



PAMZ | Parkland Airshed Management Zone

Minutes: Technical Working Group Meeting
Date: January 25, 2013
Location: ERCB Boardroom, # 202, 4909 - 49th Street, Red Deer
Midnapore Video Conference Facility, #300 31 Sunpark Plaza SE, Calgary

Participants:

Noor Alif - AESRD	Shaminder Cheema - NOVA	Jeff Cooper - Focus
John Cuttress - Focus	Lenin Flores - Focus	Brian Goliss - Shell
Warren Grimes - AESRD	Darren Robins – Imperial Oil	Aaron Rognvaldson - Husky
Jim Saltvold - Public	Pam Stables - Shell	Pervez Sunderani - AESRD
Dean Thompson - ERCB	Kevin Warren - Amarok	Reg Watson – Public

Guest: Rhonda-Lee Curran, AESRD

Bolded Items are Action Items

1. The meeting was called to order by Aaron Rognvaldson, at 0910 hrs
2. All attendees introduced themselves.
3. The agenda was reviewed and accepted with the addition of 2013 meeting dates under other Business.
4. The minutes of the November 16, 2012 meeting were accepted.
5. The status of action items arising from the November 16, 2012 meeting was reviewed.

Kevin will follow-up with Harry, before Harry leaves AESRD, concerning N2 carrier gas conversion and replacement wind system. **Done** AESRD is not retrofitting their THC/CH4 analyzers for N2 as it is only a manufacturer's recommendation and not a requirement. The ultrasonic wind system at is not due for replacement for another three years (2015) AESRD has provided PAMZ with an ultrasonic loaner unit so we can return the current unit to AESRD for calibration. Discussed further in meeting.

Kevin will distribute Passives Precision and Accuracy study and report to TWG when available. **Done** Report's author Rhonda-Lee Curran gave a presentation about the study later in the meeting.

Kevin will use report in designing scope of work for a passive rationalization study. Draft for September meeting. **Dropped** As agreed by group after discussion later in the meeting.

Kevin Warren will send Harold Gould a card thanking him for his contributions to the PAMZ TWG. **Done** Kevin included a PAMZ shirt and cordless mouse as a gift

Kevin will table the revised 2013 portable schedule at the November 21 Board meeting for their approval. **Done** Accepted by Board.

Bob Myrick will let Kevin know if/when the PAML Station is available in 2013. At its January 2013 meeting, the TWG will decide on proceeding with an application for funding for additional monitoring using the PAML based on his response. **Done** Discussed later in the meeting.

Kevin will table the proposed 2013 Operating Budget and Funding allocations for the Board's approval at the November 21 Board Meeting. **Done** Board Approved.

Kevin will contact Jeff Cooper and make arrangements to renew Focus's contract for 2013 with addition of quarterly performance reviews. **Done**

Kevin will discuss a media release concerning 2009-11 assessment results with board and communications committee at their next meetings. **Carry Forward** Waiting for information from AESRD.

6. PAMZ AQM Program

Focus Developments

Lee Loran left Focus January 11, 2013 and been replaced by Jon Cuttress. There are three new techs working on PAMZ:

- Stephanie Tandy
- Gagandeep Singh
- Chris Hendrickson

As reported under action items summary, the 2013 contract with Focus was finalized and signed just prior to the meeting.

Budget Update

Emergency repairs to the TECO 55 totalling \$8.1K were made by factory and will come out of 2012 contingency budget. Analyzer has been reinstalled in the Martha Kostuch station. Rental and operation of an additional SO2 monitor for the Ferrier Site will cost approx. \$7.1K and come out of the 2013 contingency budget leaving \$11.3K for the rest of 2013.

The remaining Campbell datalogger originally scheduled for capital expenditure in 2013 was purchased in December 2012 so that it could be used for the Ferrier work. When this monitoring is finished it will be installed in the Martha Kostuch portable. The first week of April the Martha Kostuch station will go to the factory for replacement of its roof-top AC unit with a wall-mounted HVAC. Collapsible safety rails will also be installed on the roof. The total for this work is approximately \$13K and will come out of the 2013 capital expenditure budget.

