



Peace River Area Monitoring Program (PRAMP) Committee

Technical Working Group Meeting

March 28, 2018

9:00 am to noon

NAIT Boreal Research Centre

Meeting Notes

Attendees:

Name	Sector Group	Organization	Participation
Doug Dallyn, <i>Co-Chair</i>	Public		Director
Reid Glenn	Public		Director
Anthony Traverse, <i>Treasurer</i>	Industry	Baytex Energy	Director
Robyn Kutz	Industry	CNRL	Director
Dave Hill, <i>Co-Chair</i>	Industry	Operators Committee	Director
Krista Park	Gov	AHS	Director
Vaughn Molen	Gov	AER	Guest
Bob Myrick <i>via phone</i>	Gov	AEP	Guest
Kevin Kambell		NAIT Boreal Research Instit.	Guest
Karla Reesor		Executive Director	
Mike Bisaga		Technical Program Manager	
Lily Lin		Technical Program Manager	
Brenda Barber		Office Manager	
Chris Wesson		Maxxam	
Robert Fisher		Maxxam	

Regrets:

Name	Sector Group	Organization	Participation
Garrett Tomlinson, <i>Co-Chair</i>	Gov	Northern Sunrise County	Director
Cheri Sinclair		Maxxam	
Adewunmi Adekanmbi		Maxxam	

These notes are provided as a summary of discussions of the PRAMP Technical Working Group. The views and ideas noted do not necessarily reflect the perspective of each Committee member. Decisions are taken by consensus.

1. Meeting called to order at 9:15 by Mike Bisaga. Introduction to the NAIT Boreal Research Institute by Kevin Kambell.

2. Approve Agenda

Quality Control Corner – daily spans will be tabled to next meeting; we will use this time for the oilsands aerial monitoring program

Motion to approve the agenda by Doug Dallyn.

3. Approval of Minutes

Minutes were provided prior to the meeting. Changes include Item 7 842B not 942B. Burrow should be barrow.

Motion to approve the minutes as amended by Anthony Traverse.

4. Action Items

- Maxxam trigger of canisters by Maxxam – did one test on the 842 station; received the analysis, have sent the information to Mike Zelensky to plot in database. Bob Myrick can provide the data on background samples. Lab results for blanks will be shared with TWG.
- The drawing for the pressure sensor for the canister system were send to Reid Glenn
- Signs and station wraps – we have received an initial design. Plan to have 48” x 24” signs to put on the stations and the side of stations. Larger sign at 986; this sign will be 4’x8’. Mike will continue to work on the design and work with Doug Dallyn for placement at station 986.

Action Item: Mike will talk to Bob Myrick about adding the government logo to the signs.

Action item: Karla and Brenda will research a menu option phone number

- Maxxam will trigger the canisters that are set to expire as a test.
- Mike will resend the sensor drawings to Reid – done.
- Mike will look into a second trigger on canisters related to hydro-carbons. It is possible to set two triggers on a canister; if one sample (i.e. THC) triggers, the system would have to be reset before another sample could be take (i.e. Methane). Currently triggering on high non-methane hydrocarbons. There is very little correlation between methane and non-methane readings. Canisters

used to measure Total Hydro-carbons, that was changed to the methane. Trigger point is set at 0.3ppm for non-methane hydrocarbons. AER has a boreal testing unit that they plan to do more testing with. The unit provides real time concentration levels of methane. Causes of spikes in methane can come from industry, wetlands and livestock. The concentrations of methane do not indicate if they are from industry or naturally occurring.

- *Mike will come back to the TWG with recommendations on reasonable trigger levels* - Mike has put together data on trigger levels, but recommendation will be discussed. We can do a comparison between the background and the methane triggers and determine if the thresholds should be reset.

Action Item: Mike will review the history of data and based on conversations today will come back with a recommendation.

