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University of California
Environmental Restoration Project, MS M992
Los Alamos, New Mexico 87545
505-667-0808/FAX 505-665-4747

U. S. Department of Energy
Los Alamos Area Office, MS A316
Environmental Restoration Program
Los Alamos, New Mexico 87544
505-667-7203/FAX 505-665-4504

Date: July 17, 1997
Refer to: EM/ER:97-270

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

SUBJECT: RESPONSE TO DENIAL OF RFI REPORT DATED JANUARY 1996 FOR LANL LA-UR-95-3693, TA 21 SWMU 21-029

Dear Mr. Garcia:

Enclosed please find Los Alamos National Laboratory's response to the denial of the RFI Report dated January 1996 for Technical Area (TA) 21, Solid Waste Management Unit (SWMU) 21-029. We are concerned with the New Mexico Environment Department's (NMED's) statement that this report is *grossly deficient*, as we believe that the report, while clearly not perfect, is substantially sound.

Our staffs have reviewed the comments in the denial and have concurred with less than 15% of them. We believe that approximately 50% of NMED's comments are not justified on technical grounds. Another 35% of the comments are founded upon administrative processes or agreements which were not in place at the time the report was written.

Our interpretation of the appropriateness of these comments and how they derive from NMED reviews, re-emphasizes to us the necessity for holding preNOD meetings between our staffs. We are working towards that goal and believe that if such meetings are held, as a matter of course, resource savings will occur for everyone involved.

If you have any questions regarding the response to the denial, or if your staff would like to set up a meeting to discuss these responses, please have them contact Dave McInroy at (505) 667-0819 or Joe Mose at (505) 667-5808.

Sincerely,

Jorg Jansen, Program Manager
LANL/ER Project

Sincerely,

Theodore J. Taylor, Program Manager
DOE/LAAO

JJ/TT:rfr/gmn

AUG 21 1997
em

The University of California is an Equal Opportunity Employer

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Enclosures: (1) Response to Denial of RFI Report dated January 1996 for TA 21, SWMU 21-029
(2) Certification

Cy (w/ encs.):
G. Allen, CST-7, MS E525
G. Gould, EES-15, MS G787
D. Griswold, AL-ERD, MS A906
J. Harry, EES-5, MS M992
J. Mose, LAAO, MS A316
N. Naraine, DOE-HQ, EM-453
D. Neleigh, EPA, R.6, 6PD-N
C. Rodriguez, CIO/ER, MS M769
T. Taylor, LAAO, MS A316
J. White, ESH-19, MS K498
EM/ER CT# C299, MS M992
RPF, MS M707
S. Dinwiddie, NMED-HRMB
M. Leavitt, NMED-GWQB
J. Parker, NMED-OB
G. Saums, NMED-SWQB
S. Yanicak, NMED-AIP, MS J993

Cy (w/o encs.):
T. Baca, EM, MS J591
J. Canepa, EM/ER, MS M992
T. Glatzmaier, DDEES/ER, MS M992
D. McInroy, EM/ER, MS M992
G. Rael, AL-ERD, MS A906
W. Spurgeon, DOE-HQ, EM-453
J. Vozella, LAAO, MS A316
K. Zamora, LAAO, MS A316
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 DENIAL OF RFI REPORT DATED JANUARY 1996 FOR LANL LA-UR-95-3693, TA 21 SWMU 21-029

Name: _____ Date: 7-17-97

Jorg Jansen, Program Manager
Environmental Restoration Project
Los Alamos National Laboratory

or

Tom Baca, Program Director
Environmental Management
Los Alamos National Laboratory

Name: _____ Date: 7/17/97

Theodore J. Taylor, Program Manager
Joe Vozella,
Acting Assistant Area Manager of
Environment Projects
Environment, Safety, and Health Branch
DOE-Los Alamos Area Office

or

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

RESPONSE TO DENIAL LETTER FOR THE RFI REPORT FOR TA-21, PRS 21-029

INTRODUCTION

This document responds to a letter titled, "Denial of RFI Report Dated January 1996 for Los Alamos National Laboratory LA-UR-95-3693 Technical Area 21 SWMU 21-029," from the New Mexico Environment Department (NMED) Hazardous and Radioactive Materials Bureau (HRMB) to the Los Alamos National Laboratory (LANL) Environmental Restoration (ER) Project. To facilitate review of this response, NMED's comments are included verbatim. The comments are divided into general and specific categories as presented in the letter. LANL's responses follow each NMED comment.

