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August 2, 2015

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AUG - 6

Mr. David Cobrain
New Mexico Environment Department (NMED)
Hazardous Waste Bureau
2905 Rodeo Park Dr. East
Building One
Santa Fe, NM 87505

NMED
Hazardous Waste Bureau

RE: Draft Technical Comments on the Investigation Report for Technical Area 57 Aggregate Area (Fenton Hill), Los Alamos National Laboratory (LANL), March 2015

Dear Mr. Cobrain:

Attached please find draft technical review comments on LANL's "Investigation Report for Technical Area (TA) 57 Aggregate Area (Fenton Hill)", dated March 2015.

In determining the extent of contamination, it was noted that in several sample locations, concentrations were increasing horizontally and/or vertically. However, LANL concluded that since the detected concentration were below screening levels, additional sampling to define extent was not required. In the past, this line of evidence (comparison to screening levels) has not been presented as justification to not fully define nature and extent. The concern is setting a precedence. It is possible with given topography to have down slope concentrations greater than concentrations in the immediate area of a source(s) due to runoff/transport. If NMED agrees that nature and extent has been defined, NMED may wish to caveat acceptance of how nature and extent was defined for these areas of concern.

If you or any of your staff have questions, please contact me at (801) 451-2864 or via email at paigewalton@msn.com.

Thank you,

Paige Walton

Paige Walton
AQS Senior Scientist and Program Manager

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

Enclosure

The contents of this deliverable should not be evaluated as a final work product



Draft Technical Comments on the Investigation Report for Technical Area 57 Aggregate Area (Fenton Hill), Los Alamos National Laboratory (LANL), March 2015

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The first sentence of Section 5.1 states that “Organic chemicals that are clearly present from sources other than releases from a site (e.g., polycyclic aromatic hydrocarbons) may be eliminated as COPCs [constituents of potential concern].” While statement is true, the exclusion of organic COPCs may be considered only if sufficient evidence (e.g., analytical data, trend analysis, etc.) and justification is provided to demonstrate the contamination is not related to site activities and is from an off-site source. If it is determined and approved by NMED that an organic(s) may be dropped as a COPC, the potential risks must still be addressed in the uncertainty section of the risk assessment. No response to this comment is needed.

2. Section G-2.3, Determination of COPCs. An exposure interval of 0-5 feet below ground surface (ft bgs) was applied for the ecological risk screens/. In accordance with Section 3.3 of Volume II of the 2014 NMED Risk Assessment Guidance for Investigations and Remediation, the maximum detected concentration from the 0-10 ft bgs should be used as the exposure inertial for the initial Tier 1 ecological screening assessment. As a result of using the smaller exposure interval, risks were not estimated for the following:

AOC 54-006: barium, chromium, copper, selenium, and bis(2-ethylhexyl)phthalate.
AOC 54-007: perchlorate.

In addition, as a less conservative exposure interval was applied in the screening assessments, the initial hazards were underestimated for the following constituents:

AOC 54-006: zinc (note: antimony and trichloroethene only minimally underestimated and the difference would not change the results of the risk screen.
AOC 57-007: arsenic

Revise the screening level assessment to assess the correct exposure interval in accordance with the NMED guidance.

3. Population area use factors (PAUF) were used for refining the ecological risks. As noted in Tables G-5.5-1 and G-5.5-4, home ranges are cited (EPA 1993). However, the home ranges listed in these tables are not consistent with either the home ranges listed in EPA 1003 or the NMED guidance (Volume II). For example, the home range for the deer mouse is listed in the tables as 0.077 hectares (0.19 acres). The NMED guidance lists the home range for the deer mouse as 0.3 acres. None of the mean ranges listed in EPA 1993 are equivalent to the range listed in the Tables G-5.5-1 and G-5.5-4. Clarify how the home ranges were derived and revise for consistency with the NMED guidance.
4. For the vapor intrusion calculations, the Johnson and Ettinger model appears to be applying an out of date inhalation reference concentration (RfC_i) for trichloroethene.

The output files list an RfC_i of 4.0E-02 milligrams per cubic meter (mg/m³), while IRIS lists the RfC_i as 2.0E-03 mg/m³. Revise the Johnson and Ettinger calculations accordingly.