EPA Comments on Monument Buttes Mitigation and Control Measures
5/15/15

Thank you for the opportunity to review and comment on the mitigation and control measures proposed for the Monument Buttes project. The EPA has provided input on the Adaptive Management Strategy, Applicant Committed Environmental Protection Measures (ACEPMs), and enhanced mitigation requirements at many stages throughout the EIS development process. Recently, following BLM's revision of the preferred alternative, we have discussed changes made to the ACEPMs that were included in the DEIS. We have also discussed the Adaptive Management Strategy, and how it may need to be revised to reflect the fact that modeling will now be presented in the FEIS, rather than available within one year of the ROD as was assumed in the DEIS. Through the RTAG, we also recently reviewed and commented on the Draft Far-Field Modeling Results, including a recommendation for additional mitigation to address modeled NAAQS exceedances, AQRV impacts, and known air quality issues within the U&O Basin. We understand that this mitigation and control measure document represents the BLM's proposed resolution/response to the previous discussions and comments.

Ozone Impacts:
Ozone levels in the Uinta Basin are a known and serious concern. Even following two mild winters, the three-year design value (2012-2014) for the area is still 77 ppb at the Ouray monitor. 8-hour ozone concentrations in 2013 reached values as high as 141 ppb at the Ouray monitor. This concentration corresponds to an Air Quality Index value of 211, and is categorized as "Very Unhealthy." Given the existing compromised airshed condition, any project-specific direct and indirect impacts to ozone levels in the Uinta Basin should be avoided. According to the far-field modeling conducted for the project using the ARMS platform, project-specific impacts to ozone in the Uinta Basin are anticipated to be approximately 1.5 ppb in multiple locations. Although there are always uncertainties associated with air quality modeling (as EPA discussed in our 3/11/2015 comments on the Draft Far-field Modeling Results), these results indicate that the project is likely to impact ozone levels.

Although the existing ozone concerns were already well-known at the time the Monument Butte DEIS was released for public comment, the EPA was able to give an "EC" rating to this project based upon the Adaptive Management commitments contained in the DEIS. Ozone modeling was not completed in time for the DEIS (due to the timing of the availability of the ARMS platform), but the BLM committed in the DEIS to complete modeling within one year of the ARMS platform becoming available or one year of the ROD, whichever came first. Further, the BLM committed to require additional mitigation measures if the model indicated the need to do so to prevent adverse ozone impacts. The EPA believes that the impacts predicted by the modeling results, in an existing compromised airshed, indicate a need for additional mitigation measures to prevent adverse ozone impacts. Further, given the modeling results and the existing airshed condition, the EPA believes it will be important for the BLM to affirm that the project can be accomplished in a manner that will protect air quality while approving a project that results in a substantial increase in emissions. We recommend that BLM include compensation for the proposed action by reducing emissions from Newfield's existing activities in the field in addition to further reducing proposed action emissions.

Recommended Ozone Mitigation Measures:
We recommend the following mitigation measures be considered to further reduce ozone precursors. Many of these emission reduction strategies will also reduce impacts associated with $PM_{2.5}$ emissions and impacts to AQRVs.

- Tier 4 engines for drill rigs and hydraulic fracturing pump engines at the outset of the project – significant reductions may be achieved for not only NO_x, but $PM_{2.5}$ and volatile hydrocarbons as well.
- Closed loop drilling.
- Elimination of any existing evaporation ponds and requiring other means of storage and disposal than evaporation for new development.
- Retrofit all existing pneumatic controllers to meet the standards established for pneumatic controller affected facilities that are constructed, modified or reconstructed on or after October 15, 2013, as specified in 40 CFR 60, Subpart OOOO Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution (as is required by Utah DAQ R307-502-4).
- Consideration of non-gas driven (no bleed) pneumatics and potential opportunities for power supply for such devices through renewable resources for both existing and new development.
- Control of existing tank emissions for tanks with a VOC potential to emit greater than six tons per year (discussed further below).
- Control of VOC emissions from all new tanks regardless of potential to emit.
- Require further utilization (than was considered in the current analysis) of oil gathering systems (GOSPs) to reduce decentralized equipment emissions.
- Require three-way oil/water/gas separators to be controlled via combustor or otherwise reroute vapors to sales lines.
- Require that wells utilize plunger lift systems (or otherwise automated systems) to minimize potential for fugitive emissions from well pressure fluctuation and liquid accumulation within the well.
- Directed Inspection & Maintenance program – scope and frequency could be negotiated.
- Require bottom filling of tanker trucks to reduce fugitive emissions.
- Reduce the pace or density of proposed development.

Alteration of ACEPMs – Retrofitting Existing Tanks:

The DEIS included an ACEPM to install emission controls with an efficiency of 95% on all tanks with the potential to emit greater than 20 tpy VOC within 24 months of signing the ROD. This control measure was removed from the Pre-FEIS based on public comment from Newfield. As we have discussed between EPA and BLM, and including Newfield, the EPA believes that this is a critical control measure to offset proposed additional VOC emissions in an airshed that is already compromised. Although the emissions reductions associated with this measure were not quantified in the DEIS, the existence of the measure factored into EPA's review and rating of the project, as it provides assurance that project emissions, and therefore impacts, will be even lower than what is disclosed in the emissions inventory and model results.

