

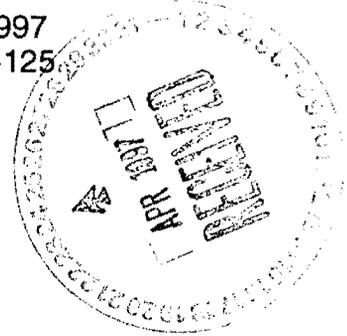
University of California
 Environmental Restoration Project, MS M992
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gter

Date: April 22, 1997
 Refer to: EM/ER:97-125



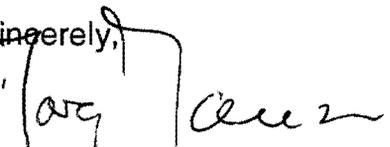
Mr. Benito Garcia
 NMED-HRMB
 P.O. Box 26110
 Santa Fe, NM 87502

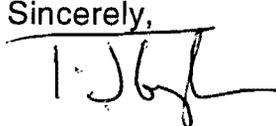
**SUBJECT: RESPONSE TO THE NOD FOR RFI REPORT FOR PRSs IN
 TAs 20, 53, and 72 (FORMER OPERABLE UNIT 1100)**

Dear Mr. Garcia:

Enclosed is a copy of the Los Alamos National Laboratory's response to the New Mexico Environment Department's Notice of Deficiency (NOD) concerning the Resource Conservation and Recovery Act Facility Investigation Report for potential release sites in Technical Areas 20, 53, and 72. A certification form signed by the appropriate officials is also enclosed. The enclosed response repeats each comment from the NOD verbatim for convenience in reviewing.

Please contact Gene Gould at (505) 667-0402 or Mike Gilgosh at (505) 667-5794, if you have any questions regarding the response to the NOD.

Sincerely,

 Jorg Jansen, Program Manager
 LANL/ER Project

Sincerely,

 Theodore J. Taylor, Program Manager
 DOE/LAO

JJ/TT/ss

- Enclosures: (1) Response to the NOD for RFI Report for PRSs in TAs 20, 53, and 72 (Former Operable Unit 1100)
 (2) Certification

HSWA, LANL FC-2/0.1-1100

TV



Cy (w/ encs.):

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G. Gould, EES-15, MS G787
D. Griswold, AL-ERD, MS A906
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EM/ER File, MS M992

CERTIFICATION

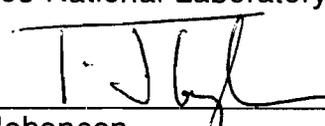
I certify under penalty of law that these documents and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violation.

Document Title: Response to the NOD for RFI Report for PRSs in TAs 20, 53 and 72 (Former OU 1100)

Name:  Date: 4-22-97
Jorg Jansen, Program Manager
Environmental Restoration Project
Los Alamos National Laboratory

or

Tom Baca, Program Director
Environmental Management
Los Alamos National Laboratory

Name:  Date: 4/23/97
Mathew Johansen,
Acting Assistant Area Manager of
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Environment, Safety, and Health Branch
DOE-Los Alamos Area Office

or

Theodore J. Taylor
Program Manager
Environmental Restoration Program
DOE-Los Alamos Area Office

**RESPONSE TO NOD FOR
RFI REPORT FOR POTENTIAL RELEASE SITES
IN TECHNICAL AREAS 20, 53, AND 72**

Sites Where No Further Action (NFA) Appears Appropriate

Based upon the information provided, NMED/EPA tentatively agrees with the NFA proposals for the following sites:

PRS 20-004, Septic Tank TA-20-49 and Drain Line
PRS 20-005, Septic Tank TA-20-27

LANL Response: Agreed

Sites Appears Appropriate Not To Add To LANL RCRA/HSWA Permit (sic)

The NMED/EPA tentatively agrees with the sites are not potential SWMUs and not to be added to LANL RCRA/HSWA Permit: (sic)

PRS 20-003(b), 20-mm Gun Firing Site
PRS 53-001(g), Waste Storage Shed TA-53-1031
PRS 72-001, Small Arms Firing Range

LANL Response: Agreed

Sites Where Additional Information Is Needed

Additional information or further investigation is required for the following sites:

PRS 20-001(a), Landfill Area 1
PRS 20-001(b), Landfill Area 2
PRS 20-002(a), Recovery Pit
PRS 20-002(b), Dumbo and Mount
PRS 20-002(c), Firing Site
PRS 53-001(a), Waste Accumulation at Building TA-53-2
PRS 53-001(b), Waste Accumulation at Building TA-53-2
PRS 53-001(e), Waste Accumulation at Building TA-53-25
PRS 53-012(e), Outfall

