



**PAMZ** | Parkland Airshed  
Management Zone

**Minutes:** Technical Working Group Meeting  
**Date:** March 23, 2012  
**Location:** ERCB Red Deer and Midnapore Videoconference Facilities

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Participants:

Red Deer

Jeff Cooper - Focus  
Trent Myck - Imperial  
Jim Saltvold - Public  
Reg Watson - Public

Brian Goliss - Shell Canada  
Dale Nylund - AltaGas  
Mohammad Shoaib - AESRD

Shane Lamden - NOVA Chemicals  
Aaron Rognvaldson - Husky  
Brian Vanderzwan – Imperial/Exxon

Midnapore

Al Duben - ERCB  
Lee Loran - Focus

Lenin Flores - Focus  
Kevin Warren - Amarak

Harold Gold - Bonavista

**Bolded Items are Action Items**

1. The meeting was called to order by Aaron Rognvaldson, at 09:12.
2. All attendees introduced themselves.
3. The agenda was reviewed and accepted with no additions
4. The minutes of the January 20, 2012 meeting were accepted with the date corrected.
5. The status of action items arising from the January 20, 2012 meeting was reviewed.

Kevin will begin updating the QAP based on discussion and report back to group at its September 16, 2011 Meeting. **DONE**

Kevin will make arrangements for a study update presentation from NOVUS Environmental at the January 20, 2012 TWG Meeting. **DONE** on Agenda

Aaron will inform the PAMZ Board of Directors of the TWG's decisions and recommend the Board approve the Operating Budget as agreed to by the TWG. **DONE**

Once, the Board has approved the budget, Kevin will contact all the vendors noted above, inform them of the TWG's decision and secure contracts for the work. **DONE**

Kevin will contact make arrangements for videoconferencing at St Albert and Calgary

ERCB offices in addition to Red Deer for the January meeting. **DONE**

6. PAMZ AQM Program

No exceedances of Ambient Air Quality Objectives or Guidelines have been observed since the January 20, 2012 Meeting.

All instruments identified in the 2012 Capital Expenditures Budget have been ordered and received. These include: Campbell 3000 DAS for McCoy, an API 700 Calibrator for McCoy, An API 400e Ozone Analyzer for Caroline, and an API 100e SO<sub>2</sub> Analyzer and CD NOVA TRS Converter. Met Sensor replacement parts for Caroline & Portables (cups & vanes) are on hand and will be installed later in spring, weather permitting  
Caroline

All levels have been within historical normals since January 20, 2012 TWG Meeting with one exception. The main electronics board on Ozone Analyzer failed and the analyzer was replaced with AESRD loaner; the new API 400e will be installed in April and old analyzer rebuilt as a hot spare. The old NOX analyzer has already been rebuilt as a hot spare

Riverside

There has been the occasional elevated H<sub>2</sub>S readings (< 10 ppb) attributed to Three Mile Bend Sewage Treatment facilities but all other levels within historical normals since January 20, 2012 TWG Meeting with one exception - One PM<sub>2.5</sub> Exceedence June 29 (33 ug). Kevin was on the road and asked Focus to call in, who called it in twice. A nearby power pole transformer caught fire at 1:15 AM Tuesday, Mar. 6. The power was restored at 16:13 later that day. Station was powered down on March 7 at 0909 as work planned for entire day with power switching on and off. Station was powered up March 8, 17:57 and all parameters were calibrated on Mar. 9. As a result station may be below 90% for March.

The status of the switchover of THC/CH<sub>4</sub> Teco 55 Analyzer back to Nitrogen carrier gas in 2012 is unknown. The O<sub>3</sub> Analyzer lamp and reaction cell were recently replaced. The status on replacement cup and vane style System by AESRD is unknown. Harry Benders of AESRD is done March 31, going to FAP April 1, and is replacing Melanie Larsen (moved to Arizona) who is done May 31.

**Action: Kevin will follow-up with Harry, before Harry leaves AESRD, concerning N<sub>2</sub> carrier gas conversion and replacement wind system.**

Martha

The station was at the Mirror Site from Jan 5 – Feb 9, 2012. Winds were mostly from south, with a strong correlation of high NO<sub>2</sub> and THC levels when winds from SW, WNW, NW and NNW. No exceedances of the air quality objectives were recorded. There were problems with THC/CH<sub>4</sub> analyzer upon startup ran at 89.5 % for the January monitoring period..

The station was at the Bluffton site from Feb 9 – Mar 8, 2012. Winds were mostly from WNW than SSE, The highest SO<sub>2</sub> levels were observed with NNE winds (highest 16 ppb NNW). The Keyera Rimbey Plant 7.5 kms directly east, so not the source. TRS ran at or near LDL; the highest treading was 3 ppb observed at March 1 at noon with strong NW winds (suspect local feedlot). No problems were observed with THC analyzer while at this

station.

Since March 8, Station has been at Delburne site. Shortly after startup started seeing lots of SO<sub>2</sub> readings at night and early morning with SW winds (peak 115 ppb) with a few hour averages > 50 ppb. Discussed situation with ERCB (Tyler Collicut and Al Duben). Now working with Al monitoring situation to dispatch mobile unit on a day with lots of readings. The THC analyzer failed on March 9 and could not be repaired. A replacement THC/CH<sub>4</sub> was installed & calibrated on March 10 (Sat). Focus unable to repair old unit to their satisfaction so are going to bring in Ray Brassard to look at it.

