

March 24, 2009 O&G Workgroup Call Summary

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This was our sixth WRAP Oil & Gas Workgroup call, held with interested O&G Stakeholders, with about 20 participants signed on from State Air Agencies, Federal Land Managers, Environmental Interest Groups and O&G Industry representatives.

The main topic of this call was to hear results of the Phase III WRAP/IPAMS Emission Inventory for the third completed basin; the Uinta Basin of eastern Utah. We also looked at the status the Piceance Pilot Project (P3) for assessing Mobile Source Emissions from western O&G operations. And we introduced the two members who have volunteered to be Co-Chairs for this Workgroup: Mary Uhl of the New Mexico Air Quality Bureau and Bruce Gantner, formerly employed by Conoco-Phillips Petroleum, but now working as a private Health, Safety & Environment consultant for the O&G industry. These Co-Chairs had worked with WRAP Staff to finalize the Workgroup's 2010-2011 Workplan and this date we completed an overview of the projects anticipated for the Workgroup should RPO funding be found for future WRAP activities. Finally, we did scheduled the **next Conference Call of this O&G Workgroup** for **Tuesday, June 2, 2009 at 10 AM Mountain Time**. Participants will call in to the WRAP Conference number at 1-866-206-0240, using Access Code 323375. The agenda for this next call will be developed and mailed later, prior to that call.

Phase III Emission Inventory Project Uinta Basin Results: Amnon Bar-Ilan of the Environ Staff began by giving a brief Overview of the Phase III Emission Inventory Project, noting that a more detailed description of the project methodology had recently been included on our January 29th call presentation. Then he began a more detailed summary of the results obtained for the Uinta Basin in eastern Utah. Environ's presentation is available on the WRAP Calendar Notice for this call at:

<http://wrapair.org/cal/calendar.php?op=view&id=1235>

These Uinta Basin Inventory Reports (2006 & 2012) are (or will shortly be) posted on the WRAP website, accessed from the "Phase III Inventories" link from the "Oil & Gas Workgroup" page at:

http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html

Amnon noted that the Phase II Project had now completed inventories for the Denver-Julesburg, Piceance and Uinta Basins. O&G operations don't always follow artificial political boundaries like State lines, so even though the Piceance and Uinta Basins are essentially the same O&G play, they were divided up for the Phase III project to reflect the portions located in Colorado (Piceance) as differentiated from O&G operations in Utah (Uinta) Next up are the North and South San Juan Basins which are similarly bisected by the Colorado/New Mexico State line. These will be followed by four Wyoming Basins (Southwest [Green River], Powder River, Bighorn & Wind River), the Williston Basin (primarily in western North Dakota) and the Great Plains Basin (primarily in eastern Montana). Amnon noted that the Scope of the Phase III project covers point and area sources, excluding most of the on and non-road mobile sources (drill rigs being the major exception). And the temporal scale of the project includes a 2006 current baseline inventory, along with mid-term projections to 2012 (2010 exception for D-J) and plans for a far future projection to 2018. Finally Amnon noted that the Phase III Scope includes only criteria pollutants (NOx, VOC's, SO2, PM, CO and NH3), leaving out inventories of other pollutants such as Greenhouse Gasses (GHG) and Hazardous Air Pollutants (HAP's).

The primary emissions of concern from O&G operations are NOx and VOC's, so Environ presentations focus on these two pollutants. The baseline 2006 Uinta inventory the basin showed 13,093 TPY of NOx, primarily from drill rigs, compressor and artificial lift engines. The VOC total was 71,546 TPY, with the biggest contributors being completion glycol dehydrators, pneumatic devices and oil/condensate tank venting. A good portion of the emissions came from tribal air sheds within the Uinta Basin, which are separately summed within those tribal jurisdictions for this project (emissions sub-totaled at the county level within the states as well).

The primary comparison made for Uinta Basin was against the totals for the Piceance Basin, where NOx emission totals were very similar. But VOC emission for the Uinta basin are over 2½ times the Piceance, due to the fact that there is more oil production and higher VOC content of the gas in the Uinta.

Regarding mid-term projections Environ uses historical trends for the major calculation parameters; those being gas production, oil production, existing well count and spud count (new drilling). In the case of Uinta however, the raw historical trends were revised downward by 25% because of the sharp reduction in activity experienced in late 2008, and the severe economic recession anticipated to continue through 2010. 2012 emissions still show some growth over the 4 year period in high producing counties.

Timing for reports of future basins looks like completion of the North & South San Juan inventories in late April or early May, three Wyoming Basins around the end of June, the more complicated Green River Wyoming Basin around the end of July, and the North Dakota and Montana Basins also mid to late summer. The last portion of the project will be the 2018 long term projections which are inherently more difficult because of the greater uncertainty present in those intervening years.