Retrofitting existing tanks will provide a significant and relevant benefit to air quality in the Uinta Basin by reducing VOC emissions that are already contributing to ozone exceedances, and doing so before increasing emissions through new project development. Based upon Newfield's Tribal source registrations, the EPA calculated that retrofitting existing tanks from tank batteries in Indian Country that emit greater than 20 tpy with 95% control would result in VOC emission reductions of greater than 900 tpy. Since much of the Monument Butte project area is outside of Indian Country, total emission reduction potential is likely much higher.

The BLM added an additional air quality control measure requiring Newfield to "conduct an annual emissions inventory and compare the inventory to the emissions estimates contained in this EIS." It is

our understanding that this was added in part to compensate for removing any requirement to retrofit existing tanks. This measure as written does not provide a benefit to air quality, as it does not specify any action to be taken based upon the emission inventory comparison. Further, comparing actual project emissions to estimated project emissions does not address opportunities for reducing existing emissions.

We recommend that BLM reconsider the ability to require and achieve substantial VOC emission reductions by controlling existing tanks, as they represent one of the largest sources in the field and best opportunities for off-setting proposed project emissions. We recommend BLM work with Newfield, EPA, and the State of Utah to define a threshold for emissions control for a tank battery that is technologically and economically feasible. As a starting point, we recommend that BLM consider what is required by the State of Utah for new facilities under Utah Administrative Code R307-401, and Utah's definition of minor source Best Available Control Technology (BACT). Utah BACT has determined in many cases that controlling tank batteries with the potential to emit VOC above four tons per year is feasible and meets the definition of minor source BACT for new and modified sources in the Uinta Basin. We further recommend that BLM work with Newfield to develop a schedule for expedient application of controls to existing tanks in the Monument Butte field, within a defined timeframe following the ROD. Alternatively, if state regulations are promulgated for existing tank batteries we recommend the application of those requirements to all of the project's existing sources.

Adaptive Management Strategy:

Adaptive management methods are intended to address areas of uncertainty, and are most effective when they are designed with specific monitoring criteria, thresholds (or "triggers") for action, and alternative management actions. For example, past projects in the Uinta Basin included adaptive management triggers based on a monitored ozone exceedance or the results of the basin-wide cumulative ARMS modeling. As is acknowledged in the adaptive management strategy for this project, these triggers have been reached, and enhanced control strategies can be developed now. At the DEIS stage for Monument Butte, project-specific modeling results were not available, so an adaptive management trigger based upon the outcome of the modeling, and a commitment to modify mitigation measures to prevent adverse impacts, was appropriate. Modeling results are now available for the project, and indicate a need for additional mitigation.

Based on the information available for this FEIS, the need for Adaptive Management on this project is much less than it was for previous projects or at the DEIS stage. The revised Draft Adaptive Management Strategy does discuss one remaining area of uncertainty related to the mechanics of winter ozone formation and ongoing studies that may inform decisions regarding the most effective control mechanisms to reduce ozone in the Uinta Basin. We agree that this is an area of uncertainty around which an adaptive management strategy could be defined. However, as currently written, the strategy does not contain any thresholds for action or any alternative management actions that BLM could take. Instead, it simply states that BLM would modify the control requirements of the project in the future "to conform to the requirements or recommendations of a regulatory basin-wide management plan." If a regulatory plan is put in place (e.g., a SIP or FIP), Newfield would be required to comply regardless of this NEPA decision, so this statement would not provide an additional benefit to air quality. If it is the BLM's intention to require Newfield to comply with any interagency recommended control strategy for the Basin, we recommend modifying the adaptive management language to make this intention more clear, and to include the elements of a traditional adaptive management strategy. We offer our assistance in revising the language if this would be helpful.

Mitigation to Address Other Modeled Impacts:

As discussed in EPA's comments on the Monument Buttes Far-field Modeling Report, adverse impacts are predicted to $PM_{2.5}$, nitrogen deposition, and visibility in addition to ozone. We recommend that the Final EIS include additional mitigation requirements to reduce these potential impacts. As noted above regarding ozone mitigation, many of the same measures we have recommended to reduce emissions of ozone precursors will provide a co-benefit for these other criteria pollutant and AQRV impacts as well.

ACEPM language:

The inclusion of detailed air quality control and mitigation measures in the Record of Decision for Uinta Basin projects, either as ACEPMs or as BLM Air Quality Control Measures, is a relatively new practice. Therefore, we feel it is an area in which there is still plenty of room to learn from past projects. It has recently come to our attention through the mitigation follow-up efforts we have been conducting with the Vernal Field Office on the Greater Natural Buttes project that imprecise wording in these measures can lead to confusion during post-ROD implementation. This confusion can make it difficult for the operator to determine whether they are in compliance with the measures in the ROD, and also difficult for the BLM to enforce those measures. For example, the simple commitment to "use green completions for all well completion activities" resulted in confusion because the term "green completion" is not clearly defined. We recommend that the BLM review and revise the list of ACEPMS and BLM Air Quality Control Measures with this in mind, and we offer our assistance with revisions if it would be helpful.