>Perhaps a statement could be added to the beginning of section 4, stating that the section only applies to Ambient Air monitoring.</p>	<p>The clauses in Section 4 are very specific about what they cover (e.g., reporting of AAAQO exceedances, monitoring equipment issues, providing monitoring data during an emergency). The guidance at the beginning of Section 4 references all EPEA and Release Reporting Regulation immediate reporting.</p>	No change made.
4	4	<p>Direction is provided that states: The release of substances must be immediately reported when:</p> <ul style="list-style-type: none"> <li>• the release has caused, is causing or may cause an adverse effect;</li> <li>• the amount exceeds the quantities or emission levels set out in the approval for the substance;</li> <li>• the release is into a watercourse or into the groundwater or surface water in any quantity; or</li> <li>• the release falls under the Transportation of Dangerous Goods Regulation Table 1 under the Transportation of Dangerous Goods Act, 1992 (Canada).</li> </ul> <p>For the last bullet, per the Regulation, immediate reporting is only required if the release falls within the limits of Table 1 AND has caused, is causing or may cause an adverse effect. Table 1 is meant to be a guide in terms of reportable quantities.</p> <p>Recommendation: Update language to align with the language of the Regulation.</p>	<p>Will re-write section 4 to refer to Reg only, not repeat Reg text.</p>	<p>Removed text that duplicated the Regulation (bullets outlining when releases must be immediately reported).</p>
4	4	<p>Section 4.0 -Is it necessary to duplicate the release reporting requirements in the AMD? It seems to be unnecessary duplication and introduces potential wording conflicts. Instead, we agree that providing clarification on some specific requirements is helpful. For example, clearly defining that ambient air concentrations over the AAAQOs are reportable (RC 4-A) is a good build and appropriate for the AMD.</p>	<p>Will re-write section 4 to refer to Reg only, not repeat Reg text.</p>	<p>Removed text that duplicated the Regulation (bullets outlining when releases must be immediately reported).</p>
4	4	<p>This section is very confusing and the intention is lost. Needs context and intent.</p> <p>Recommendation: spend some time rewriting this and having someone less familiar with the intent read it.</p>	<p>Will re-write section 4 to refer to Reg only, not repeat Reg text.</p>	<p>Removed text that duplicated the Regulation (bullets outlining when releases must be immediately reported).</p>
4	4	<p>What is the purpose of including this information? What is the justification for inclusion of release reporting in monthly air reports?</p>	<p>Will re-write section 4 to refer to Reg only, not repeat Reg text.</p> <p>As stated in the interpretation section of the Reporting Chapter: the term "release" in the Reporting Chapter shall be interpreted as meaning an air release or a release affecting the air, unless otherwise specified. A "Release" would include, but is not limited to, releases to the atmosphere and any uncontrolled, unauthorized or accidental releases that affect the air.</p>	<p>Removed text that duplicated the Regulation (bullets outlining when releases must be immediately reported).</p>
4	4	<p>The bullet points in the third paragraph of Section 4.0 are confusing. Although they are verbatim from the Release Reporting Regulation and may have been added for clarity, referencing releases to watercourses and groundwater in the AMD is unnecessary as this directive only applies to air releases. We would suggest removing the last two bullet points and/or deleting this section all-together as the fourth paragraph sums up the requirements nicely and is much less confusing.</p>	<p>Will re-write section 4 to refer to Reg only, not repeat Reg text.</p> <p>As stated in the interpretation section of the Reporting Chapter: the term "release" in the Reporting Chapter shall be interpreted as meaning an air release or a release affecting the air, unless otherwise specified. A "Release" would include, but is not limited to, releases to the atmosphere and any uncontrolled, unauthorized or accidental releases that affect the air.</p>	<p>Removed text that duplicated the Regulation (bullets outlining when releases must be immediately reported).</p>
4	RC 4-B	<p>RC 4-B - 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. Adding a reference to Approval requirements would further improve the proposed wording of this clause.</p>	<p>RC 4-C requires that when there is downtime, that minimum specifications set out in the approval are followed for reporting of downtime incidents. Therefore, you would follow your approval requirements. The note below clause 4-C is applicable to ambient continuous monitoring only (Chapter 6).</p>	No change made.

Section	Clause	Comment	Response	Action Taken
4	4	Contraventions of the AMD must be immediately reported to the Director.	Will add guidance.	Added guidance: "In accordance with EPEA and the Substance Release Regulation, all contraventions of the Air Monitoring Directive must be immediately reported to the Director."

Industrial Monthly and Quarterly Reports				
5.1	5.1	In Section 5.1, AEP indicates that the first monthly report needs to be submitted by February 28, 2017. As Chapter 9 will likely not be released until early 2016, this only gives industry one year to comply with the new requirements. As the new requirements are extensive and will take time to get the systems and protocols in place internally, we urge AEP to change this date to February 2018.	The submission date for the first monthly report under Ch 9 will be pushed back to February 2019 to allow reporters two full years before reporting begins.	The effective date of the Reporting Chapter has been changed to January 2019.
5.1	RC 5-A	This does not align with the 2 year following release guideline.	The submission date for the first monthly report under Ch 9 will be pushed back to February 2019 to allow reporters two full years before reporting begins.	The effective date of the Reporting Chapter has been changed to January 2019.
5	5	Facilities that have an operating approval are required to report air emissions data using the AEP File Transfer Protocol (FTP). Some sections of AMD Chapter 9 require duplicate reporting of the information reported by FTP, for example: a. Reporting of CEMS analyzer availability, minimum and maximum readings, mass emissions, hours exceeding any limits, and missing data in the AMD CEMS Summary Form (RC 5-T); b. Reporting of daily totals (in the monthly tab) and monthly totals (in the annual tab) in the AMD Emissions Summary Form (RC 5-CC); and c. Reporting monthly pollutant totals in the AMD Emissions Summary Form (RC 5-DD(h)).	CEMS data is provided via FTP - other data are not. Section 5.0 of Ch 9 provides the requirements for monthly reports which are required by an approval. It sets the minimum standard for what must be included in a monthly report. Ch 9 has added electronic reporting forms in order to get summary information in an electronic format - so this is not raw, hourly data (as is sent via FTP), but summaries of data used for assessing compliance and tracking ongoing performance. The purpose of the forms was to take out elements that had been reported in a monthly pdf report and put them in an electronic format that would facilitate querying, analysis and tracking by the Regulator.	No change made.
5	RC 5-F	RC 5-GG is similar in nature to RC 5-F (e).  Recommendation: Delete or update language in RC 5-F (e).	The cover letter is like an executive summary of the report - it highlights any problems or issues encountered (not in detail, but briefly), then the report later on provides the details of the issue encountered. 5-F(e) asks for "identification" and 5-GG requires "descriptions".	No change made.
5	RC 5-F (b) (iii) and (iv) and 1	Why is release reporting relevant to an air report?	As stated in the interpretation section of the Reporting Chapter: the term "release" in the Reporting Chapter shall be interpreted as meaning an air release or a release affecting the air, unless otherwise specified. A "Release" would include, but is not limited to, releases to the atmosphere and any uncontrolled, unauthorized or accidental releases that affect the air.	No change made.
5	RC 5-F(d)	RC 5-F (d): the description included below the table indicates that source testing results performed by a standard or modified method are required to be submitted to the Director if a parameter being tested has approval limits. Would an exemption be provided if the testing is conducted during equipment tuning, start-ups of modified equipment, experimental operating instruction, or while changing the operating conditions. Since source emission testing is to be conducted during 'normal operating conditions', such operational changes outside the normal conditions would provide valuable data for the operations team to maximize efficiency and gauge improvement requirements.	Will revise wording of guidance.	Revised wording to:  The exception to not having to submit special air studies is, in accordance with approval requirements, "If the approval holder monitors for any substances or parameters which are the subject of operational limits as set out in this approval more frequently than is required and using procedures authorized in this approval, then the approval holder shall provide the results of such monitoring as an addendum to the reports required by this approval."

Section	Clause	Comment	Response	Action Taken
5.2	5.2	Statement included: "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."  Standard Approval Clause only requires this information if the test was on a parameter having an approval limit.  Recommendation: Modify the AMD language to align with the standard-clause language of the approval. Specifically, remove the reference to "approval conditions" as it should only be those parameters that have "limits".	Will revise wording of guidance.	Revised wording to:  The exception to not having to submit special air studies is, in accordance with approval requirements, "If the approval holder monitors for any substances or parameters which are the subject of operational limits as set out in this approval more frequently than is required and using procedures authorized in this approval, then the approval holder shall provide the results of such monitoring as an addendum to the reports required by this approval."
5.2	5.2	Section 5.2 indicates that accidental releases include releases from spills, leaks or other on-site accidents. This seems to indicate that both liquid and gaseous accidental releases should be reported. It is unclear why a liquid spill would need to be reported under the AMD. It would be helpful if some wording could be added to the section to clarify.	As stated in the interpretation section of the Reporting Chapter: the term "release" in the Reporting Chapter shall be interpreted as meaning an air release or a release affecting the air, unless otherwise specified. A "Release" would include, but is not limited to, releases to the atmosphere and any uncontrolled, unauthorized or accidental releases that affect the air.	No change made.
5	RC 5-I	In RC 5-I (a) and (b), the proposed requirement is to provide ambient air station data and a summary of ambient air monitoring station audit findings and responses that affect data validity. For industries that rely on airsheds to provide this type of reporting, this requirement represents a duplication of effort. Further clarity is required for this item.	If airsheds are conducting ambient monitoring on behalf of industry, the airshed would be reporting on this, not industry. See note for Part 1 of Ch 9 (pg 16 of 2nd draft Ch 9). Note that RC 5-I is asking for a listing of all stations - not for data.	No change made.
5	RC 5-I and RC 5-J	The requirements of these sections are very ambient-monitoring-specific, and/or would require general commentary regarding industrial plant activities. These could be streamlined and put into different areas of the report such as the cover letter or the ambient air reporting section.  Recommendation: Incorporate requirements of RC 5-I (a) and (b), RC 5-J (a), (b), (c) and (e) into 5.3. Recommendation: Incorporate RC 5-J (a), (d), and (e) into RC 5-F.	The reporter is able to put this information wherever they feel it best fits, as long as it is contained somewhere in the report. Ch 9 specifies what <b>must</b> be in a cover letter, but that does not preclude putting other information in the cover letter. Different reporters may want to lay out their reports differently, and that is ok.	No change made.
5	RC 5-I(a) and RC 5-I(b)	Is Item RC 5-I (a) applicable to non-continuous stations as well? If so, we would suggest changing the wording to indicate this. We would also suggest adding " , if applicable for that month/quarter" to the end of Item RC 5-I (b) for clarity.	No, RC 5-I states "a listing of all continuous ambient air monitoring stations", so it is not applicable to non-continuous ambient monitoring (nor source monitoring).  RC 5-I(b) would apply to any audit findings that would affect data validity.	No change made.
5	RC 5-I(b)	Is the ambient monitoring station audit finding and response reporting requirement in RC 5-I(b) applicable to only AEMERA audits? If the industrial facility operator chooses to conduct ambient air monitoring station audits these audits should not be subject to the reporting requirements in RC 5-I(b).	RC 5-I(b) would apply to any audit findings that would affect data validity.	No change made.
5.2	RC 5-I(b)	Please clarify whether a monthly audit of ambient monitoring sites is required. If not, then recommend adding 'if applicable' to the end.	The Reporting Chapter deals with reporting, not the requirement to carry out audits. If there was no audit carried out, then there will be no "audit findings and responses that affected data validity" and the summary of the audit findings and responses will not be required. This clause requires that the results of any audits carried out are reported, if the results would affect data validity.	No change made.
5.3	5.3	Need clarity on when continuous ambient air monitoring is being referenced and when other monitoring is being referenced.  Recommendation: rearrange the section so that continuous requirements are dealt with separately sub sections for each to add clarity.	AEP re-examined the ambient clauses. The wording in the clauses is specifically either "all ambient air monitoring data" or " <b>continuous</b> ambient air monitoring data". Most clauses in section 3 apply to all ambient air monitoring data.	No change made.
5	RC 5-R	In Item RC 5-R, the form does not include a space for entering the information required in points (s) and (t).	This will be addressed on the form itself.	This will be addressed on the form itself.
5	RC 5-U(s)	Please clarify how to put in more than one missing data method in the AMD CEMS Summary Form (RC 5-U(s)).	This will be addressed on the form itself.	This will be addressed on the form itself.

Section	Clause	Comment	Response	Action Taken
5	RC 5-HH	This appears to be a requirement for ALL monthly/quarterly reports whereas it should only be a requirement if an approval requires this monthly discussion. Many approvals only have emissions limits that are challenged via annual stack surveys. Therefore a monthly discussion or comparison of operations to limits is not realistic.  Recommendation: Change language to tie back to approval requirements (see above).	Yes, that is correct. You would only report against emissions limits if there are emissions limits in your approval, and you had something to report that month. If you only compare to emissions limits when a stack survey is conducted, then you would include those comparisons in the corresponding monthly report(s).	No change made.
5	RC 5-HH	(b) and (c) are redundant to other requirements of the Chapter. As discussed in comment for 5.4.8, including any reference numbers for a given month should suffice. This is also already required in the cover letter.  Recommendation: Delete these requirements as they are covered in RC 5-F (b)(ii).	It is already common practice to include comparisons to applicable EPEA approval emission limits in monthly/annual reports. Including just a reference number would not directly provide the Regulator with the required discussion, or the total number of exceedances of each specific emission limit.  The cover letter is where you would identify any previous correspondence related to the reporting of exceedances of approval emission limits.	No change made.
5	RC 5-II	RC 5-II could be covered briefly in the cover letter.  Recommendation: Move to incorporate in RC 5-F.	The cover letter is like an executive summary of the report - it highlights any problems or issues encountered (not in detail, but briefly), then the report later on provides the details of the issue encountered. RC 5-II asks for a discussion of comparisons to performance targets specified in the approval.	No change made.
5	RC 5-KK	Section 5.4.9 states that maintenance records need to be included for pollution abatement equipment. It is not clear what maintenance activities are required to be included. This needs clarity if it is to be included. It is reasonable to include major maintenance such as turnarounds etc. however minor maintenance and preventative maintenance records on a monthly basis would be overly burdensome.	What RC 5-KK requires is the <b>date</b> of most recent maintenance of pollution control technologies and identification of the <b>type</b> of maintenance performed. There is no requirement to supply maintenance "records". The requirements of 5-KK could be met by adding a table to the monthly report, or if no or minimal maintenance was performed that month it could just be described in a sentence or two.	No change made.
5	RC 5-KK(e)	Item RC 5-KK (e) asks for the most recent maintenance date of the required pollution control technologies and equipment and identification of the type of maintenance performed. The staff that submit the air reports are not always aware of this information as there is a separate team that completes the maintenance. This is going to be much more burdensome than it may seem and we request that AEP consider removing this requirement.	What RC 5-KK requires is the date of most recent maintenance of pollution control technologies and identification of the type of maintenance performed. There is no requirement to supply maintenance "records". The requirements of 5-KK could be met by adding a table to the monthly report, or if no or minimal maintenance was performed that month it could just be described in a sentence or two.  Although the person preparing the monthly report may not be the same person who carries out maintenance activities, maintenance information should be being tracked for the facility and should be accessible.	No change made.
5.5	RC 5-MM	Is RC 5-MM required? It simply spells out all the fields included in the Form. RC 5-LL dictates the requirement to complete and submit the Form, making RC 5-MM redundant.  Recommendation: Delete RC 5-MM.	This clause identifies the major requirements of the specific form.	No change made.
5.7	5.7	The flow diagram is misleading as it suggests many of the items are required even if not required by the approval.  Recommendation: Update the Flow Diagram to include "if required by an approval" versus having to do ALL requirements of Section 5 if the approval requires monthly or quarterly reporting.	The flow charts are just simplified guidance and clearly state that: "This diagram is guidance only and does not necessarily cover every possible category of information that may need to be included in a monthly or quarterly report, which is set out by the AMD Reporting Chapter, the approval and any applicable written notices from the Director..."  The AMD sets out minimum reporting requirements for all approval holders to ensure consistent reporting of some elements. The clauses specify whether or not a requirement is based on approval conditions. You are correct in saying that some new requirements in Ch 9 are minimum requirements for everyone (not based on approval conditions).	No change made.

Section	Clause	Comment	Response	Action Taken
5 and 6	5 and 6	The reporting of unauthorized and accidental releases. Releases are not defined and we are unsure how this relates to air in any way.	<p>The interpretation section of the Reporting Chapter states that the term “release” in the Reporting Chapter shall be interpreted as meaning an air release or a release affecting the air, unless otherwise specified.</p> <p>Your EPEA approval sets out what sources are permitted to release to the atmosphere. Under the terms and conditions of your approval, any unauthorized or uncontrolled (when required to be controlled, factoring in other approval conditions) release is an approval contravention. In addition to being immediately reported, identification of such releases should already be being included in monthly/annual reports. The number of release issues that occurred during the year is important information related to the operation and performance of the industrial facility.</p> <p>A clarifying note is included in the AMD Reporting Chapter indicating that accidental releases would not include routine fugitive or open source releases (such as, but not limited to, fugitive emissions from tailings ponds or dust from on-site roads), but would include releases from spills, leaks or other on-site accidents.</p>	No change made.
5 and 6	5 and 6	Although AEP clarified that incident reporting shall only include air related incidents there is repetitive mention throughout Chapter 9 that references reporting of releases and the clarifying notes reference for spills. Industry questions the relevance of this however understands that for the purposes of Section 7 AEP may want to mirror the spill reporting, loss to air and loss to land, required in NPRI and will support reporting of releases for this purpose. Clarity needs to be provided nonetheless.	The interpretation section of the Reporting Chapter states that the term “release” in the Reporting Chapter shall be interpreted as meaning an air release or a release affecting the air, unless otherwise specified.	No change made.
5 and 6	RC 5-G and RC 6-H	There is still a requirement to have a Title Page. This is unnecessary administrative burden.  Recommendation: Remove Title Page requirement – pertinent information is already expected to be provided in the cover letter. In addition, the standard naming protocols for electronic file submissions should be enough for AEP to determine who the document is from and what its purpose is.	A title page is a standard element of any report and it has been determined that air monitoring reports need to include a title page. Many monthly/annual reports being submitted already include a title page. This requirement ensures consistency of reports for identification and records purposes.	No change made.
5.2, 6.2	RC 5-G, RC 6-H	What is to be included in the Title page, others sections provide detail but this section does not.  Recommendation: include a RC 5-G/6-H detailing what is to be included.	The title page should include, but not necessarily be limited to, identification of the industrial operation, the approval number, the company, the type of report (e.g., monthly, annual, manual stack survey, etc.), and period of monitoring (e.g., June 2019).	No change made.
5.2, 6.3.2	RC 5-I, RC 6-N	It is odd to have ambient air reporting information mixed in with source reporting information.  Recommendation- All ambient air reporting requirements should be separated into their own subsection like they are in some cases in section 6. such as RC 6-N.	Some clauses are more general and cover information that may affect both ambient and source monitoring. It is ultimately up to the reporter to decide how to structure their report, as long as AMD requirements are met.	No change made.
5.3.1 and 5.3.2	5.3.1 and 5.3.2	These appear to be requirements for ALL monthly/quarterly reports whereas they should only be requirements if an approval requires ambient air monitoring and reporting. In addition, this is confusing for those participating in airsheds.  Recommendation: Revise statements to say: “For the monthly or quarterly report in RC 5-A, if the person responsible is required to report on ambient air monitoring under the conditions of an approval, the person responsible must include...”.	<p>Guidance is provided on the first page of Part One that industry does not need to duplicate data submission and reporting already provided by airsheds. If there is some confusion between industry and airsheds, that should be worked out with the airshed and the responsibility documented in both the industry and airshed QAP.</p> <p>The AMD requires that all ambient monitoring (except that done for the industrial operation's own purposes) must be reported electronically to the Ambient Data Warehouse and summarized in monthly/annual reports.</p>	No change made.
5.3.2	5.3.2	In Section 5.3.2, a wind rose should only be required if meteorological data is monitored at the compliance station in question. Including a wind rose for the closest representative station is unnecessary effort.	<p>Wind roses are required to provide a general idea of what the prevailing winds are for the site for that month/year. If winds are not monitored at the station, the next closest stations provides a best-estimate of winds.</p> <p>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.</p>	No change made.
5.4.1	5.4.1	This appears to be a requirement for ALL monthly/quarterly reports whereas it should only be a requirement if an approval requires monthly CEMS reporting (not all approvals require monthly CEMS reporting even though the facility has a CEMS).  Recommendation: Change language to tie back to approval requirements (see above).	CEMS data summarization and CEMS zero and span reporting is being required for all approval required CEMS monitoring. Submission of CEMS zero and span should already be being done if you are following the intent/principles of the CEMS Code.	



