



Keeping the Community Informed

The companies operating in the Three Creeks area are committed to sharing information with the community and continue to address concerns about air quality, emissions and traffic.

Fall 2014

Shell Canada, Murphy Oil, Baytex Energy and PennWest Exploration operate in the Three Creeks area and are committed to listening to their neighbours and addressing concerns about air quality, emissions and traffic. Representatives from these companies, as well as Tervita, have formed an Industry Steering Committee to provide direction and resources at the senior leadership level for the collective work of the companies involved in looking at how to improve air quality, reduce emissions and reduce traffic impacts.

Best Practices Working Group

Chair: David Hill

Facilitator: David Hill

The Best Practices Working Group, made up of technical staff from Baytex, Shell, Murphy Oil, PennWest, and Tervita, together reviewed areas of their operations with a view to establishing best practices that reflect a consistent and sound approach to mitigating and managing emissions. As reported in a previous newsletter, the group took a field tour of each other's facilities and began discussions about best practices with respect to emissions management. Various service companies and independent technical experts were also consulted. This work resulted in the development of a compilation of the "Best Practices" to address transportation and emission management within the Three Creeks area.

Essentially the practices can be summarized as follows: Minimum Tank Standards for Hauling Bitumen. This minimum tank standard allows for the tank trucks used for hauling bitumen to be sealed effectively. It includes the use of thicker steel in the tank walls to accommodate the relatively small amount of pressure that is generated by the release of the solution gas entrained in the bitumen during transportation. This design standard also provides for increased structural strength in case of rollover.



Tighter Controls for Vacuum Truck Dispatches. Vacuum trucks by design are not sealed when they are picking up materials. As a result, based on the nature of what they are picking up they can also generate emissions. On occasion a vacuum truck may be dispatched for a job when a tank truck may be all that is needed. A series of questions provided by each company are reviewed in advance to make sure that vacuum trucks are used in a manner that reduces emissions.

Truck Loading Procedures Designed. A set of procedures that accommodates the variations in the piping and other installation configurations of the facilities used by each of the area operators have been developed to minimize emissions and odours while loading is taking place. Each operator will select the procedure that best fits the physical set up of their particular facilities.

Enhanced Quality Assurance for Trucking Operations. Each operator will monitor and audit their trucking activity by various measures which may include speed monitoring, compliance with the loading procedure, random checks for equipment integrity, etc. Summaries or results from the audits would be available to the community on a company basis.

Enhanced Communication Between Companies for Major Maintenance and Turnaround Events. There are opportunities to gain efficiencies as well as minimize disruptions when companies co-ordinate their maintenance and turn around schedules. Since these activities also create a risk of increased emissions, co-ordination of the activities also reduces the risk of generating these emissions.

Conservation of Excess Gas Produced at Each Site to be Used as Fuel or Converted to Electricity. Rather than flare excess produced gas, this practice encourages using produced gas as fuel or converting it to electricity on each site where it is produced.

Mandatory Training for New Hires to Include the Emphasis on Emission Mitigation. (In Progress). For new hires involved with working in the area it is proposed to establish a mandated training session that provides 1) an awareness of the issues associated with emissions and 2) an understanding of the Best Practices that have been developed to address these issues. The training will also be used to re-enforce that these Best Practices are required to be applied whenever appropriate in their work.

The steering committee also recommends that the Best Practices Working Group remain as a standing committee to monitor the application of the best practices and to foster a higher level of communication between the operating companies over operational issues which in itself represents a best practice too. Any new updates to these or new practices will be communicated to the community through a newsletter like this or through the county's website.

Air Quality Working Group

Chair: Allison Fisher, Shell Canada

Facilitator: Karla Reesor

Multi-stakeholder Air Monitoring Subcommittee

Facilitator: Karla Reesor

The Air Quality Working Group and the Multi-stakeholder Air Monitoring Subcommittee have been focused on continuously improving air monitoring at the two air monitoring trailers. Maxxam Analytics, which manages the on-site air monitoring equipment, has recently upgraded the trailer shelters. The trailers now have better workspace for servicing the units, and also more functional heat and air conditioning systems.

Each station monitors total hydrocarbons, non methane hydrocarbons (NMHC) and total reduced sulphur to indicate whether emissions are present. When hydrocarbons exceed a threshold, canister sampling is used to detect volatile organic compounds. Procedures for using the equipment and handling the canister samples have been reviewed and expanded to ensure sample integrity is maintained and that appropriate and consistent analyses can be completed.

The NMHC analyzer at the Three Creeks 842b Station was out of service for a period of time in September and October 2014. Maxxam Analytics repaired the unit and it was back in service in mid-October. To help minimize future periods of data outages, Maxxam has ordered a back-up NMHC analyzer which is anticipated to be available by January 2015. With the addition of this new back-up analyzer, we hope that there will be continuous service of the NMHC analyzers in the future. However, if there is a disruption in service, Maxxam will now be able to provide an immediate replacement unit.

The Emissions Inventory Study, lead by Clearstone Engineering, is on-going. Clearstone conducted field testing in the summer and early fall to be able to better identify and quantify the emissions in the Three Creeks area. Results are expected by the end of 2014.

The Stantec Air Monitoring Data Review Report is available on the Northern Sunrise County website (www.northern sunrise.net) and the Emissions Inventory Report will be on the website when it is complete.

Several new members have joined the Multi-stakeholder Air Monitoring Subcommittee: Yan Lui from Alberta Environment and Sustainable Resource Development, Bob Myrick from the Alberta Environmental Monitoring, Evaluation and Reporting Agency, and Garrett Tomlinson from Northern Sunrise County. The Subcommittee is also developing new Terms of Reference to align with the Alberta Energy Regulator's Report of Recommendations on Odours and Emissions in the Peace River area. The Subcommittee is approaching other stakeholders in the area interested in participating in a new committee, built upon the efforts of the Subcommittee. The new Peace River Air Monitoring Program will include the existing monitoring in Three Creeks and other areas such as Reno, Seal Lake and Walrus, as determined by the new committee. The Subcommittee is already moving ahead on establishing a new air monitoring station in the Reno area. It is anticipated that the Reno air monitoring unit will be operational early in 2015.



At a Multi-stakeholder Air Monitoring Subcommittee meeting in October, members of the group were invited to visit the two air monitoring sites. In this photo, Reid Glenn is at the newly refurbished Three Creeks 842b Station.

Operational Enhancements in the Field

Over the past year or so operators have been continuously looking at how they can improve operations through monitoring equipment performance, the application of new technology, and working with contractors to look for improvements in the reduction of emissions. So far the field has seen the use of new highly sensitive hydrocarbon emission cameras to detect low level fugitive emissions at the facilities as well as the installation at many facilities of pressure activated shut down switches designed to shut in the producing wells at a facility should there be an elevated pressure detected in the tanks or flare stacks. New equipment has been installed to scrub emissions from vacuum trucks with at least one contractor. A continuation of the work to bring the facilities into compliance with the Alberta Energy Regulator's new requirements is ongoing with many facilities. This work includes capturing and flaring vapours that were previously vented as well as the use of a greater amount of solution gas being used as fuel. The larger picture of designing the potential for a gas conservation scheme is also continuing with a view to ultimately conserving the lion's share of produced gas in the Three Creeks area.

PennWest
Exploration



BAYTEX
ENERGY CORP.

MURPHY
OIL CORPORATION

For additional information, please contact the facilitators for the working groups:

Dave Hill / davidhilladr@gmail.com / 403 923-2824

Karla Reesor / karlareesor@movingfwd.ca / 403 807-2995