LANL Response: See General and Site Specific Comments (below)

Sites Analysis Information are Unavailable at this time

The NMED/EPA did not review those sites because the facility would submit the test results of these sites later. No decision is being finalized:

PRS 20-001(c), Landfill Area 3
PRS 20-002(d), Firing Site
PRS 20-003(c), Navy Gun Site



PRS 53-005, Waste Oil Pit
PRS 53-008, Boneyard
PRS 53-010, Mineral Oil Storage Area

LANL Response:

- Because LANL does not feel that the 1995 sampling adequately located the PRS, PRS 20-001(c) is currently proposed for a continuation of Phase I sampling.
- PRS 20-002(d) will be the subject of a VCA, which is currently scheduled for the summer of 1998.
- PRS 20-003(c) was remediated as a VCA in the fall of 1995; the final report was submitted September 30, 1995.
- Because the pit could not be located during the initial Phase I efforts, PRS 53-005 is currently proposed for a continuation of Phase I sampling.
- PRS 53-008 will be the subject of a VCA for radioactive contaminants, currently scheduled for the fall of 1998.
- PRS 53-010 was remediated as a VCA in the fall of 1995; the final report was submitted September 30, 1995.

GENERAL COMMENTS

1. Sites which are listed on the HSWA permit, and for which LANL is proposing Voluntary Corrective Action (VCA), should still have all the analytical results submitted. The VCA report may function as the equivalent of the RFI report, provided all the sampling and analytical data is submitted. Otherwise, LANL needs to provide the RFI data.

LANL Response:

In accordance with LANL ER Project Consistency Team Memo EM/ER:96-PCT-014 dated August 19, 1996, all specific results, conclusions, and recommendations for sites proposed for VCA will be presented in VCA plans. (See response above for proposed dates for the VCA plan/report submittals.)

2. The Report did not specify, whether LANL had conducted laboratory analysis for HE, which is required in the work plan for the following sites:

PRS 20-001(a,b,c), 20-002(a,b,c,d)

LANL Response:

Chapter 4 states that the following PRSs were sampled for laboratory analyses of HE:

PRS No.	Number of Samples	RFI Report Section	Page
20-001(a)	8	4.1.2	4-1
20-001(b)	22	4.2.2	4-1
20-001(c)	Continuation of Phase I		
20-002(a)	23	4.3.2	4-2
20-002(b)	23	4.4.2	4-2
20-002(c)	25	4.5.2	4-3
20-002(d)	Proposed for VCA		

PRS 20-001(c) was not sampled in the correct location. LANL proposes a continuation of Phase I sampling, including the analyses of HE. Results will be provided after this PRS is sampled in the correct location. Twenty-five HE samples were collected from PRS 20-002(d), which is proposed for remediation. All results will be included in the VCA completion report.

3. *It is hard to understand the Sample Summary Table for each site. I cannot tell what the results for the HE or metals were. What is the meaning of 423, 444, 445, or 264...etc. The reviewer understands some of them are explained in Appendix B but not all. LANL shall explain the meaning of those numbers in the table at the footnotes.*

LANL Response:

The Sample Summary Table for each site presents the analytical request number (batch number) for a given sample. A number in the column indicates the sample was submitted for laboratory analysis and NA indicates the sample was not submitted for a particular analysis. Analytical results for these samples are presented and discussed later in the section for those results greater than background UTLs. Attached are the revised Sample Summary Tables—5.1-1, 5.4-1, 5.11-1, 5.18-1, and 5.20-1.

4. *LANL mentions in several places in the report that a HE spot test was performed on each sample that is sent offsite for laboratory analysis; no HE results are shown in the tables.*

LANL Response:

The HE spot test is a field screening technique used to determine if HE is present in the soil. The test is not quantitative, but rather is a gross indication of whether HE is present or not. The use of the field HE spot test kit to determine the presence or absence of HE in samples is primarily made for health and safety reasons and is also required by the Explosives Division (DX) of the Laboratory. In addition, the determination of whether HE is present in the samples is necessary for the transportation of these samples offsite. Because the spot test only provides an indication of whether HE is present or not, no quantitative results are available to be presented in the report.

In the RFI report, no analytical results are presented in the data comparison tables if there are no detects for an analyte or analytical suite. The lack of HE results in the data tables is an indication that no HE was detected in the samples sent to the offsite laboratory. This should also have been

stated in the section on the Evaluation of Organic Chemicals for each PRS discussed in this report.

