



**Minutes:** Technical Working Group Meeting  
**Date:** January 20, 2012  
**Location:** ERCB Red Deer, Midnapore and St. Albert Videoconference Facilities

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Participants:

Red Deer

Didn't Take Attendance

Midnapore

Harold Gold - Bonavista  
Steve Prodanuk - Focus

Colin Long - Keyera  
Kevin Warren Amarok

Lee Loran - Focus  
Lenin Flores -

St. Albert

Jeff Cooper - Focus

**Bolded Items are Action Items**

1. The meeting was called to order by Aaron Rognvaldson, at 09:05.
2. All attendees introduced themselves.
3. The agenda was reviewed and accepted with no additions
4. The minutes of the November 18, 2011 meeting were accepted as circulated.
5. The status of action items arising from the November 18, 2011 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

Since the November board meeting, no exceedances of any Alberta Ambient Air Quality Objectives (AAAQOs) or guidelines were noted at any of the four continuous monitoring stations. This is noteworthy since there were numerous PM<sub>2.5</sub> exceedances at this time last year.

Replacement sensors and parts have been ordered for all wind monitoring systems; \$70,500 was budgeted for capital expenditures to replace equipment at the end of its life cycle, and this new equipment is being ordered.

### Caroline

Nothing unusual has been noted since the last meeting. The new data acquisition and control system was installed and is now operating. The old system continues to run in parallel so data can be compared if necessary. The ozone analyzer failed and was replaced with a borrowed analyzer from Alberta Environment. A new analyzer will be installed early in 2012 and if Focus can rebuild the old one for less than \$2500, that will be done and it will be used as a spare. The old NO<sub>x</sub> analyzer has been rebuilt as a spare.

### Riverside

Since last meeting, there have been occasional elevated H<sub>2</sub>S readings in the last few months (<6 ppb); these did not exceed the AAAQO but were an odour nuisance. These readings are associated with the nearby sewage treatment facilities. All other parameters were within historical normals. The THC/CH<sub>4</sub> analyzer will be retrofitted to use nitrogen carrier gas in 2012, which will add a small operating expense. The current ultrasonic wind sensor will be replaced with a cup and vane system, which provides a visible indication of wind conditions.

### Martha

The Martha portable was at the Blindman Industrial Park site from Nov. 3 to Dec. 7. Levels for most parameters were much lower than expected for an industrial park and lower than most of those observed at Red Deer Riverside. Focus noted that there seemed to be a lot less activity in and around the station, compared to when it was there in June.

The station was at the Evergreen site from Dec. 7 to Jan. 4 to assist in an Alberta Health Services investigation into hydrocarbon-type odours. No AAAQO exceedances were observed. The ERCB did see some correlation with venting activity and higher hydrocarbon levels when they compared PAMZ data and facility operating records in July. Alberta Health Services installed an indoor air quality sampler for a week during the December monitoring period. The PAMZ monitoring report will be available by February 15.

The Martha station is now at Mirror where the issue has been idling of locomotives in rail yards. Many elevated NO<sub>2</sub> readings have been noted, especially during the cold weather,

but there have been no AAAQO exceedances. More idling was reported in Bashaw during the time the station was at Mirror. The initial report on this monitoring was shared with the media and all levels of government were represented at an initial public meeting that led PAMZ to conduct the monitoring. There were improvements (e.g., reduced idling) after initial monitoring, but concerns have resurfaced, and the resident where the station is located has decided to move later this year.

## McCoy

The McCoy station has been at the West Sundre site since Oct. 5. Levels have been typical of a medium-sized town. The monitoring schedule had planned this station to be at Riverside Industrial Park in January to help with the PM<sub>2.5</sub> study and identify potential future sites. However, a suitable location could not be found so the schedule was adjusted and the station was left in Sundre. The McCoy monitoring station schedule needs to be adjusted. It was initially decided that the station should go to a site in the Rocky Mountain House area but this decision was overturned later in meeting after discussion of the Red Deer PM<sub>2.5</sub> study results.

