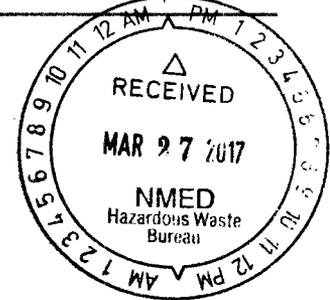


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AQS, Inc.
Paper Run Drive
South West, Utah 84405
Phone (801) 476-1365
www.aqsnet.com



March 22, 2017

DCN: NMED-2017-13

Mr. David Cobrain
New Mexico Environment Department (NMED)
Hazardous Waste Bureau
2905 Rodeo Park Dr. E/Bldg 1
Santa Fe, NM 87505

RE: Revised Draft Technical Review of the *Threemile Canyon Aggregate Area Supplemental Investigation Report*, Los Alamos National Laboratory (LANL), dated February 2016.

Dear Mr. Cobrain:

Attached please find draft technical review comments on the human health and ecological risk assessment sections of LANL's, *Threemile Canyon Aggregate Area Supplemental Investigation Report (SIR)*, LA-UR-16-20567, dated February 2016. The original review comments (dated July 20, 2016) have been revised based on agreements made during a February 14, 2017 meeting with LANL.

If you have any questions, please contact me at (801) 451-2864 or via email at pwalton@aqsnnet.com.

Thank you,

Paige Walton
AQS Senior Scientist and Program Manager

cc: Robert Murphy, NMED (electronic)
Neelam Dhawan, NMED (electronic)
Joel Workman, AQS (electronic)

Enclosure



Revised Technical Review Comments on the *Threemile Canyon Aggregate Area Supplemental Investigation Report (SIR)*, Los Alamos National Laboratory (LANL), dated February 2016.

1. Section 5.1, Selection of Constituents of Potential Concern (COPCs) – SIR-wide:

The Permittees lists lines of evidence to be used in determining if an inorganic chemical should be eliminated as a constituent of potential concern (COPC). The comparison to the maximum background concentration is listed as a line of evidence to be used to screen out a COPC. Except in special cases, NMED does not consider such comparisons as a valid line of evidence for dismissing detected inorganic compounds as COPCs. Note that Section 2.7.3 of the NMED SSG does not state that comparison to maximum background is an acceptable line of evidence. The range of values in the background data set is considered in the statistical determination of appropriate background threshold values (e.g., background values, BVs). As indicated in Section 2.7.3 of the SSG, if the maximum concentration of a COPC exceeds the applicable BV, statistical tests must be used to determine if the data set for the COPC is statistically different from the applicable background data set. However, NMED does allow the upper end of the background data set to be used for comparison in special cases:

- Statistically determined BV is significantly greater than the maximum background concentration.
- Statistical tests cannot be performed because of insufficient data or a high percentage of nondetections.
- Sufficient number of samples have been collected to determine nature and extent but results are predominately non-detect (discussion of sample number versus detections).
- There is no history to suggest the constituent is directly related to site activities or a dominant waste stream. If there is site history to suspect that the constituent is present due to site activities (such as lead at a firing site), then it is 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) or if it is not retained as a COPC, risks associated with it must be presented in the uncertainty section.
- Spatial analyses does not show a pattern or trend indicating contamination.
- The site concentration is significantly lower than the corresponding soil screening level (SSL).
- The maximum detected result is statistically determined to be an outlier (note, sufficient samples must be collected to show a point is an outlier and not indicative of a hotspot).

2. Appendix H, Section H-3.1:

The Permittees state that the potential for construction workers to be exposed to subsurface soil is complete. Examination of the information provided in the main text and Appendix H indicates that exposure during construction activities at these sites is feasible. Thus, it is unclear why the risk assessment does not include estimations of risk to construction workers. Further, many of the sites may include COPCs that result in more conservative screening levels for the construction worker over the residential receptor. Revise the risk assessment to

address the potential for construction workers to be exposed to site contamination at the solid waste management units (SWMUs) and areas of concern (AOCs). For those sites where COPCs that drive the construction worker risks are not present as COPCs, a statement that the residential scenario is protective of the construction worker, along with other lines of evidence supporting the exclusion of a construction worker exposure scenario in the human health risk assessment should be provided. If COPCs are present resulting in the residential screening not being protective of the construction worker, the construction worker scenario must be evaluated and added to the assessment.