SITE SPECIFIC COMMENTS

PRS 20-001(b). Landfill Area 2

1. Page 5-13, Table 5.2-1: The report mentions that soil samples were analyzed for inorganics; however, only silver is indicated on the Table. Were other inorganics analyzed for?

LANL Response:

All samples requested for "inorganic" analyses in this RFI report were analyzed in accordance with EPA SW-846 Method 6010 for 23 TAL metals, as described in Appendix E. Table 5.2-1 in the RFI report lists only those inorganics with concentrations greater than background UTLs for the PRS. Therefore, only silver is presented.

PRS 20-002(b). Dumbo and Mount

2. Page 5-26: There is a contradiction in the report on the radiation screening performed at this site. The results of field surveys showed that surface radiation was as much as six times the ambient radiation levels; however, the results of field screening showed no radioactivity above background. Were those two surveys at the same location or different locations? LANL must clarify this issue.

LANL Response:

As stated on Pages 5-17 and 5-18 of the RFI report, "Prior to the start of field investigations, all firing site locations, including PRS 20-002(a), were surveyed and a grid was laid out using traditional cadastral survey techniques. Radiological field surveys were then conducted by taking gamma radiation measurements near the soil surface at intersecting points on the established grid. These radiation data points were then plotted as 'activity rate contours' to help clarify the radioactivity distribution and activity levels in relation to topographic, geological, and historical site usage."

"The surveys were conducted to aid in the selection of analytical sample locations and to represent a snapshot of the radioactivity trends specific to the local area. The field readings are sensitive to environmental conditions and, as such, are relative only to the local area at that particular moment in time. The background values established at each site serve only to clarify the contouring by reducing the 'noise' in the figure."

"The radiological surface activities presented in Figure 5.4-2 are a graphical depiction of the results of the field data collected. The actual numerical values of the field surveys are not necessarily statistically significant; however, the figures do depict a general trend for each area and were evaluated on that basis."

The above excerpt from the RFI report applies to Section 5.5.4.1, PRSs 20-002(b), as well as to PRS 20-002(a). The "measured ambient radiation levels" referenced in Section 5.5.4.1 was used to aid in evaluating the field survey data and to help establish those areas that were trending towards higher radiation levels. The locations with higher radiological survey results were selected for analytical sampling. As stated above in the excerpt from the RFI report, the gamma radiation readings at grid intersection points presented are not statistically significant for determining "radiological contamination" and are simply used as a tool for biasing analytical

sample locations. This is further demonstrated by the results of the analytical sampling at PRS 20-002(b) indicating no specific radioisotopic COPC concerns at this PRS.

PRS 53-001(a), Waste Accumulation at building TA-53-2

3. Page 5-47, Extent of contamination: The vertical extent of contamination needs to be determined on sample 0253-95-0004, which had 3.25 ppm Aroclor-1260.

LANL Response: Agreed. This location will be resampled.

4. Page 5-48, Section 5-12: The site was a less-than-90-day storage area for drums before 1990. Has the status ever changed or remained the same since then? Please specify. Because the site is still in use, NFA request is deferred until the site is decommissioned.

LANL Response:

The site was identified as a less-than-90-day storage area in the SWMU Report (LANL 1990, 0145) and by photographs. The site is currently managed as a less-than-90-day storage area under 40 CFR 262. The site has been characterized, and no COPCs were retained based on the sample results and screening assessment. The RFI report incorrectly requested a deferred action for this site. NFA is requested based on NFA policy Criterion 4 because no COPCs are present and because the site is currently regulated by 40 CFR 262. A Class III permit modification will be submitted requesting removal of this site from the HSWA module of the Laboratory's Hazardous Waste Facility Permit.

PRS 53-001(e), Waste Accumulation at building TA-53-25

5. Page 5-51, Section 5.13: The investigation was conducted at a location which is neither the original site in the SWMU Report, nor the site which was indicated in a 1989 photograph. It is hard to imagine that the site shown in the photograph is incorrect. LANL must provide evidence to justify whether the new site is the right one.

LANL Response:

The investigation was conducted in the gravel area 30 ft south of Building TA-53-25 (the location shown in the 1989 photograph, as shown in Figure 5.13-1). The RFI work plan concluded that this was the site of the PRS and was in use from about 1981 until 1992. There is an active waste storage area located on the asphalt pavement directly adjacent to Building TA-53-25, on the south side. This site was not investigated. The second paragraph of Section 5.13.1 should have the following sentence added: "The area sampled for this RFI was located 30 ft south of the building, on the gravel, in accordance with the 1989 photograph and the RFI work plan."