Section	Clause	Comment	Response	Action Taken
5.4.1	5.4.1	Also – if there were no out of control zeros or spans, is it enough to make that statement in the body of the monthly report, or will the approval holder have to submit a blank form?  Recommendation: It may be helpful to have a checkbox at the top of the Form that allows the user to “Check here if NO out of control zero or spans for the month”. This allows the user to have a consistent set of forms and a consistent reporting template on a monthly basis in order to ensure nothing is overlooked.	It is not necessary to submit a blank form. Will add guidance to sections 2.2 and 12.2.	Added guidance to sections 2.2 and 12.2 that "Blank forms are not required to be submitted. However, it should be noted in the monthly and annual reports which forms are being submitted with the specific report, to clarify which reporting forms are associated with the report."
5.4.1	RC 5-S	Is RC 5-S required? It simply spells out all the fields included in the Form. RC 5-R dictates the requirement to complete and submit the Form, making RC 5-S redundant.	This clause identifies the major requirements of the specific form.	No change made.
5.4.2	RC 5-T	This form is redundant and unnecessary needs to be simplified.  Recommendation - simplify the form and remove redundant fields, focus on making the current electronic system capable of pulling the data for you.	Ch 9 has added electronic reporting forms in order to get summary information in an electronic format - so this is not raw, hourly data (as is sent via FTP), but summaries of data used for assessing compliance and tracking ongoing performance. The purpose of the forms was to take out elements that had been reported in pdf reports and put them in an electronic format that would facilitate querying, analysis and tracking by the Regulator.  Existing electronic reporting systems are intended for different reporting purposes (submission of hourly monitoring data, incident reporting, compliance purposes). These forms are just extensions of the monthly and annual reports - providing data in electronic format instead of pdf. Summarization of CEMS data, and review of the data, is the responsibility of industrial operations.	No change made.
5.4.2	RC 5-U (s) and (t)	The form will not work to provide this information as it is set up as it only allows you to include information on one backfilling event and often there are more than one events.  Recommendation- remove the columns for the method, state number of backfilling events only- details can be obtained form the electronic reports. OR create a separate form for the backfilling information.	This will be addressed on the form itself.	This will be addressed on the form itself.
5.4.2	RC 5-U (s) and (t)	Additionally this information is already submitted and it is redundant.	Ch 9 has added electronic reporting forms in order to get summary information in an electronic format - so this is not raw, hourly data (as is sent via FTP), but summaries of data used for assessing compliance and tracking ongoing performance. The purpose of the forms was to take out elements that had been reported in pdf reports and put them in an electronic format that would facilitate querying, analysis and tracking by the Regulator.  Existing electronic reporting systems are intended for different reporting purposes (submission of hourly monitoring data, incident reporting, compliance purposes). These forms are just extensions of the monthly and annual reports - providing data in electronic format instead of pdf. Summarization of CEMS data, and review of the data, is the responsibility of industrial operations.	No change made.
5.4.2/6.4.2	5.4.2/6.4.2	This appears to be a requirement for ALL monthly/quarterly reports whereas it should only be a requirement if an approval requires monthly CEMS reporting (not all approvals require monthly CEMS reporting even though the facility has a CEMS).  Recommendation: Change language to tie back to approval requirements (see above).	CEMS data summarization is being required for all approval required CEMS monitoring. Submission of CEMS monitoring information should already be being done if you are following the intent/principles of the CEMS Code.	
5.4.2/6.4.2	5.4.2/6.4.2	The majority of the information requested in the Summary should be available to AEP through the electronic reports. If AEP wants to see summary information, then they should generate it themselves in their own database. Requiring industry to submit both the detailed data and summary data is excessive.  Recommendation: AEP should upgrade the functionality of their CEMS e-reporting database to be able to pull the summary reports, if required, on their own. It is highly recommended that this summary information requirement be removed from the AMD.	Ch 9 has added electronic reporting forms in order to get summary information in an electronic format - so this is not raw, hourly data (as is sent via FTP), but summaries of data used for assessing compliance and tracking ongoing performance. The purpose of the forms was to take out elements that had been reported in pdf reports and put them in an electronic format that would facilitate querying, analysis and tracking by the Regulator.  Existing electronic reporting systems are intended for different reporting purposes (submission of hourly monitoring data, incident reporting, compliance purposes). These forms are just extensions of the monthly and annual reports - providing data in electronic format instead of pdf. Summarization of CEMS data, and review of the data, is the responsibility of industrial operations. AEP does not intend to upgrade the CEMS submission system to be a reporting out system to summarize data on industry's behalf.	No change made.

Section	Clause	Comment	Response	Action Taken
5.4.2/6.4.2	RC 5-U	Is RC 5-U required? It simply spells out all the fields included in the Form. RC 5-T dictates the requirement to complete and submit the Form, making RC 5-U redundant.  Recommendation: Delete RC 5-U.	This clause identifies the major requirements of the specific form.	No change made.
5.4.3	RC 5-V	This is all included in the form. Is this stating that detailed information is also required in the body of the text as well? Inclusion of this information in the body of the report will bring us back to a format that is lengthy and wordy.  Recommendation: All that should be required is a summary of the number of tests and the units they were performed on and then the details can be found in the forms. ex During the month of May 3 RATAs and one Stack Test were completed on units 99F-1113, 99F-1213, 91F-5000, and 92F-5251, respectively. All tests were complete with the exception of the test run on unit 99F-1113.	The information required by RC 5-V would only be a couple sentences and is needed to identify in the report the source sampling carried out (the Excel summary forms are imported into a database). An example is provided in section 5.4.3:  "For RC 5-V (d), 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."	No change made.
5.4.3/6.4.3	5.4.3/6.4.3	Not all approvals require a summary of source testing and this appears to be a requirement for ALL monthly/quarterly reports.  Recommendation: Change language to tie back to approval requirements (see above).	It is already common practice to include information on source testing in monthly/annual reports. This is now being formalized in the Reporting Chapter. The Air Monitoring Directive Reporting Chapter sets out the minimum reporting requirements to ensure that consistent reporting is carried out and that the department obtains a baseline of information.	No change made.
5.4.3/6.4.3	RC 5-V	The AMD now requires the use of Forms to provide detailed information pertaining to source testing. As such, all of the information required by RC 5-V would be included in the Forms IF there was any source testing completed in the month/quarter.  Recommendation: Remove RC 5-V as this is redundant to the information required by the associated Forms.	The information required by RC 5-V would only be a couple sentences and is needed to identify in the report the source sampling carried out (the Excel summary forms are imported into a database). An example is provided in section 5.4.3:  "For RC 5-V (d), 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."	No change made.
5.4.4	5.4.4	5.4.4: Requires monthly reporting on Flaring monitoring, please indicate whether this is a requirement only if it is an approval requirement to summarize flaring activity. Many flares may not have the necessary instrumentation or monitors to provide the requested data, especially in cases where this is not an Approval requirement. There are significant costs and time constraints for industry to modify these monitoring systems (intrinsically safe installations, plant outage requirements, etc.).	This section applies to all flaring, not just specific reporting of flaring required under an approval. Monitors are not required if not already installed, as estimated emissions can be reported.	Clarifying note added.
5.4.4	RC 5-W	The question for this and in general for the entire section is what constitutes flaring. Would flaring of natural gas flaring (not including natural gas purge/pilot), nitrogen flaring, or steam flaring (These three are the most common non-upset flaring that each facility completes, especially during shut downs and start-ups) count?  Recommendation - include a clear definition of what flaring reporting includes.	Flaring in this section is not specific to just natural gas flaring, but covers all types of flaring. Flaring is a general engineering term and is typically referred to as releasing via a flare gas combustion device.	No change made.
5.4.4/6.4.4	5.4.4/6.4.4	This appears to be a requirement for ALL monthly/quarterly reports whereas it should only be a requirement if an approval requires monthly Flare reporting (not all approvals require Flare reporting either monthly or annually).  Recommendation: Change language to tie back to approval requirements (see above).	This section applies to all flaring, not just specific reporting of flaring required under an approval. Monitors are not required if not already installed, as estimated emissions can be reported.	Clarifying note added.
5.4.4/6.4.4	5.4.4/6.4.4	If AEP is only after flare reports from a certain industry sector, that should be specified. There are many flares which do not currently have in-line monitors and this requirement could result in costly upgrades and equipment/analyzer additions.  Recommendation: Specify exactly who is required to submit this report and/or tie it back to approval requirements.	This section applies to all flaring, not just specific reporting of flaring required under an approval. Monitors are not required if not already installed, as estimated emissions can be reported.	Clarifying note added.

Section	Clause	Comment	Response	Action Taken
5.4.4/6.4.4	RC 5-X	Is RC 5-X required? It simply spells out all the fields included in the Form. RC 5-W dictates the requirement to complete and submit the Form, making RC 5-X redundant.  Recommendation: Delete RC 5-X.	This clause identifies the major requirements of the specific form.	No change made.
5.4.7	5.4.7	It is not clear what is meant by "emissions data". Is CEMS data considered "emissions data"? The requirement to use the AMD Emissions Summary Form IN ADDITION TO the CEMS Summary Form is excessive since both forms require the same information.  Recommendation: Remove any CEMS information requirements from the AMD Emissions Summary Form as it is redundant to the CEMS Summary Form. At a minimum, include guidance on what is meant by "emissions data" in order to ensure clarity for the reader on whether or not the Form is required based on the requirements of the approval.	For RC 5-CC, the AMD Emissions Summary Form is to be filled out according to the monthly emissions reporting required under your approval. This may need to include totals from CEMS, if you are required to report monthly pollutant totals. There is likely only one field (mass emissions for month) that may be duplicative of the AMD CEMS Summary Form.	No change made.
5.4.7	RC 5-DD	Is RC 5-DD required? It simply spells out all the fields included in the Form. RC 5-CC dictates the requirement to complete and submit the Form, making RC 5-DD redundant.  Recommendation: Delete RC 5-DD.	This clause identifies the major requirements of the specific form.	No change made.
5.4.8	5.4.8	Why is release reporting relevant to an air report?	As stated in the interpretation section of the Reporting Chapter: the term "release" in the Reporting Chapter shall be interpreted as meaning an air release or a release affecting the air, unless otherwise specified. A "Release" would include, but is not limited to, releases to the atmosphere and any uncontrolled, unauthorized or accidental releases that affect the air.	No change made.
5.4.8	RC 5-FF (e) - (i)	Recommendation: This form should be aligned with the AER format or vice versa. Should be simplified. Additional information can be achieved by looking up the 7 day letters, there is no need to include the sections (e) to (i).	The Approval Contravention Form is based around the types of contravention summary tables often submitted as part of monthly/annual reports. It does contain more fields than are currently submitted, but the fields represent the minimum information that should be summarized as part of monthly/annual reports and are broken down to allow for storage in the Regulator database. Contraventions should not be occurring every month, and in most cases, this form will not need to be submitted very often and would usually only contain a small number of contraventions.  A representative of the AER was present at the AMD Reporting Forms Task Team meetings in June and the AER has been involved in the review of the AMD Reporting Chapter. The AMD Approval Contravention Form is very similar (though more detailed) than the contravention summary tables already included in many monthly/annual reports. The AER also has other directives and regulations that may require additional/different contravention reporting, either with or separate from EPEA approval monthly/annual reports.	No change made.
5.4.8	RC 5-HH	Can you please confirm if all that is required here is a simple sentence referring people to the source emission form and contravention form or if you want more detail in the text. Similar to the comment for RC 5-V.	Discussions and comparisons to emission limits are requirements for monthly/annual reports.	No change made.
5.4.8	RC 5-II	What if your approval states to provide this annually does this override this? we have some equipment where we are required to report monthly (SRU) and others where the requirement is annually (VRU), as per the approval.  Recommendation - although the AMD does state that approval takes precedent this is a bit confusing, please be more specific about reporting requirement as far as timeline for reporting monthly vs annually.	Will add "relevant to the month/quarter" to the clause. If you have an annual performance target, you would not report against it in the monthly report. Rather it would be discussed in the annual report.	Added "relevant to the month/quarter" to the clause.
5.4.8/6.4.8	5.4.8/6.4.8	This appears to be a requirement for ALL monthly/quarterly reports whereas it should only be a requirement if an approval requires monthly contravention reporting.  Recommendation: Change language to tie back to approval requirements (see above).	If required to submit monthly reports, then the approval contravention and comparisons to source emission limits are a requirement for monthly reports. If your approval only requires you to submit annual reports, then this information is submitted via the annual report.  The Air Monitoring Directive Reporting Chapter sets out the minimum reporting requirements to ensure that consistent reporting is carried out and that the department obtains a baseline of information needed for compliance purposes, reporting against standards, supporting policy development and management decisions and reporting to the public.	No change made.

Section	Clause	Comment	Response	Action Taken
5.4.8/6.4.8	5.4.8/6.4.8	<p>The majority of the information requested in the Form should be available to AEP through the 7-day letters. If AEP wants to see the information, then they should look in their own database. Requiring industry to submit both the contravention 7-day letter in two places is excessive.</p> <p>Recommendation: AEP should upgrade the functionality of their database to be able to review letters/phone calls, if required, on their own. It is highly recommended that this requirement be removed from the AMD. If not, requiring the approval holder to indicate any Reference Numbers for the given month should be enough to direct the reader to the associated letter that contains all the details required by the Form.</p>	<p>The information gathered when contraventions are called in (through ERC) and the pdf 7-day letters do not supply data in electronic format that can be tied with other reporting summary information being collected under the AMD. The Regulator requires the one set of immediate reporting for compliance purposes and immediate response to incidents. The forms in Chapter 9 of the AMD are reporting required by monthly and annual reports - which is already being provided in monthly/annual reports. These forms are just extensions of the monthly and annual reports - providing data in electronic format instead of pdf. 7-day letters hold the industrial operation accountable for outlining their follow up and actions after a contravention, where as the summary form provides a record of past contraventions that can be queried using the database that will house all the data from the Chapter 9 forms. AEP does not have any intention of merging incident reporting with routine monthly/annual reporting. Incident reporting covers all media, not just air.</p> <p>Industrial operations should not be required to complete and submit the contravention form each month - only when contraventions occur, which hopefully will be minimal.</p>	No change made.
5.4.8/6.4.8	5.4.8/6.4.8	<p>Also – if there were no contraventions, is it enough to make that statement in the body of the monthly report, or will the approval holder have to submit a blank form?</p> <p>Recommendation: It may be helpful to have a checkbox at the top of the Form that allows the user to “Check here if NO out of control zero or spans for the month”. This allows the user to have a consistent set of forms and a consistent reporting template on a monthly basis in order to ensure nothing is overlooked.</p>	Blank forms will not be required. Will add guidance to sections 2.2 and 12.2.	Added guidance to sections 2.2 and 12.2 that "Blank forms are not required to be submitted. However, it should be noted in the monthly and annual reports which forms are being submitted with the specific report, to clarify which associated reporting forms are associated with the report."
5.4.8/6.4.8	RC 5-FF	<p>Is RC 5-FF required? It simply spells out all the fields included in the Form. RC 5-EE dictates the requirement to complete and submit the Form, making RC 5-FF redundant.</p> <p>Recommendation: Delete RC 5-FF.</p>	This clause identifies the major requirements of the specific form.	No change made.
5.4.9	5.4.9	<p>This appears to be a requirement for ALL monthly/quarterly reports whereas it should only be a requirement if an approval requires this monthly discussion. Overall, these requirements are onerous and the majority of the information will not change on a monthly basis making it a non-value added item to include. Non-operation of PAE also requires a call to the ERC, which would have to be reported on in other areas of Chapter 9.</p> <p>Recommendation: At a minimum, change language to tie back to approval requirements (see above). Ideally, remove this section as it is low-value and redundant to other reporting requirements.</p>	It is already common practice to include information on pollution controls in monthly/annual reports. This is now being formalized in the Reporting Chapter. If the approval requires the use of the pollution control technology, the AMD is requiring the reporting of the performance of these technologies.	No change made.

Section	Clause	Comment	Response	Action Taken
5.4.9	RC 5-KK	5.4.9: This section duplicates the reporting requirements already included in Approvals, and therefore does not add value. The amount of details described in RC 5-KK could be difficult to provide for many of our systems. If a tracking system does not exist for this level of detail, and only that the pollution control technologies are required to be operational during equipment operation, is the reporting required only if the pollution control technology fails and becomes reportable under the approval clause? We would suggest that including a summary any reportable incidents in the monthly report is appropriate.	Clause reworded and guidance note added.	Clause reworded and guidance note added.
5.4.9	RC 5-JJ	To be consistent there should be a form for this. Recommendation - in order to align with the rest of the reporting please create a form for this.	Clause reworded and guidance note added.	Clause reworded and guidance note added.
5.4.9	RC 5-KK	RC 5-KK (a) requires a list and description of pollution abatement equipment (PAE). Is this the PAE specified in the approval? What if the approval references the application, does the approval holder have to determine what is PAE and what is not? Recommendation: Only request commentary on equipment listed in the approval.	This section applies to pollution control technologies and equipment required by the industrial operation's approval, whether identified in the approval itself or required via reference to the application. Clause reworded and guidance note added.	Clause reworded and guidance note added.
5.4.9	RC 5-KK	RC 5-KK (b) requires percent operational time. This could be misleading as some PAE (like a flare) is only operational during an upset. As such, the percent operational time of the PAE will not correspond with the percent operational time of the unit, which could result in confusion. Conversely, AEP may receive results of 100% every month, unless there is an upset which would be captured in other reporting requirements. Recommendation: Remove.	Clause reworded and guidance note added.	Clause reworded and guidance note added.
5.4.9	RC 5-KK	RC 5-KK (c) requires control effectiveness or efficiency. This will not change monthly and is therefore considered low-value, high burden information to include monthly. Recommendation: Remove.	Clause reworded and guidance note added.	Clause reworded and guidance note added.
5.4.9	RC 5-KK	RC 5-KK (d) Allowed downtime is included in approval conditions and non-allowed downtime is a contravention that must be reported. Either way, this requirement is covered elsewhere in the Reporting Chapter. Recommendation: Remove.	Clause reworded and guidance note added.	Clause reworded and guidance note added.
5.4.9	RC 5-KK	RC 5-KK (e) It is unclear what value reporting on maintenance of equipment brings to the monthly report. Maintenance programs are typically outside of approval-related items and up to the approval holder to ensure due diligence. Unless AEP intends to regulate equipment maintenance, this item should be removed as it is out of scope with respect to environmental monitoring and reporting. Recommendation: Remove.	Clause reworded and guidance note added.	Clause reworded and guidance note added.
5.4.9	RD 5-KK	This is a very large piece, need clarity on the definition of maintenance activities.	Clause reworded and guidance note added.	Clause reworded and guidance note added.
5.4.9	RD 5-KK	Recommendation - provide clarifying notes on what constitutes maintenance, replacing one rubber seal vs. shut down or turnaround, routine PM vs scheduled/non-scheduled maintenance.	Clause reworded and guidance note added.	Clause reworded and guidance note added.

