State of New Mexico
ENVIRONMENT DEPARTMENT
Harold Runnels Building
1190 St. Francis Drive, P. O. Drawer 26110
Santa Fe, New Mexico 87502-0110
(505) 827-2855
Fax: (505) 827-2836

GARY E. JOHNSON
GOVERNOR

MARK E. WEIDLER
SECRETARY

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

July 3, 1998

Mr. Theodore Taylor, Project Manager
Los Alamos Area Office
Department of Energy
528 35th Street
Los Alamos, New Mexico 87544

Mr. John Browne, Director
Los Alamos National Laboratory
P. O. Box 1663, Mail Stop A100
Los Alamos, New Mexico 87545

RE: Request for Supplemental Information
TA 3 RCRA Facility Investigation Report
Los Alamos National Laboratory
NM0890010515

Dear Mr. Taylor and Mr. Browne:

The RCRA Permits Management Program (RPMP) of the New Mexico Environment Department's Hazardous and Radioactive Materials has reviewed the RCRA Facility Investigation Report (LAUR-97-3571) for TA 3 dated September 1997 and requests supplemental information as detailed in the attachment.

LANL must respond to the request for supplemental information within thirty (30) days of the receipt of this letter. If LANL does not submit a complete response to this request within thirty (30) calendar days, LANL should be advised that a Notice of Deficiency will be issued.

5553

TL

Should you have any questions regarding this letter, please contact me or Mr. John Kieling, RPMP's LANL Facility Manager, at (505) 827-1558.

Sincerely,

Robert S. ("Stu") Dinwiddie, PhD, Manager
RCRA Permits Management Program
Hazardous and Radioactive Materials Bureau

RSD:kth

attachment

cc w/ attachment:
T. Baca, LANL EM, MS J591
J. Canepa, LANL EM/ER, MS M992
J. Davis, NMED SWQB
B. Garcia, NMED HRMB
K. Hill, NMED HRMB
M. Johansen, DOE LAAO, MS A316
J. Kieling, NMED HRMB
S. Kruse, NMED HRMB
M. Leavitt, NMED GWQB
H. LeDoux, DOE LAAO, MS A316
D. McInroy, LANL EM/ER, MS M992
D. Neleigh, EPA 6PD-N
J. Parker, NMED DOE OB
J. Vozella, DOE LAAO, MS A316
S. Yanicak, NMED DOE OB, MS J993
File: HSWA LANL HSWA LANL 1/1114/3
Track: LANL, doc date, NA, DOE/LANL, NMED HRMB/Dinwiddie, RE, file

ATTACHMENT
Request for Supplemental Information
TA 3 RFI Report
September 1997

The following potential release sites were presented in this document: 3-004(c & d), 3-007, 3-014(k-l & o), 3-021, 3-049(a), 3-052(b), 3-056(k) & C-3-014.

The following table summarizes RPMP's concurrence or non-concurrence with LANL's proposed action as indicated within this RFI Report:

PRS Number	*LANL Proposed Action*	*AA Concurs?*	*Rationale*
3-004(c)	NFA	No	See General and Site-specific Comments
3-004(d)	NFA	No	See General and Site-specific Comments
3-007	NFA	No	Further information requested; see Site-specific Comments
3-014(k)	NFA	No	See General and Site-specific Comments
3-014(l)	NFA	Yes	No COCs present; no additional information required
3-014(o)	NFA	No	See General and Site-specific Comments
3-021	NFA	No	See General Comments
3-049(a)	NFA	No	See General and Site-specific Comments
3-052(b)	NFA	No	See General and Site-specific Comments
3-056(k)	NFA	Yes	No COPCs
C-3-014	NFA	Yes	No COPCs present; no additional information required

General Comments:

1. LANL failed to perform appropriate risk screening per NMED HRMB/EPA guidance: LANL should avoid using Multiple Chemical Evaluations, "risking away" constituents prior to a UTL/BV comparison. *[all PRSs]*