Risk Assessment Calculations: PRS 53-001(a) and 53-012(e)

6. Page C-5: The equation of calculating 95% UCL of the arithmetic mean is unclear to the reviewer. Plugging the given default numbers into the equation, the calculated result, the 95% upper confidence limit of the mean for PRS 53-001(a) is 283,828. LANL shall explain: 1) how the default parameters were generated, and 2) why the result is not realistic.

LANL Response:

1) Generation of the default parameters.

The equation and description of the parameters used in the equation are presented in Gilbert (Gilbert 1987, 0312) and discussed in EPA's "Supplemental Guidance to RAGS: Calculating the Concentration Term" (EPA 1992, 1120). The arithmetic mean and standard deviation of the data that are presented on Page C-5 are from the original site data set. However, the log-transformation of the data as needed for use in this equation (as suggested in the description of x and s) was inadvertently omitted from the calculation of the mean and standard deviation.

2) Why the result is unrealistic.

The 95% upper confidence limit (UCL) on the mean of the distribution is the preferred estimate of the exposure point concentration used for risk assessment. The calculations using the untransformed data (as inadvertently presented on Page C-5) do result in a 95% UCL of 283,828 mg/kg. However, even when calculated with the transformed data, the 95% UCL is still relatively large (approximately 80 mg/kg), considering the data set. This unrealistic estimate is a consequence of attempting to estimate a log normal distribution from only four data points. As stated in EPA's "Supplemental Guidance to RAGS: Calculating the Concentration Term" (EPA 1992, 1120), data sets with fewer than 10 samples provide poor estimates of the mean concentration. Therefore, LANL remains confident in the conclusion presented in the RFI report.

7. Page C-4, Section 2.1: I states, "NMED/EPA recommends using the 95% upper confidence level (UCL) of the arithmetic mean (95% UCL) to estimate EPCs." However, on page C-5 it states, "The calculated 95% UCL of the mean exceeded the maximum detected concentration (3.25 mg/kg arochlor-1260) at PRS 53-001(a). Therefore, the maximum detected value (3.25 mg/kg arochlor-1260) was used as the EPC for PRS 53-001(a)." It is quite confusing to the reviewer. LANL shall explain it.

LANL Response:

The exposure point concentration is generally estimated by the 95% UCL on the mean of the observed data from a site. When working with limited data (i.e., fewer than 10 samples), estimates of the UCL on the mean may be greater than the highest measured concentrations. In that case, EPA recommends use of the highest measured concentration as the exposure point concentration. Four data points were available for analysis at PRS 53-001(a) and only three were available at PRS 53-012(e). As a result of these limited data sets, the appropriate estimate for the exposure point concentrations are the maximum detected concentrations at each site. As stated in Appendix C, Page C-5, the maximum concentrations were used in the risk assessment for each of the PRSs.

References:

EPA (US Environmental Protection Agency), May 1992. "Supplemental Guidance to RAGS: Calculating the Concentration Term," OSWER Publication 9285.7-081, Washington, DC. (EPA 1992, 1120)

Gilbert, R. O., 1987. Statistical Methods for Environmental Pollution Monitoring, Van Nostrand Reinhold, New York, New York. (Gilbert 1987, 0312)

LANL (Los Alamos National Laboratory), November 1990. "Solid Waste Management Units Report," Volumes I through IV, Los Alamos National Laboratory Report No. LA-UR-90-3400, prepared by International Technology Corporation under Contract 9-XS8-0062R-1, Los Alamos, New Mexico. (LANL 1990, 0145)