Mobile Source Emissions Pilot Project Status: After the Uinta Basin report, we had a brief status report on the P3 Mobile Source Emissions. The Final February 25, 2009 Scope of Work for this project is (or will soon be) available on the "1235" WRAP Calendar Call Notice link listed above.

I gave an quick overview of the history of this project, noting that we had already discussed that Mobile Source Emissions were outside the Scope of the Phase III Emission Inventory (Phase III covers point & area sources only). The O&G Workgroup members therefore suggested that the WRAP should undertake to address this heretofore unquantified piece of the Oil & Gas field operations emission picture. The primary objectives of this P3 project are to: (1) Quantify the emission totals of Mobile Onroad & Nonroad emissions sources present in O&G Field operations in a selected pilot location (Piceance Basin), (2) Make comparisons of these emissions against existing WRAP county wide Mobile Source Emission Inventories to determine the potential for double counting (3) Make estimates of the relative contribution of these mobile emissions as compared to the point and area source emissions already captured in the existing IPAMS/WRAP Phase III O&G Emission Inventory (4) determine the representativeness of the results for application at other O&G operations in the WRAP Region and (5) to make recommendations of mitigation options for these emissions.

Because the WRAP's current funding is extremely limited until the Regional Haze SIP's are completed, there were no WRAP funds to pay for this Pilot Study, so we asked our state partners with significant O&G impact to consider funding the study. Colorado's Air Program is looking at ways they might fund the study for the Piceance Basin of Western Colorado, but their funding mechanism required some assessment of control possibilities. They also need to know how much the study might cost before committing to funding, so the Scope was sent (sole source) to Environ for a formal bid. But Environ is working hard on another WRAP O&G related project, that being to develop an emission calculation protocol for Greenhouse Gases from these field operations. In order to do a quality job on defining their work requirements and properly accounting for the real costs of doing this mobile source job, Environ asked to delay their bid until they are able to clean some of this GHG work off their plate. On this call, Environ felt that they would be able to get an expense accounting back to the WRAP sometime in May. Environ's "gut feeling" on this project is that it is likely to take around 6 months, thus if the bid is accepted shortly after submittal, it is possible that we could have results by the end of this year.

O&G Workgroup 2010-2011 Workplan: Tom Moore explained that the WRAP has been requested to prepare an estimate for the Air Managers Committee of costs to maintain the WRAP's regional analytical tools for haze, and a second cost estimate on what it might take to work on other regional issues outside visibility, such as ozone, mercury, nitrogen deposition, control strategies. This date Tom went over the projects that have been included in this Workplan for the O&G Workgroup (plan is posted on the "1235" WRAP Calendar Call Notice link listed above).

There are four projects included in this Workplan. The first is to take the good work expended on the Phase III WRAP/IPAMS Emission Inventory and develop a mechanism to “track” these inventories so they can be updated as time goes by for future years. Part of Environ’s Phase III task is to make the initial design of such a tool where by new activity data can be simply submitted by the operators into some sort of calculation spreadsheet that yield the new inventory. The second O&G Workgroup project is to take a closer look at Phase III future year projections and refine those projections for use in ongoing Air Quality Planning. Third is a project to take the results of the P3 Mobile Source Emissions assessment and apply that knowledge to other O&G basins outside the Piceance in the WRAP region. And finally the fourth O&G Workgroup project is to prepare & maintain an O&G emissions control handbook similar to what the WRAP previously prepared for fugitive dust control. This would provide a resource to stakeholders for evaluating and applying emission mitigation measures on future O&G operations.

For each of the projects there is a “Base” effort expense estimated for both years, and then an “Additional” cost for working on the expanded slate of issues that the AMC identified in their request. For the Base effort it is estimated that the WRAP would need \$210K in 2010 and another \$125K in 2011. Additional costs are estimated at \$40K in 2010 and \$10K the next year. As noted, there are no currently identified sources for these funds. We are currently in discussions with the WRAP’s Air Managers Committee on what support they might provide in the future, looking at the two scenarios. And it is expected that the EPA might reevaluate their RPO support once they see the RH SIP’s coming in.

This plan was reviewed by the WRAP’s Technical Oversight Committee at their March 11-12, 2009 meeting in Salt Lake City, and for a look at how the O&G Workgroup’s piece of the WRAP’s plan fits in to the overall WRAP Workplan, interested stakeholders can download the “Draft 2010-11 WRAP Workplan (3/9)” document from that Salt Lake meeting’s Interactive Agenda at: <http://wrapair.org/forums/toc/meetings/090311m/> .