

January 13, 2014

**Meeting Notes Summary – Technical Subgroup of Workgroup for Global Air Permit Policy
Development for Temporary Oil and Gas Drill Rigs**

Date of Meeting: Thursday, January 9, 2014

Time of Meeting: 14:00 – 15:00

Location of Meeting: Conference Room A, Bayview Building, 619 E. Ship Creek Ave., Ste. 249, Anchorage, AK 99501 and Teleconference

Technical Subgroup of Workgroup for Global Air Permit Policy Development for Temporary Oil and Gas Drill Rigs (Subgroup) Members present in person: Brad Thomas, ConocoPhillips (CPAI); Todd Fortun, AECOM; Barbara Trost, Program Manager, Monitoring and Quality Assurance, Alaska Department of Environmental Conservation/ Division of Air Quality (ADEC/ AQ); Bob Morgan, ADEC/ AQ; Mike Gravier, ADEC/ AQ; Tom Turner, ADEC/ AQ; Deanna Huff, ADEC/ AQ

Technical Subgroup of Workgroup for Global Air Permit Policy Development for Temporary Oil and Gas Drill Rigs (DRWG) Members present via telephone: Wally Evans, Hilcorp Energy (Hilcorp); Bill Britt, Hilcorp, Alejandra Castaño, BP Exploration Alaska (BPXA); Ben Wedin, Nordic–Calista Services (Nordic); Tom Damiana, AECOM; Alan Schuler, ADEC/ AQ; Dan Fremgen, ADEC/ AQ; James Renovatio, ADEC/ AQ,

Meeting Facilitator: Jeanne Swartz, ADEC/AQ

Public members present by telephone: Alison Cook, BPXA; Al Trbovich, SLR; Tom Chapple, HMM Consulting; Tim Burke, Arctic Slope Regional Corporation Energy Services (ASRC Energy)

1) Introductions

The meeting commenced at 14:04. Jeanne Swartz welcomed all the participants and asked for introductions, first from the participants present in person, then from the participants joining the meeting by telephone.

2) Agenda Check

Jeanne Swartz identified the items sent in the meeting invitations as topics for discussion and no one had any additions or corrections to the agenda to report. She turned the meeting over to Barbara Trost.

3) Work on Mission Statement

Barbara Trost first read the Subgroup mission statement proposed by Alice Edwards, ADEC/ AQ Director and Drill Rig Workgroup meetings coordinator in order to see if the Subgroup members generally agreed with the proposed mission statement. After some initial technical problems, the statement was shared via GoTo Meeting with the participants joining the meeting by telephone. The proposed mission statement is as follows:

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The Drill Rig Technical Subgroup shall determine whether the available monitoring and modeling data is sufficiently accurate, representative and complete to reasonably conclude

- 1. that the current models significantly over predict ambient concentrations for drilling operations, and**
- 2. that drilling activity anywhere in the state is very unlikely to cause ambient air concentrations greater than the NAAQS,**

and, if these conclusions cannot be made, recommend what additional data or limitations on the conclusions are needed to assist in developing and finalizing a programmatic approach that would provide protection of ambient air quality standards and reasonably address air quality planning requirements.

There was discussion as to what “significantly” and “very” meant in items 1 and 2, respectively. The initial consensus was to drop those terms from the draft language. The group then discussed the modeling and monitoring data that industry is preparing for ADEC (see following topic), and how best to deal with the pending changes in dispersion modeling without turning the effort into an unending research project. The group decided that the initial focus should be on whether there is sufficient monitoring data to show that drilling operations do not threaten the National Ambient Air Quality Standards (NAAQS) – i.e., item 2. If not, the subgroup could then deal with the modeling question, as warranted, under the “if these conclusions cannot be made” aspect of the mission statement. The subgroup therefore recommends that item 1 be dropped from the mission statement. Jeanne Swartz said she would send the proposed changes to the draft mission statement to the main Drill Rig Workgroup (DRWG) members for their consideration.

The revised proposed mission statement reads as follows:

The Drill Rig Technical Subgroup shall determine whether the available monitoring and modeling data is sufficiently accurate, representative and complete to reasonably conclude that drilling activity anywhere in the state is unlikely to cause ambient air concentrations greater than the NAAQS, and, if these conclusions cannot be made, recommend what additional data or limitations on the conclusions are needed to assist in developing and finalizing a programmatic approach that would provide protection of ambient air quality standards and reasonably address air quality planning requirements

4) Discussion of Air Monitoring and Modeling Data

Brad Thomas said fifteen (15) high quality ambient data sets and 5-10 modeling studies would be delivered to ADEC during the following week (Week of January 13, 2014). Some of the data has been previously reviewed by ADEC but not all of the data. Brad also said that since the 24-hour Particulate Matter of 2.5 microns or less in size (PM_{2.5}) and 1-hour nitrogen dioxide (NO₂) NAAQS are the pollutants and averaging periods of most concern, the data to be submitted would be limited to those pollutants.