Section	Clause	Comment	Response	Action Taken
<b>Industrial Annual Reports</b>				
6	6	Many of the Annual requirements are repeats of Monthly requirements.	Many clauses in the annual reports section include "if not already submitted in monthly or quarterly reports" to prevent duplicate reporting. Those clauses without this are usually cumulative for the year, or include additional information only available based on a year of monitoring.	No change made.
6	6	Similar to the detailed review contained herein for the monthly reporting section, updates should be made throughout to clarify what is required if dictated in the approval and/or if not already included in the monthly reports.  Recommendation: In order to reduce repetition between monthly and annual report summaries, a statement at the beginning of the section advising that annual reports do NOT have to contain information already provided in monthly reports would be helpful (see RC 6-S for example).	The EPEA approval sets out what monitoring is required and sets out some (but not necessarily all) the reporting that is required. The Air Monitoring Directive Reporting Chapter sets out the minimum reporting requirements to ensure that consistent reporting is carried out and that the department obtains a baseline of information needed for compliance purposes, reporting against standards, supporting policy development and management decisions and reporting to the public.  If a particular type of activity or monitoring is not required by your approval (such as CEMS), then you are not required to report the summary information outlined by the AMD (e.g., AMD CEMS Summary Form, etc.).  Many clauses in the annual reports section include "if not already submitted in monthly or quarterly reports" to prevent duplicate reporting. Those clauses without this are usually cumulative for the year, or include additional information only available based on a year of monitoring.	No change made.
6	6	Similar to the comments throughout the Monthly Reporting section of the Chapter, any sections of the Annual Reports that describe the requirements of the associated Form are considered redundant to the Form itself.  Recommendation: Delete repetitive sections that describe Form contents.	These clauses identify the major requirements of the specific form.	No change made.
6	6	Similar to the comments throughout the Monthly Reporting section of the Chapter, any sections of the Annual Reports that are duplicative to other sections of Chapter 9 an/or other databases owned/operated by AEP should be removed. Examples: CEMS Summary Form (5.4.2), Source Testing Results summary (5.4.3), Contravention Form (5.4.8).	Ch 9 has added electronic reporting forms in order to get summary information in an electronic format - so this is not raw, hourly data (as is sent via FTP), but summaries of data used for assessing compliance and tracking ongoing performance. The purpose of the forms was to take out elements that had been reported in pdf reports and put them in an electronic format that would facilitate querying, analysis and tracking by the Regulator.  Existing electronic reporting systems are intended for different reporting purposes (submission of hourly monitoring data, incident reporting, compliance purposes). CEMS raw data is required to be submitted, however a summary of CEMS data and operator performance is also required to be reported. Industry must summarize and report on their own data and is responsible for assuring that data has been reviewed.  AEP does not have any intention of merging incident reporting with routine monthly/annual reporting. Incident reporting covers all media, not just air. Industrial operations should not be required to complete and submit the contravention form each month - only when contraventions occur, which hopefully will be minimal.	No change made.
6.1	RC 6-A	This does not align with the 2 year following release guideline.	Will modify/push back effective date.	The effective date of the Reporting Chapter has been changed to January 2019.
6.2	RC 6-G (b) (iii) and (iv)	Why is release reporting relevant to an air report?	As stated in the interpretation section of the Reporting Chapter: the term "release" in the Reporting Chapter shall be interpreted as meaning an air release or a release affecting the air, unless otherwise specified. A "Release" would include, but is not limited to, releases to the atmosphere and any uncontrolled, unauthorized or accidental releases that affect the air.	No change made.
6	RC 6-J	RC 6-J (a) – Is this not already covered in Section 11 of Chapter 9 for Report Resubmission?  Recommendation: Remove – redundant to other requirements of the Chapter.	As the annual report likely relies on data and information prepared for the monthly reports, it is a requirement to note in the annual report any changes made after a monthly or quarterly report was initially submitted. The actual resubmission of the revised report is dealt with in section 11. There has been cases of monthly an annual data not matching up.	No change made.

Section	Clause	Comment	Response	Action Taken
6.2	RC 6-J	Please clarify if this is or is not only applicable to ambient air data.  Recommendation - Similar to the comment made for RC 5-I.	RC 6-J (a) pertains to any data (source or ambient) contained in a monthly report. RC 6-J (b) and (c) are only applicable to ambient.  RC 6-J(d) would apply to any audit findings that would affect data validity. Clauses RC 5-I, RC 6-J, RC 15-I, RC 16-K reworded.	This is for any facility audits affecting data validity or that resulted in a contravention of the terms and conditions of the approval or the AMD.  Clause reworded.
6	RC 6-J and RC 6-K	See comments for RC 5-I and RC 5-J	The reporter is able to put this information wherever they feel it best fits, as long as it is contained somewhere in the report. Ch 9 specifies what <b>must</b> be in a cover letter, but that does not preclude putting other information in the cover letter. Different reporters may want to lay out their reports differently, and that is ok.	No change made.
6	RC 6-N and RC 6-T	The requirement for spatial plots (RC 6-N) and data distributions (RC 6-T) are excessively burdensome for the minimal value that they add. As AEP will have all of the data they need in a digital extractable format, we suggest that AEP create these plots on an as-needed basis, rather than placing the burden on industry to create plots for each and every facility.	Monthly/annual reports provide a summary and overview of the monitoring carried out during the month/year. Summarization of ambient data (e.g., data distribution) is a requirement for monthly/annual reports that was taken from the 1989 AMD.	No change made.
6	RC 6-O, RC 6-P, RC 6-Q	Redundant to information provided monthly per RC 5-N/O/P.  Recommendation: Update to say "if not already submitted in monthly reports".	These are cumulative for the year. Otherwise you would need to look at twelve separate reports to get this information. The annual report provides an annual summary.	No change made.
6	RC 6-R	Exceedances of AAAQOs are required to be immediately reported and also result in the submission of a 7-day letter.  Recommendation: Remove as this information is captured in other Chapter 9 requirements and can be summarized by AEP using the contravention reporting database.	It is already common practice to include information on exceedances of AAAQOs in monthly/annual reports. This is now being formalized in the Reporting Chapter. The Air Monitoring Directive Reporting Chapter sets out the minimum reporting requirements to ensure that consistent reporting is carried out and that the department obtains a baseline of information needed for compliance purposes, reporting against standards, supporting policy development and management decisions and reporting to the public.	No change made.
6.2	6.2	In Section 6.2, a definition for "due diligence source testing" should be added as this is currently undefined in the document and needs clarity.	This term is no longer used in the Reporting Chapter.	Term removed.
6	RC 6-NN/OO	This information is available in the ERC database. If AEP wants to compare number of contraventions over a 5 year period, then they should look in their own database.  Recommendation: Delete; use internal database.	Annual reports are intended to highlight performance and ongoing issues at the industrial operation. This requires summarization of industry performance over the year.  Existing electronic reporting systems are intended for different reporting purposes (submission of hourly monitoring data, incident reporting, compliance purposes). Summarization of performance and monitoring results is a requirement of the industrial operation. A summary of contraventions over time demonstrates to the Regulator how an industrial operation's performance varies over time and is used in approval renewals and policy development. AEP does not intend to modify incident tracking systems in order to meet industry reporting requirements for the AMD.  Contraventions reporting is limited if the number of contraventions are kept minimal.	No change made.
6	RC 6-PP/QQ/RR	(a), (b), and (c) of these requirements would all require reporting to the Director which would be captured in the AEP ERC database. AEP should leverage their own systems to gather the information, if required, instead of requesting industry to summarize it for them.  Recommendation: Delete; use internal database.	Annual reports are intended to highlight performance and ongoing issues at the industrial operation. This requires summarization of industry performance over the year.  Existing electronic reporting systems are intended for different reporting purposes (submission of hourly monitoring data, incident reporting, compliance purposes) and collect more detailed information than is being required by the Reporting Chapter. It may not make sense for general reporting and compliance/incident reporting systems to be merged, as compliance systems are purposely kept separate. The compliance system also includes all media incident reporting, not just that for air.	No change made.
6.6	6.6	This entire section would be included in separate approval requirements. If a facility had a significant expansion or modification, an amendment application would have been required. If the approval writer wanted updates on status of the project following the issuance of the amendment, clauses would already be in the approval amendment driving those requirements.  Recommendation: Delete.	It is already common practice to include information on expansions or modifications to a facility in monthly/annual reports. This is usually just identification that a new phase or change was completed during the month/quarter/year. This is important context information that relates to the monitoring information being discussed in the report.	No change made.

Section	Clause	Comment	Response	Action Taken
6.9	6.9	The flow diagram is misleading as it suggests many of the items are required even if not required by the approval and if already submitted in monthly reports.  Recommendation: Update the Flow Diagram to include "if required by an approval" and/or "if not already submitted in monthly reports".	The flow charts are just simplified guidance and clearly state that: "This diagram is guidance only and does not necessarily cover every possible category of information that may need to be included in a monthly or quarterly report, which is set out by the AMD Reporting Chapter, the approval and any applicable written notices from the Director..."  The AMD sets out minimum reporting requirements for all approval holders to ensure consistent reporting of some elements. The clauses specify whether or not a requirement is based on approval conditions. You are correct in saying that some new requirements in Ch 9 are for everyone (not based on approval conditions).	No change made.
6.3.2	6.3.2	In Section 6.3.2, AEP asks that we note local events and influencers which may have an effect on monitoring results. Our company feels that this is an unreasonable ask as it requires detailed meteorological analysis. We recommend that the scope of the AMD remain limited to data reporting, and not require detailed data analysis and interpretation.	RC 6-N (c) (ii) includes "if applicable and known". If the person responsible is aware of any local events or influencers (e.g., forest fires, nearby construction, changes to monitoring methods, etc.) which may have an effect on monitoring results then they should be identified. This is already typically done in reports (when such events and influences are known). This clause does not require you to conduct a scientific investigation to determine what may be influencing air quality at your monitoring station, but if you are aware of something it should be noted in the annual report.	No change made.
6.3.2	RC 6-N (c) (ii), 1	This is a very odd request, it seems to assume that we should have the capacity to perform meteorological analysis. This is an unrealistic expectation of industry, air sheds may have the capacity but not industry.  Recommendation - remove this or at minimum give some better clarity.	RC 6-N (c) (ii) includes "if applicable and known". If the person responsible is aware of any local events or influencers (e.g., forest fires, nearby construction, changes to monitoring methods, etc.) which may have an effect on monitoring results then they should be identified. This is already typically done in reports (when such events and influences are known). This clause does not require you to conduct a scientific investigation to determine what may be influencing air quality at your monitoring station, but if you are aware of something it should be noted in the annual report.	No change made.
6.3.2	RC 6-T	Could we have an example of what this would look like?  Recommendation - Provide examples.	Example monthly and annual reports will be provided and will show what representation of ambient data distribution look like.	No change made.
6.4.10	6.4.10	This appears to be a requirement for ALL annual reports whereas it should only be a requirement if the approval requires such a summary.  Recommendation: Change language to tie back to approval requirements.	It is already common practice to include information on pollution controls in monthly/annual reports. This is now being formalized in the Reporting Chapter. The Air Monitoring Directive Reporting Chapter sets out the minimum reporting requirements to ensure that consistent reporting is carried out and that the department obtains a baseline of information needed for compliance purposes, reporting against standards, supporting policy development and management decisions and reporting to the public.	No change made.
6.4.10	RC 6-WW	This seems more appropriate for a form.  Recommendation - in order to be in alignment with the rest of the directive create a form that can be used to provide this information.	Clause reworded and guidance note added.	Clause reworded and guidance note added.
6.4.7	6.4.7	Redundant to information provided monthly.  Recommendation: Update to say "if not already submitted in monthly reports".	RC 6-GG is tied to approval requirements and only applies if "required by an approval to report emission data annually".	No change made.
6.4.7	6.4.7	It is not clear what is meant by "emissions data". Is CEMS data considered "emissions data"? The requirement to use the AMD Emissions Summary Form IN ADDITION TO the CEMS Summary Form is excessive since both forms require the same information.  Recommendation: Remove any CEMS information requirements from the AMD Emissions Summary Form as it is redundant to the CEMS Summary Form. Include guidance on what is meant by "emissions data" in order to ensure clarity for the reader on whether or not the Form is required based on the requirements of the approval. Guidance should consider only requiring reporting on those parameters that are subject to monitoring, reporting, and limits within the approval (except CEMS).	For RC 6-GG, the AMD Emissions Summary Form is to be filled out according to the annual (or monthly if not submitting monthly reports) emissions reporting required under your approval. This may need to include totals from CEMS, if you are required to report monthly pollutant totals. There is likely only one field (mass emissions for month) that may be duplicative of the AMD CEMS Summary Form.	No change made.
6.4.8	RC 6-PP and RC 6-QQ	The release portion of this is not relevant to air pollution.	As stated in the interpretation section of the Reporting Chapter: the term "release" in the Reporting Chapter shall be interpreted as meaning an air release or a release affecting the air, unless otherwise specified. A "Release" would include, but is not limited to, releases to the atmosphere and any uncontrolled, unauthorized or accidental releases that affect the air.	No change made.



Section	Clause	Comment	Response	Action Taken
6.4.8	RC 6-SS	Is this required if this has been submitted on a monthly basis?  Recommendation - clarify the timelines of reporting this information monthly or annually, as per approval or as per AMD, if it is one or the other or both.	It would be required if not already included in monthly or quarterly reports.	Added "if not already included in monthly or quarterly reports" and "relevant to the year, month or quarter" to the clause.
6.4.9	6.4.9	This appears to be a requirement for ALL annual reports whereas it should only be a requirement if an approval requires fugitive emissions monitoring (some do not).  Recommendation: Change language to tie back to approval requirements.	This clause only requires reporting, not monitoring. The clause specifically applies to "approval required fugitive monitoring". If your approval does not require any fugitive monitoring then this section does not apply. If your approval does require fugitive monitoring, then this section would apply and a summary of the fugitive monitoring must be included in the annual report.	No change made.

Industrial Emissions Inventory Reporting				
7	7	You CANNOT force a push ahead in the timeline for the Section 7 reporting we need a MINIMUM of 2 years to get ready and this 2 years needs to be after the guidance document and form are released. o There should be a caveat that states that although Chapter 9 is released Section 7 will not be finalized until review of the guidance document and reporting forma have been completed.	The main requirements of AMD emissions inventory reporting are stated in the AMD Reporting Chapter. The Annual Emissions Inventory Report Form simply provides the format and fields for reporting and industry will have the opportunity to review the form before it is finalized. The Annual Emissions Inventory Report Standard and Guidance Document mainly just provides guidance and clarifications to help with preparing the inventory and filling in the reporting form. Industry will have the opportunity to review the Standard and Guidance Document before it is finalized. As previously stated:  <ul style="list-style-type: none"> <li>• No additional substances are anticipated to be added via the Annual Emissions Inventory Report Standard and Guidance Document for at least the first few years.</li> <li>• Only one estimation methodology is anticipated as being specified in the Annual Emissions Inventory Report Standard and Guidance Document (use of CEMS for equivalent boilers at select SAGD operations, for consistency with current policy) for at least the first few years.</li> </ul>	No change made.
7	7	A realistic implementation data for this would be 2019 reporting year due Sept 2020. Unless finalization can occur prior to 2016 start.	The effective date for the emissions inventory reporting requirements has already been pushed back and cannot be pushed back any further without needing to collect emissions data in the interim. Environment and Parks is still relying on 2008 emissions data that was collected through a mandatory air emissions survey. An additional air emissions survey was planned for 2014, but was not carried out as the revised Reporting Chapter requires the submission of very similar information.  The deadline for the first emissions inventory report has been pushed back to September 2019.	Deadline for first emissions inventory report pushed back to 2019.
7	7	It may be valuable to have a working group like we did for the forms for the emissions inventory reporting, this section has not had the scrutiny of the others as we keep being told to wait and it's too important to rush.	This will be considered. The form and guidance document will not be finalized until they have been reviewed by stakeholders.	No change made.
7	7	Section 7 constantly references the guidance document that is not available yet and the form. It is absolutely impossible to know if we can meet the requirement of this section without these supporting documents.	The main requirements of AMD emissions inventory reporting are stated in the AMD Reporting Chapter. The Annual Emissions Inventory Report Standard and Guidance Document mainly just provide guidance and clarifications to help with preparing the inventory and filling in the reporting form. Industry will have the opportunity to review the Standard and Guidance Document before it is finalized. As previously stated:  <ul style="list-style-type: none"> <li>• No additional substances are anticipated to be added via the Annual Emissions Inventory Report Standard and Guidance Document for at least the first few years.</li> <li>• Only one estimation methodology is anticipated as being specified in the Annual Emissions Inventory Report Standard and Guidance Document (use of CEMS for equivalent boilers at select SAGD operations, for consistency with current policy) for at least the first few years.</li> </ul>	No change made.

