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Jr 3/2/2017

**APPROVED, FINAL NMED-DOE-LANL TECHNICAL MEETING
MINUTES FOR THREE MILE CANYON AGGREGATE AREA AND
UPPER SANDIA CANYON AGGREGATE AREA SUPPLEMENTAL
INVESTIGATION REPORTS HELD ON FEBRUARY 14, 2017**

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Approved, Final, March 1, 2017

NMED ~~DRAFT~~ Meeting Minutes Upper Sandia Canyon and Three Mile Canyon Supplemental Investigation Reports Technical Meeting

Meeting Date and Location: February 14, 2017- NMED-HWB Office

Attendees:

DOE: Arturo Duran

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LANL: Kent Rich, Joe English, Rich Miranda, Todd Haagenstad, Bruce Robinson

NMED-HWB: Neelam Dhawan, Robert Murphy, Siona Briley, Paige Walton.

Meeting Purpose: NMED and Permittees have exchanged comments on Upper Sandia Canyon Aggregate Area (USCAA) and Three Mile Canyon Aggregate Area (TMCAA) Supplemental Investigation Reports (SIRs). NMED draft comments for USCAA SIR and TMCAA SIR were submitted to the Permittees on November 16, 2016 and November 21, 2016, respectively. The Permittees' response to the draft comments was submitted to NMED on January 31, 2017. The purpose of the meeting was to discuss and resolve technical issues regarding NMED and Permittee comments for these SIRs. After exchanging draft comments, some differences may still exist about certain processes presented in the SIRs and the impact that NMED's draft comments will have on the report approval process. Permittees and NMED agree that the goal of the meeting is to make progress on as many of the issues as possible though not necessarily resolve everything today. The issues to be addressed at the meeting affect many SIRs that have been or will be submitted to NMED and the outcome of the meeting will hopefully provide a consistent approach to resolving the issues.

- 1. Use of Soil Screening Levels (SSLs):** In cases where chemicals of potential concern (COPC) concentrations increase with depth or laterally, Permittees compare the maximum detected concentration to the SSL for the current and future land use scenario to determine whether additional sampling to define the extent of contamination is warranted. If the SSL is an order of magnitude or greater than the maximum detected concentration the determination of no further sampling being warranted is made even if concentrations are increasing vertically or laterally. Permittees believe that the approach they are using to eliminate unnecessary additional sampling is protective of human health and the environment and that from a risk perspective, is an appropriate approach. NMED agreed that in most cases the method is appropriate as long as sufficient additional information and lines of evidence are provided in the discussion as outlined in the NMED draft. If the site concentration is significantly lower than the SSLs (e.g., orders of magnitude), it was agreed that this comparison was sufficient as a single line of evidence to determine that no further sampling is warranted for the COPC in question. However, in some cases, additional evaluation of the COPC is required. The Permittees concur that in some cases additional evaluation of the COPC is justified and that additional sampling may be warranted even if the maximum detected concentration is an order of magnitude below the SSL. NMED stated that they agree that additional sampling may not be warranted in cases where the following criteria are met: there is no history of contaminant release due to site

activities, contaminant concentrations do not increase significantly with depth or laterally and appear to be isolated cases (do not indicate a trend), there is no downstream component of contaminant migration, and concentrations are an order of magnitude or more below the SSL. NMED also stated that organic COPCs are of more concern than metals because detected organics represent a potential release related to historical lab activities. Permittees brought up the issue of the difficulties related to using historical data to determine whether there was possibly a release at the site.