TABLE 5.1-1
Sampling Summary - Landfills

Location ID	Sample No.	Depth (ft)	Matrix	HE EPA-SW-846-8330	Sample Methods						
					Metals EPA-SW-846-6310	Sr-90 HASL-300	U (iso) HASL-300	U (tot) KPA ASTM Z-2907	Gamma-Spec HASL 300		
PRS 20-001(a)											
20-1000	0220-95-	0001	10.0-11.0	Soil	295	296	297	297	297	297	
20-1007		0008	10.0-11.0	Soil	295	296	297	297	297	297	
20-1008		0009	10.0-11.0	Soil	295	296	297	297	297	297	
20-1009		0010	10.0-11.0	Soil	295	296	297	297	297	297	
20-1010		0011	10.0-11.0	Soil	295	296	297	297	297	297	
20-1011		0012	10.0-11.0	Soil	295	296	297	297	297	297	
20-1012		0013	10.0-11.0	Soil	295	296	297	297	297	297	
20-1013		0014	10.0-11.0	Soil	295	296	297	297	297	297	
PRS 20-001(b)											
20-1014	0220-95-	0015	8.0-9.0	Soil	358	359	360	360	360	360	
20-1015		0016	8.0-9.0	Soil	358	359	360	360	360	360	
20-1016		0017	9.0-10.0	Soil	358	359	360	360	360	360	
20-1017		0018	9.0-10.0	Soil	358	359	360	360	360	360	
20-1018		0019	6.0-7.0	Soil	358	359	360	360	360	360	
20-1018		0020D	6.0-7.0	Soil	358	359	360	360	360	360	
20-1019		0023	1.0-2.0	Soil	358	359	360	360	360	360	
20-1020		0024	10.0-11.0	Soil	358	359	360	360	360	360	
20-1021		0025	10.0-11.0	Soil	312	318	319	319	319	319	
20-1022		0026	10.0-11.0	Soil	312	318	319	319	319	319	
20-1023		0027	10.0-11.0	Soil	312	318	319	319	319	319	
20-1024		0028	10.0-11.0	Soil	312	318	319	319	319	319	
20-1025		0029	10.0-11.0	Soil	312	318	319	319	319	319	
20-1026		0220-95	0030	10.0-11.0	Soil	312	318	319	319	319	319
20-1027			0031	10.0-11.0	Soil	312	318	319	319	319	319
20-1028	0032		10.0-11.0	Soil	312	318	319	319	319	319	
20-1029	0033		10.0-11.0	Soil	312	318	319	319	319	319	
20-1030	0034		10.0-11.0	Soil	312	318	319	319	319	319	
20-1031	0035		10.0-11.0	Soil	312	318	319	319	319	319	
20-1032	0036		10.0-11.0	Soil	312	318	319	319	319	319	
20-1033	0037		10.0-11.0	Soil	312	318	319	319	319	319	
20-1034	0038		10.0-11.0	Soil	312	318	319	319	319	319	

Batch numbers for sample analysis request are identified by each 3-digit number.

TABLE 5.4-1
Sample Summary - Firing Sites

Location ID	Sample No.	Depth (ft)	Matrix	Sample Methods						
				HE EPA-SW-846-8330	Metals EPA-SW-846-6310	Sr-90 HASL-300	U (iso) HASL-300	U (tot) KPA ASTM Z-2907	Gamma-Spec HASL 300	
PRS 20-002(a)										
20-1056	0220-95-	0063	0-0.5	Soil	264	265	283	283	283	283
20-1056		0064	2.5-3.0	Soil	264	265	283	283	283	283
20-1057		0065	0-0.5	Soil	264	265	283	283	283	283
20-1057		0066	2.5-3.0	Soil	264	265	283	283	283	283
20-1057		0067	2.5-3.0	Soil	264	265	283	283	283	283
20-1058		0070	0-0.5	Soil	264	265	283	283	283	283
20-1058		0071	2.5-3.0	Soil	264	265	283	283	283	283
20-1059		0072	0-0.5	Soil	264	265	283	283	283	283
20-1059		0073	2.5-3.0	Soil	264	265	283	283	283	283
20-1060		0074	0-0.5	Soil	264	265	283	283	283	283
20-1060		0075	2.5-3.0	Soil	264	265	283	283	283	283
20-1061		0076	0-0.5	Soil	264	265	283	283	283	283
20-1061		0077	2.5-3.0	Soil	264	265	283	283	283	283
20-1062		0078	0-0.5	Soil	264	265	283	283	283	283
20-1062		0079	2.5-3.0	Soil	264	265	283	283	283	283
20-1063		0080	0-0.5	Soil	264	265	283	283	283	283
20-1063		0081	2.5-3.0	Soil	264	265	283	283	283	283
20-1064		0082	0-0.5	Soil	264	265	283	283	283	283
20-1064		0083	2.5-3.0	Soil	264	265	283	283	283	283
20-1065		0084	0-0.5	Soil	264	265	283	283	283	283
20-1065	0220-95-	0085	2.5-3.0	Soil	264	265	283	283	283	283
20-1066		0086	0-0.5	Soil	264	265	283	283	283	283
20-1066		0087	2.5-3.0	Soil	264	265	283	283	283	283

Batch numbers for sample analysis request are identified by each 3-digit number.