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Barbara Trost asked what the data would look like and Brad said it would be summaries, including charts, and raw data. Barbara wanted to clarify that the agency review of the data does not include certification of Prevention of Significant Deterioration (PSD)-quality and Brad said the intent was for the data not to be reviewed for PSD purposes. Barbara said that ADEC expected to see reasonable-quality data; ambient data with modeling results and with documentation of quality control (QC) assurances. Brad said there were quality assurance (QA) measures with the data and that modeling and monitoring data were not comparable, because the models over- or under-predict ambient levels and the stack parameters were not refined.

Barbara Trost further noted that ADEC would need to know the level of drilling activities during the monitoring period. Brad Thomas said he would be able to provide that information, including when the drill rigs were operating on highline power.

Alan Schuler asked if modeling as well as monitoring data were going to be submitted and Brad said yes; that the modeling data was consistent with the Code of Federal Regulations, Title 40 (40 C.F.R.) Appendix W standards. Alan asked if the submittal would include a Q/Q plot comparison of the modeled and monitored results, which is the approach typically used by the U.S. Environmental Protection Agency (EPA) in evaluating model performance. Tom Damiana said there was insufficient data for that type of a “performance” evaluation. Brad said that industry could not find a way to stay in compliance with the NO₂ short-term standard by using Appendix W modeling. Alan said that EPA was working on modeling improvements that may help resolve some of the known problems. Examples include the “ARM2” NO₂ modeling algorithm, which was submitted to EPA by the American Petroleum Institute (API), and various “draft” algorithms for improving estimates during low wind speeds. He also mentioned that industry was also looking at the “Monte Carlo” statistical approach. Tom Damiana responded by saying the draft algorithms are not yet approved for general use and that it would be at least two years before EPA could incorporate them into the Guideline (40 CFR 51, Appendix W). Tom Damiana further stated that turning the Monte Carlo statistical results into permit condition could be difficult.

During the modeling discussion, Deanna Huff noted that “actual” and “allowable” emissions can substantially differ, and that actual emissions are typically used in comparing modeled results to monitored results. Brad said they could provide a comparison of the maximum allowable and actual emissions.

5) Set Focus for Next Meeting and Steps/ Actions Needed Prior to Meeting

The Subgroup decided that they should meet about a week after ADEC receives the data in order to develop an approach, timeline and milestones for reviewing that large of a submittal. Jeanne Swartz clarified the date that Brad would bring the ambient data to ADEC and said that she would send a meeting invitation to the Subgroup about the next meeting within a few days and would also

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re-send Alice Edwards' proposed mission statement to the main DRWG, with the suggestions proposed by the Technical Subgroup.

ADEC may e-mail technical questions directly to Tom Damiana or Todd Fortun, as long as the other Subgroup members are copied. Brad said the data review should be restricted to look at the issue of how current models overpredict ambient concentrations. Dan Fremgren said that the maximum allowable emissions are much higher than the actual emissions.

The meeting concluded at 15:06.

A brief discussion by the Anchorage participants following the meeting centered on whether the ambient data would be subject to Freedom of Information Act (FOIA) requests. Jeanne said that this might be a topic for the DRWG Options subgroup to consider in their meeting on January 16.

Action Items Generated From January 9 Meeting:

- **ADEC staff will review data provided by Brad Thomas**
- **Brad Thomas will bring computer files to ADEC on January 13, 2014 that will contain:**
 - **PM2.5 and NO2 ambient air monitoring data from various monitoring stations on the North Slope, along with QA information**
 - **Drilling activity/ source status information will be available on request**
 - **Permit maximum emissions and actuals emissions data will be available on request**
- **Subgroup members will prepare to frame discussion about roles of data evaluators, timelines, and milestones at the next Technical subgroup meeting**
- **The meeting summary from the January 9th Subgroup meeting will be circulated and placed on the DRWG website within a few days.**
- **ADEC will provide a meeting invitation, a meeting place in Anchorage, and agenda for the second Technical subgroup meeting, tentatively to be held the week of January 20, 2014.**

Respectfully submitted,

Jeanne Swartz ADEC/AQ