## Passives

The levels and patterns with the passive program were consistent with historic normals for October and November. Station 19 was found to have been destroyed sometime prior to the November-December change-out and a new temporary site was set up slightly to the north to be used until the ground thaws and the original site can be restored. High NO<sub>2</sub> readings were seen in October at the Baseline Mountain site when a gasoline generator was installed at the site to replace a propane-powered one that does not perform well during cold weather.

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

Kris Sirunas, a local consultant working on the Red Deer PM<sub>2.5</sub> Study with Novus Environmental, presented an overview of the results to date for the Red Deer Riverside PM<sub>2.5</sub> Study.

Novus Environmental was the consultant hired to conduct the study and given three tasks:

- Analysis of existing monitoring data
- Local air quality modeling and assessment
- Site selection analysis

The first two tasks are completed and task three is underway. Kris reviewed the findings to date. PAMZ had noted an increase in PM<sub>2.5</sub> starting in May 2009 while other pollutant mean levels had not changed much. The change in the monitors used is one explanation for the higher levels, with a shift to FDMS TEOMs from conventional TEOMs; conventional TEOMs do not do a good job accounting for secondary particulate. Other stations that made this change noted similar patterns. Canada Wide Standards are all based on results obtained with conventional TEOMs, and the proposed new standards are going to be even stricter.

The second task was to do modeling related to road traffic and the civic yards. The City of Red Deer was very cooperative and efficient in providing data. Based on vehicle emissions, there was a 20% increase in Riverside Drive traffic after the yards went in, but other pollutants don't show the same increase as PM<sub>2.5</sub>.

The consultant's conclusion is that the higher PM<sub>2.5</sub> levels are due in part to relocation of the civic yards as well as to the different TEOM monitors. There were a number of questions concerning tasks 1 and 2 from the group.

- On the modeling area slide, can Novus explain what the blue lines are representing? It appears that the lines are thicker in some areas than others - please explain.
- Did Novus receive information on whether the sanding/salting practices along Riverside Dr. have changed since the new Civic Yards opened? If so, were those changes incorporated in the modeling?
- Can Novus explain the statement "Wintertime road dust has dominant effect on PM<sub>2.5</sub> levels"? The understanding is that the road dust would be of a much coarser fraction than 2.5. Has Novus assumed all road dust to be in the fine fraction for simplicity?
- Can Novus explain in detail the statement "Buses contribution is relatively small?" Does this mean the buses on the roads or the buses idling in the yards?
- For Task 3, can Novus verify that the back trajectory modeling is being used to identify potential monitoring locations?
- Has Novus looked at potential other sources that could lead to elevated PM levels at Riverside? PAMZ's understanding is that Novus specifically looked at only the monitor type (FDMS vs Conventional TEOM) and the civic yards as reasons for the elevated measurements, but has not considered anything else.
- Can Novus comment on whether speciated VOC measurements using canister sampling could assist in identifying source contributions for PM<sub>2.5</sub> measurements?

**Action: Kris will get answers to the above questions and send to Kevin who will distribute to the group.**

The case for moving the station remains, as the current site has, in effect, become a fenceline industry monitoring site. Back trajectory analysis related to task 3 is currently underway.

**Action: Kevin will make arrangements to distribute the draft report summarizing all study tasks prior to the next meeting and arrange for a presentation on the results from NOVUS Environmental at the March 23, 2012 TWG Meeting**

After some discussion of how the McCoy station could be utilized to assist in the selection of a new permanent site in Red Deer the following course of action was agreed to.

The McCoy station will be deployed to the potential site(s) identified in Task 3 on a trial basis from August to December 2012 to see what levels could be expected. The overall intent is to find a location that is more representative of the Red Deer urban area.

8. Upcoming Events

PAMZ Board Meeting – January 25, 2012 GH Dawe Centre, Red Deer  
ESAA Convention and Training Courses – Feb 14-16 River Cree Resort  
RDRWA Stakeholder Workshops – Red Deer

- Feb 13 Local Government
- Feb 14 Provincial Government
- Feb 21 Industry/Agriculture Organizations
- Feb 22 Conservation/Community Organizations

9. Next Meeting

The next TWG meeting will be held March 23, 2012.

**Action: Kevin will contact make arrangements for videoconferencing at St Albert and Calgary ERCB offices in addition to Red Deer**

ADJOURNMENT

The meeting was adjourned at 11:55