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John Kieling, Bureau Chief
 Hazardous Waste Bureau
 New Mexico Environment Department
 2905 Rodeo Park Drive East, Building 1
 Santa Fe, NM 87505-6303



Subject: Request to Delay Review of Previously Submitted Aggregate Area Supplemental Investigation Reports

Dear Mr. Kieling:

The U.S. Department of Energy (DOE) and Los Alamos National Security (LANS) request the New Mexico Environment Department (NMED) delay its review of previously submitted aggregate area supplemental investigation reports (SIRs) to allow time for DOE/LANS to complete a background study of chromium speciation in solid media at Los Alamos National Laboratory (the Laboratory). The rationale for this request is provided below.

As part of the technical approach presented in the SIRs, the primary focus for defining the extent of contamination is characterizing contamination that potentially poses an unacceptable risk and may require additional sampling. As such, comparison with soil screening levels (SSLs)/screening action levels (SALs) is used as an additional step following a determination of whether extent is defined by concentrations of chemicals of potential concern (COPCs) decreasing with depth and distance and whether concentrations are below estimated quantitation limits or detection limits. If concentrations increase with depth and distance or do not exhibit any obvious trends, SSLs/SALs are used to determine whether additional sampling for extent is warranted. If the COPC concentration is sufficiently below the SSL/SAL (i.e., the SSL/SAL is 10 times [an order of magnitude] or more than all concentrations), the COPC does not pose a potential unacceptable risk, and no further sampling for extent is warranted.

In the case of chromium, at sites where there is no previous indication that hexavalent chromium was used and released at a site, DOE/LANS have used a comparison of concentrations to trivalent chromium SSLs instead of total chromium SSLs to determine whether additional sampling for extent is warranted. Although chromium in soil may be naturally present as both trivalent chromium and hexavalent chromium, the arid, alkaline soils found at the Laboratory do not favor the presence

of hexavalent chromium, other than possibly at trace levels. The possible trace concentration(s) of naturally occurring hexavalent chromium in soil is vastly overshadowed by trivalent chromium concentration(s) because this is the predominant form of chromium in the environment. Because historical uses of hexavalent chromium at the Laboratory are limited (e.g., cooling tower additives and electroplating) and site conditions do not favor the formation of hexavalent chromium, DOE/LANS believes that the use of the residential SSL for trivalent chromium is appropriate for most sites. However, NMED recommends DOE/LANS conduct a background study to confirm that the soils do not favor the presence of hexavalent chromium and the use of the trivalent chromium SSL is appropriate.

The purpose of the background study is to determine the speciation of chromium in native soils at sites that have not been impacted by Laboratory operations. Samples will be collected and analyzed for total and hexavalent chromium. If the data show that chromium is present in the solid media predominantly as trivalent chromium, DOE/LANS, with NMED concurrence, will continue to use comparisons to trivalent chromium SSLs in extent discussions as a line of evidence supporting why additional sampling is not warranted. The background study will be conducted during the summer of 2017, and it should take approximately 3 months to complete and receive the analytical data. The sampling data will be provided to NMED as soon as they are available. Therefore, DOE/LANS request that NMED delay its review of previously submitted SIRs until the background study is completed. Also, DOE/LANS will not submit other SIRs until NMED has reviewed the study results.

If you have any questions, please contact Kent Rich at (505) 665-4272 (krich@lanl.gov) or Ramoncita Massey at (505) 665-7771 (ramocita.massey@em.doe.gov).

Sincerely,



Bruce Robinson, Program Director
Environmental Remediation Program
Los Alamos National Laboratory

Sincerely,



David S. Rhodes, Director
Office of Quality and Regulatory Compliance
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