GENERAL COMMENTS

NMED COMMENT

1. Document of Understanding (DOU), Appendix N, RCRA Facility Investigation(RFI) Report, Pages 1–6. The DOU lists a specific format for RFI reports for which this document lacks. The following sections were not included in the RFI report: Section 2.2.2 Soils, Section 5.1.1 History, Section 5.1.2 Physical Description, Section 5.1.7.2 Risk Assessment, Section 5.1.8 Ecological Assessment, and Section 5.1.9 Extent of Contamination.

LANL RESPONSE:

The Document of Understanding (DOU) was introduced for use on April 18, 1996 (NMED et al. 1996, 1328). Work on the Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Report for Potential Release Site (PRS) 21-029 began in June 1995, and the report was published in January 1996. Because this RFI report was published before the specific format included in the DOU was introduced, its format differs from the format specified in the DOU. The information that would have been contained in the sections listed in NMED's comment is included in the current report under different section headings, as listed in Table 1.

TABLE 1

CROSSWALK BETWEEN THE DOU RFI FRAMEWORK AND THE RFI REPORT FOR PRS 21-029

SECTION IN DOU RFI FRAMEWORK	SECTION IN RFI REPORT FOR PRS 21-029
2.2.2 Soils	2.2 Geology
5.1.1 History	1.1 Facility Background
5.1.2 Physical Description	2.0 Environmental Setting, and 5.1.1 Previous Investigations
5.1.7.2 Risk Assessment	No risk assessment was conducted
5.1.8 Ecological Assessment	5.2.4 Ecotoxicological Screening Action Level Comparisons
5.1.9 Extent of Contamination	5.2.5 Summary of the Results from the 1994 and 1995 Investigations

NMED COMMENT

2. All deviations from the approved RFI Workplan should be summarized in a section entitled as such.

LANL RESPONSE:

The accepted RFI report standards in use when this document was written, which were in accordance with Environmental Protection Agency (EPA) guidelines, required that deviations from the approved work plan be included in the discussion of field activities. In accordance with these standards, deviations were included in the RFI Report for PRS 21-029 in Section 5.1.2, 1994 Field Investigation and Sampling Activities, and Section 5.1.3, 1995 Field Investigation and Sampling Activities.

The format included in the DOU does not require that deviations from the work plan be presented in a separate section. The DOU format states that deviations from the approved work plan should be included within Section 5.1.4, Field Investigation (NMED et al. 1996, 1328).

NMED COMMENT

3. A preliminary review of Voluntary Corrective Action Report for Potential Release Site 21-029 DP Tank Farm, dated July, 1996, which addresses the East Fill Station only, reveals that Total Petroleum Hydrocarbon (TPH) of up to 8,900 parts per million (ppm) was left in place then backfilled during the Voluntary Corrective Action (VCA). The extent of contamination has not been determined for the East Fill Station.

LANL RESPONSE:

The subsurface material with the total petroleum hydrocarbons (TPH) value of 8 900 parts per million (ppm) was removed during the voluntary corrective action (VCA) conducted at DP Tank Farm. The elevated TPH value was detected in sample 0121-96-0043, which was collected from the northern end of the excavation on the east side wall. As discussed in Table F-1 (page F-3) of the VCA report, an additional 8 to 12 in. of subsurface material were removed from this location, and sample 0121-96-0050 was collected to confirm that the high TPH concentrations had been removed. Analytical results indicated that sample 0121-96-0050 contained TPH at a concentration of 670 ppm, which is below the cleanup level of 1 000 ppm used in this VCA. The locations of samples 0121-96-0043 and 0121-96-0050 are shown on Fig. 3.3-2 (page 11) of the VCA report.

The extent of contamination at the East Fill Station has been determined as shown in Figs. 5-4 through 5-9 (pages 42 through 46) of the RFI report. To bound the vertical extent of contamination, all boreholes were drilled to at least 10 ft below any detected contamination with the exception of boreholes 21-2559 and 21-3009. Borehole 21-2559 was drilled during the 1994 investigation and was sampled to characterize contaminants. The benzene, toluene, ethylbenzene, and xylene (collectively known as BTEX) concentrations detected at this location are bounded by locations sampled in the 1995 investigation as shown in Figs. 5-5 and 5-8 (pages 43 and 45) of the RFI report. Borehole 21-3009 was drilled to 12.5 ft below ground surface (bgs) and then terminated because the location was on a slope that was too steep to continue safe operation of the drill rig. The drill rig was moved 20 ft south to a more stable location, and borehole 21-3012 was drilled to bound the southern extent of contamination. The

lateral extent of contamination was further bounded by boreholes 21-3010, 21-3007, and 21-3013. No contaminants were detected in any of the bounding boreholes.