Section	Clause	Comment	Response	Action Taken
7	7	The requirement for methodology changes to be approved in writing by the Director will add administrative tasks to both industry and government. In order to calculate the most reasonable emissions estimates year over year, methods must be adjusted depending on available information and conditions. It is doubtful that AEP has or will have the manpower capacity to accommodate this in the timeframes that would be required. As an alternative, our company suggests mandatory annual updates to the methodology document with all changes summarized in a separate section. It is possible that this document could have an earlier submission date to allow time for AEP to review and ask questions if desired. It is thought this alternative meets the objectives of AEP without adding overly onerous administrative tasks to either party.	Specific criteria for changing methodologies will be outlined in the Annual Emissions Inventory Report Standard and Guidance Document. It is unlikely that any request to change a methodology that meets these criteria would be rejected. Criteria will likely include: (a) the previous method is no longer acceptable to use because of process/equipment/fuel changes at the source; (b) source monitoring information (CEMS, stack sampling) is now available in place of the previously estimated emissions; etc.  All approved changes in estimation methods will also be documented in the Quantification Methodology Document.	No change made.
7	7	It is still unclear what substances are required as there are multiple locations within the document that reference multiple locations including but not limited to; AEIRSG document, NPRI, Appendix B Schedule 1, and Appendix C Schedule 2. Not all of these are referenced in the Regulatory Compliance notes and there are redundancies in this. It is recommended that a single list be created, similar to that for NPRI, to improve clarity and make compliance with Section 7 less dependant on interpretation.	Schedule 1 and Schedule 2 provide the list of reportable substances. No additional substances are anticipated to be added via the Annual Emissions Inventory Report Standard and Guidance Document for at least the first few years. Schedule 2 substances have an additional condition of whether or not they are "applicable" to the specific industrial operation. This is why these substances are presented in a separate list from Schedule 1.	No change made.
7	7	It is very disappointing that the Annual Emissions Inventory Guidance Document has not been released along with the draft Chapter. It is very difficult to fully assess the impact of the requirements without understanding AEP's expectations as laid out in the Guidance Document. We suggest that the first Emissions Inventory Reporting date be shifted to provide industry a full 2 years to develop compliance plans after the Guidance Document is released in final.	Industry will have the opportunity to review the Annual Emissions Inventory Report Standard and Guidance Document prior to it being finalized.  The effective date for the emissions inventory reporting requirements has been pushed back to 2019.	Emissions inventory submission deadline extended to 2019.
7	7	There are situations at our facilities, where we meter the total fuel to multiple combustion sources and determine the total emission from the combined sources. This is suitable for NPRI, but would not be suitable for AMD due to the fact that emissions need to be reported at the source level. Adding meters on each line will be a substantial cost to industry and will require time to budget and install with field operations. Again, without seeing the Guidance Document and knowing what is considered an acceptable calculation method to AEP, we cannot fully assess the impacts of these requirements.	Adding meters to all individual sources will not be required. There are several acceptable methods of allocating activity data for a group of sources to the individual associated sources. Guidance will be provided in the Annual Emissions Inventory Report Standard and Guidance Document and is already available as part of emissions inventory reporting programs in other jurisdictions.	No change made.
7	7	Chemistry industry members are not against providing the annual emissions reporting data to the government. However, we are of the view that this can be done in more efficient ways, including leveraging data that have been reported elsewhere. We are willing to work with government to identify these other options and to provide data that is of value and that can be used to good purpose.	The National Pollutant Release Inventory is not sufficient for meeting Alberta's air emissions inventory data requirements. The Reporting Chapter is requiring more detailed and comprehensive information than the national reporting system. This level of detail is needed in order for the government to make robust policy and air quality management decisions that are placed-based and can examine specific technologies and sectors.	No change made.
7	Effective Dates	With current publication and effective dates of the Air Monitoring Directive, producers will only have one year to fully implement changes to information collection and data infrastructure. This is not a reasonable timeframe for compliance given the scope and scale of information being requested under Section 7. Understanding that the current AMD requires an update and that AEP is interested in implementing change in a timely manner, we recommend that the effective date be adjusted to allow for a reasonable transition period to be accommodated.	The effective date for the emissions inventory reporting requirements has been pushed back to 2019.	Emissions inventory submission deadline extended to 2019.

Section	Clause	Comment	Response	Action Taken
7	Emissions Inventory Form	The use of spreadsheets to collect this type and volume of data is concerning. As the spreadsheets will be protected, any changes to the format of the spreadsheet from year to year will require re-entering all of the static facility and stack data into the new spreadsheet or copying it from the previous year cell-by-cell. This is the current situation with SGER and it presents a constant challenge. An on-line database application with a prefill function and bulk upload data capacity is desirable.	<p>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. At some point down the road, it may be necessary to overhaul and replace the existing form, which may require re-entering of data. At that point, AEP would consider developing an import tool to help transfer data between the old form and the new form.</p> <p>While a more robust online reporting system would perhaps be ideal, it is beyond the scope of the updates to the Air Monitoring Directive and likely a longer-term future solution. It may not be practical to spend significant funding on an ongoing basis to collect only air information, when water, land and other environmental data is also being reported to the department by various methods. Spreadsheets are a low cost, practical, solution that is achievable within the available timeframe, and provides an opportunity to test the new reporting requirements before moving to a longer-term reporting solution.</p>	No change made.
7	Guidance Document	The Annual Emissions Inventory Report Standard and Guidance Document (RC 7-Q, guidance document) will specify methodologies, emission factors, etc. to be used to prepare the inventory of substances reported in the Industrial Emissions Inventory Report. (The guidance document is not available to review at this time.) a. Will we have an opportunity to review and comment on the guidance document before it is finalized?	Industry will have the opportunity to review the Annual Emissions Inventory Report Standard and Guidance Document prior to it being finalized.	No change made.
7	Guidance Document	b. Will the methodologies in the guidance document align with NPRI methodologies?	The Annual Emissions Inventory Report Standard and Guidance Document will mainly provide guidance on what methodologies should be used. At this time, 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 change made.
7	Guidance Document	c. Will the guidance document allow the industrial operator to select the methodologies applicable to the facility's unique characteristics?	Yes, with the exception of the prescribed surrogate CEMS method and the use of CEMS/stack sampling monitored emissions data, an industrial operator can select the method they feel is most appropriate for their facility's unique characteristics.	No change made.
7	Guidance Document	d. Will the guidance document be published by mid-2016, so that the methodologies can be included in the industrial facility 2017 sampling plan?	Timelines are not yet set on published the draft Annual Emissions Inventory Report Standard and Guidance Document and draft Annual Emissions Inventory Report Form for review by industry. AEP will strive to get these out for public review as soon as possible after Ch 9 requirements have been finalized.	No change made.
7	Guidance Document	e. Why does the AMD Appendix C - Schedule 1: Additional Substances List contain substances that are not on the NPRI reporting list substances (Acetone and Ethyl chloroformate)?	<p>Neither of these substances are likely relevant to the power generation sector. However, these substances are potentially relevant to the Alberta chemicals sector.</p> <p>Whether a substance is reportable to the NPRI or not is not the only factor that determines whether it will be included in the AMD emissions inventory reportable substance schedules.</p> <p>Both of these substances have Alberta Ambient Air Quality Objectives and at least one facility in the province has an emission limit for ethyl chloroformate. Acetone was emitted by Alberta chemical plants in the past and could become relevant again. If these substances are not being emitted by your facility, then you will not be required to report them.</p>	No change made.
7	Guidance Document	AEP is yet to release both the Annual Emissions Inventory Report Standard and Guidance Document (AEIRSG document) and the Annual Emissions Inventory Report Form (AEIR Form). Our company is very concerned to commit to a compliance timeline of either 2017 (for monthly reporting) or 2018 (for annual reporting) without a comprehensive review of these documents.	<p>Industry will have the opportunity to review the draft Annual Emissions Inventory Report Standard and Guidance Document and draft Annual Emissions Inventory Report Form prior to them being finalized. The guidance document is guidance only to assist in completion of the inventory and filling out the form.</p> <p>Annual Emissions Inventory Reporting is separate from monthly and annual reports.</p> <p>The effective date of the Reporting Chapter was changed to January 2019.</p>	The effective date of the Reporting Chapter has been changed to January 2019.

Section	Clause	Comment	Response	Action Taken
7	Guidance Document	We suggest that AEP after releasing AEIRSG document and AEIR form for public review and comments, open up the compliance timelines for industry consensus.	The effective date for the emissions inventory reporting requirements has been pushed back to 2019. This additional time will allow more time for AEP to develop guidance documents and circulate for stakeholder review and comment. Timelines and cannot be pushed back any further without needing to collect emissions data in the interim. Environment and Parks is still relying on 2008 emissions data that was collected through a mandatory air emissions survey. An additional air emissions survey was planned for 2014, but was not carried out as the revised Reporting Chapter requires the submission of very similar information.	Emissions inventory submission deadline extended to 2019.
7	Guidance Document	We recommend that the Air Monitoring Directive issues the Guidance Document and Emission Reporting spreadsheet for stakeholder review as soon as possible.	Timelines are not yet set on published the draft Annual Emissions Inventory Report Standard and Guidance Document and draft Annual Emissions Inventory Report Form for review by industry. AEP will strive to get these out for public review as soon as possible after Ch 9 requirements have been finalized.	No change made.
7	Guidance Document	To date, the Guidance Document as detailed in the Draft has yet to be shared with stakeholders. Without detailed information as to the prescribed methodologies of the requirements of the Draft as a whole, our industrial association members are limited in their ability to provide fulsome feedback as to the feasibility of the requirements. Our industrial association requests that this document be shared with stakeholders to provide a more thorough and meaningful review.	The main requirements of AMD emissions inventory reporting are stated in the AMD Reporting Chapter. The Annual Emissions Inventory Report Form simply provides the format and fields for reporting and industry will have the opportunity to review the form before it is finalized. The Annual Emissions Inventory Report Standard and Guidance Document mainly provide guidance and clarification to help with preparing the inventory and filling in the reporting form. Industry will have the opportunity to review the Standard and Guidance Document before it is finalized. As previously stated: <ul style="list-style-type: none"> <li>• No additional substances are anticipated to be added via the Annual Emissions Inventory Report Standard and Guidance Document for at least the first few years.</li> <li>• Only one estimation methodology is anticipated as being specified in the Annual Emissions Inventory Report Standard and Guidance Document (use of CEMS for equivalent boilers at select SAGD operations, for consistency with current policy) for at least the first few years.</li> </ul>	No change made.
7	Inventory Form	After an initial review of the AMD updates, I do not see the Emissions Inventory Report Form. Is this going to be posted for this next round of reviews?	Timelines are not yet set on published the draft Annual Emissions Inventory Report Standard and Guidance Document and draft Annual Emissions Inventory Report Form for review by industry. AEP will strive to get these out for public review as soon as possible after Ch 9 requirements have been finalized.	No change made.
7	RC 7-C	This reads as if the approval holder does not meet any of the thresholds identified in Table 1, then no annual emissions inventory report is required even if the facility has emissions of chemicals listed in the other schedule of the Appendices. If the thresholds are met, then report is required not only on those substances listed in Table 1, but ALL the other substances listed in Appendix C, of which there are no threshold amounts listed. This seems highly onerous.  Recommendation: AEP should identify some reasonable threshold values for Appendix C so industry is not reporting on 'grams' of substances released.	Table 1 sets out the reporting thresholds. If a facility does not meet any of these reporting thresholds, then submission of an Annual Emissions Inventory Report Form is not required.  Reporting is not necessarily required for every schedule 2 substance, only the substances applicable to the industrial operation, as described in the AMD Reporting Chapter.	No change made.
7	RC 7-D	There continues to be confusion on the difference between annual "actual" and what are normal emissions when normal is defined as the average emissions.  Recommendation: Provide additional clarification on the 'normal' emissions. If this is meant to be a 5-year average of 'actual', then state is as such. The risk is that by not being specific about what is required, several different interpretations by industry will arise which will lead to inherent data quantification differences.	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. 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 change made.

Section	Clause	Comment	Response	Action Taken
7	RC 7-D	In RC 7-D (b), the proposed requirement is to provide annual actual air emissions, normal air emissions and maximum air emissions for each of the applicable substances listed in Appendix C Schedule 2. Typically these emissions are calculated based on estimates of feed compositions or process knowledge and as such, these substances will not have specific site emission limits. For example, metals in combustion emissions are based on a very limited number of samples, or industry data for the fuel source. This is then extrapolated into an annual emission estimate based on the total volume of fuel combusted. As such, while the emissions can be estimated, all of the values have a high degree of uncertainty. Many of the emission factors published by US EPA for these substances have 95% confidence intervals that are in the range of ±50-100+%. Providing normal and maximum emission rates would suggest a degree of knowledge that is not typically available for these substances. Further, given that the uncertainty in emission factors is so large, providing normal and maximum emission rates is unlikely to provide any additional useful information – the range in emissions between normal, actual and maximum is dwarfed by the uncertainty in emission factors. Based on these operational considerations and limitations, our industrial association would recommend that the requirement for normal and maximum emissions be deleted for these substances.	<p>Although not necessarily common to all sectors, there are emission limits on several Schedule 2 substances.</p> <p>There are many sources and pollutants that can have higher uncertainty on quantities being released, whether they be annual actual, normal or maximum rates. Higher uncertainty does not mean they should be excluded from an emissions inventory. The users of the inventory information must be aware of these higher uncertainties, but all relevant sources and emissions must still be accounted for.</p> <p>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 emission rates are meant to be representative of what is normally emitted from sources at a facility and a representative normal rate should be reported for the specific source at the facility. It is anticipated that normal and maximum emission rates will not need to be changed every year, facilities are only required to update these when the normal and maximum rates they previously reported are no longer representative.</p> <p>In order to model different emissions scenarios, if the facility does not estimate normal and maximum emissions it leaves the regulator having to estimate these instead.</p>	No change made.
7	RC 7-D (b)	Regarding section RC 7-D (b), the proposed requirement is to provide annual actual air emissions, normal air emissions and maximum air emissions for each of the applicable substances listed in Appendix C Schedule 2. It is recommended that the requirement for normal and maximum emissions be deleted for these substances. Typically these emissions will be calculated based on estimates of feed compositions or process knowledge and typically these substances will not have specific site emission limits. For example, metals in combustion emissions are based on a very limited number of samples, or industry data for the fuel source. This is then extrapolated into an annual emission estimate based on the total volume of fuel combusted. As such, while the emissions can be estimated, all of the values have a high degree of uncertainty. Providing normal and maximum emission rates would suggest a degree of knowledge that is not typically available for these substances.	<p>Although not necessarily common to all sectors, there are emission limits on several Schedule 2 substances.</p> <p>There are many sources and pollutants that can have higher uncertainty on quantities being released, whether they be annual actual, normal or maximum rates. Higher uncertainty does not mean they should be excluded from an emissions inventory. The users of the inventory information must be aware of these higher uncertainties, but all relevant sources and emissions must still be accounted for.</p> <p>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 emission rates are meant to be representative of what is normally emitted from sources at a facility and a representative normal rate should be reported for the specific source at the facility. It is anticipated that normal and maximum emission rates will not need to be changed every year, facilities are only required to update these when the normal and maximum rates they previously reported are no longer representative.</p> <p>In order to model different emissions scenarios, if the facility does not estimate normal and maximum emissions it leaves the regulator having to estimate these instead.</p>	No change made.
7	RC 7-D and RC 7-P	We have concerns regarding sections RC 7-D and RC 7-P. We believe these requirements will add additional administrative burden to facilities already required to report under NPRI.	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 (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.	No change made.
7	RC 7-D and RC 7-P	We see limited value to the AMD in the information which is often based on estimates, as outlined below.	<p>Most sources and pollutants are not based on continual measurements and preparing an inventory using only non-estimated (measured) sources would not be practical, as it would either exclude most sources and pollutants, or would require continual measurement of all sources for the applicable pollutants.</p> <p>There are also many sources and pollutants that can have higher uncertainty on quantities being released, whether they be annual actual, normal or maximum rates. Higher uncertainty does not mean they should be excluded from an emissions inventory. The users of the inventory information must be aware of these higher uncertainties, but all relevant sources and emissions must still be accounted for.</p>	No change made.

Section	Clause	Comment	Response	Action Taken
7	RC 7-D(b)	RC 7-D(b) – The emissions inventory should focus on reporting actual emissions only. From an industrial operating and reporting perspective, trying to assess ‘normal’ and ‘maximum’ emissions doesn’t add value in the context of routine reporting. Rather, this type of information is appropriate for approval applications and renewals, where operating rates, design, and emissions modeling are considered. Further, in cases where an emissions limit is defined in an Approval, what other maximum emissions rate would make sense for an industrial facility to report?	<p>It is anticipated that normal and maximum emission rates will not need to be changed every year, facilities are only required to update these when the normal and maximum rates they previously reported are no longer representative.</p> <p>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 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.</p> <p>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.</p>	No change made.
7	RC 7-D(b)	In Item 7-D (b), it does not makes sense to have three emission rates (normal/annual/maximum) for the Schedule 2 substances. While the emissions can be estimated, all of the values have a high degree of uncertainty. Providing normal and maximum emission rates would suggest a degree of knowledge that is not typically available for these substances. Most likely, companies will report the exact same rate three times as they will not have better data to provide. The only substances for which normal/annual/maximum emissions is possible to provide with any level of accuracy are SO <sub>2</sub> , NO <sub>2</sub> , CO, and PM. We urge AEP to reconsider the requirements in Item 7-D and limit these to only the substances mentioned above or, at most, to those substances listed in Table 1.	<p>There are many sources and pollutants that can have higher uncertainty on quantities being released, whether they be annual actual, normal or maximum rates. Higher uncertainty does not mean they should be excluded from an emissions inventory. The users of the inventory information must be aware of these higher uncertainties, but all relevant sources and emissions must still be accounted for.</p> <p>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 emission rates are meant to be representative of what is normally emitted from sources at a facility and a representative normal rate should be reported for the specific source at the facility. It is anticipated that normal and maximum emission rates will not need to be changed every year, facilities are only required to update these when the normal and maximum rates they previously reported are no longer representative.</p>	No change made.

Section	Clause	Comment	Response	Action Taken
7	RC 7-D(b)	In RC 7-D (b), the proposed requirement is to provide annual actual air emissions, normal air emissions and maximum air emissions for each of the applicable substances listed in Appendix C Schedule 2. It is recommended that the requirement for normal and maximum emissions be deleted for these substances.	<p>It is anticipated that normal and maximum emission rates will not need to be changed every year, facilities are only required to update these when the normal and maximum rates they previously reported are no longer representative.</p> <p>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 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.</p> <p>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.</p> <p>In order to model different emissions scenarios, if the facility does not estimate normal and maximum emissions it leaves the regulator having to estimate these instead.</p>	No change made.
7	RC 7-D(b)	<p>Typically these emissions will be calculated based on estimates of feed compositions or process knowledge and typically these substances will not have specific site emission limits.</p> <p>For example, metals in combustion emissions are based on a limited number of samples, or industry data for the fuel source. Fuel composition data is then extrapolated into an annual emission estimate based on the total volume of fuel combusted. As such, while the emissions can be estimated, all of the values have a high degree of uncertainty. Providing normal and maximum emission rates would suggest a degree of knowledge not typically available for these substances.</p>	<p>Although not necessarily common to all sectors, there are emission limits on several Schedule 2 substances.</p> <p>There are many sources and pollutants that can have higher uncertainty on quantities being released, whether they be annual actual, normal or maximum rates. Higher uncertainty does not mean they should be excluded from an emissions inventory. The users of the inventory information must be aware of these higher uncertainties, but all relevant sources and emissions must still be accounted for.</p> <p>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 emission rates are meant to be representative of what is normally emitted from sources at a facility and a representative normal rate should be reported for the specific source at the facility. It is anticipated that normal and maximum emission rates will not need to be changed every year, facilities are only required to update these when the normal and maximum rates they previously reported are no longer representative.</p>	No change made.
7	RC 7-E(c)	Item RC 7-E (c) seems to indicate that the Guidance Document can provide additional reporting requirements. All reporting requirements should be included in the AMD, not in the Guidance Document. The Guidance Document should be a "how to" guide which provides instructions/methodology only. We suggest that this requirement be removed.	<p>The main requirements of AMD emissions inventory reporting are stated in the AMD Reporting Chapter. The Annual Emissions Inventory Report Standard and Guidance Document mainly provides guidance and clarifications to help with preparing the inventory and filling in the reporting form. Industry will have the opportunity to review the Standard and Guidance Document before it is finalized. As previously stated:</p> <ul style="list-style-type: none"> <li>• No additional substances are anticipated to be added via the Annual Emissions Inventory Report Standard and Guidance Document for at least the first few years.</li> <li>• Only one estimation methodology is anticipated as being specified in the Annual Emissions Inventory Report Standard and Guidance Document (use of CEMS for equivalent boilers at select SAGD operations, for consistency with current policy) for at least the first few years.</li> </ul>	No change made.

