**Cross-Reference of NMED NOD Comments and Revisions to Investigation Report for Area of Concern 01-007(k) in the Upper Los Alamos Canyon Aggregate Area**

| NMED NOD Comment No. | Summary of NOD Comment | Section(s) in Original Report | Section(s) in Revised Report | Nature of Revision |
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| **General Comment** | | | | |
| 1 | For the vapor-intrusion pathway, it was noted that soil data were used to calculate risks and hazards to receptors in indoor air. According to draft 2002 U.S. Environmental Protection Agency (EPA) guidance, use of bulk soil data is not currently recommended. Because no suspected source for continued release of acetone and methylene chloride exists and their concentrations are decreasing with depth, the vapor-intrusion pathway is potentially complete and the discussion and use of the bulk soil model are sufficient as a qualitative analysis for this pathway. Note that for future vapor-intrusion investigations where the vapor-intrusion pathway has been identified as a complete pathway, the use of active soil-gas data will be required. | n/a* | n/a | The vapor-intrusion pathway is primarily for sites where an evident volatile organic compound (VOC) release has occurred and a vapor plume is present and acts as a continual source of VOCs at sufficient concentrations to migrate through the soil and into a structure. The continued evaluation of the soil data, as presented in the investigation report for Area of Concern (AOC) 01-007(k) and other previous aggregate area reports, is adequate for most LANL sites where a plume does not exist. |
| **Specific Comments** | | | | |
| 1 | Although the Permittees state the residential scenario was evaluated for comparison purposes per the Compliance order on Consent (Consent Order), the site is located on private property and residential use is a reasonable foreseeable future land use. The scenario was evaluated since the land use will not be under the Permittees' control. No response to this comment is required. | Section 4.1, p. 11 | Section 4.1 | The text has been revised to indicate the residential scenario is evaluated because it is a reasonably foreseeable future land use for the site. |

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| 2 | Use of the trivalent chromium soil screening level (SSL) is acceptable when no source for hexavalent chromium exists. NMED will provide an SSL for total chromium and guidance on how to address chromium in risk assessments in the forthcoming revision of "Risk Assessment Guidance for Site Investigations and Remediation." | Section 4.2, p. 11 | n/a | Comment noted. |
| 3 | The Permittees approach to eliminating some constituents from the data analyses and risk assessments if they are from non-site-related sources is acceptable if they can demonstrate this by using historical site information and/or by collecting site-specific background data from locations not impacted by the site activities. However, cleanup may still be necessary. | Section 5.1, pp. 12–13 | Section 5.1, pp. 12–13<br>Section 6.2.4.3 | Text has been deleted from section 5.1. The revised report provides a comprehensive presentation of information gleaned from the site history to demonstrate why certain chemicals detected are not site-related.<br>LANL cannot be required to clean-up constituents from non-site-related sources. Neither the New Mexico Hazardous Waste Act nor the Resource Conservation and Recovery Act provide authority to order cleanup of constituents that were not treated, stored, or disposed of by a regulated entity. Finally, as is often the case with naturally occurring and anthropogenic background constituents, the responsible party approach does not apply. |
| 4 | According to the 2012 NMED risk assessment guidance, if the maximum detected concentration from a site is greater than the background reference value and too few samples and/or positive detections are available to conduct a statistical comparison and additional data are not proposed, then the constituent must be retained as a chemical of potential concern (COPC). Comparison to the range of background is not sufficient grounds alone to eliminate a COPC. | Section 5.1.1, p. 14 | Section 6.2.4.3 | LANL disagrees with NMED's statement. LANL considers the comparison to the maximum background concentration as a line of evidence to eliminate inorganic chemicals as COPCs, where appropriate.<br>Based on the July 31, 2014, meeting, the text for antimony, cadmium, and cyanide in section 6.2.4.3 has been revised. |

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| 5 | The text states that previous sampling had not been conducted at AOC 01-007(k). This statement is incorrect since sampling was conducted at this site in 2008. Revise the text to clarify that additional investigations were conducted in 2013 to complete characterization of the site. | Section 6.2.3, p. 18 | Section 6.2.3 | The text in section 6.2.3 has been revised to clarify that additional investigations were conducted in 2013 with the intent of changing the status of this AOC from corrective action complete with controls to corrective action complete without controls. |
| 6 | The Permittees must conduct a hypothesis test to verify that site concentrations of cadmium are not different from background and address it in the uncertainty analyses. | Section 6.2.4.3, p. 20 | Section 6.2.4.3 | The text for cadmium has been revised. Hypothesis tests were not conducted for cadmium in soil because there are no detected concentrations of cadmium to compare with background concentrations; all soil results are nondetects. Hypothesis tests were conducted assuming the detection limits (DLs) above the background value (BV) are detects. The results of the tests are included as another line of evidence that cadmium is not a COPC. It is not included in the uncertainty analysis. |
| 7 | Historical evidence suggests a potential source(s) for nitrates and may be site-related. For consistency with the 2010 investigation for the site, nitrates must be retained as a COPC. Revise the report accordingly. | Section 6.2.4.3, p. 2 | Sections 6.2.4.3, 6.2.4.4<br>Appendix G, sections G-3.2.1, G-5.3.1, G-5.4.8; Tables G-2.3-1, G-2.3-2, G-2.3-3, G-3.2-1, G-4.2-2, G-4.2-5, G-4.2-8<br>Attachment G-1 (CD) | There is no evidence based on site history to indicate the AOC is a potential source for nitrate. (Physics laboratories at LANL used to conduct experiments involving uranium-235, uranium-238, radium-226, carbon-14, polonium-210, and tritium.) However, for consistency with the 2010 investigation for AOC 01-007(k), nitrate is retained as a COPC, and the report has been revised accordingly. |
| 8 | Benzo(a)pyrene was not detected at the site according to Table 6.2-3. Revise the text accordingly. | Section 6.2.4.3, p. 21 | Section 6.2.4.3 | The text has been revised. |

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| 9 | Polycyclic aromatic hydrocarbons (PAHs) cannot be eliminated as COPCs based on the rationale LANL has provided. Unless LANL can demonstrate that PAHs are not site-related in a site-to-background analysis, then they must be retained as COPCs in the risk assessments. Revise the risk assessment accordingly. | Section 6.2.4.3, p. 21 | Section 6.2.4.3 | The text has been revised to present comprehensive and appropriate lines of evidence why the PAHs detected at the site are not site-related. |
| 10 | Revise Table G-2.3-2 to present the correct number of detects for lead. | Table G-2.3-2, p. G-28 | Table G-2.3-2 | The table has been revised. |
| 11 | Revise the construction worker screening action level (SAL) listed for uranium-235/236 to be consistent with the SAL in LANL's "Derivation and Use of Radionuclide Screening Action Levels, Revision 2." | Table G-4.2-6, p. G-35 | Table G-4.2-6 | The table has been revised. |
| 12 | Clarify the source of the input values for the vapor-intrusion data in Appendix G: soil dry bulk density, soil total porosity, and soil water-filled porosity. | Appendix G, Attachment G-2 | n/a | The input values for soil dry-bulk density and soil water-filled porosity are for Qbt 3. The soil total porosity was obtained from EPA's draft guidance for evaluating the vapor-intrusion pathway (Appendix G, Table G-4), assuming silt-loam soil. |
| n/a | n/a | Throughout | Throughout | Minor editorial changes were made throughout the document for the sake of correctness and clarity. |

*n/a = Not applicable.