**Background Info - Reporting on Guidelines**

At the recent CASA meeting, attendees were advised that Chapter 9 of the Air Monitoring Directive (AMD) will come into effect on January 1, 2019.

The specific concern is with respect to section *RC 4‑A* of Chapter 9, which currently states:

*The person responsible must immediately report to the Director any monitoring results that show ambient air concentrations exceeding the AAAQOs.*

Furthermore, the *Appendix A Definitions and Acronyms* of the Air Monitoring Directive (AMD) currently states:

*(1) “AAAQO” means Alberta Ambient Air Quality Objectives and Guidelines, as listed in the Alberta Ambient Air Quality Objectives and Guidelines Summary (Alberta Environment and Sustainable Resource Development 2013), as amended from time to time…*

As such, the AAAQO definition in the AMD is inconsistent with current reporting protocols and practices around AAAQOs.

The Environmental Protection and Enhancement Act (EPEA) legislation presents objectives and guidelines as two separate mechanisms, and some Airsheds currently report to Alberta Environment against objectives only. As per WBEA’s Airshed protocol, government, industry and community are notified of any and all AAAQO exceedances. Currently, these stakeholders are not notified of guideline exceedances.

As they are written today, the proposed changes to Chapter 9 would require Airsheds and industry to notify government of any exceedances of both objectives and guidelines. This is very different than WBEA’s current practices. For example (to provide context), from May 1 – August 28 this year, WBEA experienced a total of approximately 766 hours throughout the network where PM2.5 concentrations exceeded the hourly guideline. This was in addition to the 159 AAAQO exceedances for PM2.5 that were reported in real time to Alberta Environment during the same time period. If Airsheds were required to report guideline exceedances this would mean WBEA would have reported 825 exceedances to government. These numbers give a snapshot of what reporting numbers would look like in a wildfire season.

If the proposed changes to Chapter 9 come into effect, significant additional resources will be required to manage the additional reporting as neither Airsheds, nor Alberta Environment currently have the capability to track and categorize exceedances into existing reference numbers. Each reported exceedance – both AAAQO exceedances and guideline exceedances – will require its own unique case file, meaning significant impact on budgets related to exceedance notification services. Please note that this applies to Airsheds, Alberta Environment and industry alike. As Airsheds, we must also consider the implications of notifying industry members on call/environmental departments almost every hour, continually, for multiple days.

As outlined above, if these changes are implemented, massive change management and additional resources will be required to manage.

The recent, Temporary Protocol for Airsheds, issued on August 23, 2018 by CIC and AEP does provide some temporary relief for regional station operators (see attached). However, this protocol does not cover compliance-based stations. Not sure how smoke from wildfires will stop itself from passing over compliance stations?

**Questions & Points for Consideration**

**Question 1**: Does your Airshed report immediately to Call-in Centre exceedances of AAAQOs and guidelines or only AAAQO?

Contraventions of both AAAQOs and guidelines are reported to the GoA Call Centre immediately upon becoming aware of the contravention.

Both LICA and PRAMP currently do not report TRS contravention as we do not apply H2S objectives to TRS.

**Question 2**: How does your Airshed define immediately? Near real-time, within 2 hours, next business day, next calendar day or only during monthly reporting?

For hourly and 24-hour exceedances, contraventions are typically in near real time during business hours, or the next calendar day, after the data review is completed. Data collected on the previous day is reviewed in the morning before 10am.

For the monthly operational uptime that does not meet 90% requirement, it is reported during the monthly report preparation.

**Question 3**: If guidelines needed to be reported immediately, does your Airshed have resources to handle this new reporting requirement?

Assuming that ***immediately*** means in real time, it would be a challenge, but possible. Our contractor currently doesn’t have on-call technicians that can support this requirement. However, if the guidelines require immediate reporting, it will become part of contract requirements and we will explore delivery options … which may include engaging a 3rd party “on-call” service provider.

30- minute Average Guideline for TRS

The new 30-minute average reporting will require Airsheds to capture sub-hourly data intervals, for example 1-minute or 5-minute data averages. Raw values for 30-minute averages will need to be calculated and stored.

Depending on each organizations data quality assurance and control procedures, the sub-hourly data intervals will need to be baseline corrected and final 30-minute data stored and reported. If there are differences between raw and final 30-minute values, either exceedances of the guidelines will be reported late, or some exceedances that were reported in real time will need to be retracted.

Our assumption is that these 30-minute data values will also need to be reported to the new AEP Data System.

**Question 4**: If AEP requires immediate reporting of raw data, then the reporting of the final data in order to validate exceedences, how much additional work would this scenario be for your Airshed?