Caroline

- All levels within historical normals since November 16, 2012 TWG Meeting
- Wind sensor had a 94% Operating Efficiency in December due to Icing Conditions

Focus will set up dataloggers or adjust raw data so that a Minus 1 hour offset correction is applied for the BAM 1020 PM2.5 data beginning January 1, 2013

Red Deer

- All levels within historical normals since November 16, 2012 TWG Meeting
- Since the Nov. 16 TWG Meeting there have been no exceedences of the 24-hour PM2.5 objective though there have been days earlier this week that have flirted with the objective.
- Using nitrogen as a carrier gas will extend the life of the column as per the manufacturer's recommendation but it has been Focus's experience that there are no problems using dry ultrapure zero air. AENV is not switching back to N2 and will continue to use ultrapure zero air. After some discussion, the group decided to not retrofit the Teco 55 in the Martha Kostuch portable for using N2 carrier gas.
- The ultrasonic wind system at is not due for replacement for another three years (2015) AESRD has provided PAMZ with an ultrasonic loaner unit so we can return the current unit to AESRD for calibration.
- The same goes with the TECO FDMS unit; it will not be replaced for another three years even though most jurisdictions in Canada are switching to the TECO Sharp 5030.

Martha

- The station was located at Crestomere Site Nov. 28, 2012 through January 10, 2013 due to delay in Power Installation at Ferrier Acres Site
- The SO2 analyzer had excessive zero drift throughout December so the lamp was replaced shortly after installation at Ferrier
- The Crestomere site is located along south side of Highway 53; NOX levels (13 ppb monthly average) were lower than those seen in Red Deer
- Due to the high tree canopy at the French residence, the Martha Station is located at a Devon Water Well (Ferrier Acres) at 10-22-39-8 W5
- An SO2 analyzer has been installed at French Residence (Satellite) at 7-22-39-8 W5 with high volume sample train in yard south of the residence
- No significant SO2 has been observed at either site to date, have seen some THC, NOX and high PM2.5 levels during recent inversions
- When SO2 is present at Satellite Site it also has been observed at Ferrier Acres site

McCoy

- The station was relocated from Lacombe to Lancaster Nov. 27, 2012
- Station will be on site through last week of March 2013 (must be out by March 31, 2013 as per Municipal Planning Commission agreement)
- Observed wind direction patterns are very different at the Riverside and Lancaster sites
- Riverside monitors PM2.5 with TEOM FDMS while McCoy at Lancaster employs a BAM 1020
- The average PM2.5 levels recorded at Riverside In December are roughly double those recorded at Lancaster
- Average NOX levels recorded at Riverside in December 2012 are roughly 29% higher than those recorded at Lancaster

Kevin will apply to ESRD for use of the PAML for the last 6 months of 2013 at the Lancaster site and for the funds required to operate it. If the application is successful, at its June meeting the TWG will revisit the idea of using one of the portables for a shortened three-month monitoring campaign in July-September

Passives

Levels and patterns consistent with historical normals for October – December 2012.

2013 Monitoring Schedule

The current monitoring schedule for the portables is:

	Martha	McCoy
Jan-13	Ferrier Acres	Lancaster Reservoir
Feb-13	Ferrier Acres	Lancaster Reservoir
Mar-13	Ferrier Acres	Lancaster Reservoir
Apr-13	Rocky Mtn House Area	Eagle Hill
May-13	Sylvan Lake	Sewage Lagoon
Jun-13	Flaring Site	Class 2 Landfill
Jul-13	TBD	Crossfield-Carstairs
Aug-13	TBD	Crossfield-Carstairs
Sep-13	TBD	Crossfield-Carstairs
Oct-13	Rocky Mtn House Area	Eagle Hill
Nov-13	Sylvan Lake	Class 2 Landfill
Dec-13	Flaring Site	Sewage Lagoon

7. 2013 Funding Allocation Developments

On December 12, PAMZ received a letter from Penn West about changes made to eliminate SO₂ and NO_x emissions at their Wimborne plant. In the letter, they indicated their intent to apply to ESRD to amend their operating approval and advised they would cease participation in PAMZ and not be paying any membership fees for 2013 related to this facility. Penn West declined an invitation to meet with PAMZ to discuss the matter. It is PAMZ's position that clauses in Penn West's approval require that they remain a member in good standing until their approval has been amended to remove this requirement. ESRD has not yet made a decision about amending Penn West's operating approval and it was not known by the representative present if they had received an amendment application.