5. Canister Sampling Program

- A document that provided an overview of canister sampling events was reviewed by Maxxam. Review of the events in 2017 and 2018. Eleven events, 4 were not collected properly.
 - July 21 at Reno was not collected; have changed alarm and alert system.
 - November 12th canister was collected but not sent for analysis. Have implemented procedures to ensure canisters are sent for analysis.
 - Feb 25 at Reno – there was a hardware failure. Have implemented a corrective measure to trigger a sample from expired canisters to test the system.
- Maxxam reviewed off the shelf systems which actively sample the air and force-fill the canister. These systems have natural tie-in and alarming functions but cost about \$20,000 per station.
- All of the canister sampling systems at PRAMP's stations now have a pressure sensor-based alarm. Alarms trip when the pressure changes significantly.
- Updating data loggers in the stations, the new data loggers can send out emails directly. There will be 3 different alert systems in place.
- Mike and Lily currently do not receive any alerts for canister triggers. This is an issue with the Maxxam network; Chris indicated Maxxam is receiving alerts and will continue to investigate how to get them to Mike and Lily.
- Maxxam will get an alert if there is a trigger or a leak. Maxxam noted that there is slight change in the pressure in all of the stations. The pressure change is so minor that does not affect desired amount of sample taken. Validation sample was done at 842 and the vacuum pressure was good.
- Missed and failed opportunities to collected cansiter samples has undermined PRAMP's confidence in the system; Maxxam understands this sentiment and seeks to continuously to improve their procedures.
- The TPMs recommend having a third party audit of the canister system. WBEA has the knowledge and expertise to provide this service and is able to audit the PRAMP program.
- The TMPs recommend a refresher training session for handling the canisters. It was noted that 842 station has a high turnover of individuals who manage the canisters.
- Confirmation of the canisters being changed must be done within one day. Recommend to the board to do a third party audit.

7. Continuous Monitoring Program

January Dashboard

Reno

- All compliance parameters were within the guidelines and above 90% uptime
- TRS: Uptime was 99.5% = 4 hrs of downtime. 2 additional zero-span checks (IZS) were performed on Jan 6 and 7 to assess a high span drift (-3 hrs). A full multi-point calibration was completed on Jan 9 to correct the drift. The hour following calibration was discarded due to the analyzer's slow recovery from the post-calibration IZS (-1 hr).
- THC/CH₄/NMHC: Uptime was 97.3% = 20 hrs downtime. Monthly calibration was scheduled for Jan 9, but on arrival the N₂ (carrier gas) regulator was found to be leaking. The regulator was replaced and the cylinder exchanged. The following calibration failed at low point, likely caused by contamination of the carrier gas by the replacement regulator. Column conditioning ran overnight, followed by a post-repair calibration on Jan 10. Daily QC and the as-found portion of the Jan 9 calibration validate data collected prior to the regulator change.

986B

- All compliance parameters were within the guidelines and above 90% uptime
- SO₂ /TRS: Uptime was 99.7% = 2 hrs downtime.
- THC/CH₄/NMHC & Meteorological Parameters: Uptime was 99.9% = 1 hr downtime.
- On January 16, an alternate datalogger (DrDas Ultimate) was installed and tested on the channels at hours 17 and 19. The Ultimate datalogger is currently running in parallel with the resident (ESC) datalogger.

842B

- All compliance parameters were within the guidelines and above 90% uptime
- TRS: Uptime was 94.4% = 42 hrs downtime. Repeat span verification (IZS) and an as-found response check on Jan 3 to assess a low span drift (-4 hrs). Shut-down calibration attempted on Jan 4 but the analyzer was slow to stabilize. The scrubber material was renewed, followed by overnight column conditioning. Post-repair calibration on Jan 5 restored the analyzer (-35 hrs). Data was invalidated back to as-found check on Jan 3.
- As-found response check completed on Jan 12 to assess low span drift (-3 hrs).
THC/CH₄/NMHC: Uptime was 99.7% = 2 hrs downtime.
- Analyzer firmware crash on Jan 12 (-1 hr).
- The pressure sensor for the VOC canister sampler was installed.
- Span and H₂ fuel gas cylinders were replaced followed by an IZS (-1 hr).

February Dashboard

Reno

- All compliance parameters were within the guidelines and above 90% uptime
- THC/CH₄/NMHC: Uptime was 99.7% = 2 hrs downtime. The fuel gas cylinder was replaced on Feb 9, followed by a zero-span check (-1 hr).
- The sample manifold was cleaned prior to the start of monthly calibration on Feb 22 (-1 hr).
- A canister event was recorded on Feb 25 at 23:50, at an initial concentration of 0.40 ppm.

986B

- All compliance parameters were within the operational guidelines and above 90% uptime.