NMED COMMENT

4. The SAP for DP Tank Farm should include SAPs for investigating the East and West Fill Station areas, the above ground tank area, and the hydrocarbon seep area in DP Canyon. Page 3, Voluntary Corrective Action Plan for Potential Release Sites 21-029, DP Tank Farms Removal of Contaminated Soil, April 1996, states: The 1995 UST investigation at the former West Fill Station Location revealed that neither TPH, BTEX, nor benzene were detected in samples collected from any of the boreholes at concentration greater than 1,000, 500, and 10 ppm respectively. However, from the RFI Report, Table A-14, page A-49, Sample 231-3003 found TPH in two samples with results of >600 and >670 ppm. There is no indication further testing was done.

LANL RESPONSE:

DP Tank Farm was investigated in 1994 in accordance with the approved Technical Area (TA) 21 Operable Unit (OU) RFI Work Plan (LANL 1991, 0689). The analytical results from the 1994 RFI indicated that the only constituents present at DP Tank Farm were associated with petroleum products. Based on these results, the site was recommended for no further action (NFA) under RCRA because it met Criterion 3 of the NFA criteria in place at the time (LANL ER Project policy EM/ER:95-PCT-015, dated January 2, 1996). This criterion stated that the site is regulated or closed under a different authority that addresses corrective action, in this case the NMED Underground Storage Tank (UST) Bureau.

Because DP Tank Farm has been characterized in accordance with an approved sampling plan and was found to meet one of the NFA criteria, no additional information would be obtained by further characterization of the site.

Following the RFI, further investigation was conducted in 1995 in accordance with the UST Regulations (New Mexico Environmental Improvement Board 1990, 0644). The extent of petroleum products contamination was determined for both the East and West Fill Stations. As shown in Table 5-6 (page 47) and Fig. 5-10 (page 47) of the RFI report, the TPH values reported as >600 and >670 ppm were the only detected TPH values in the West Fill Station samples. As stated on page 46 of the RFI report, these elevated levels were "contained within an area that is horizontally bounded by boreholes 21-3002, 21-3004, 21-3005, and 21-3014, and a volume bounded vertically by a depth of approximately 20 ft." Because the extent of contamination was determined as required under the UST Regulations, no further testing is required.

The area in DP Canyon below DP Tank Farm that has been known as the "seep area" was incorrectly labeled. The geological definition of a seep is "a spot where water or petroleum oozes from the earth, often forming the source of a small trickling stream" (quoted from the American Geological Institute's Dictionary of Geological Terms). The area in DP Canyon does not fit this definition because petroleum products are not oozing from the earth or forming a stream at this location. The seep area in DP Canyon is actually a small, localized hydrocarbon sheen observed in the surface water of the ephemeral stream in the canyon bottom. This sheen is not always visible, but it can be

seen when the exposed Bandelier tuff beneath the waterline is disturbed by walking or scraping. Based on this information, this area will be referred to as "the localized hydrocarbon sheen." Because the source of the diesel constituents in the area of the localized hydrocarbon sheen has not been conclusively determined, a sampling and analysis plan (SAP) will be prepared to address this area. This SAP will be submitted by August 20, 1997.

NMED COMMENT

5. The seep has been identified as "weathered diesel" and constitutes Refuse in a watercourse. Therefore, 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 Administrative Code, NMAC, 6.2, Section 2201: ***No person shall dispose of any refuse in a natural watercourse or in a location and manner where there is a reasonable probability that the refuse will be moved into a natural watercourse by leaching or otherwise.***

LANL RESPONSE:

Although diesel constituents were detected in the stream channel north of DP Tank Farm, the source of the localized hydrocarbon sheen in DP Canyon has not been conclusively determined. During the UST investigation, boreholes were hand-augered on the channel banks north and south of the localized hydrocarbon sheen area. Petroleum products were detected in samples collected north of this area (opposite DP Tank Farm), but not in samples collected south of this area. These data support the hypothesis that potential sources other than DP Tank Farm exist, such as runoff from the Los Alamos town site.

After completion of the VCA at DP Tank Farm, quarterly visual inspections were initiated at the site as requested by the NMED Surface Water Quality Bureau. No visible evidence of petroleum products contamination has been observed in the stream channel in the vicinity of the localized hydrocarbon sheen. Annual water sampling is scheduled for August 1997.