Section	Clause	Comment	Response	Action Taken
7	RC 7-L	RC 7-L (a) requires a "description of all air emission release points at the industrial operation;". Clarification should be provided around what is considered a release point.  Recommendation: Provide guidance that defines a release point as those points at a plant that are subject to monitoring, reporting or limits in an approval.	"air emission release point" is already 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".  Sources releasing to the atmosphere that cannot be traced back to a single point would fall under the definition for an "air emission non-point source".	No change made.
7	RC 7-L(a)	RC 7-L (a) "(i) identification and (ii) description of all air emission release points at the industrial operation" – The use of the word all is expansive. For example, our facility approval acknowledges that there are a number of emission points described in the application, including things like building ventilation vents, maintenance exhausts, etc. As written, the annual reporting of the emissions inventory is an enormous undertaking for industry if we were mandated to include all sources. Further thought to refine the request to a reasonable level of effort and value is needed.	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.  The groups of small point sources that you mention could potentially be grouped and categorized as non-point sources. They are likely too small and numerous to practically be inventoried as individual point sources. The approval categories of groups of small point sources would likely be a good way of categorizing these as non-point sources.	No change made.
7	RC 7-L(a)	RC 7-L (a) requires a "description of all air emission release points at the industrial operation". Clarification should be provided around what is considered a release point. The suggestion would be to provide wording that defines a release point as those points at a site that are subject to monitoring, reporting or limits in an approval.	"air emission release point" is already 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".  Sources releasing to the atmosphere that cannot be traced back to a single point would fall under the definition for an "air emission non-point source".	No change made.
7	RC 7-L(d) and RC 7-N(d)	Requirements RC 7-L (d) and RC 7-N (d) which require the identification and description of all processes, units, and equipment at the industrial operation which emit to the atmosphere using the air emission release points is excessive and we suggest that it be removed.	The processes, units and equipment emitting via a release point is critical information for a source-level emissions inventory.  Facilities are required to report descriptive information about these processes, units and equipment, but will not have to report emissions prior to release to the atmosphere (reporting emissions values will only be required for the release points themselves).  Example: Two boilers emit to the atmosphere using a single stack. Air emissions must be reported for the stack, but only descriptive information is required for the two boilers (such as: manufacturer, model number, fuel type, design capacity, year of manufacture, year of installation, power rating, load rating, hours of operation, etc.).  Most of this descriptive information will not change from one year to the next, and the same reporting form can be used from one year to the next. An industrial operator can use the previous year's reporting form and simply update any information that has changed (and report the additional information required for the specific calendar year).	No change made.
7	RC 7-M	Requirement RC 7-M references RC 7-C but we believe it should reference RC 7-D.	This is the correct reference. RC 7-C is the requirement to prepare and submit an annual emissions inventory report.	No change made.
7	RC 7-N (h, i, j)	Requirements in RC 7-N (h), (i), and (j) are vague and the impacts are difficult to assess without seeing the form. Once again, due to the unknown level of impact, we urge AEP to delay release of the Chapter until Industry has a chance to review the Guidance Document and Emission Inventory Form.	The main requirements of AMD emissions inventory reporting are stated in the AMD Reporting Chapter. The Annual Emissions Inventory Report Form provides the format and fields for reporting and industry will have the opportunity to review the form before it is finalized. The specific fields on storage tanks, exposed storage piles, mine fleets, mine faces and tailings pond will be specified in the Annual Emissions Inventory Report Form.	No change made.
7	RC 7-P	In RC 7-P (a), the proposed requirement would have operators provide an identification and description of any changes from the previous year greater than 10%. The estimation process is such that for most of the Schedule 2 substances, the explanation will be simply that the process throughput for the unit changed. For this reason, our industrial association recommends that this information only be required for Schedule 1 substances.	That would be an acceptable explanation for changes in emissions for sources whose emissions are calculated that way. As with any source, if the activity associated with the release changes there will likely be some change in the associated air pollutants being released.	No change made.
7	RC 7-P (a)	In RC 7-P (a), the proposed requirement is to provide an identification and description of any changes from the previous year greater than 10%. It is recommended that this information only be required for Schedule 1 substances. The estimation process is such that for most of the Schedule 2 substances, the explanation will be simply that the process throughput for the unit changed.	That would be an acceptable explanation for changes in emissions for sources whose emissions are calculated that way. As with any source, if the activity associated with the release changes there will likely be some change in the associated air pollutants being released.	No change made.



Section	Clause	Comment	Response	Action Taken
7	RC 7-P(a)	In RC 7-P (a), the proposed requirement is to provide an identification and description of any changes from the previous year, greater than 10%. It is recommended that this information only be required for Schedule 1 substances. The estimation process is such that for most of the Schedule 2 substances, the descriptor will be simply that the throughput for the process had changed.	That would be an acceptable explanation for changes in emissions for sources whose emissions are calculated that way. As with any source, if the activity associated with the release changes there will likely be some change in the associated air pollutants being released.	No change made.
7	RC 7-P(c)	The requirement in RC 7-P (c) to include a listing of negligible sources is unwarranted and provides little value for the effort required. We urge you to delete this requirement.	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.  It is of benefit to industry to allow for very small sources to be identified as negligible and not have to report emissions for them. The alternative would be to require quantification for all sources regardless of how small their emissions may be.	No change made.
7	RC 7-P(e)	Requirement 7-P (e) is very open-ended and this is concerning since we have not been provided the form for review. There could be new requirements introduced which we are unaware of. Requirements should be summarized in AMD only, not within the Guidance Documents and Forms. Guides and Forms should only explain how to meet the requirements in the AMD. Although AEP has indicated on the Webinars that this is the intent, the current AMD language does not appropriately reflect the intent.	This is a standard catch-all used for all AMD forms (and most other AEP reporting forms) to ensure consistency between the Directive and the associated reporting forms. Without such a clause, every single field on a reporting form would need to be individually listed in the clauses in the Directive.  Industry will have the opportunity to review the Annual Emissions Inventory Report Form prior to it being finalized.	No change made.
7	RC 7-T	Requiring written authorization from the Director to use a different measurement, estimation methodology, or emission factor as indicated in Item RC 7-T is problematic as it may lead to submission delays. It is recommended that this requirement be removed.	Specific criteria for changing methodologies will be outlined in the Annual Emissions Inventory Report Standard and Guidance Document. It is unlikely that any request to change a methodology that meets these criteria would be rejected. Criteria will likely include: (a) the previous method is no longer acceptable to use because of process/equipment/fuel changes at the source; (b) source monitoring information (CEMS, stack sampling) is now available in place of the previously estimated emissions; etc.  All approved changes in estimation methods will also be documented in the Quantification Methodology Document.	No change made.
7	RC 7-V	This section of the Chapter requires the development of a Quantification Methodology Document. This is a SIGNIFICANT undertaking given the amount of information required by Section 7. Many facilities have developed internal procedures and documents that guide the annual data collection process, but that documentation may not be as comprehensive as is required herein, and it may involve MANY individual documents that make up the entire system.  Recommendation: Consider recommending the development of a QMD or equivalent documentation that describes the emissions reporting process at a facility. For SGER, the requirement for a QMD was phased in over several years.	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 and as personnel change, as is required by the AMD.	No change made.
7	RC 7-V	Item RC 7-V which requires the preparation of a Quantification Methodology Document is very burdensome and should not be required considering that we are already required to follow AEP's Guidance Document. As indicated above, there should be some level of trust that Industry will meet the requirements as laid out in the Guidance Document.	The Annual Emissions Inventory Report Standard and Guidance Document will mainly provide guidance on what methodologies should be used. At this time, 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).  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 change made.
7	RC 7-W(c) and (d)	Items RC 7-W (c) and (d) ask for maximum and normal emissions from non-point sources. As per the webinar, this requirement was removed and this text should be updated.	Agreed.	Clause revised to separate air emission release point and air emission non-point source
7.1	RC 7-A, 1	This in particular will be severely challenging to meet. There needs to be a full two years and it needs to be a phased in approach where companies start reporting in year 201X and must be fully compliant by 201(X+2).	The effective date for the emissions inventory reporting requirements has been pushed back to 2019.	Emissions inventory submission deadline extended to 2019.

Section	Clause	Comment	Response	Action Taken
7.2.1	7.2.1	A definition should be added in Section 7.2.1 which explains how to determine "applicable substances".	<p>Guidance is already provided in section 7. Additional guidance may be provided in the Annual Emissions Inventory Report Standard and Guidance Document.</p> <p>As the emissions inventory requirements apply to EPEA approved industrial facility, facilities should know what substances they typical emit to the atmosphere, and also which typically must be tracked and/or reported according to their approval, the NPRI or other reporting programs.</p>	No change made.
7.2.1	7.2.1	In Section 7.2.1, reference is made to "amounts that can be quantified with reasonable effort". Who decides what is reasonable? We want to ensure that these requirements do not force the installation of additional meters or measurement equipment beyond what our facilities already have installed.	<p>Generally speaking, "reasonable effort" is what a reasonable person would do in the individual circumstance to meet the requirement, taking all factors into account. This differs from "best effort", which would require doing almost anything if something is remotely possible. For example, 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.</p> <p>Adding meters to all individual sources would not be required. However, reasonable effort would require the use of other estimation methods (e.g., emission factors, engineering judgements, source allocation, information from equipment manufacturer, etc.) to quantify the approximate emissions for substances that the facility is actually emitting (based on criteria such as: approval conditions, previous NPRI reporting, other quantification carried out by the facility, etc.).</p> <p>As the emissions inventory requirements apply to EPEA approved industrial facility, facilities should know what substances they typical emit to the atmosphere, and also which typically must be tracked and/or reported according to their approval, the NPRI or other reporting programs.</p>	No change made.
7.2.1	7.2.1	Section 7.2.1, page 70 refers to road dust and space heating. Is AEP's expectation that these types of sources be quantified? We rarely calculate space heating emissions. We do not calculate road dust for NPRI unless the on-site distance travelled on unpaved roads is greater than 10,000 km in the calendar year. Will the expectation be the same? Again, without seeing the Guidance Document, it is not possible to assess the impact of these requirements.	Depending on the type of the operation, these sources could be large enough to warrant quantification. 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 change made.
7.2.1	RC 7 -D & E, 3	<p>This would be highly burdensome in some cases as we have multiple point sources feeding into a single release point. In some cases we are capable of singling pieces of equipment out with current meters but in other cases we do not and it would require meter installation. This is not at all feasible to coordinate in the timeframes provided.</p> <p>Recommendation - if this is something that will be pushed through then it must be understood that estimation methods may need to be used to determine the percent contribution of each unique identifiable source.</p> <p>Extension on the currently listed 1 year timeframe to become compliant with this.</p>	<p>Adding meters to all individual sources will not be required. There are several acceptable methods of allocating activity data for a group of sources to the individual associated sources. Guidance will be provided in the Annual Emissions Inventory Report Standard and Guidance Document and is already available as part of emissions inventory reporting programs in other jurisdictions.</p> <p>The effective date for the emissions inventory reporting requirements has been pushed back to 2019, and cannot be pushed back any further without needing to collect emissions data in the interim. Environment and Parks is still relying on 2008 emissions data that was collected through a mandatory air emissions survey. An additional air emissions survey was planned for 2014, but was not carried out as the revised Reporting Chapter requires the submission of very similar information.</p>	Emissions inventory submission deadline extended to 2019.
7.2.1	RC 7 -D & E, 4	<p>What constitutes reasonable effort?</p> <p>Recommendation- provide a definition.</p>	Generally speaking, "reasonable effort" is what a reasonable person would do in the individual circumstance to meet the requirement, taking all factors into account. This differs from "best effort", which would require doing almost anything if something is remotely possible. For example, 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.	No change made.

Section	Clause	Comment	Response	Action Taken
7.2.1	RC 7 -D & E, 4	Release Chapter 9 with Section 7 still in draft and hold off on implementation of Section 7 until a full review period is completed.	<p>The review process for the Reporting Chapter has already included:</p> <ul style="list-style-type: none"> <li>•Holding several stakeholder webcasts to present the draft chapters, go through the feedback received, present the department's response to the feedback and explain the rationale behind requirements in Chapter 9 (September 2014, February 2015 and September 2015).</li> <li>•Meetings with individual industry groups to better understand their concerns with the proposed reporting requirements (January and February 2015).</li> <li>•Convening a Reporting Forms Task Team to go through the reporting forms with industry and airshed stakeholders (June 2015).</li> <li>•Changing Chapter 9 based on the feedback received, including aligning better with approval requirements and regulations.</li> <li>•Emissions inventory requirements were amended so that required pollutants better align with the National Pollutant Release Inventory and an additional year was provided before emissions inventory reports will be required.</li> <li>•Two drafts were provided for stakeholder review, something not done for the revisions of any of the other chapters of the Air Monitoring Directive.</li> </ul> <p>The main requirements of AMD emissions inventory reporting are stated in the AMD Reporting Chapter. The Annual Emissions Inventory Report Form simply provides the format and fields for reporting and industry will have the opportunity to review the form before it is finalized. The Annual Emissions Inventory Report Standard and Guidance Document mainly just provides specific guidance and clarifications to help with preparing the inventory and filling in the reporting form. Industry will have the opportunity to review the Standard and Guidance Document before it is finalized. As previously stated:</p> <ul style="list-style-type: none"> <li>• No additional substances are anticipated to be added via the Annual Emissions Inventory Report Standard and Guidance Document for at least the first few years.</li> <li>• Only one estimation methodology is anticipated as being specified in the Annual Emissions Inventory Report Standard and Guidance Document (use of CEMS for equivalent boilers at select SAGD operations, for consistency with current policy) for at least the first few years.</li> </ul>	No change made.
7.2.1	RC 7 -D & E, 4 bullets	<p>Is this in addition to the listed substances? If so then why even bother including the NPRI reportable substances in the schedule as this is redundant and gives the impression that these are all that is required when it is clear that this is not the case.</p> <p>Recommendation - There should be one location for all of the reportable substances, one table that includes all. Additionally if this is a requirement it should be in the RC 7 form not in a notes format.</p>	<p>Schedule 1 and Schedule 2 provide the list of reportable substances. No additional substances are anticipated to be added via the Annual Emissions Inventory Report Standard and Guidance Document for at least the first few years. Schedule 2 substances have an additional condition of whether or not they are "applicable" to the specific industrial operation. This is why these substances are presented in a separate list from Schedule 1.</p>	No change made.
7.2.1	RC 7-E (c)	<p>Why include additional substances and requirements in the guidance document? Should incorporate in the appendices as nobody has access to the guidance document yet and we cannot comment.</p> <p>Recommendation - there should only be one location where the reportable substances can be found including them in multiple locations only creates confusion. Revise this clause to include requirements from the bullets in the paragraph below and to reflect a single source of required reportable substances.</p>	<p>Schedule 1 and Schedule 2 provide the list of reportable substances. No additional substances are anticipated to be added via the Annual Emissions Inventory Report Standard and Guidance Document for at least the first few years. Schedule 2 substances have an additional condition of whether or not they are "applicable" to the specific industrial operation. This is why these substances are presented in a separate list from Schedule 1.</p>	No change made.
7.2.1	Table 1	<p>Since the reporting thresholds in Table 1 are the same as the NPRI reporting thresholds, there should be a specification for TPM, PM10 and PM2.5 that these substances refer to filterable particulate matter to be consistent with NPRI reporting.</p>	<p>This will be clarified in the Annual Emissions Inventory Report Standard and Guidance Document. This will likely just be filterable particulate matter for consistency with the NPRI. However, the US EPA and many US state agencies have added condensable PM for PM2.5 emissions reporting and the NPRI has also been considering adding this as well. The AMD emissions inventory requirements may also add condensable PM at some point in the future.</p>	No change made.
7.2.1	RC 7-D	<p>Please confirm that only Appendix B Schedule 1 substances whose emissions meet the reporting thresholds in Table 1 are required to be included in the annual emission inventory.</p>	<p>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. If a facility does not actually emit say sulphur dioxide or ammonia, the facility can either enter zero emissions or can identify the schedule 1 pollutant as negligible and thus exclude it from reporting. More information on negligible sources and pollutants will be provided in the Annual Emissions Inventory Report Standard and Guidance Document.</p>	No change made.

Section	Clause	Comment	Response	Action Taken
7.2.2	2, 4	We need a delivery date in order to determine if this is reasonable and we are all aware that this cannot be provided at this time. Section 7 compliance is completely dependent on the availability and content on these two documents.	The main requirements of AMD emissions inventory reporting are stated in the AMD Reporting Chapter. The Annual Emissions Inventory Report Form provides the format and fields for reporting and industry will have the opportunity to review the form before it is finalized. The Annual Emissions Inventory Report Standard and Guidance Document mainly provides guidance and clarifications to help with preparing the inventory and filling in the reporting form. Industry will have the opportunity to review the Standard and Guidance Document before it is finalized. As previously stated: <ul style="list-style-type: none"> <li>• No additional substances are anticipated to be added via the Annual Emissions Inventory Report Standard and Guidance Document for at least the first few years.</li> <li>• Only one estimation methodology is anticipated as being specified in the Annual Emissions Inventory Report Standard and Guidance Document (use of CEMS for equivalent boilers at select SAGD operations, for consistency with current policy) for at least the first few years.</li> </ul>	No change made.
7.2.2	2, 4	Recommendations - The timelines associated with Section 7 need to be based on two years after the release of these documents. Release Chapter 9 with Section 7 still in draft and hold off on implementation of Section 7 until a full review period is completed. If they are released after Jan 1 2016 and or rushed to be released by this date then it is not at all reasonable to expect compliance with Section 7 before the 2018 RY, submission in September 2019.	Submission date for emissions inventory has been pushed back to September 2019	Emissions inventory submission deadline extended to 2019.
7.2.2	7.2.2	This in particular will be severely challenging to meet. There needs to be a full two years and it needs to be a phased in approach where companies start reporting in year 201X and must be fully compliant by 201(X+2).	The effective date for the emissions inventory reporting requirements has been pushed back to 2019.	Emissions inventory submission deadline extended to 2019.
7.2.2	RC 7-H	The "annual emission inventory reporting form" has not yet been released, please allow additional time to review this document.	The main requirements of AMD emissions inventory reporting are stated in the AMD Reporting Chapter. The Annual Emissions Inventory Report Form provides the format and fields for reporting and industry will have the opportunity to review the form before it is finalized. <p>The effective date for the emissions inventory reporting requirements has been pushed back to 2019. This will allow AEP additional time to produce the guidance document and form and distribute to stakeholders for review and comment.</p>	Emissions inventory submission deadline extended to 2019.
7.2.2	RC 7-I	Without the document we cannot comment on whether or not this submission method is feasible nor can we start to prepare for the submission. <p>Recommendation - Release Chapter 9 with Section 7 still in draft and hold off on implementation of Section 7 until a full review period is completed.</p>	The Annual Emissions Inventory Report Standard and Guidance Document mainly provide guidance and clarifications to help with preparing the inventory and filling in the reporting form. Industry will have the opportunity to review the Standard and Guidance Document before it is finalized. As previously stated: <ul style="list-style-type: none"> <li>• No additional substances are anticipated to be added via the Annual Emissions Inventory Report Standard and Guidance Document for at least the first few years.</li> <li>• Only one estimation methodology is anticipated as being specified in the Annual Emissions Inventory Report Standard and Guidance Document (use of CEMS for equivalent boilers at select SAGD operations, for consistency with current policy) for at least the first few years.</li> </ul>	No change made.
7.2.3	RC 7-K (f) and RC 7-K (g)	In addition to other formats, please consider allowing the building and boundary location information to be provided in an AutoCAD or GIS format.	Requiring GIS or AutoCAD formats could be problematic, as not all industrial operators will necessarily have the required licensed programs. Also, standardizing things like projections, field naming and ordering, and metadata would be required. Without such standardization the submitted files would be difficult to use and to combine together. Requiring simplified lat/long or UTM locations will allow for the generation of standardized shape files and are also better suited for use in an inventory geodatabase. <p>AEP will consider whether to allow other location file types and this will be clarified in the Annual Emissions Inventory Report Standard and Guidance Document.</p>	No change made.

