

General

MEMORANDUM

TO: DOE Team
FROM: Teri Davis, DOE Team Supervisor
THROUGH: Kim Hill, EPA IPA
DATE: June 16, 1997
SUBJECT: Common HRMB/EPA Comments Regarding Recurring LANL Document Deficiencies

Recent HRMB/EPA reviews of LANL documents have resulted in recurring Notice of Deficiency (NOD) comments. To ensure consistency in our NOD comments regarding these types of deficiencies, please insert the following paragraphs in your NOD comments whenever appropriate. If we need to revise the wording please get back to me as soon as possible on proposed changes.

Refuse in a Watercourse: Under regulations established by the New Mexico Water Quality Control Commission (NMWQCC) in the State of New Mexico Standards for Interstate and Intrastate Streams, 20 New Mexico Annotated Code (NMAC), 6.2, Section 2201: *No person shall dispose of any refuse in a natural watercourse by leaching or otherwise.*

COPCs: One or More Contaminants of Potential Concern (COPCs) Greater than SALs and COPCs less than SALs: LANL must perform a baseline risk assessment (BRA) for those PRS where one or more COPCs exceed a SAL. These evaluations must also include those COPCs which did not exceed SALs, but had normalized values that exceeded 0.1.

Calculation and Use of UTLs: The use of tolerance intervals is an alternate approach to the analysis of variance in determining the presence of statistically significant contamination. A tolerance interval is constructed from data obtained from (uncontaminated) background soil locations. The concentrations from the site investigations are then compared with the tolerance interval. If the site constituent concentrations fall outside the tolerance interval, statistically significant contamination is evinced. Tolerance intervals may be used for determining statistically significant contaminant concentrations; however, the following criteria must be met and documented:

- The presence of homogeneous soil types must be verified. The use of Upper Tolerance Limits (UTLs) is appropriate for sites that overlie extensive homogeneous geologic deposits (e.g., thick homogeneous lacustrine clays) that do not naturally display geochemical variations.
- The tolerance interval must be calculated using an adequate data set (minimum of 8 data points).
- Calculated UTLs must be compared to human health and ecological screening values to determine their relevance.



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- For adequate review, the Administrative Authority (AA) must be provided the entire data set (including non-detectable concentrations) used to perform the statistical analysis and the type of statistical analysis performed.
- For adequate review, the AA must be provided all background data points.
- Variability within each data set must be defined (i.e., minimum and maximum constituent concentrations, average constituent concentration value and the standard deviation).
- A normality test must be applied to the data set prior to the derivation of an UTL.
- The data set must be inspected for outliers (i.e., unusually high or low values) and their identity and source (such as analytical laboratory transcription errors) should be documented.

If these criteria are met, LANL must recalculate UTLs based on the 95 percent confidence level of the 95th percentile of distribution [USEPA, 1989, *Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities - Interim Final Guidance*, NTIS PB89-151047]. If these criteria cannot be met, LANL must calculate the background concentration based on the 95 percent upper confidence level of the arithmetic average concentration.

Calculating SALs: For those SALs absent from the USEPA Region IX PRGs, LANL shall calculate the SAL using toxicity data obtained from USEPA Region III risk-based concentration tables or the latest Integrated Risk Information System/Health Effects Summary Tables (IRIS/HEAST) data using USEPA Region IX default values applicable to the projected future land use.

Cumulative Risk from Multiple Nearby PRS: LANL shall consider the cumulative risk posed to human health and the environment from multiple, nearby PRSs. Many sites within Technical Area (TA) XX present carcinogenic, noncarcinogenic, or radiological risks which, in total, may present an unacceptable human health or ecological risk.

Miscellaneous Deficiencies: This report fails to list the UTLs used, fails to justify use of MCE which has not been approved, and recommends NFA for areas using sample data that fails to meet QA/QC standards.

Qualified Data: An inordinate number of analyses were qualified or rejected within this RFI Report. Due to the low surrogate recoveries, blank contaminations, holding time exceedances, and problematic diluted samples below detection limits, conclusions regarding the presence or absence of contaminants can not be made. It is unacceptable to submit RFI Reports with greater than 50% of the data qualified. This report

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submitted for some data sets greater than 90% of qualified data as data sufficient for decision making.

Using Field Methods for PRS Characterization: LANL shall not use field instrumentation to determine the types of analyses to be conducted at investigations aimed at determining the presence or absence of contamination. When field instrumentation is used for screening, LANL shall provide assurances (such as detection limits and calibration records) that appropriate Quality Assurance/Quality Control criteria were adhered to. In addition, LANL must obtain confirmatory samples when using field screening to determine the presence or absence of contamination.

OTHER COMMON APPROACH TOPICS

Additionally, we should look at requesting LANL to use both the New Mexico Water Quality Control Commission standards and the latest Screening Action Level (SAL) guidance as found in the USEPA Region 6 document entitled *Human Health Media-Specific Screening Levels* dated October 30, 1996.

Additional Work Requested: If a RFI followed the approved RFI Workplan or Sampling and Analysis Plan (SAP), yet failed to either meet the objectives of an RFI or did not follow currently accepted practices, then prepare an Attachment A entitled "Request For Workplan Modification" within the NOD letter requiring the additional work. The NOD comments should follow the Request for Additional Work (Attachment A) as Attachment B. A generic cover letter for this type of additional work can be obtained from either John K. or Kim H. for a price!

cc: Robert S. ("Stu") Dinwiddie, Manager
Jerry Bober, DOD Team Supervisor