Kevin briefly reviewed how fee allotments for large companies are calculated, noting that amounts owing for PAMZ 2013 fiscal year are based on emission data for 2011. Two things determine what a plant pays: the amount PAMZ needs in its budget, and the plant's emissions. Some smaller plants are now paying a larger proportion because overall emissions from larger plants are coming down for various reasons (improved efficiency, reduced gas throughput, etc.). The Penn West allocation for 2013 is \$37,778.

Kevin will defer Invoicing of EPEA member facilities until after this funding issue has been discussed at next week's Board Meeting.

8. Alberta Environmental Monitoring Commission

Kevin provided a high level summary of recent developments with the Environmental Monitoring Commission (EMC) based on a presentation given to the three northern airshed in December. The EMC will be an independent arms-length body that will decide where, when and how environmental monitoring will be done in Alberta. Initially it will focus on the Wood Buffalo area (2013-2014). It will collect all fees required for the monitoring from industry and also enter into agreements with airsheds and others to conduct the monitoring. For 2013 it will be business as usual for WBEA as plans for enhanced monitoring program

are developed and funding allocations determined. In 2014 the enhanced monitoring will be implemented and approx. \$50 Million for environmental monitoring (air, water, soil, other) will be collected from industry with operations in the area. Ernie Hui, the EMC's executive director was scheduled to give a presentation to the PAMZ board meeting next week but had to cancel and reschedule for their April 17 meeting.

Kevin will report back to the TWG as more developments around the EMC become known.

9. Presentation on Passive Precision & Accuracy Study

Rhonda-Lee Curran of ESRD and a graduate student and author of a paper summarizing a Passive Precision & Accuracy Study gave a presentation summarizing the study.

- The study looked at field performance of only Maxxam-type passives (No AGAT or AMEC) used by 5 Alberta Airsheds over a 5 year period 2006-2011 (did not breakdown individual airsheds)
- Robust sample sizes were used: 1000 for Precision and > 500 for Accuracy
- Precision was determined by looking at passive duplicates; PAMZ has 10% rotating duplicates (4 per month)
- Accuracy compared passive results with co-located permanent continuous monitoring; PAMZ has two permanent co-located sites: Caroline and Red Deer Riverside

The study concluded that:

- Precision (repeatability)
 - Duplicate samples showed an approximate 1:1 relationship
- Accuracy (proximity to "true" result)
 - SO₂ bias high compared to continuous, Mean absolute % difference $\pm 62\%$
 - NO₂ bias low compared to continuous, Mean absolute % difference $\pm 41\%$
 - O₃ bias high compared to continuous, Mean absolute % difference $\pm 21\%$
- The Maxxam passives have an acceptable performance for use in interpretation of spatial/temporal trends of ambient concentrations of SO₂, NO₂ and O₃

In 2012, the TWG was tasked by the PAMZ Board to revisit the density of the passive monitoring network, decide if a study is needed, and report back to the Board. The TWG's decision on proceeding with study was delayed until 2013 because of delay in the release of the Passive Precision & Accuracy Study results.

After discussion the TWG that that the opportunities for cost savings by reducing the number of sites very limited based on standard being used by all airsheds. Such a study would cost in vicinity of \$20-30K minimum and require application for funding from ESRD. With the limited funds available due to GOA cutbacks TWG wants to increase odds of success on critical items: additional monitoring in Red Deer (\$30-35K) and annual report preparation (\$17.5K). The group decided against proceeding with a study to look at the density of the passive monitoring network at this time.

Aaron and/or Kevin will communicate the group's decision to the board at their upcoming meeting.

10. Other Business

NONE

11. Upcoming Events

PAMZ Board Meeting January 25, 3:00-7:00 GH Dawe Center Boardroom, Red Deer

12. Next Meeting

The next TWG meeting will be held Friday, April 12, 2013 at the Red Deer ERCB office. There will be no teleconferencing unless weather on this date restricts longer-distance travel.

13. Adjournment

The meeting was adjourned at 1210 hrs