



PAMZ | Parkland Airshed
Management Zone

Minutes: Technical Working Group Meeting
Date: June 15, 2012
Location: ERCB Boardroom, # 202, 4909 - 49th Street, Red Deer

Participants:

Tyler Barkhouse, AB	Al Duben - ERCB	Lenin Flores - Focus
Brian Goliss - Shell Canada	Adam Judd - Keyera	Shane Lamden - NOVA Chemicals
Lee Loran - Focus	Steve Prodanuk - Focus	Aaron Rognvaldson - Husky
Jim Saltvold - Public	Mohammad Shoaib - AESRD	Kevin Warren - Amarok
Reg Watson - Public		

Bolded Items are Action Items

1. The meeting was called to order by Aaron Rognvaldson, at 0905
2. All attendees introduced themselves.
3. The agenda was reviewed and accepted with the addition of discussion of Sundre Pipeline Leak and Emergency Response Monitoring under other business. The bar-b-que and tour of the Red Deer Station was deferred to a future date due to inclement weather and a relatively low attendance for the meeting.
4. The minutes of the March 23, 2012 meeting were accepted.
5. The status of action items arising from the March 23, 2012 meeting was reviewed.

Kevin will follow-up with Harry, before Harry leaves AESRD, concerning N2 carrier gas conversion and replacement wind system. **IN PROGRESS** Shelley Morris is Harry's interim replacement and Kevin has a number of items to discuss with her.

Kevin will track passive NO2 values against Continuous NO2 at co-located sites for last 5 years and report back to group. **DONE** Kevin presented a summary of last 3 years of data later in the meeting.

Kevin will see that Red Deer Particulate Summary Report is finalized and submitted to AESRD plus the Final Invoice before 2012 fiscal Year End (March 31). **DONE**

Kevin will distribute Passives Precision and Accuracy study and report to TWG when available. **CARRY FORWARD** Report not completed yet

Kevin will use report in designing scope of work for Passive rationalization study. Draft for

September meeting. **CARRY FORWARD** See above

Brian will work with Kevin to have Diagnostic Air Patrol presentation by Diagnostics Engineering at the next meeting. **DONE** Presentation was delivered later in the meeting

6. PAMZ AQM Program

No exceedances of any Air Quality Objectives have been recorded by the PAMZ continuous air quality monitoring network since the March 23, 2012 TWG Meeting.

The network was audited by Alberta Environment and Sustainable Resources Development (AESRD) on May 8, 9, 10, 15, 2012. The results were discussed later in the meeting.

Caroline

All levels have been within historical normals since the last meeting. The station did not observe and elevated H₂S or THC levels at the time of the June 7 Sundre pipeline leak or since. Kevin reported that given the location of the station and the pipeline break, the distance between the two locations and prevailing wind patterns, this was to be expected. Brian indicated that mobile monitoring conducted in response to the break did not pick up any elevated H₂S readings either.

Riverside

There has been the occasional elevated H₂S readings (< 10 ppb) attributed to Three Mile Bend Sewage Treatment facilities but all other levels within historical normals since the last TWG Meeting. The ozone analyzer at the station has not been performing well in recent months and this was highlighted by its audit failure (discussed later). Focus has made arrangements with AESRD and as this is a NAPS analyzer, it will be removed and sent to Environment Canada for repairs and recalibration. PAMZ has a spare AESRD unit that will be installed in the interim. Kevin has requested replacement of the ultrasonic windhead with a cup and vane type from AESRD but has not heard back on status. See 1st action item

Portables

Kevin reviewed the schedule changes as a result of poor conditions that delayed the removal of the McCoy station from the Crossfield Site and his inability to locate a monitoring site in or near the Edgar Industrial Park in Red Deer. The McCoy station was one month late going to Lacombe and the Martha Station returned to the Mirror site for June.

Martha

The station was at the existing Delburne from March 8 – April 2, 2012. There were lots of high SO₂ readings with SW winds peaking > 100 ppb, max hour average 49 ppb. Kevin discussed with ERCB who were unable to deploy their mobile unit to the area while the Martha Station was at the Delburne site. ERCB is following up with Crew Energy, the operator of the battery responsible for the SO₂ emissions.