   Regarding PRGs, EPA states that "...PRGs were established...to serve as a screening tool for determining if a contaminant release has occurred at a site, if the release requires further delineation, or if a site risk assessment should be conducted. These PRGs were calculated for both residential and industrial exposure scenarios. Although Region 9 PRGs correspond to a hazard quotient of 1.0 for noncarcinogens and a risk of 1×10^{-6} for carcinogens, EPA did not intend for PRGs to be used to estimate risk at a site or be used as a shortcut to the risk assessment guidelines outlined in *Risk Assessment Guidance for Superfund (RAGS).*"

2. LANL failed to adhere to the approved RFI Workplan (WP) or Sampling and Analysis Plan (SAP). LANL should identify each variance from the approved RFI WP/SAP and, for each variance, provide the rationale for varying from the approved RFI WP/SAP and evaluate the impact of each variance on the integrity of the investigation. *[all PRSs]*

3. LANL failed to identify constituents above background UTLs or detection limits and failed to identify those constituents which were identified above UTLs and exceeded Screening Action Levels (SALs). RPMP evaluated the analytical data provided in Appendix A and found that LANL failed to identify or mis-identified constituents for many of the PRSs. *[all PRSs]*

   Therefore, LANL should perform a re-evaluation of the analytical data and provide an explanation why the constituents identified in Table A (attached) were not presented within the tables of the RFI Report. In addition, LANL should perform this re-evaluation comparing COPC concentrations with the verbally agreed-upon background values (written confirmation is forthcoming) instead of the UTLs as presented in the RFI Report.

4. LANL should provide reference to the source(s) of the SALs used in the report.

5. LANL failed to locate duplicate samples appropriately. Because field QC "duplicate" samples are designed to check both laboratory and field procedures, LANL should ensure that future duplicate samples are obtained from areas

which are known to be or are most likely to be contaminated. *[no response required]*

6. LANL should perform an ecorisk screening evaluation at all PRSs with contaminant concentrations greater than background or above detection limits. *[all PRSs]*

7. LANL should present the UTLs for all analytes and all matrices (Qbt_3, Qbt_4, soil, etc.) differentiated in the RFI Report in one comprehensive table.

8. LANL should present and define the "Minimum detectable activities" and measurement uncertainties for radionuclides within the text of the RFI Report such that the elimination of radionuclides from further consideration can be reproduced. *[all PRSs where applicable]*

Specific Comments:

9. Section 3.3.1, Risk Due to Naturally Occurring Inorganic Chemicals in Soils
The assumptions used to conduct exposure assessments and estimate the reference dose for manganese are the same as for any other inorganic chemical. Those assumptions, along with the fact that manganese background UTL exceeds a hazard quotient of 1.0, will be taken into consideration if a contaminant release is discovered at a site and the need for a corrective action remedy is assessed. LANL should not minimize the risk due to naturally occurring background concentrations.

10. Section 4.3.2, Organic Analysis
LANL multiplies all contaminants found in the laboratory blank by 10 in order to obtain a concentration at which those constituents are considered to be detected. Once the "10 times" rule was applied to bis(2-ethylhexyl)phthlate (DEHP) and di-n-butylphthalate data, the concentrations at which these two constituents were deemed detect were relatively high: 2.3 and 2.2 ppm, respectively. For this reason, the concentration of DEHP in sample 0103-97-0030 (0.84 ppm) may actually denote a contaminant release but was considered non-detect. Furthermore, results from di-n-butylphthalate are completely omitted from the report. LANL should include those constituents found in the laboratory blanks, regardless of whether they are considered detect or non-detect.

11. 3-004(c)
    a. Methylene chloride and acetone were identified in both the laboratory method blank and in sample 0103-97-0277. Because these two constituents were identified in the method blank, LANL applied the "10 times" rule which indicated that the concentrations identified in sample 0103-97-0277 should be considered non-detected. LANL should include those constituents found in the laboratory blanks, regardless of whether they are considered detect or non-detect.
    b. Table A-3
    If only two out of the five analyses are useable, then LANL should evaluate if the useable data is sufficient to meet the data quality objectives of the investigation.