The next site will be Garrington site from April 4- May 9. Site is located at Glen Willsie Residence SE 29-34-4 W5. Still a fair bit of drilling activity recently, currently there's a rig located about 2 kms northwest.

### McCoy

The station was located at West Sundre site from October 6, 2011 through Jan 31, 2012. Winds were mostly straight out of the west, therefore station was not downwind of Industrial area as per original intent. All concentrations observed were significantly below applicable Alberta Ambient Air Quality Objectives & Guidelines. All levels were well within historical normals seen in other similar-sized towns in PAMZ and below those in cities eg. Red Deer Diurnal (time of day) patterns similar to those observed in towns and cities where motor vehicles are the primary pollution source.

Since Jan 31, 2012 the station has been at the Crossfield-Carstairs site. Levels have been within historical normals at this site with no distinct correlations between low level SO<sub>2</sub> and southwest wind direction (TAQA North E. Crossfield). The PM<sub>2.5</sub> analyzer was down from Feb 25 – March 1, < 90% for February. The motor spring assembly failed and parts had to come from Oregon

### Passives

Levels and patterns are consistent with historical normals for December 2011 and January 2012. Station 19 (Crossfield-Carstairs) was destroyed. A new site was established slightly to north i.e. < .5 km.

Annual patterns for 2011 are similar to previous years

- SO<sub>2</sub> slightly lower .37 > .34
- NO<sub>2</sub> significantly lower 2.49 (2010) > 1.96 (2010) > 1.39 (2011) 44 % drop in two years, 29% in last year
- O<sub>3</sub> significantly higher 28.2 < 33.8 (20% increase)

**Action Item: Kevin will track passive NO<sub>2</sub> values against Continuous NO<sub>2</sub> at co-located sites for last 5 years and report back to group.**

## 7. Red Deer PM<sub>2.5</sub> Study

Xin Qiu, Novus Environmental walked group through a PowerPoint Presentation (attached) summarizing part 3 of PM<sub>2.5</sub> study: Modeling potential new locations for Red Deer Station relocation. He is recommending deployment of McCoy portable to Southeast site in Aug & Sep and to Michener Park area Oct-December.

**Action Item – Kevin will see that report is finalized next week and submitted to AESRD plus the Final Invoice before 2012 fiscal Year End (March 31).**

8. Passive Network Assessment

Rhonda Lee Curran, a master's student with U of A professor Warren Kindzierski and AEW staff member is currently conducting a study to assess the precision, accuracy, and uncertainty of passive samplers. She is looking at all data collected by various airsheds from sites that have duplicate or triplicate samples as well as co-located data from sites that have – AEW both continuous and passive sampling. The report will be shared with all airshed organizations that participate. Last heard from her 1 month ago when she had questions on which Red Deer Site to use for continuous data (Riverside).

**Action: Kevin will distribute report to TWG when available.**

**Action: Kevin will use report in designing scope of work for Passive rationalization study. Draft for September meeting. Would occur in 2013 in 2nd or 3rd quarter if it can be funded – AEW/PAMZ/Other**

9. Other Business

Ozone Management Plan – Final drafts of Burning Bylaw Review & Agricultural BMPs Reports are being reviewed, if no major updates needed they will be tabled at next week's Board Meeting. No meeting this afternoon. Looking for nominations for 2012 Action Hero Awards – Companies, municipalities, NGOs and individuals. Presentations to WCS Air info night next Monday and SPOG Learning Supper April 24.

Membership – Aaron Rognvaldson was confirmed by group as chair for another two-year team.

Standalone Remote Monitoring- Brian Goliss raised idea of having Diagnostics Engineering give a presentation about their Diagnostic Air Patrol Technology capable of remote monitoring of low level SO<sub>2</sub> and H<sub>2</sub>S concentrations.

**Action: Brian will work with Kevin to have Diagnostic Air Patrol presentation by Diagnostics Engineering at the next meeting.**

Industry Updates – Need articles for newsletter

10. Upcoming Events

- WCS Information night, RMH Monday March 26 6-8 at Lou Soppit Centre, PAMZ info both and AEW & AHS reps also in attendance
- PAMZ Board Meeting, GH Dawe, Wednesday March 28 3-5:30 with networking supper to follow
- SPOG Learning Supper, Tues April 24, James River Hall, Agenda being Finalized, Myles Kitagawa also presenting, easy things one can do to reduce their environmental footprint
- NOVA Open House, May 2 at Satinwood House 6-8 PM
- PAMZ IRG Public issues Identification Meeting May 16, RMH, Walking Eagle Inn

Clearwater Room 6-9

- Clean Air Day – Wed June 6 – Action Hero Awards in RD possibly other Activities too (Gauge & Save?)
- Next TWG June 15, BBQ & Station Tours afterward
- AGM June 20, 630-730 Location yet to be determined (subsequently Bentley was closed by Board)

11. Next Meeting

The next TWG meeting will be held June 15, 2012.

**Action: Kevin will contact make arrangements to have lunch available at Riverside Station for tours and lunch following the meeting.**

ADJOURNMENT

The meeting was adjourned at 11:45