The station was at the new Garrington Site (SE 29-34-4 W5) from April 4- May 7, 2012. There is still a fair bit of drilling activity in the region and during the monitoring, there was a drilling rig located about 2 kms northwest. Initially there were problems with an inadequate

main service breaker. These were resolved with the installation of a new higher amperage breaker. There were no air quality objective exceedences and levels of all monitored parameters were well within historical normals for the region.

The station was at the new Crestomere site alongside Highway 53 about 20 kms west of Highway 2 from May 9 – June 5, 2012. The station was off line for 2 days before the monitoring for overhaul of the trailer hitch and new tires. There was a relatively large cattle operation in the vicinity of the site, and elevated NH₃ (not monitored) levels were present (noted during AESRD audit). Otherwise a preliminary review of data collected indicates nothing out of ordinary.

The station was located to the Mirror site on June 6, as Kevin has been unsuccessful in locating a site in the eastern half of the Edgar Industrial park or close by. Preliminary review of the data indicates correlations with wind directions from the rail yards and elevated NO₂ and THC as seen previously. Station is also picking up some elevated TRS in early mornings which merits further investigation.

McCoy

The station was located at the existing Crossfield-Carstairs site from Jan 31 – June 6. Levels were within historical normals at this site with no distinct correlations between low level SO₂ and southwest wind direction (TAQA North E. Crossfield). Some low level TRS readings present with NW winds, attributed to H₂S associated with Carstairs sewage treatment ponds. As reported above the relocation of the station to the Lacombe site was delayed by wet field conditions. PAMZ agreed to cover cost of 5 loads of gravel to improve access road into the Crossfield Site.

Since June 6, the station has been at the old Lacombe site (last monitored in 2005). Preliminary indications are that levels are consistent with those seen previously. The new Campbell Scientific datalogger scheduled for installion at the station was installed in the Martha Station instead.

Passives

Levels and patterns are consistent with historical normals for March through May 2012. Kevin presented a summary of the passive NO₂ results compared to continuous results for the Caroline and Red Deer Sites observed the last three years. The continuous results correlated well with the passive results at both stations. Both sites indicate a substantial reduction in NO₂ levels in recent years.

7. Audit Results

Kevin led the group through a summary of the audit results he had prepared.

The Red Deer station was audited on May 8, Caroline on May 9, Crossfield (McCoy) on May 10, and Crestomere (Martha) on May 15. Some of the findings of the audit are being contested by PAMZ.

The results were the poorest in the history of the AQM program.

Initial results indicate 8 critical failures, 0 Inspection must improves, 4 non-critical opportunities for improvement and 7 other concerns. Aaron & Kevin met with Focus to discuss results on May 30 and their plan(s) to address the findings.

Some of the audit results indicate lack of supervision, attention to AESRP AMD procedures

and internal Focus SOPs, lack of internal checks and attention to details.

Kevin has had two subsequent communications with AESRD, the first on June 1 requesting recalculation of indicated concentrations (denied), and a re-audit of the Martha NO₂ (denied and copy of Audit Protocol (told not yet available)). The second was on June 11 requesting a meeting to discuss June 1 response and an extension of June 15 deadline for formal response (report was not received until May 24).

The indicated concentrations used for the audit result calculations did not have the data acquisition system's correction factors (slopes and intercepts) applied. These corrected values were offered by the Focus technician present at the May 8 audit but were refused and instead the uncorrected (no slope or intercepts applied) indicated concentrations were used by the AESRD auditor. The remainder of the audits performed on May 9, 10 and 15, 2012 also did not use corrected indicated concentrations from the data acquisition systems. Previous audits have used the corrected indicated concentrations.

Kevin has reviewed the AESRD 2007 Audit Protocol obtained from the CASA Data Warehouse Website.

Section 2.2.3.6 specifies: "Equipment responses will be taken from the on site data acquisition system including correction factors, if any, as applied by the data acquisition system."

Section 2.2.3.5 specifies: "The operator is requested to mark down all channels for the analyzer(s) being audited on the data acquisition system and display the data for the analyzer(s)."