TABLE 5.4-1
Sample Summary - Firing Sites

Location ID	Sample No.	Depth (ft)	Matrix	Sample Methods							
				HE EPA-SW-846-8330	Metals EPA-SW-846-6310	Sr-90 HASL-300	U (iso) HASL-300	U (tot) KPA ASTM Z-2907	Gamma-Spec HASL 300		
PRS 20-002(b)											
20-1067	0220-95-	0088	0-0.5	Soil	423	425	427	427	427	427	
20-1067		0089	0-0.5	Soil	423	425	427	427	427	427	
20-1067		0092	2.5-3.0	Soil	423	425	427	427	427	427	
20-1068		0093	0-0.5	Soil	423	425	427	427	427	427	
20-1068		0094	2.5-3.0	Soil	423	425	427	427	427	427	
20-1069		0095	0-0.5	Soil	423	425	427	427	427	427	
20-1069		0096	2.5-3.0	Soil	423	425	427	427	427	427	
20-1070		0097	0-0.5	Soil	423	425	427	427	427	427	
20-1070		0098	2.5-3.0	Soil	423	425	427	427	427	427	
20-1071		0099	0-0.5	Soil	423	425	427	427	427	427	
20-1071		0100	2.5-3.0	Soil	423	425	427	427	427	427	
20-1072		0101	0-0.5	Soil	423	425	427	427	427	427	
20-1072		0102	2.5-3.0	Soil	423	425	427	427	427	427	
20-1073		0103	0-0.5	Soil	423	425	427	427	427	427	
20-1073		0104	2.5-3.0	Soil	423	425	427	427	427	427	
20-1074		0105	0-0.5	Soil	423	425	427	427	427	427	
20-1074		0220-95-	0106	2.5-3.0	Soil	423	425	427	427	427	427
20-1075			0107	0-0.5	Soil	423	425	427	427	427	427
20-1075			0108	2.5-3.0	Soil	423	425	427	427	427	427
20-1076	0109		0-0.5	Soil	423	425	427	427	427	427	
20-1076	0110		0-0.5	Soil	423	425	427	427	427	427	
20-1077	0114		0-0.5	Soil	423	425	427	427	427	427	
20-1077	0115		2.5-3.0	Soil	423	425	427	427	427	427	

Batch numbers for sample analysis request are identified by each 3-digit number.

TABLE 5.4-1
Sample Summary - Firing Sites

Location ID	Sample No.	Depth (ft)	Matrix	Sample Methods						
				HE EPA-SW-846-8330	Metals EPA-SW-846-6310	Sr-90 HASL-300	U (iso) HASL-300	U (tot) KPA ASTM Z-2907	Gamma-Spec HASL 300	
PRS 20-002(c)										
20-1144	0220-95	0240	0-0.5	Soil	444	445	443	443	443	443
20-1144		0241	2.5-3.0	Soil	444	445	443	443	443	443
20-1144		0242	4.5-5.0	Soil	444	445	443	443	443	443
20-1145		0243	0-0.5	Soil	444	445	443	443	443	443
20-1145		0244	2.5-3.0	Soil	444	445	443	443	443	443
20-1145		0245	4.5-5.0	Soil	444	445	443	443	443	443
20-1146		0246	0-0.5	Soil	444	445	443	443	443	443
20-1146		0247	2.5-3.0	Soil	444	445	443	443	443	443
20-1146		0248	4.5-5.0	Soil	444	445	443	443	443	443
20-1147		0249	0-0.5	Soil	444	445	443	443	443	443
20-1147		0250	2.5-3.0	Soil	444	445	443	443	443	443
20-1147		0251	4.5-5.0	Soil	444	445	443	443	443	443
20-1148		0252	0-0.5	Soil	444	445	443	443	443	443
20-1148		0253	2.5-3.0	Soil	444	445	443	443	443	443
20-1148		0220-95-	0254	4.5-5.0	Soil	444	445	443	443	443
20-1149	0255		0-0.5	Soil	444	445	443	443	443	443
20-1149	0256		2.5-3.0	Soil	444	445	443	443	443	443
20-1149	0257		2.5-3.0	Soil	444	445	443	443	443	443
20-1149	0260		4.5-5.0	Soil	444	445	443	443	443	443
20-1150	0261		0-0.5	Soil	444	445	443	443	443	443
20-1150	0262		2.5-3.0	Soil	444	445	443	443	443	443
20-1150	0263		4.5-5.0	Soil	444	445	443	443	443	443
20-1151	0264		0-0.5	Soil	444	445	443	443	443	443
20-1151	0265	2.5-3.0	Soil	444	445	443	443	443	443	
20-1151	0266	4.5-5.0	Soil	444	445	443	443	443	443	

Batch numbers for sample analysis request are identified by each 3-digit number.