Section	Clause	Comment	Response	Action Taken
7.2.3 & 7.2.4	7.2.3 & 7.2.4	The precision of building downwash calculators like BPIP for dispersion modelling is not very refined and small buildings/tanks tend to be insignificant on most sites. Recommend only requiring the inclusion of buildings and tanks taller than ~ 10 m, which would simplify both submission of building dimensions and later modelling, without compromising result quality.	This will be consistent with the Alberta Air Quality Model Guideline, which takes into account the height of the building relative to the stack and the distance of the building from the stack (building's region of influence).	No change made.
7.2.3 & 7.2.4	RC 7-N (h, i, j)	Perhaps this information will be included in the Annual Emission Inventory Reporting Form, however please specify what data would be required for these air emission sources.	The specific fields on storage tanks, exposed storage piles, mine fleets, mine faces and tailings pond will be specified in the Annual Emissions Inventory Report Form.	No change made.
7.2.4	RC 7-L (b)	In addition to other formats, please consider allowing the point source spatial locations to be provided in an AutoCAD or GIS format.	Requiring GIS or AutoCAD formats could be problematic, as not all industrial operators will necessarily have the required licensed programs. Also, standardizing things like projections, field naming and ordering, and metadata would be required. Without such standardization the submitted files would be difficult to use and to combine together. Requiring simplified lat/long or UTM locations will allow for the generation of standardized shape files and are also better suited for use in an inventory geodatabase.  AEP will consider whether to allow other location file types and this will be clarified in the Annual Emissions Inventory Report Standard and Guidance Document.	No change made.
7.2.5	RC 7-N (c), (d), (i), & (j)	What parameters/information, these need to be specified and this would be better presented in a form format as well.  Recommendation - Prescribe what exactly is being asked for in a form format. Release Chapter 9 with Section 7 still in draft and hold off on implementation of Section 7 until a full review period is completed.	The specific fields on non-point sources, processes, units, equipment, storage tanks, exposed storage piles, mine fleets, mine faces and tailings pond will be specified in the Annual Emissions Inventory Report Form.	No change made.
7.2.6	RC 7-P (c)	What is the purpose of this ask? Are we to include all negligible sources such as BBQ's or only items such as a large pond because it contains potable water? Need clarity to be provided.  Recommendation - Release Chapter 9 with Section 7 still in draft and hold off on implementation of Section 7 until a full review period is completed.	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.  It is of benefit to industry to allow for very small sources to be identified as negligible and not have to report emissions for them. The alternative would be to require quantification for all sources regardless of how small their emissions may be.	No change made.
7.2.6	RC 7-P (e), (f), & (g)	For e, f, and g the form needs to be made available in order to comment on this.	The main requirements of AMD emissions inventory reporting are stated in the AMD Reporting Chapter. The Annual Emissions Inventory Report Form provides the format and fields for reporting and industry will have the opportunity to review the form before it is finalized.	No change made.
7.2.7	7.2.7	This is extremely challenging emissions Calculation methods often change year over year due to the sampling performed etc. requiring written approval will create an excessive amount of work that I am not sure government has the manpower to support.	Specific criteria for changing methodologies will be outlined in the Annual Emissions Inventory Report Standard and Guidance Document. It is unlikely that any request to change a methodology that meets these criteria would be rejected. Criteria will likely include: (a) the previous method is no longer acceptable to use because of process/equipment/fuel changes at the source; (b) source monitoring information (CEMS, stack sampling) is now available in place of the previously estimated emissions; etc.  All approved changes in estimation methods will also be documented in the Quantification Methodology Document.	No change made.
7.2.7	RC 7-Q	How are we to know what to do and what this looks like without looking at the document first. We cannot say if we are capable of meeting the deadlines and the prescribed methodologies nor are we able to prepare until this document is available.	The Annual Emissions Inventory Report Standard and Guidance Document will mainly provide guidance on what methodologies should be used. At this time, 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).  Industry will have the opportunity to review the Annual Emissions Inventory Report Standard and Guidance Document and Annual Emissions Inventory Report Form prior to their finalization.	No change made.
7.2.7	RC 7-S (c)	Here this appears to be asking for a multiyear average. This may not be the best method to determine normal is there have been major operational changes such as fuel source. Too difficult to comment on without the Guidance document being available for reference.	Several methods for determining the normal emission rate for a release point are given. Ultimately 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. It is up to the industrial operation to determine what their normal operating conditions and emissions would be.	No change made.

Section	Clause	Comment	Response	Action Taken
7.2.7	RC 7-T	This is extremely challenging emissions calculation methods often change year over year due to the sampling performed etc. requiring written approval will create an excessive amount of work that I am not sure government has the manpower to support.	<p>Specific criteria for changing methodologies will be outlined in the Annual Emissions Inventory Report Standard and Guidance Document. It is unlikely that any request to change a methodology that meets these criteria would be rejected. Criteria will likely include: (a) the previous method is no longer acceptable to use because of process/equipment/fuel changes at the source; (b) source monitoring information (CEMS, stack sampling) is now available in place of the previously estimated emissions; etc.</p> <p>All approved changes in estimation methods will also be documented in the Quantification Methodology Document.</p>	No change made.
7.2.7	RC 7-U	This is extremely challenging emissions calculation methods often change year over year due to the sampling performed etc. requiring written approval will create an excessive amount of work that I am not sure government has the manpower to support.	<p>Specific criteria for changing methodologies will be outlined in the Annual Emissions Inventory Report Standard and Guidance Document. It is unlikely that any request to change a methodology that meets these criteria would be rejected. Criteria will likely include: (a) the previous method is no longer acceptable to use because of process/equipment/fuel changes at the source; (b) source monitoring information (CEMS, stack sampling) is now available in place of the previously estimated emissions; etc.</p> <p>All approved changes in estimation methods will also be documented in the Quantification Methodology Document.</p>	No change made.
7.2.7	RC 7-V	This is documented however not in a formal document. This will be a very time consuming document to produce and maintain especially when considering that some major changes may need to occur to break out each identifiable source.	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 change made.
7.2.7	RC 7-V	There needs to be some consideration about timing of when this first submission would be due Release Chapter 9 with Section 7 still in draft and hold off on implementation of Section 7 until a full review period is completed.	<p>The review process for the Reporting Chapter has already included:</p> <ul style="list-style-type: none"> <li>•Holding several stakeholder webcasts to present the draft chapters, go through the feedback received, present the department's response to the feedback and explain the rationale behind requirements in Chapter 9 (September 2014, February 2015 and September 2015).</li> <li>•Meetings with individual industry groups to better understand their concerns with the proposed reporting requirements (January and February 2015).</li> <li>•Convening a Reporting Forms Task Team to go through the reporting forms with industry and airshed stakeholders (June 2015).</li> <li>•Changing Chapter 9 based on the feedback received, including aligning better with approval requirements and regulations.</li> <li>•Emissions inventory requirements were amended so that required pollutants better align with the National Pollutant Release Inventory and an additional year was provided before emissions inventory reports will be required.</li> <li>•Two drafts were provided for stakeholder review, something not done for the revisions of any of the other chapters of the Air Monitoring Directive.</li> </ul> <p>The main requirements of AMD emissions inventory reporting are stated in the AMD Reporting Chapter. The Annual Emissions Inventory Report Form provides the format and fields for reporting and industry will have the opportunity to review the form before it is finalized. The Annual Emissions Inventory Report Standard and Guidance Document mainly provides guidance and clarifications to help with preparing the inventory and filling in the reporting form. Industry will have the opportunity to review the Standard and Guidance Document before it is finalized. As previously stated:</p> <ul style="list-style-type: none"> <li>• No additional substances are anticipated to be added via the Annual Emissions Inventory Report Standard and Guidance Document for at least the first few years.</li> <li>• Only one estimation methodology is anticipated as being specified in the Annual Emissions Inventory Report Standard and Guidance Document (use of CEMS for equivalent boilers at select SAGD operations, for consistency with current policy) for at least the first few years.</li> </ul>	No change made.

Section	Clause	Comment	Response	Action Taken
7.2.9	RC 7-DD	What will these timelines be? There needs to be an understanding that if the change is complex it may require more than 30 days to investigate and establish new data for the calculation.  Recommendation - release Chapter 9 with Section 7 still in draft and hold off on implementation of Section 7 until a full review period is completed.	Timelines for resubmission of Annual Emissions Inventory Reports will be specified in the Annual Emissions Inventory Report Standard and Guidance Document, which will be circulated for stakeholder review.	No change made.
7.2.9	RC 7-Z	Recommend including a materiality threshold (e.g. 10% to align with NPRI threshold for "No significant change [i.e. < 10%] or no change" in reportable substance releases) below which a reissuing of the annual emission inventory would not be required.	A materiality threshold cannot be provided. Any discovered error or issue requires corrective action. Due diligence must be exercised.	No change made.
7	7	One of the major concerns relates to the administrative burden resulting from the annual emissions reporting, in large part because of the inclusion of details such as normal and maximum emissions for point sources each year. The annual reporting requirement is mandated on a frequency that will generate large amounts of data that AEP will then need to review. Much of this information will not change from one year to the next and is unlikely to provide value for either compliance or environmental protection purposes.	The same reporting form can be used from one year to the next. An industrial operation can simply update the information that has changed and report the information for the specific reporting year.  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 emission rates are meant to be representative of what is normally emitted from sources at a facility and a representative normal rate should be reported for the specific source at the facility. Facilities are only required to update max and normal emission rates if the rates previously reported are no longer representative.	No change made.
7	RC 7-T	There isn't the need to use consistent methods for normals and maximums, as these may well change over time and are aren't being used to track year to year emissions. The industrial operation should get to select the best method to determine representative normal and maximum emission rates (except when emission limits are set out by the approval).	Agreed.	Removed requirement for consistent methods for normal and maximum emission rates in RC 7-T.

Industrial Notifications				
8	8	Schedules are set based on operational activities in order to meet the requirements of the CEMS and Stack sampling codes. Schedules do not require approval only NOTIFICATION. We are required to give two weeks notice in order to provide the auditor the capacity to arrange their schedule. This is not a logical statement given that the current system is based on a notification system not an approval system and the reason for this is due to the highly challenging nature of scheduling multiple tests around very specific operating conditions. Recommendation - remove this entirely.	Guidance reworded.	Guidance reworded.
8	between 8-D and 8-E	Please clarify the reference to an auditor in this statement.	Guidance reworded.	Guidance reworded.
8	RC 8-C	The requirement to notify the Director a minimum of 14 days prior to a Stack Survey or RATA is an accepted, albeit burdensome, practice. Often times, exact dates for surveys are not known and can move a day or two within a given week, or get moved by more than 7 days. It is challenging to continue to have to meet the 14 day advance notification requirement given these scheduling difficulties.  Recommendation: Amend Form to provide approval holder flexibility to provide notice for "week of" versus specific days. If the survey is rescheduled outside of the original "week of", waive the requirement for an additional 14 days notice and make it as soon as the approval holder is aware of the rescheduled date. If an auditor cannot accommodate the rescheduled date, then AEP can reject it and require the appropriate notice. If the auditor wasn't coming out anyway, then there is no point in the 14 days notice.	Guidance reworded.	Guidance reworded.

Section	Clause	Comment	Response	Action Taken
8	RC 8-C	<p>We have no concerns with the requirement to submit notification when the scheduled date changes, however we have serious concern with point (b). Point (b) seems to indicate that any scheduled date changes now require a new 14-day notification window, which seems excessive and unnecessary.</p> <p>AEP has historically understood the scheduling challenges that face both industry and stack test firms, and have allowed for new test dates that fall within the 14-day notification window when it is a reschedule of a previously notified test program. By now requiring 14-days' notice for stack test program reschedules, you are limiting the ability of both industry and stack test firms to complete the test programs close to the original test dates, which is normally the intent of both parties. We believe this section should be reworded to remove the requirement for 14-days' notice of test program reschedules as the approval holder has met the requirement with the original notification and are now adapting the schedule to account for unexpected delays to a planned test program. If our understanding of point (b) is incorrect, we would ask AEP to clarify this in section RC 8-C.</p>	Guidance reworded.	Guidance reworded.
8	Stack Survey Notification	<p>"Rescheduled stack survey or RATA dates may be rejected due to the auditor's availability." The schedules are not set and AEP is notified. This has never been a process that includes an approval process, and as such it does not align with the item that schedule changes are subject to rejection. Schedules are set in order to comply with the CEMS and Stack Sampling Codes and are based on operational activities. This statement should be removed entirely.</p>	Guidance reworded.	Guidance reworded.
8	Statement under second paragraph, page 82:	<p>We strongly disagree with the inclusion of this statement. Auditor availability is not taken into consideration when initial test program schedules are set between industry and stack test firms, and this should not change for rescheduled stack test programs. We believe the auditor should have the right to consult with the approval holder if concerns arise with respect to rescheduled test dates, however as scheduling can be a complex process for all parties, we do not believe the auditor should have the ability to outright reject a new test date as that could result in further delays with completing a required stack test program. We request this statement be removed or reworded to reflect a spirit of cooperation between all parties.</p>	Guidance reworded.	Guidance reworded.

Industrial Source Monitoring Reporting				
9	9	<p>9.1, 9.2, and 9.3 contain a significant amount of repetition of information within the individual reports. The Form, Cover Letter, Title Page, Summary Content and Appendices requirements for each report contain a large amount of duplicate information.</p> <p>Recommendation: AEP should review these report requirements and ensure that information is only required in one place within a report.</p>	The Source Monitoring Reports have been re-reviewed to ensure required content is appropriate.	The Source Monitoring Reports have been re-reviewed to ensure required content is appropriate.
9	RC 9-C (f) & (g), RC 9-L (e) & (f)	<p>These are examples of exact repeats of information required in multiple places within one report.</p>	The Source Monitoring Reports have been re-reviewed to ensure required content is appropriate.	The Source Monitoring Reports have been re-reviewed to ensure required content is appropriate.
9	RC 9-YY	<p>More significantly, the requirement for 'production rate' during testing (or for 720 hours prior to testing per RC 9-YY) is not an appropriate requirement. If AEP wants assurance regarding sampling taking place during "normal operations" there are other means to provide that which do not create confidentiality issues. Specific to CGA's which also require reporting of production rates (RC 9-JJJ (f) &amp; (g)), production rate has nothing to do with a CGA which challenges the industrial analyzer by introducing calibrated gases to determine the difference between the analyzer reading and the calibrated gas.</p> <p>Recommendation: Remove requirement to include production rates in reports, especially for CGAs.</p>	As testing is generally required to be done at normal operations, production information must be included in the source sampling reports. As with any information submitted under EPEA, confidentiality can be requested as per the confidentiality provisions set out in EPEA.	No change made.



Section	Clause	Comment	Response	Action Taken
9	RC 9-ZZ	The CEMS Data for during the audit and 48 hours before and after the audit is flagged in the electronic reports. Requesting the data to also be included in the RATA report is redundant.  Recommendation: Delete – AEP already has this information electronically.	Revised to 12 hours, guidance note removed.	Revised to 12 hours, guidance note removed.
9.1	RC 9-C(f, g)	Depending on the stack surveyed, production may not be a relevant parameter to correlate with the testing results. Instead, operational parameters relevant to the emission source tested should be provided in correlation with the testing results. For example, if a boiler is tested, its fuel gas consumption during testing would be a more relevant operational parameter than plant production rate during that testing. Additionally, if the production rate during testing is indeed a pertinent piece of information, please provide a mechanism to keep facility production rates confidential.  Additionally, if the production rate during testing is indeed a pertinent piece of information, please provide a mechanism to keep facility production rates confidential.	The Stack Sampling Code requires sampling at normal operation. This subclause applies to the end product, output or other parameter used to represent normal operations and must be disclosed. As with any information submitted under EPEA, confidentiality can be requested in accordance with the criteria set out in EPEA.	No change made.
9.1	RC 9-E	We request clarification on this statement. We believe the requirement for “as found or unadjusted” findings refers to the plant CEM data however that is not stated. What further confuses the reader is the fact that plant CEM data does not need to be reported for Manual Stack Surveys, unless that data has been generated as part of a RATA. Promulgated instrument method stack test data is adjusted based on the requirements of US EPA Method 7E, which includes 3-point calibrations, system bias tests, drift tests, and the calculation of correction factors which are then applied to the raw data. The promulgated instrument method stack test data is not considered as found or unadjusted; therefore it can't meet this statement. We request this statement be modified to clarify the intent.	Agreed - this clause causes confusion. The results are adjusted based on the specific procedures/promulgated method. The intent was to prevent adjustments to the CEMS prior to performing an audit/survey, however that is more an issue of monitoring rather than reporting.	Clause RC 9-E removed.
9.1.5	RC-9-T	Typo: the final word in this sentence should be 'tested' instead of 'testing'.	Agreed.	Change made.
9.1.5/9.2.5	RC 9-R (b) (ii)/ RC 9-SS (c) (ii)	This needs to be reworded/amended not exactly sure how one it to incorporate drawings in a form. It is redundant to provide the same drawing over and over again.  Recommendation: Delete this requirement. If you want details ask for it once. Or make this a requirement for the report in a separate area.	This clause just applies to the appendix of the report, not the form.	
9.2.4	RC 9-QQ (b)	We believe a far better approach would be to use the stratification reporting procedures described in US EPA Method 7E, Section 8.1.2 Determination of Stratification, page 8. US EPA Method 7E is the promulgated instrument reference method containing all quality assurance steps required for instrumentation testing, and has been updated more recently than the Alberta CEMS Code (Method 7E 2014, Alberta CEMS Code – 1998). Based on the differing ages of the two documents, we believe it would be a better approach to accept the US EPA standard for stratification.	This clause defines what and how to report, not which methods are acceptable for use. Chapter 4 Monitoring of the AMD defines requirements for conducting manual stack surveys. Manual stack surveys must be conducted in accordance with the Alberta Stack Sampling Code, as well as the Methods Manual for Chemical Analysis of Atmospheric Pollutants and US EPA promulgated methodologies (as applicable), and any other methods, if authorized in writing by the Director.	No change made.
9.2.5	RC 9-ZZ	There are two contradictory statements here: 48 hours vs. 12 hours – What is required, 48 hours of data before and after the audit, or 12 hours of data before and after the audit? Please clarify. One minute data vs. one hour data – The statement below the box first states that one minute data is required, then goes on to state that data should be presented in one hour increments. Please clarify whether data is required in one minute or one hour increments.	Clause reworded to 12 hours, guidance note removed.	