2. **Use of trivalent chromium screening levels versus total chromium screening levels:** NMED stressed that unless there is background data available for different media, i.e., soil, sediment, and tuff that demonstrate that the preponderance of Cr in the area is trivalent chromium (Cr III), total Cr screening levels must be used when making the determination that additional sampling is not warranted. NMED provided Permittees with two options they may choose: (1) to do a background study to demonstrate that total Cr is mostly comprised of Cr III at LANL or (2) compare the samples analyzed for total Cr with total Cr SSL values. Permittees do not want to re-write all of the reports that are affected by this issue so their inclination is to collect the additional background Cr data. NMED agreed that a practical approach is needed. Permittees will notify NMED of their decision to either do a background study or to compare their total Cr data to total Cr SSLs.
3. **Comparison of site data to maximum background concentrations when identifying COPCs:** NMED and EPA guidance do not allow for point to point comparison between the site data set and background data set except in special situations (e.g. the BV is greater than the maximum value in the background dataset); a statistically derived UTL must be used for the comparison. Permittees contends that their approach is reasonable and only used when the number of detections are too few to allow for statistical comparisons and is always used in conjunction with other lines of evidence. NMED stated that the only meaningful comparison is to the UTL which takes into account the entire range of values in the background dataset. Permittees argued that the approach is conservative and consistent with the Framework Agreement, however, agreed that comparison to the maximum background concentration is by itself insufficient to eliminate a constituent as a COPC. NMED will allow the comparison for both identification of COPCs and for defining nature and extent if coupled with multiple lines of evidence to include looking at the number of detections versus sample number, history of the site (as best known), locations (is there any spatial variation or trends), along with the comparison to the SSLs. If there is site history to suspect the constituent to be present from site activities (such as lead at a firing site), then it would be possible that the constituent could be present from historical activities at low levels (in the high range of background). In these cases, the constituent still must be carried forward as a COPC and retained in the risk assessment (it will likely not be a risk driver).
4. **Ecological Risk-Screening Assessment Methods:** Permittees use a two-fold screening approach that NMED does not agree with, specifically, Permittees do not provide justification for the use

of a value of 0.3 for the LOAEL assessment. NMED agreed that the process Permittees use for first tier screening is acceptable but for second tier a more conservative value of 0.1 must be applied. The less conservative approach of using 0.3 would not be appropriate if more than three COPCs are present at a site. Permittees agree to use 0.1 in future reports. For the reports already submitted to NMED the issue will be addressed by NMED in comments. The Permittees also agreed the next revision to the Ecological Risk Assessment Guidance will include the LOAEL screening of COPECS.

5. **Calculation of UCLs:** NMEDs' comment on the calculation of UCLs in the TMCAA SIR states that the UCL should be calculated with a minimum of 6 detections. Permittees stated that they are using a minimum of 5 detections which is consistent with previous NMED direction and EPA ProUCL guidance. NMED stated that they will accept use of 5 detections as long as Permittees can provide sufficient technical justification for the number of samples used in determining UCLs and that the number is consistent with EPA guidance.

6. **Exposure Point Concentrations for Risk Assessment Uncertainty Analysis:** If a potentially unacceptable risk is indicated using the maximum detected concentration as the EPC, Permittees further evaluate the risk in the uncertainty analysis to determine whether the potential risk estimated by the maximum detected concentration is likely or not. NMEDs' comment indicates that NMED does not support the use of a UCL calculated from fewer than 6 detections and provided alternative measures in their USCAA general comments. Permittees recommended a more flexible approach in performing uncertainty analysis if the use of the maximum detected concentration as an EPC indicates a potential unacceptable risk. NMED indicated that a more flexible approach may be applied as long as the approach is technically defensible, is clearly defined and described in the report, and is consistent with current EPA guidance (with references). NMED will evaluate on a case by case basis.

7. **Johnson and Ettinger (J&E) Vapor Intrusion Model:** Permittees use the model as a qualitative method for screening of soil data to determine if soil has been impacted. NMED recommended that the J&E model not be used as a line of evidence and not included in future reports. Permittees question if the vapor intrusion assessment discussions as presented in the SIRs is sufficient without J&E. NMED stated that the lines of evidence approach as currently presented in SIRs is adequate without the J&E model and that the inclusion of risks predicted by the model in total risk calculation is not needed. Permittees stated that they have not been consistent in adding the results calculated from J&E to the overall risk and will revise the SIRs and IRs already submitted for consistency.