TABLE 5.4-1
Sample Summary - Firing Sites

Location ID	Sample No.	Depth (ft)	Matrix	Sample Methods						
				HE EPA-SW-846-8330	Metals EPA-SW-846-6310	Sr-90 HASL-300	U (iso) HASL-300	U (tot) KPA ASTM Z-2907	Gamma-Spec HASL 300	
PRS 20-003(b)										
20-1094	0220-95-	0170	0-1.0	Soil	NA	462	463	NA	NA	463
20-1094		0171	1.0-5.0	Soil	NA	462	463	NA	NA	463
20-1095		0172	2.0-3.0	Soil	NA	462	463	NA	NA	463
20-1096		0173	0-1.0	Soil	NA	462	463	NA	NA	463
20-1096		0174	1.0-5.0	Soil	NA	462	463	NA	NA	463
20-1097		0175	2.0-3.0	Soil	NA	462	463	NA	NA	463
20-1098		0176	0-1.0	Soil	NA	462	463	NA	NA	463
20-1098	0220-95-	0177	0-1.0	Soil	NA	462	463	NA	NA	463
20-1098		0180	1.0-5.0	Soil	NA	462	463	NA	NA	463
20-1099		0181	2.0-3.0	Soil	NA	462	463	NA	NA	463
PRS 72-001										
72-1000	0272-95-	0001	0-1.0	Soil	NA	265	NA	NA	NA	NA
72-1001		0002	0-1.0	Soil	NA	265	NA	NA	NA	NA
72-1002		0003	0-1.0	Soil	NA	265	NA	NA	NA	NA
72-1003		0004	0-1.0	Soil	NA	265	NA	NA	NA	NA
72-1004		0005	0-1.0	Soil	NA	265	NA	NA	NA	NA
72-1004		0006	0-1.0	Soil	NA	265	NA	NA	NA	NA
72-1005		0009	0-1.0	Soil	NA	265	NA	NA	NA	NA
72-1006		0010	0-1.0	Soil	NA	265	NA	NA	NA	NA

Batch numbers for sample analysis request are identified by each 3-digit number.

NA: Sample not submitted for this analysis.

TABLE 5.11-1
Sample Summary - Waste and Product Storage Areas

PRS No.	Location ID	Sample No.	Depth (in.)	Matrix	Sample Methods					
					Metals EPA-SW-846-8330	PCB EPA-SW-846-8081	TPH EPA-SW-846-8015	SVOC EPA-SW-846-8270	VOC EPA-S-846-8260	
53-001(a)	53-1051	0253-95-	0001	0-6.0	Soil	185	184	184	NA	184
	53-1052		0002	0-6.0	Soil	185	184	184	NA	184
	53-1053		0003	0-6.0	Soil	185	184	184	NA	184
	53-1054		0004	0-6.0	Soil	185	184	184	NA	184
	53-1051		0375	0-6.0	Soil	NA	NA	NA	77057	NA
	53-1052		0376	0-6.0	Soil	NA	NA	NA	77057	NA
	53-1053		0377	0-6.0	Soil	NA	NA	NA	77057	NA
	53-1054		0378	0-6.0	Soil	NA	NA	NA	77057	NA
53-001(b)	53-1055	0253-95-	0005	0-12.0	Soil	211	210	210	NA	210
	53-1055		0007	0-12.0	Soil	211	210	210	NA	210
	53-1056		0008	0-8.0	Soil	211	210	210	NA	210
	53-1055		0390	0-12.0	Soil	NA	NA	NA	77057	NA
	53-1055		0391	12.0-18.0	Soil	NA	NA	NA	77057	NA
	53-1056		0392	0-4.0	Soil	NA	NA	NA	77057	NA
	53-1056		0393	4.0-8.0	Soil	NA	NA	NA	77057	NA
53-001(e)	53-1057	0253-95-	0011	0-6.0	Soil	NA	NA	210	NA	210
	53-1058		0012	0-6.0	Soil	NA	NA	210	NA	210
	53-1059		0013	0-6.0	Soil	NA	NA	210	NA	210
	53-1060		0014	0-6.0	Soil	NA	NA	210	NA	210

Batch numbers for sample analysis request are identified by a 3- or 5-digit number.

NA: Sample not submitted for this analysis.