12. 3-004(d)
    a. LANL should tentatively identify the source/contributor of carbazole.
    b. Table A-5

If only three out of the twelve analyses are useable, then LANL should evaluate if the useable data is sufficient to meet the data quality objectives of the investigation.

13. 3-007
    a. LANL should clarify if Table 5.2.7-1 (0.71 ppm) or Table A-8 (710 J ppm) presents the appropriate concentration of benzoic acid.
    b. LANL should improve Figure 5.2.4-1 to include drainage pathways.
    c. LANL should clarify what is meant by "standard analytical suite."
    d. LANL should resolve the discrepancy between the number of samples obtained in Table 5.2.4-1 (4 samples) and the text (5 samples).
    e. LANL should explain why thorium-228, -230 & -232 were not included in Table 5.2.6-1.

14. Section 5.3.4, PRSs 3-014(k-l & o)
    LANL should clarify why one sample location per bed was adequate to characterize and detect contamination if it exists.

15. 3-014(k)
    LANL should clarify why uranium and tritium are not identified as present at this PRS although they were detected and presented in Table A-10.

16. 3-014(m)
    LANL should present the analytical data and other information gathered during this investigation which led to the decision to conduct a VCA/M.

17. 3-014(o)
    a. LANL should submit a process schematic which explains why the westernmost bed of PRS 3-014(o) is suspected to contain the greatest amount of contamination.
    b. LANL should also discuss how sludge was transported from the treatment facility to the drying beds.
    c. Five constituents from the westernmost bed of 3-014(o) were found in concentrations either above SALs or Region 9 industrial PRGs. In addition, the modified phthalate detection level (from application of the "10 times rule") was unduly elevated. LANL should conduct further characterization of this bed including a human health and ecological risk assessment.

18. 3-049(a)
    a. LANL should revise Table 5.5.6-1 to include samples 0103-97-0063, -0064, -0066 & -0091 which, in Table A-19, identify constituents above background and/or SALs.
    b. LANL should identify the UTLs for uranium-234, -235 & -238 and their source.
    c. LANL should explain why the cyanide results for samples 0103-97-0096 through -0098 were qualified as non-detect even though the concentrations are high.
    d. LANL should compare the total chromium analytical results with the total chromium SAL of 210 ppm rather than comparing it to the trivalent chromium SAL.

19. 3-052(b)
    LANL should either present the constituents identified above background and/or SALs in samples 0103-97-0163 through -0177 (Table A-22) in Table 5.6.5-1 or provide rationale why they were not included.

20. 3-056(k)
    a. LANL should either present the detected radionuclides from samples 0103-97-0154, -0173 & -0171 in Table 5.6.9-3 or provide rationale why they were not included.
    b. LANL should revise either the units of measure in Table A-27 or Table 5.6.10-1. The same concentrations of the same constituents in the same sample are presented with variance of three orders of magnitude.

21. Appendix A
    a. The middle table on page A-26 is duplicative of the first table on the page.
    b. The last table on page A-26 is mis-titled and should be headed "A-xx" not "2-24."

22. Appendix B
    The sample matrices identified in Appendix B do not directly correlate with the sample matrices identified in the tables within the text ("Summary of Samples Collected at PRS X-XXX").

TABLE A

Constituent Concentrations Greater than UTLs/BVs and Human Health Risk-Based Concentrations

PRS	Contaminant	Location ID [03-0xxx]	Sample ID [0103-97-xxxx]	Media	Depth [inches]	Concentration [ppm]	LANL UTL [ppm]	BV [ppm]	LANL SAL [ppm]	EPA R6 HH SAL [ppm]	EPA R6 HH RBC [ppm]
3-021	chromium	3327	0242	soil	0-12	28.1	19.3	19.3	210	210 N	21
		3327	0243	Qbt_4	24-36	101	10.9	7.14			
	lead (QBU)	3327	0242	soil	24-36	84.7	23.3	22.3	400	400 N	40
		3330	0248	soil	33-45	103					
		3329	0247	Qbt_4	36-48	358	11	11.2			
		3330	0250	Qbt_4	48-60	41.6					
		3331	0251	Qbt_4	45-47	67.1					
		3331	0256	soil	33-45	83.3	23.3	22.3			
	beryllium	3328	0245	Qbt_4	40-60	81	NIR	1.21*	NIR	0.14 C	0.14
	iron	3327	0243	Qbt_4	36-48	33200	33200	14500	NIR	23000 N	2300
		3328	0245	Qbt_4	36-48	16100					
	manganese (QBU)	3329	0247	Qbt_4	36-48	624 J-	NIR	482	3200	380 N	38