#### Amendments to Industrial Reports and Data

11.1	RC 11-A	Similar to the comment for 7.2.9, recommend including a materiality threshold below which an error/issue would not require reissuing the current report.	A materiality threshold cannot be provided. Any discovered error or issue requires corrective action. Due diligence must be exercised.	
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Section	Clause	Comment	Response	Action Taken
<b>Alberta Airshed General Reporting Requirements</b>				
12	RC 12-A(e)	Those may be the same person as it's been identified that the validation and review may be handled by the report writer.	There is no requirement for who must review a report. If the report is reviewed by a different person, 12-A(e) requires that the reporter be identified	No change made.
12	RC 12-A (f)	The person identified in (c) and/or (d) is probably never going to have their office in a monitoring station, and monitoring stations rarely have an address.	Yes, that is true. This is more pertinent to industry. Will remove this requirement, as monthly and annual reports require that all stations be listed.	Removed 12-A(f).
12	RC 12-A (f)	Clarify: Is the X Y coordinate location of every continuous and passive monitoring site the requirement here? Usually not an address as seems to be indicated in (c) or (d).	Will remove this requirement, as monthly and annual reports require that all stations be listed.	Removed 12-A(f).
12	RC 12-O	Identify the contracting entity (e.g.,: WSP, Maxxam, AGAT, etc.), or the individuals working for the entity that did work on the network being reported on? The second may be very fluid, especially with on-call technicians doing the daily data checks, though they may never be hands on the network directly.	Because it doesn't specify whether to supply a company or a name, either would be suitable, however company name should be included either way. If just a company name was supplied, that would be sufficient.	No change made.

<b>Alberta Airshed Data Submission</b>				
13	13.1.2	<p>"decimal resolution...may not be indicative of the analyzer's actual measurement capability..." Is the rationale presented for rounding to a certain number of significant figures before submission to the data warehouse, and was presented as the rationale for the number of significant figures the data warehouse will currently accept. RC-13 F suggests that those digits that are not to be submitted to the warehouse *are* representative of actual measurement capability if they're to be used for comparison with AAAQOs; one of these cases is inconsistent with standard mathematical and laboratory practices around precision and rounding. To introduce two standards is to create the situation where the data in the warehouse (and the data in the monthly reports, as currently generated) will not tally up the same number of exceedances as reported; the only way to replicate the exceedance value will be for the data manager/operations contractor to generate the expanded values from their own databases, devaluing the data warehouse. Data retention requirements being finite (7 years, if I recall) mean that eventually the exceedance will potentially not be able to be verified/validated/corroborated in the dataset, as the data warehouse may be the only source for that historical data; it is certain that end users of the data will not necessarily contact the Ministry to check exceedances in the dataset vs reported exceedances. Same standard should apply for RC-13 E and RC-13 F.</p> <p>Most (if not all) Airsheds report exceedances to the decimal places indicated in the AAAQO document (zero, for most cases), a change to 1 decimal place will create a uptick in exceedances reported when Ch 9 comes into effect that is not a real indication of a change in pollution levels, but rather a statistical change. Would data end users understand this if implemented?</p>	<p>Agree. This clause is trying to prescribe a consistent way of comparing monitoring values to AAAQOs for determining whether or not there has been an exceedance. If clause 13-E is stressing that the person responsible only report what the analyzer is capable of reporting, then that number of decimal places will be reported to the ambient data warehouse. Agree that then 13-F does not make sense - cannot go back to the raw data to get another decimal place if it is beyond the precision of the analyzer (would mean comparing a different value to the AAAQO than the data warehouse is comparing). Ideally, analyzers would provide enough precision to be able to compare to the AAAQOs with one extra decimal place, however we understand that this is not always the case.</p> <p>Clauses 13-E and 13-F will be amended accordingly.</p> <p>The rationale for carrying an additional decimal place when comparing to AAAQOs is that any amount greater than the AAAQO is an exceedance (so 10.1 is greater than 10 and therefore is an exceedance of 10). From our analysis, it is unlikely that this would cause there to be a significant extra number of exceedance from what has been reported, nor would it signal that there is an artificial increase in pollution levels.</p>	The text "except when comparing to AAAQOs" was removed from RC 3-E and 13-E. RC 3-F and 13-F were amended and guidance was added below.
13	RC 13-E and RC 13-F	Object: Significant digits for reporting AAAQOs must be the same as what is required in the data warehouse. It becomes impossible to determine exceedances by reviewing data in the warehouse or reports with no decimal places. i.e. H2S measured at 9.7 and 10.3 look the same in the warehouse and reports as 10, Using these clauses one would be an exceedance while the other not.	<p>Agree that the rounding convention used to determine whether or not an AAAQO has been exceeded should be the same for both reporting in the online ambient data warehouse and monthly/annual reports.</p> <p>The rationale for this requirement is that by carrying 1 decimal place greater than the AAAQO allows a measure of whether that AAAQO was exceeded, i.e., <b>any</b> amount greater than the AAAQO is an exceedance of that AAAQO; so 9.7 does not exceed 10, but 10.1 does exceed). Examples are provided in RC 3-F. Rounding requirements to compare to AAAQOs creates a common/consistent cut-off in the data for determining whether or not an exceedance has taken place.</p>	RC 3-F and RC 13-F have been re-worded to provide more clarity.
13	RC 13-M/18.2	Does resubmission require the same form?	Yes, the same form is to be used.	No change made.
13	RC 13-A	Reword, the "...person responsible's own purposes..." are not necessarily "...the Airshed's own purposes...".	As stated in the interpretation section: "a reference to "person responsible" in Part 2 of the Reporting Chapter shall be interpreted as meaning a person responsible for an Alberta airshed and, for certainty, excluding a person responsible for an industrial operation".	No change made.

Section	Clause	Comment	Response	Action Taken
13.1.8	RC 13-S	NO <sub>2</sub> , PM <sub>2.5</sub> and O <sub>3</sub> are the requirements to perform an AQHI calculation. If I read this correctly RC 13-S is asking that even though a station does not have the required parameters to perform the AQHI calculation, the data is to be reported continuously to the Alberta Real-time Ambient Air Website for AQHI purposes regardless?	Real-time reporting covers more than just AQHI. Yes, even if a station does not monitor for all the AQHI substances, real-time reporting is required if the additional pollutant(s) is measured continuously and is something being reported to the Ambient Data Warehouse or in in monthly/annual reports. Real-time reporting of individual substances is used by AEP and Alberta Health for tracking air quality events.	No change made.

Alberta Airshed Monthly Reports				
15	RC 15-F (a)	Add wording to clarify: Where a monitoring analyzer is required to be operational 90% of the time and was not, identification of the....	Agreed.	Added "and was not" to RC 5-F, RC 6-G, RC 15-F, RC 16-H.
15	RC 15-I (b)	Add wording to clarify: A summary of ambient air monitoring station audit findings and responses that affected data validity in that month. Otherwise this could mean submitting all audit results ever determined in that network.	RC 15-I(b) would apply to any audit findings that would <b>affect data validity</b> . Clauses RC 5-I, RC 6-J, RC 15-I, RC 16-K reworded.	Clauses RC 5-I, RC 6-J, RC 15-I, RC 16-K reworded.
15.1	RC 15-D	The other reporting sections specify that the first reportable year will be 2017. Please add the same specification here.	Agreed.	Added "Commencing with the 2019 calendar year" to RC 15-A.

Alberta Airshed Annual Reports				
16	RC 16-H (c)	Change wording: Make this wording the same as 15 F (c) ..., monitoring methods or significant changes to monitoring equipment. Otherwise could mean swapping even a cylinder regulator must be reported or an analyzer for another one using the same method.	Agreed.	Changed to "identification of any changes to monitoring locations, monitoring methods or significant changes to monitoring equipment".

Alberta Airshed Notifications				
17	RC 17-A	Change wording: Guidance paragraph third line should be changed. Reporting the replacement of a sensor or analyzer with the same model is not required in RC 15 F (c) and should not be in RC 16 H (c).	Agreed.	Text revised for consistency with monthly report guidance.
17	RC 17-C and RC 17-D	Clarify: A mention should be made here that Regulator approval of the change may also be required. It seems by this clause that notification of a change is enough.	Agreed.	Added "Regulator approval of the change may also be required" to sections 8 and 17 for relocations and scheduled shut-downs of ambient monitors.

Amendments to Alberta Airshed Reports and Data				
18	RC 18-A	Change wording: This clause does not allow any time to determine what is needed to meet RC 18-B (c) or even (b). Change wording to allow time for this work. Or is two separate reports what is intended here.	RC 18-A is simply notifying that there is an issue with the information previously submitted. The specific information accompanying the notification will depend on the specific type of issue discovered. In most cases, identification of the issue, a brief explanation of what happened and what is planned to address the issue can be provided with the notification. If more investigation is required around the explanation or any anticipated changes that will be required, it is acceptable to indicate this in the notification.	No change made.
18	RC 18-A	Similar to comment for 11.1 RC 11-A, recommend including a materiality threshold below which an error/issue would not require reissuing the current report.	A materiality threshold cannot be provided. Any discovered error or issue requires corrective action. Due diligence must be exercised.	No change made.
18	RC 18-B	Clarify: How does (b) differ from (c)? Does (b) mean an explanation of causes for errors etc.? If yes say so. If not, it's unclear what the difference between "identification" and "explanation" is.	(a) asks for identification and description of errors/omissions; (b) asks for an explanation (reasoning) for the error/omission (that is, why did it happen, what was the cause); and (c) asks for identification of the changes or corrections that will be made in response to the error/omission.	Changed RC 11-B(b), 11-S(b), 18-B(b) and 18-J(b) to "explanation of the cause of the of the errors, omissions or other issues that were identified".
18	RC 18-N	Change wording: See comment for RC 18-A above.	RC 18-N is simply notifying that there is an issue with the information previously submitted. The specific information accompanying the notification will depend on the specific type of issue discovered. In most cases, identification of the issue, a brief explanation of what happened and what is planned to address the issue can be provided with the notification. If more investigation is required around the explanation or any anticipated changes that will be required, it is acceptable to indicate this in the notification.	No change made.
18	RC 18-O (b)	Clarify: See comment for RC 18-B above.	(a) asks for identification and description of errors/omissions; (b) asks for an explanation (reasoning) for the error/omission (that is why did it happen, what was the cause; and (c) asks for identification of the changes or corrections that will be made in response to the error/omission.	Changed RC 11-B(b), 11-S(b), 18-B(b) and 18-J(b) to "explanation of the cause of the of the errors, omissions or other issues that were identified".

Section	Clause	Comment	Response	Action Taken
<b>Definitions</b>				
Def	9	(9) "Air Shed Zones" - Recommend that AEP 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 change made.
Def	48	(48) "normal" air emissions: - The concept of 'normal' can be broad as industrial facilities can have variable production rates. For our petrochemical facility, our 'normal' operation can vary between 55-110%, based on minimum equipment operating needs, plant production plans, feedstock availability and other factors.	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 change made.
Def	General	Unique source identifiers - please add to definition tab. Different approvals have different mechanisms for identifying source names and it is not obvious that identifiers from different facilities will be consistently structured.	These are defined in the approval or approval application for each source.	No change made.

<b>Forms</b>				
Forms	Flare Stack Form	Other Substances Flared (if applicable)' heading expressed as daily emission total is unclear. Are we supposed to report CO2 and H2O emissions from combustion? Please provide clarification and examples of other substances of interest.	Form has been changed to be non-pollutant specific.	Form has been changed to be non-pollutant specific.
Forms	Flare Stack Form	Further clarity is requested as to where the reporting requirements detailed in the Draft differ from those under a facility's EPEA Approval. In particular, the applicability of the "AMD Flare Stack Form" and the "AMD Sulphur Recovery and Removal Form" for facilities, where the EPEA Approval does not stipulate reporting of these activities, is unclear. This ambiguity has been resolved for the "AMD Monthly Production Form" as Alberta Environment and Parks has clarified that reporting is only required if set out in the Approval. This approach should be applied to the "AMD Flare Stack Form" and the "AMD Sulphur Recovery and Removal Form" such that the submission of these forms will only be applied to activities that are explicitly required to be reported under a facility's Approval.	The AMD Flare Stack Form applies to all flaring that occurred at the industrial operation for the month/quarter/year. The AMD Sulphur Recovery and Removal Form applies if an industrial operation is required by an approval to recover or remove sulphur.	No change made.
Forms	Flare Stack Form	Some information required under approvals for flaring are not found on the AMD Flare Stack Form (e.g., description of material sent to flare, type of notification associated with the flaring occurrence, reason for flaring occurrence, quantity of material sent to the flare, method used to determine the quantify of material sent to flare).	Additional common fields added to the form.	Additional common fields added to the form.
Forms	Approval Contravention Form	The contravention form – still not aligned with what AER is asking and still asks for all the same detail as before.	The Approval Contravention Form is based around the types of contravention summary tables often submitted as part of monthly/annual reports. It does contain more fields than are currently submitted, but the fields represent the minimum information that should be summarized as part of monthly/annual reports and are broken down to allow for storage in the Regulator database. Contraventions should not be occurring every month, and in most cases, this form will not need to be submitted very often and would usually only contain a small number of contraventions.  A representative of the AER was present at the AMD Reporting Forms Task Team meetings in June and the AER has been involved in the review of the AMD Reporting Chapter. The AMD Approval Contravention Form is very similar (though more detailed) than the contravention summary tables already included in many monthly/annual reports. The AER also has other directives and regulations that may require additional/different contravention reporting, either with or separate from EPEA approval monthly/annual reports.	No change made.
Forms	Approval Contravention Form	No mention of character limits on the contravention form which could be a major issue.	The AMD Approval Contravention Form is an Excel form and has the per cell character limit of Excel 2010 (32,767 characters). This form is intended to be a summary of any air-related contravention events, and it is not anticipated that the amount of summary information being entered in a single cell will hit or exceed the character limit. The AMD Approval Contravention Form does not replace the more detailed 7-day letters.	No change made.

Section	Clause	Comment	Response	Action Taken
Forms	Approval Contravention Form	It may be better to attach the 7 day letters for reference as an appendix to the contravention form.	The Approval Contravention Form will collect a summary of air-related contraventions in a format suitable for importing into the Regulator database. You will not be able to append the 7-day letter to the form itself, as the form cannot be modified beyond entering in the required information. However, you can append the 7-day letter to the monthly/annual PDF report being submitted, if you wish to.	No change made.
Forms	CEMS Summary Form	The CEMS form is still redundant in the information it is asking as this is all submitted electronically already.	Ch 9 has added electronic reporting forms in order to get summary information in an electronic format - so this is not raw, hourly data (as is sent via FTP), but summaries of data used for assessing compliance and tracking ongoing performance. The purpose of the forms was to take out elements that had been reported in pdf reports and put them in an electronic format that would facilitate querying, analysis and tracking by the Regulator.  Summarization of industry data (CEMS) is the responsibility of the industrial operation, including the responsibility to review CEMS data. Hourly CEMS data for all industry will not be summarized by the Regulator.	No change made.
Forms	CEMS Summary Form	The CEMS Summary form format does not support inclusion of information on more than one backfilling event. This information however, is included in the electronic format and its inclusion is redundant.	This will be addressed on the form itself.	This will be addressed on the form itself.
Forms	Forms	The use of spreadsheets to collect this type and volume of data remains a significant concern to our members. Any changes to the format of the spreadsheet from year-to-year will require either re-entering all static facility and stack data into a new spreadsheet or copying it from the previous year cell by-cell (as is the case with other pieces of reporting policy). Instead, we believe an online database application with prefill functions and the ability to bulk load data (such as OWNERS) is much preferable to the use of spreadsheets.	While a more robust online reporting system would perhaps be ideal, it is beyond the scope of the updates to the Air Monitoring Directive and likely a longer-term future solution. It may not be practical to spend significant funding on an ongoing basis to collect only air information, when water, land and other environmental data is also being reported to the department by various methods. Spreadsheets are a low cost, practical, solution that is achievable within the available timeframe, and provides an opportunity to test the new reporting requirements before moving to a longer-term reporting solution. Similar spreadsheet reporting forms are already used by industry to submit data under the Specified Gas Emitters Regulation.	No change made.
Forms	Validation form	Change wording: RC 13-N and RC 13-O should also be referenced in reporting chapter or remove reference to RC 13-L.	Agreed.	Will add reference to RC 3-N, RC 3-O, RC 13-N, RC 13-O to Ambient Data Validation Form to cover meta data and account info that is included as part of the form requirements.
Forms	Validation form	Change or clarify: Please allow more than one station to be included on the same form or explain why only one form per station is needed. It will be an unnecessary duplication of effort each month to submit one form PER station.	The validation form will be modified to allow for submission of one form for multiple stations. The form will be uploaded to the data warehouse so that the proof of validation is available for users of the data. Data submitters can submit data for multiple stations at once so there the data warehouse will be build so that a single form applies to multiple station submissions.	Will change validation form to add in stations listing field.
Forms	Validation form	Clarify: Is a check mark, initial or date expected under "Completed" in each row of each section?	These are checkboxes. Once in final format, clicking on the box will add a checkmark.	No change made.

General Chapter 9 Feedback				
-	-	Also I am not sure that the implications of Chapter 7 are fully appreciated by AEP as the timelines are not at all reasonable or achievable.  The recommendation is that an additional section or caveat be included that states that INITIAL implementation is to begin in 2017 and that full compliance with Chapter 9 monthly/quarterly requirements is mandated for 2018 and full compliance with Chapter 9 annual reporting be required by 2019. This would give industry time to get to where we need to be in a reasonable timeframe as there will inevitably be gaps the first couple of years. It also helps mitigates the significant burden this will be creating during economically challenging times.	The effective date of the Reporting Chapter has been changed to January 2019.	The effective date of the Reporting Chapter has been changed to January 2019.
-	-	The implementation date is not aligned with the two years after release. This would make the effective date January 2018 not January 2017 the referenced dates are a year premature.	The effective date of the Reporting Chapter has been changed to January 2019.	The effective date of the Reporting Chapter has been changed to January 2019.