TABLE 5.11-1
Sample Summary - Waste and Product Storage Areas

PRS No.	Location ID	Sample No.	Depth (in.)	Matrix	Sample Methods					
					Metals EPA-SW-846-8330	PCB EPA-SW-846-8081	TPH EPA-SW-846-8015	SVOC EPA-SW-846-8270	VOC EPA-S-846-8260	
53-001(e) con't	53-1057	0253-95-	0379	0-6.0	Soil	NA	NA	NA	77057	NA
	53-1058		0380	0-6.0	Soil	NA	NA	NA	77057	NA
	53-1059		0381	0-6.0	Soil	NA	NA	NA	77057	NA
	53-1060		0382	0-6.0	Soil	NA	NA	NA	77057	NA
53-001(g)	53-1061	0253-95-	0015	0-6.0	Soil	220	NA	219	NA	219
	53-1062		0016	0-6.0	Soil	220	NA	219	NA	219
	53-1063		0017	0-6.0	Soil	220	NA	219	NA	219
	53-1063		0018	0-6.0	Soil	220	NA	219	NA	219
	53-1064		0021	0-6.0	Soil	220	NA	219	NA	219
	53-1061		0383	0-6.0	Soil	NA	NA	NA	77057	NA
	53-1062		0384	0-6.0	Soil	NA	NA	NA	77057	NA
	53-1063		0385	0-6.0	Soil	NA	NA	NA	77057	NA
	53-1064		0386	0-6.0	Soil	NA	NA	NA	77057	NA

Batch numbers for sample analysis request are identified by a 3 or 5-digit number.

NA: Sample not submitted for this analysis.

TABLE 5.18-1
Sample Summary - Septic Systems

PRS No.	Location ID	Sample No.	Depth (in.)	Matrix	Sample Methods				
					Metals EPA-SW-846-6310	Cyanide EPA-SW-846-9018	SVOC EPA-SW-846-8270	VOC EPA-SW-846-8260	
20-004	20-1106	0220-95-	0194	0-6.0	Soil	362	NA	361	361
	20-1107		0195	24.0-36.0	Soil	362	NA	361	361
	20-1108		0196	24.0-36.0	Soil	362	NA	361	361
	20-1109		0197	0-6.0	Soil	362	NA	361	361
	20-1110		0198	12.0-16.0	Soil	362	NA	361	361
	20-1111		0199	30.0-34.0	Soil	362	NA	361	361
	20-1112		0200	0-6.0	Soil	362	NA	361	361
	20-1113		0201	12.0-16.0	Soil	362	NA	361	361
	20-1114		0202	24.0-36.0	Soil	362	NA	361	361
20-005	20-1135	0220-95-	0228	54.0-60.0	Soil	430	430	NA	NA
	20-1135		0229	54.0-60.0	Soil	430	430	NA	NA
	20-1136		0232	54.0-60.0	Soil	430	430	NA	NA
	20-1137		0233	54.0-60.0	Soil	430	430	NA	NA
	20-1138		0234	54.0-60.0	Soil	430	430	NA	NA
	20-1139		0235	54.0-60.0	Soil	430	430	NA	NA
	20-1140		0236	54.0-60.0	Soil	430	430	NA	NA
	20-1141		0237	54.0-60.0	Soil	430	430	NA	NA
	20-1142		0238	54.0-60.0	Soil	430	430	NA	NA
	20-1143		0239	54.0-60.0	Soil	430	430	NA	NA

Batch numbers for sample analysis request are identified by each 3-digit number.

NA: Sample not submitted for this analysis.

**TABLE 5.20-1
Sample Summary - Outfalls**

PRS No.	Location ID	Sample No.			Depth (in.)	Matrix	Sample Methods				
							Metals EPA-SW-846-8330	PCB EPA-SW-846-8081	TPH EPA-SW-846-8015	SVOC EPA-SW-846-8270	VOC EPA-SW-846-8260
53-012(e)	53-1086	0253-95-	0048		0-4.0	Soil	185	184	184	NA	184
	53-1087		0051		0-8.0	Soil	185	184	184	NA	184
	53-1088		0054		0-4.0	Soil	185	184	184	NA	184
	53-1086		0387		0-4.0	Soil	NA	NA	NA	77057	NA
	53-1087		0388		0-8.0	Soil	NA	NA	NA	77057	NA
	53-1088		0389		0-4.0	Soil	NA	NA	NA	77057	NA

Batch numbers for sample analysis request are identified by a 3- or 5-digit number.

NA: Sample not submitted for this analysis.