TABLE A

Constituent Concentrations Greater than UTLs/BVs and Human Health Risk-Based Concentrations

PRS	Contaminant	Location ID [03-0xxx]	Sample ID [0103-97-xxxx]	Media	Depth [inches]	Concentration [ppm]	LANL UTL [ppm]	BV [ppm]	LANL SAL [ppm]	EPA R6 HH SAL [ppm]	EPA R6 HH RBC [ppm]
3-004(d)	chromium	3294	0261	soil	0-12	33.1	19.3	19.3	210	210 N	21
		3294	0261D	soil							
	lead	3294	0261	soil	0-12	56.6	23.3	22.3	400	400 N	40
		3294	0261D	soil							
	benzo(a)pyrene	3296	0264	soil	0-12	0.18 J	DL	DL	0.061	0.06 C	0.06
3-014(k)	chromium (QBU)	3264	0013	Qbt_4	28-40	24	10.9	7.14	210	210 N	21
3-014(o)	chromium (QBU)	3203	0024	soil	0-6	40.6 J+	19.3	19.3	210	210 N	21
	mercury	3205	0030	soil	0-9	3.8	0.1	0.1	23	23 N	2.3
	silver	3205	0030	soil	0-9	71.3	380	1*	380	380 N	38
	lead (QBU)	3205	0030	soil	0-9	45.1	23.3	22.3	400	400 N	40
	benzo(a)pyrene	3205	0030	soil	0-9	0.67	DL	DL	0.061	0.06 C	0.06
		3203	0024	soil	0-6	0.22					

TABLE A

Constituent Concentrations Greater than UTLs/BVs and Human Health Risk-Based Concentrations

PRS	Contaminant	Location ID [03-0xxx]	Sample ID [0103-97-xxxx]	Media	Depth [inches]	Concentration [ppm]	LANL UTL [ppm]	BV [ppm]	LANL SAL [ppm]	EPA R6 HH SAL [ppm]	EPA R6 HH RBC [ppm]
3-049(a)	chromium (Q-flagged)	3231	0061	soil/sed	0-4	68.2 J-	19.3	19.3	210	210 N	21
		3233	0062	soil/sed	0-4	152 J-					
		3234	0063	soil/sed	0-4	274 J-					
		3236	0064	soil/sed	0-4	264 J-					
		3237	0065	soil/sed	0-4	198 J-					
		3239	0067	soil/sed	0-4	86.3 J-					
		3240	0068	soil/sed	0-3	41.3 J-					
	copper	3231	0061	soil/sed	0-4	450	15.5	14.7	2800	2800 N	280
		3231	0061D	soil/sed	0-4	446					
		3233	0062	soil/sed	0-4	663					
	lead (QBU)	3233	0062	soil/sed	0-4	56.6	23.3	22.3	400	400 N	40
		3236	0064	soil/sed	0-4	53.9					
		3237	0065	soil/sed	0-4	51.2					
		3240	0068	soil/sed	0-3	92.6					
	manganese (QBU)	3237	0065	soil/sed	0-4	1110 J-	714	671	3200	380 N	38
3-052(b)	lead (QBU)	3286	0166	soil/tuff	12-24	45	23.3	22.3	400	400 N	40
		3287	0168	soil/tuff	12-24	64					

NIR = Not indicated in RFI Report
DL = Detection Limit
Qbt_4 = Bandelier Tuff Unit 4
N = Non-carcinogenic
C = Carcinogenic
J-/J+ = Analytical data qualifiers as defined in the RFI Report
QBU = Sample heterogeneity indicated by variances in results of duplicate analyses