Kevin is contesting some of the results based on AESRD's use of the data without correction factors applied. After using correct indicated concentrations:

- Red Deer Ozone fail remains a fail (worsens)
- Caroline TRS fail becomes a pass
- Martha NO Channel remains a fail
- Martha THC & CH₄ become a fail
- Flows of all 3 BAM units failed (certification of Focus's standard expired Sep 2011)
- Wind Direction at Crossfield out 22 Degrees (Pot failed)
- After using corrected indicated concentrations and proper flow performance specs ($\pm 5\%$ vs. $\pm 3\%$) McCoy becomes a pass (3.6%) Caroline & Martha remain a failure ($>5\%$)
- NO channel indicated strange behavior during AESRD audit not seen during Focus calibrations before or since. Request for NO analyzer to be re-audited denied.

At their preliminary meeting with Focus on May 30, Aaron & Kevin requested Focus come before TWG and present an action plan that will ensure a similar result does not recur and restores PAMZ's confidence in their capability.

Focus Response

Tyler Barkhouse of Focus presented a verbal summary of the actions taken or planned to address the deficiencies identified by the Audit results.

These actions included

hiring an additional technologist and reducing Jeff Cooper's administrative duties to allow him more time in the field.

Establishment of an internal audit program, the design of which will be reviewed by and external expert.

More senior technologist presence and involvement during actual audits.

Requirement that all Focus personal adhere to existing SOPs and the new internal audit protocol.

Tyler reaffirmed that PAMZ is the top priority for Focus's ambient monitoring group and that they will do what it takes to insure PAMZ's confidence in them is restored. He also indicated that some of the AESRD's audit conclusions need to be questioned and followed up further on.

Action: Jeff Cooper will prepare a formal action plan to address the deficiencies identified by the audit and present it to Kevin and Aaron at a meeting in early July.

Action: Focus will report on their progress on implementing the action plan at the September TWG meeting.

Action: The action plan will include a "score card" performance measurement tool to assist the TWG in assessing Focus's success in implementing the action plan.

8. Diagnostic Engineering Presentation

Eric Dixon and Kirby Nixon of Diagnostic Engineering gave a presentation about their company's remote ambient air monitoring technology. Their monitoring unit does not require line power and can measure SO₂ and H₂S and in the future VOCs and particulate. They are interested in running a pilot study at the Caroline Site that would compare data collected by their monitoring unit with data collected by PAMZ's. The group approved the idea of a study in theory, provided that there are no additional costs to PAMZ and that PAMZ will not endorse the results of the study.

Action: Diagnostics Engineering will prepare a detailed proposal for the co-located study and provide to Kevin by mid-July. Kevin will review and report to TWG on his recommendations at next TWG meeting or sooner if applicable.

Xin Qiu, Novus Environmental walked group through a PowerPoint Presentation (attached)

9. National Air Quality Management System and Canadian Ambient Air Quality Standards Presentation.

Due to time constraints Kevin presented a much abridged version of presentation he had received from Bob Myrick of AESRD concerning the new National Air Quality Management System currently in development and the associated Canadian Ambient Air Quality Standards and their possible implications for PAMZ.

Action: Kevin will distribute a copy of the presentation to the TWG prior to the next TWG Meeting.

10. Other Business

Sundre Pipeline Break

Was discussed earlier under Caroline Monitoring summary.

Emergency Response Monitoring

PAMZ's capability for emergency response monitoring and its guidelines for the use of the portable monitoring stations were reviewed. PAMZ's program is not designed to include an emergency response component. The only airshed that currently has this capability is WBEA. PAMZ's portables may be deployed to assist in an air quality investigation or an emergency upon request from one or more government agencies.

Action: Kevin will distribute the Portable Stations' Usage Guidelines to the TWG prior to the next TWG Meeting.

11. Upcoming Events

- PAMZ Board Meeting June 20, 3:00-5:45 Bentley Community Hall
- AGM June 20, 6:30-7:30 Bentley Community Hall
- SPOG Neighbour's Day, Sept. 14 Sundre Culing Rink

11. Next Meeting

The next TWG meeting will be held Sept. 7, 2012.

* Note: Date was changed due to conflict with Neighbour's Day.

ADJOURNMENT

The meeting was adjourned at 12:15