- THC/CH₄/NMHC: Uptime was 98.2% = 12 hrs downtime. Due to low fuel gas pressure the analyzer recorded anomalously low hourly and span data on Feb 7. The fuel gas cylinder was replaced, followed by a zero-span check (-10 hrs).
- Following monthly calibration on Feb 15, the channels remained offline in order to test the canister trigger program on the Ultimate datalogger (-2 hrs).

842B

- All compliance parameters were within the guidelines and above 90% uptime
- TRS: Uptime was 99.9% = 1 hr downtime.
- An additional zero-span check (IZS) was performed on Feb 28 to assess a high span drift (-1 hr).
 - THC/CH₄/NMHC: Uptime was 98.8% = 8 hrs downtime. Due to poor sample injections, sporadic instances of THC < 1.80 ppm, along with corresponding CH₄/NMHC values, were discarded in the minute data and hourly averages were recalculated. Hourly data with >15 min of poor injections were discarded on Feb 27 and Feb 28 (-5 hrs)
- The actuator failed on Feb 28 causing the IZS to fail. Data was rejected back to the identified point of failure on Feb 28, hr 21:00 (-3 hrs). The actuator was replaced on Mar 1.

8. Passive Monitoring Program

- Will be tabled until next meeting.

9. Production Data and Ambient monitoring results

- Have reviewed all the data for the airshed map. Data compiled for all station areas up to the end of 2017.
- Map indicates methane concentrations and production proximity to stations.
- Well sites are in closer proximity to Reno than 986 and 842.
- Higher concentrations are at night; lower wind conditions
- Going forward, this is useful for planning to use the portable monitoring station and where to expand routine monitoring activities. We will discuss further at the next face to face meeting of the TWG. We can add layers to the map to include other things such as populations.

10. Aerial Monitoring Update

- AEP entered into agreement with NOA to measure greenhouse gases around oilsands in Alberta. Started it in 2017; will continue in April, June and August of 2018.
- Flights start on April 5 to 16, using a single engine aircraft will be measuring methane and hydrocarbons. The aircraft will circle around the perimeter of a facility and different heights
- Will measure the same facilities as in 2017. Will be able to do a comparison.
- Plan to go to the Seal Lake and Three Creeks area. Coordinating with Environment Canada's survey.
- Draft report should be done around the end of April. Bob will confirm the draft results can be shared with airsheds.
- Bob will provide the COSIA email to Karla to provide more information to share with the Committee.

11. Workplan Update

- AEP should hear decisions on what is being approved next week. There were \$74m project asks with \$50m available. Not everything will be funded.
- Paperwork has been started to extend our current contract to June.

11. Next Meeting Date

June 28 in Peace River; location to be determined.

Meeting adjourned at 12:23 by Krista Park.

Action Item Number	Action Item Description	Status
New Action Items		
2018-03-01	Mike will talk to Bob Myrick about adding the government logo to the signs.	NEW
2018-03-02	Karla and Brenda will research a menu option phone number	NEW
2018-03-03	Mike will review the history of data and based on conversations today will come back with a recommendation.	NEW
2018-01-05	Mike will come back to the TWG with recommendations on reasonable trigger levels	
Completed Action Items		
2018-01-01	Maxxam will trigger the canisters that are set to expire as a test.	
2018-01-02	Mike will resend the sensor drawings to Reid	
2018-01-03	Mike will do research on signs and/or wraps for the stations	
2018-01-04	Mike will look into a second trigger on canisters related to hydro-carbons	
2017-11-01	Mike will add the approval process to the TORs. Will send with the draft minutes for approval.	
2017-11-02	Mike will make a recommendation to the Board on the procedures for the TWG to report to the Board	
2017-11-03	Lily will ask Maxxam to provide a system design including the location of the new sensor. The TWG will approve via email before Maxxam does the installation.	

2017-11-04	The TWG will make a recommendation to proceed with the data management initiative to the Board.	
2017-11-05	Karla and Mike will have a discussion with AEP (Bob and Yayne) to determine the contract parameters for the data management initiative.	
2017-11-06	Karla will talk with Mike Zelensky to confirm roles of the AHS Benchmark reporting	
2017-11-07	Mike and Lily will advise Maxxam to go back to 23 hour interval and advise them that any procedural changes need to be reviewed by the Technical Program Managers.	
2017-11-08	Lily will advise Maxxam to apply the data validation on one minute data.	
2017-10-01	Lily will request Maxxam lower the concentrations on alarms for the canisters	
2017-10-01	Lily and Mike will investigate higher end alarming systems in canisters	