8. **Deviation from the Default Exposure Assumptions for the Industrial Scenario:** NMED provided comments that the modified Industrial exposure scenario used in the USCAA SIR has not been justified or approved. Permittees recommend modifying risk scenarios where default scenarios are unrealistic. In general, NMED supports the specification of an alternate exposure scenario in the uncertainty analysis when exposures at the site are closer to those represented by the

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alternate scenario. Permittees questioned what documentation or justification is going to be sufficient or necessary. NMED does not consider "professional judgement" parameters based on interviews with workers with regards to how much time they spent at a site. The rest of Permittees' approach is fine but additional justification for the alternate scenarios based on EPA guidance and the exposure parameter values is required following the recommendations for the alternate exposure found in EPA's Exposure Factors Handbook. Also, if a land use change is proposed, additional sampling, evaluation, and/or corrective action may be required. DOE (Arturo) stated that the land use scenario is restricted in the property deed. If property transfer is initiated, a process is automatically triggered to review and address the risk due to the proposed land use change. NMED will include a control in the certificate of completion and a comment that states if land use changes then the risk must be re-assessed.

9. **Elimination of PAHs as COPCs:** NMED and Permittees acknowledge that they won't be able to resolve the issue at the present time. NMED considers PAH contamination at sludge beds to be design related and site related contamination. Permittees have already received the comments for USCAA SIR and will address PAHs in the Phase II work plan.
10. **Reevaluation of Conclusions and Recommendations for SWMU 61-002:** The NMED comment addresses two locations at SWMU 61-002 where residual contamination exists at elevated levels. TPH-DRO, TPH-GRO, and other organics are elevated in a sample at one location at a depth of 10-10.5 ft bgs. The exposure pathway is incomplete for the industrial, construction worker, and residential scenarios due to the depth of the contamination. NMED contends that the contamination represents a hot spot and should be evaluated separately from the rest of the SWMU and may require remediation. Permittees proposed corrective actions complete with controls, the control being the location of the hotspot underneath the security perimeter road. The other hot spot consists of two locations with elevated PCBs at a depth of 1.5-2.0 ft bgs. LANL stated that the locations are well bounded by other sampling locations, that the contamination does not pose a risk, and by looking at just the one location the risk results will be biased high. NMED noted that data from surrounding locations cannot be used to determine risk at a hotspot and that the contaminated spot was covered with fill before the extent of contamination had been determined. DOE wonders if CoC with controls will be sufficient to address the PCB hotspot? Approval with modifications has been sent for USCAA, NMED will reconsider the available SWMU information during review of next submittal for USCAA.
11. **Evaluation of Data from Multiple Sites:** NMED does not support the use of consolidated units for human health and ecological risk screening assessments. Permittees believe it is appropriate to combine data from sites that overlap one another and where it is not possible to distinguish potential contamination from one site from that of the other. NMED agreed that the Permittees approach is acceptable in limited situations.

Action Items

- **NMED will revise their comments for the SIRs and IR currently under review to be consistent with the decisions made in this meeting. One option would be for NMED to send a Notice of Disapproval (NOD) with request to resubmit the SIR but not stipulate a deadline for resubmittal or the second option is for NMED to send Approval with Modifications for SIR documenting the deficiencies in the SIR that can be addressed during next submittal (i.e., phase 2 work plan or phase 2 investigation report) in accordance with Permittees' campaign schedule. The Approval with Modifications for USCAA SIR has already been sent to the Permittees, therefore Permittees should respond to NMED's comments in next submittal for SIR in accordance with campaign approach.**
- **NMED will send Permittees draft comments for the Former Los Alamos Inn Property Site IR and schedule a meeting to try to resolve those comments prior to submission. LANL will look for additional information on the former cooling tower located within the former LA Inn property site.**
- **Permittees will submit a work plan on Fenton Hill and will need to schedule a meeting to discuss the sampling and analysis plan (SAP). NMED will need a preview copy to assist with discussions.**