Section	Clause	Comment	Response	Action Taken
-	-	Our industrial association will be reaching out because unfortunately the information provided in draft 2 does not change the concerns.	As the existing reporting requirements are 26 years old, there does need to be some changes and modernization of the requirements. Significant changes have already been made in response to stakeholder comments in order to reduce the reporting burden as much as practical. Ultimately more information is needed than was in 1989 and the format of reporting needs to be changed from paper/scanned documents to electronic reporting to eliminate the manual entry of data that Environment and Parks is currently carrying out.	No change made.
-	-	Please know that I completely understand your perspective and points but to simply create more work because the systems in place are not sufficiently set up is a band aid fix not a permanent solution. Understanding that band aid solutions are necessary a lot of the time. I am not sure it is appropriate to have them living in a formal document without a caveat describing them as such.	<p>Most industrial operations should already be meeting most of the monthly/annual report requirements.</p> <p>Some data are reported electronically, some are not. Ch 9 has added electronic reporting forms in order to get summary information in an electronic format - so this is not raw, hourly data (as is sent via FTP), but summaries of data used for assessing compliance and tracking ongoing performance. The purpose of the forms was to take out elements that had been reported in pdf reports and put them in an electronic format that would facilitate querying, analysis and tracking by the Regulator.</p> <p>The Excel forms are not seen as a band-aid solution, or a temporary fix for current reporting systems. Existing electronic reporting systems are intended for different reporting purposes (submission of hourly monitoring data, incident reporting, compliance purposes). AEP does not have any intention of merging incident or CEMS reporting with routine monthly/annual reporting.</p>	No change made.
-	-	<p>There continues to be a disconnect between AEP and Industry in terms of 'acceptable administrative burden'. Many of the requirements of the monthly and annual reports, in addition to the requirements of the Annual Emissions Inventory Report continue to be highly administrative, cumbersome, and seemingly non-value-added. Alberta Environment is creating significant duplication for industry to submit data through various portals, all of which Alberta Environment has access to. There appears to be a reluctance from Alberta Environment to build on existing data collection systems, and instead pass the administrative burden of providing data in different formats to industry.</p> <p>Recommendation: AEP should know and understand which systems are already in place within the Agency, and which data is already collected, rather than create an overly-burdensome system which overlaps existing data collection systems and data submissions. Examples include (1) duplicate CEMS data submissions using the on-line CEMS system and the new CEMS Summary Form, which requires users to provide information which should be readily available using Alberta's on-line CEMS system; (2) duplicate contravention reporting using the ERC phone-in and 7-day letter requirements and the new Contravention Reporting Summary Form, which requires users to provide the same information as would be included in a 7-day letter, but in a different format; and (3) duplicate inventory reporting to NPRI - AEP should engage with Environment Canada to enhance the existing NPRI system to streamline additional, duplicative reporting requirements for industry.</p>	<p>Most industrial operations should already be meeting most of the monthly/annual report requirements.</p> <p>Some data are reported electronically, some are not. Ch 9 has added electronic reporting forms in order to get summary information in an electronic format - so this is not raw, hourly data (as is sent via FTP), but summaries of data used for assessing compliance and tracking ongoing performance. The purpose of the forms was to take out elements that had been reported in pdf reports and put them in an electronic format that would facilitate querying, analysis and tracking by the Regulator.</p> <p>Existing electronic reporting systems are intended for different reporting purposes (submission of hourly monitoring data, incident reporting, compliance purposes). The immediate incident reporting system is purposely kept separate and includes all media incident reporting, not just that for air. AEP does not have any intention of merging incident reporting with routine monthly/annual reporting.</p> <p>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.</p>	No change made.

Section	Clause	Comment	Response	Action Taken
-	-	<p>There continues to be a disconnect between what AEP is saying, and what the AMD is saying. AEP has been very clear in discussions and during the webinars that approval holders need only report what is required by the approval. However, the language used in Chapter 9 is inconsistent and could lead to confusion. Throughout Section 5.0 (and 6.0), including the flow chart, the inclusion of many of the items in the Section appear to be mandatory regardless of what the approval requirements are based on the language of "For the monthly or quarterly report in RC 5-A, the person responsible must include...". Exceptions do exist for the Production Reporting and a couple others which state "For the monthly or quarterly report in RC 5-A, if the person responsible is required to report X under the conditions of an approval, the person responsible must include...". This inconsistent language could lead the reader to believe some are MUSTS and some are only required if the approval requires them.</p> <p>Recommendation: AEP should reword reporting requirements to align with the requirements of the approval. Flow charts should be revised to have YES and NO options based on the requirements of the approval. No additional reporting outside of the approval requirements should be requested. As described by AEP, the purpose of the AMD is to describe HOW to report, not WHAT to report.</p>	<p>The EPEA approval sets out what monitoring is required and sets out some (but not necessarily all) the reporting that is required. The Air Monitoring Directive Reporting Chapter sets out the minimum reporting requirements to ensure that consistent reporting is carried out and that the department obtains a baseline of information needed for compliance purposes, reporting against standards, supporting policy development and management decisions and reporting to the public.</p> <p>If a particular type of activity or monitoring is not required by your approval (such as CEMS), then you are not required to report the summary information outlined by the AMD (e.g., AMD CEMS Summary Form, etc.).</p> <p>The stated purpose of the Reporting Chapter is to:</p> <ul style="list-style-type: none"> <li>• establish the minimum requirements for the reporting of air and emissions data, reports and summarized information to the Regulator;</li> <li>• standardize the types, content and format of air and emissions data, reports and summarized information;</li> <li>• establish and/or reference the minimum reporting frequencies and deadlines for air and emissions data, reports and summarized information;</li> <li>• establish and/or reference the procedures for the submission of air and emissions data, reports and summarized information; and</li> <li>• provide guidance on the reporting of air and emissions data, reports and summarized information.</li> </ul> <p>The flow charts are simplified guidance and clearly state that: "This diagram is guidance only and does not necessarily cover every possible category of information that may need to be included in a monthly or quarterly report, which is set out by the AMD Reporting Chapter, the approval and any applicable written notices from the Director...". Some new requirements in Ch 9 are minimum requirements for everyone (not based on approval conditions).</p> <p>The AMD sets out minimum reporting requirements for all approval holders to ensure consistent reporting of some elements. The clauses specify whether or not a requirement is based on approval conditions. Some new requirements in Ch 9 are for everyone (not based on approval conditions).</p>	No change made.
-	-	<p>A lot of the confusion and frustration that is being generated by the AMD Chapter 9 stems from the lack of consistency in approval terms and conditions throughout the Province. Trying to create a 'one-size-fits-all' document for a suite of approvals that all have different reporting requirements is challenging. For industry, it is challenging to understand how to apply standardized reporting requirements to 'one-off' clauses. Not being able to engage with other industry and industry groups on common topics to reach consensus and common understanding, due to the wide variety of approval-related-expectations across the Province, further divides the issues with the Chapter.</p> <p>Recommendation: The AEP Policy Branch should work with the Approvals branch to set expectations and ensure the use of the standard template in writing approvals. Having more standardized approvals with respect to reporting would ensure a more consistent application and interpretation of the AMD requirements, and less disparity in terms of reporting expectations within industry sectors.</p>	<p>The approvals template has been, and will continue to be, updated for consistency with the requirements of the revised Air Monitoring Directive. Monitoring and reporting requirements are set out in approvals. However, the Air Monitoring Directive Reporting Chapter sets out the minimum reporting requirements to ensure that consistent reporting is carried out and that the department obtains a baseline of information needed for compliance purposes, reporting against standards, supporting policy development and management decisions and reporting to the public. The Reporting Chapter requirements must be finalized in order to complete the updates to the approvals template. Approvals and Compliance AEP staff have been involved in the AMD revisions since the outset.</p>	No change made.
-	-	<p>In some cases, different sections of Chapter 9 require reporting of the same information, for example:</p> <p>a. Reporting of mass emissions in the AMD Source Emission Summary Form (RC 5-CC) and AMD CEMS Summary Form (RC 5-T);</p>	<p>For RC 5-CC, the AMD Emissions Summary Form is to be filled out according to the monthly emissions reporting required under your approval. This may need to include totals from CEMS, if you are required to report monthly pollutant totals. There is likely only one field (mass emissions for month) that may be duplicative of the AMD CEMS Summary Form.</p>	No change made.
-	-	<p>b. Reporting air contravention (i. verbal notification; ii. 7-day contravention letter; iii. AMD Approval Contravention Form (RC 5-EE and RC 5-FF); and iv. Monthly and Quarterly Report cover letter RC 5-F(b)(ii) and RC 5-O;</p>	<p>These different notification mechanisms have different purposes. The only new aspect from i through iv, as listed, is the use of the electronic forms. Some data are reported electronically, some are not. The electronic forms are used to take summary data that have been reported via pdf report in the past and have this entered into Excel spreadsheets in order to get the data in electronic format for assessing compliance and tracking ongoing performance.</p>	No change made.

Section	Clause	Comment	Response	Action Taken
-	-	c. The AMD RATA Summary Form (RC 9-BB and RC 9-CC) duplicates some of the information reported in the monthly and quarterly reports (RC 5-V(d)); and	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.	No change made.
-	-	d. The AMD Manual Stack Survey Form (RC 9-B) duplicates some of the information reported in the manual stack survey report (RC 9-L).	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.	No change made.
-	-	We would like to stress up front that the new requirements are a significant burden to the industry and considering the current downturn in the Alberta economy and the staffing reductions that the industry as a whole are facing, it will be very challenging to implement these requirements in their current form and within the required timelines. We ask that AEP reconsider the requirements and eliminate any "nice to have's", and limit data requests to only what is really needed.	As the existing reporting requirements are 26 years old, there does need to be some changes and modernization of the requirements. Significant changes have already been made in response to stakeholder comments in order to reduce the reporting burden as much as practical. Ultimately more information is needed than was in 1989 and the format of reporting needs to be changed from paper/scanned documents to electronic reporting to eliminate the manual entry of data that Environment and Parks is currently carrying out.	No change made.
-	-	In our opinion, some examples of the nice to have requirements include: • The passive spatial plots and continuous data distributions required in RC 6-N and RC 6-T.	Passive plots are only required for passive networks of 8 or more passives. This is necessary to see the spatial variability in ambient concentrations. Data distribution is currently required in the 1989 AMD, so this is not a new requirement.	No change made.
-	-	In our opinion, some examples of the nice to have requirements include: • Year over year comparisons required in RC 6-NN and RC 6-OO.	Comparisons to emissions limits over past years allows the regulator to track and highlight any performance issues or trends that may need to be addressed.	No change made.
-	-	In our opinion, some examples of the nice to have requirements include: • The Quantification Methodology Document (RC 7-V).	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 change made.
-	-	In our opinion, some examples of the nice to have requirements include: • Detailed interpretation of monitoring data (Section 6.3.2).	Interpretation of ambient data isn't necessarily required, unless there have been exceedances. Otherwise, if the person responsible is aware of any local events or influencers (e.g., forest fires, nearby construction, changes to monitoring methods, etc.) which may have an effect on monitoring results then they should be identified. This is already typically done in reports (when such events and influences are known). This section does not require you to conduct a scientific investigation to determine what may be influencing air quality at your monitoring station, but if you are aware of something it should be noted in the annual report.	No change made.
-	-	In our opinion, some examples of the nice to have requirements include: • Maintenance details and dates of the pollution control technologies (RC 5-KK (e)).	Clause reworded and guidance note added.	Clause reworded and guidance note added.
-	-	In our opinion, some examples of the nice to have requirements include: • RC 7-L (d) and RC 7-N (d) which requires the identification and description of all processes, units, and equipment at the industrial operation which emit to the atmosphere.	The processes, units and equipment emitting via a release point is critical information for a source-level emissions inventory. Facilities are required to report descriptive information about these processes, units and equipment, but will not have to report emissions prior to release to the atmosphere (reporting emissions values will only be required for the release points themselves). Most of this descriptive information will not change from one year to the next, and the same reporting form can be used from one year to the next.	No change made.
-	-	In our opinion, some examples of the nice to have requirements include: • Listing of negligible sources as per RC 7-P (c).	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. It is of benefit to industry to allow for very small sources to be identified as negligible and not have to report emissions for them. The alternative would be to require quantification for all sources regardless of how small their emissions may be.	No change made.
-	-	We also ask that AEP consider pushing the timelines back by an additional year, or using a phased-in approach which would allow some of the less critical requirements to be delayed by an additional year or two. The additional time would enable the development of robust systems and processes to collect and report the requested data and would result in higher quality data.	The effective date of the Reporting Chapter has been changed to January 2019.	The effective date of the Reporting Chapter has been changed to January 2019.



Section	Clause	Comment	Response	Action Taken
-	-	Confusion stemming from the inconsistency in approval terms and conditions is generating difficulty in fulfilling the requirements of AMD Chapter 9. Trying to create a 'one-size-fits-all' monitoring and reporting document for a suite of approvals that all have different reporting requirements is challenging for the regulator. For industry, it is challenging to understand how to apply standardized reporting requirements to "one-off" clauses.	The approvals template has been, and will continue to be, updated for consistency with the requirements of the revised Air Monitoring Directive. Monitoring and reporting requirements are set out in approvals. However, the Air Monitoring Directive Reporting Chapter sets out the minimum reporting requirements to ensure that consistent reporting is carried out and that the department obtains a baseline of information needed for compliance purposes, reporting against standards, supporting policy development and management decisions and reporting to the public. The Reporting Chapter requirements must be finalized in order to complete the updates to the approvals template.	No change made.
-	-	The Policy and Approvals branches of the Ministry of Environment and Parks could collaborate, to set expectations and ensure the use of a standard template for approvals. Having more standardized approvals with respect to reporting would enable more consistent application and interpretation of the AMD requirements.	The approvals template has been, and will continue to be, updated for consistency with the requirements of the revised Air Monitoring Directive. Monitoring and reporting requirements are set out in approvals. However, the Air Monitoring Directive Reporting Chapter sets out the minimum reporting requirements to ensure that consistent reporting is carried out and that the department obtains a baseline of information needed for compliance purposes, reporting against standards, supporting policy development and management decisions and reporting to the public. The Reporting Chapter requirements must be finalized in order to complete the updates to the approvals template.	No change made.
-	-	Our industrial association acknowledges the need for the effective and efficient monitoring and reporting of air quality in the province of Alberta, and members remain committed to diligent and accurate reporting. The oil and gas sector is highly regulated, and significant effort is required to maintain compliance with current reporting requirements. The current draft of Chapter 9 will result in a substantial increase in administrative burden without any tangible benefit in improving environmental performance.	Significant changes have already been made in response to stakeholder comments in order to reduce the reporting burden as much as practical. Ultimately more information is needed than was in 1989 and the format of reporting needs to be changed from paper/scanned documents to electronic reporting to eliminate the manual entry of data that Environment and Parks is currently carrying out.	No change made.
-	-	While our industrial association and its members have been fully engaged in the consultation process, we continue to see significant opportunities for improving and streamlining these requirements and aligning them with existing reporting rules. We strongly believe that this policy is not ready for finalization nor implementation. This current version of the policy will have a significant impact on the administrative and cost burden faced by our members.	<p>The review process for the Reporting Chapter has already included:</p> <ul style="list-style-type: none"> <li>o Holding several stakeholder webcasts to present the draft chapters, go through the feedback received, present the department's response to the feedback and explain the rationale behind requirements in Chapter 9 (September 2014, February 2015 and September 2015).</li> <li>- Meetings with individual industry groups to better understand their concerns with the proposed reporting requirements (January and February 2015).</li> <li>- Convening a Reporting Forms Task Team to go through the reporting forms with industry and airshed stakeholders (June 2015).</li> <li>- Changing Chapter 9 based on the feedback received, including aligning better with approval requirements and regulations.</li> <li>- Emissions inventory requirements were amended so that required pollutants better align with the National Pollutant Release Inventory and an additional year was provided before emissions inventory reports will be required.</li> <li>- Two drafts were provided for stakeholder review, something not done for the revisions of any of the other chapters of the Air Monitoring Directive.</li> </ul> <p>Significant changes have been made in response to stakeholder comments in order to reduce the reporting burden as much as practical.</p>	No change made.

Section	Clause	Comment	Response	Action Taken
-	-	<p>Our industrial association must emphasize that the degree of administrative burden facing producers has direct implications on the economic competitiveness of Alberta's upstream oil and gas industry, and as such should be a key consideration in the continued development of an Alberta air policy framework. There has already been a decrease of investment within our sector by approximately 40 per cent nationwide relative to 2014. The current challenging price environment has further eroded the economic competitiveness of the upstream industry in Alberta. In order to protect the competitiveness and stabilize investor confidence through the active management of administrative and cost burdens, our industrial association maintains that:</p> <ul style="list-style-type: none"> <li>· Alberta Environment and Parks should more closely align with existing reporting requirements at the provincial and federal level. By addressing the redundancies that will develop as a result of the introduction of the Draft in its current form, a significant increase in administrative burden for both industry and government can be avoided; and</li> <li>· The administrative burden of duplicative reporting is amplified through the requirement to use multiple forms. In addition, where reporting requirements are duplicated from other reporting channels, the formats differ and require even more staff time. The development of one common approach would simplify the entry and review of the information requested and would reduce errors.</li> </ul>	<p>Significant changes have already been made in response to stakeholder comments in order to reduce the reporting burden as much as practical. Ultimately more information is needed than was in 1989 and the format of reporting needs to be changed from paper/scanned documents to electronic reporting to eliminate the manual entry of data that Environment and Parks is currently carrying out.</p> <p>Some data are reported electronically, some are not. Ch 9 has added electronic reporting forms in order to get summary information in an electronic format - so this is not raw, hourly data, but summaries of data used for assessing compliance and tracking ongoing performance. The purpose of the forms was to take out elements that had been reported in pdf reports and put them in an electronic format that would facilitate querying, analysis and tracking by the Regulator.</p> <p>Existing electronic reporting systems are intended for different reporting purposes (submission of hourly monitoring data, incident reporting, compliance purposes). The forms are just extensions of the monthly and annual reports - providing data in electronic format instead of pdf. AEP does not have any intention of merging incident reporting with routine monthly/annual reporting. Incident reporting covers all media, not just air.</p> <p>The AMD emissions inventory 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.</p>	No change made.
-	-	<p>Make a commitment to work with industry to improve your existing systems. Much of the frustration I have heard from around the table is that there is a lot of burdensome reporting required that doesn't add much value. I see the asks of the AMD as valuable however some other requirements are not because they are essentially an exercise in collecting and QA'ing all this data to dump into a theoretical garbage can where it cannot be used appropriately thereafter.</p>	<p>Some data are reported electronically, some are not. Ch 9 has added electronic reporting forms in order to get summary information in an electronic format - so this is not raw, hourly data (as is sent via FTP), but summaries of data used for assessing compliance and tracking ongoing performance. The purpose of the forms was to take out elements that had been reported in pdf reports and put them in an electronic format that would facilitate querying, analysis and tracking by the Regulator.</p> <p>Existing electronic reporting systems are intended for different reporting purposes (submission of hourly monitoring data, incident reporting, compliance purposes). The forms are just extensions of the monthly and annual reports - providing data in electronic format instead of pdf. Forms are not seen as a fix for current electronic reporting systems used for immediate incident reporting. AEP does not have any intention of merging incident reporting with routine monthly/annual reporting. Incident reporting covers all media, not just air.</p> <p>The summary data submitted under the AMD will be stored in a Regulator database and will be in a useful and comprehensive format that will be accessible to policy makers, regional staff and the AER. This information will allow for queries of sector, facility or parameter (e.g., contraventions) that can be used for policy development, management/regional planning and approval applications/renewals.</p>	No change made.
-	-	<p>As was mentioned in the initial comments provided to AEP, there are a lot of redundancies in the new reporting requirement as given in Table 1 in Appendix 1.. Although our company understands the reasoning behind AEP wanting the data in this format, our company strongly supports the concept of single window reporting rather than what is proposed. Reporting the same information through multiple forums in multiple formats creates an unnecessary administrative burden that draws resources away from projects aimed at improving environmental performance, especially with the current global climate.</p>	<p>While a more robust online reporting system would perhaps be ideal, it is beyond the current scope of the updates to the Air Monitoring Directive and likely a longer-term future solution. It may not be practical to spend significant funding on an ongoing basis to collect only air information, when water, land and other environmental data is also being reported to the department by various methods. Spreadsheets are a low cost, practical, solution that is achievable within the available timeframe, and provides an opportunity to test the new reporting requirements before moving to a longer-term reporting solution. Similar spreadsheet reporting forms are already used by industry to submit data under the Specified Gas Emitters Regulation.</p>	No change made.