If AEP requires reporting TRS exceedances based on a 30-minute AAAQO/Guideline value, our first estimate of effort around data QA/QC suggests that it will likely not add extra work (this is based on our current in-house handling of sub-hourly data intervals). However, the AEP requirement of “immediate” reporting of raw data (assuming immediate means real-time), will require the same consideration as the answer to Q3.

**Question 5**: In your Airshed, who will be responsible for any follow-up investigation and for writing the required seven-day notification letter for the new 30 minute TRS guideline?

Program Manager.

Reporting Stations

The following criteria, which are consistent with the CAAQS determination of monitoring stations for PM2.5 and ozone, are to determine which monitoring stations are not to be used for the application of the TRS ambient guideline:

* sites within areas of industrial activity;
* sites which are very near to industrial activities except those near population centers.

**Question 6**: Please update the following table to include any additional stations that report H2S and TRS in your Airshed:

|  |  |
| --- | --- |
| **H2S Stations** | **TRS Stations** |
| Ardrossan | Anzac |
| Beverly | Barge Landing |
| Brion MacKay River | Bertha Ganter - Fort McKay |
| Buffalo Viewpoint | Caroline |
| Calgary Southeast | CNRL Horizon |
| Edmonton East | Cold Lake South |
| Falher | Conklin Community |
| Firebag | Evergreen Park |
| Fort Saskatchewan-92 St and 96 Ave | Fort McKay South (Syncrude UE1) |
| Gold Bar | Fort McMurray-Athabasca Valley |
| Lamont County | Fort McMurray-Patricia McInnes |
| Lethbridge | Grande Prairie (Henry Pirker) |
| Lower Camp | Hinton |
| Mannix | Lancaster |
| Maskwa (LICA) | Millennium Mine |
| Mildred Lake | PRAMP\_842 |
| Red Deer - Riverside | Smoky Heights |
| Scotford 2 | Stony Mountain (Conklin Lookout) |
| Sherwood Park (New) | Janvier |
| St. Lina (LICA) | Fort Hills |
| Valleyview | Reno (PRAMP) |
| Wapasu | Station 986 (PRAMP) |
| Surmont |  |
| Waskow Ochi Pimatisiwin |  |
| Christina Lake |  |
| Jackfish 1 |  |
| Jackfish 2/3 |  |
| PAMS (LICA portable) |  |
|  |  |
|  |  |

**Question 7**: Please review the table below and flag stations in your Airshed that report for CAAQs (add any additional CAAQs reporting stations that may be missing from this list):

While LICA monitors H2S at other locations in the network, only Cold Lake’s TRS is used in CAAQs determination. None of PRAMP’s TRS data are used for CAAQs determination *to our knowledge*.

|  |  |  |  |
| --- | --- | --- | --- |
| **Air Zone** | **Monitoring Station** | **TRS** | **H2S** |
| Peace | Beaverlodge |  |  |
| Evergreen Park | **x** |  |
| Grande Prairie (Henry Pirker) | **x** |  |
| Smoky Heights | **x** |  |
| Lower Athabasca | Anzac | **x** |  |
| Bertha Ganter - Fort McKay | **x** |  |
| CNRL Horizon | **x** |  |
| Cold Lake South | **x** |  |
| Fort Chipewyan |  |  |
| Fort McKay South (Syncrude UE1) | **x** |  |
| Fort McMurray - Athabasca Valley | **x** |  |
| Fort McMurray - Patricia McInnes | **x** |  |
| **Cold Lake** | **x** |  |
| Upper Athabasca | Carrot Creek |  |  |
| Edson |  |  |
| Hinton | **x** |  |
| Power |  |  |
| Steeper |  |  |
| North Saskatchewan | Breton |  |  |
| Bruderheim |  |  |
| Caroline |  |  |
| Drayton Valley |  |  |
| Edmonton Central |  |  |
| Edmonton East |  | **x** |
| Edmonton Woodcroft |  |  |
| Edmonton South |  |  |
| Elk Island |  |  |
| Fort Saskatchewan |  | **x** |
| Genesee |  |  |
| Lamont County |  | **x** |
| St Lina |  |  |
| Tomahawk |  |  |
| Violet Grove |  |  |
| Red Deer | Red Deer Riverside |  | **x** |
| Lancaster | **x**  |  |
| South Saskatchewan | Calgary Central |  |  |
| Calgary Southeast |  | **x** |
| Calgary Northwest |  |  |
| Medicine Hat - Crescent Heights |  |  |
| Lethbridge |  | **x** |

**Question 8**: Does your Airshed support this new 30 minute, province wide guideline for TRS?

This question will be brought up and discussed during our next TWG meeting, which, for both LICA and PRAMP will be held in mid to late September. As a result, both LICA and PRAMP cannot provide a response to this question at this time.

**Question 9:** What modifications or conditions would you suggest be applied to this guideline in order to make it more user-friendly and appropriate?

See answer for Q8.