To address uncertainty associated with the source of the localized hydrocarbon sheen, LANL will prepare a SAP to address this area. This SAP will be submitted by August 20, 1997.

NMED COMMENT

6. The data verification and validation conclusions reached within this report are grossly inadequate to determine data sufficiency for decision making. See Specific Comments 9, 10 and 11.

LANL RESPONSE:

The data verification and validation conclusions reached in this report are adequate to determine data sufficiency for decision making as clarified in the responses to Specific Comments 9, 10, and 11.

LANL RESPONSE:
A list of suggested statistical tests for detecting distribution shifts between PRS data and LANL-wide background data is presented in the guidance document, "Application of LANL Background Data to ER Project Decision-Making, Part I: Inorganics," EM/ER:96-PCT-010 (Project Consistency Team, 1210; Ryti et al. 1996, 1298). For the background comparisons in this report, the Gehan modification to the Wilcoxon Rank Sum test and the Quantile test were selected because, together, they capture most types of differences between distributions. These tests are described in detail below.

The Gehan modification to the Wilcoxon Rank Sum test is recommended when there are relatively frequent nondetected values because this test handles detection limits in a statistically robust manner. When there are no nondetected values, the Gehan test is identical to the Wilcoxon Rank Sum test. This test is conducted by pooling PRS data and background data into one data set. The test then determines whether the average rank of site data is greater than that of the background data.

The Quantile test is capable of detecting a statistical difference when only a small number of PRS concentrations are elevated. The Quantile test also accounts reasonably for nondetected values. This test is conducted by comparing the upper quantile of the background data with that of the PRS data.

Lead and zinc were the only two inorganic chemicals that required further background comparisons for DP Tank Farm. The data for lead and zinc are presented in Table A-6 of the RFI report. As these data show, there were no nondetected values for these two inorganic chemicals. Therefore, detection limits were not relevant to the statistical test results for these two chemicals.

NMED COMMENT
16. Fig. 5-7, pg. 45. A summary of the TPH results at the West Fill Station indicates the 1995 investigation was centered on borehole 21-2556. However, Figure 5-7 shows no results for borehole 21-2556 for TPH. Figure 5-10, page 47, also does not show TPH results for 21-2556. If this borehole was not analyzed for TPH, it should not have been used to center the investigation as indicated on page 46.

LANL RESPONSE:
As stated in Section 5.1.3 of the RFI report (page 26), the 1995 UST investigation of the West Fill Station was centered on the location of borehole 21-2556, which was drilled in 1994. This borehole was selected as the center of the array because the highest concentrations of petroleum products were detected in this borehole (see Table A-8, page A-20, of the RFI report). The objective of the 1995 investigation was to bound the extent of contamination detected during the 1994 investigation. The 1994 analytical results from borehole 21-2556 indicated that the vertical extent of contamination in this borehole had been bounded. Therefore, no further sampling of this borehole was warranted. To bound the lateral extent of contamination, drilling was conducted in 1995 in a four-armed array centered around borehole 21-2556 and extending approximately 20 ft in each direction.

b. The laboratory has not made any transcription errors between the data and the form. If there are major differences between the mass listing and the Form Vs, a more in-depth review of the data is required. This may include obtaining and reviewing additional information from the laboratory.

c. The appropriate number of significant figures has been reported (number of significant figures given for each ion in the ion abundance criteria column) and that rounding is correct.

d. The laboratory has not made any calculation errors.

2. Verify from the raw data (mass spectral listing) that the mass assignment is correct and that the mass is normalized to m/z 198.

3. Verify that the ion abundance criteria was met. The criteria for m/z 68, 70, 441, and 443 are calculated by normalizing to the specified m/z.

4. If possible, verify that spectra were generated using appropriate background subtraction techniques. Since the DFTPP spectrum is obtained from chromatographic peaks that should be free from coelution problems, background subtraction should be done in accordance with the following procedure. Three scans (the peak apex scan and the scans immediately preceding and following the apex) are acquired and averaged and background subtraction must be accomplished using a single scan prior to the elution of DFTPP.

NOTE: All instrument conditions must be identical to those used in the sample analysis. Background subtraction actions resulting in spectral distortions for the sole purpose of meeting the contract specifications are contrary to the quality assurance objectives and are therefore unacceptable.

E. Action

1. If the laboratory has made minor transcription errors which do not significantly affect the data, the data reviewer should make the necessary corrections on a copy of the form.

2. If the laboratory has failed to provide the correct forms or has made significant transcription or calculation errors, the Region's designated representative should contact the laboratory and request corrected data. If the information is not available, then the reviewer must use professional judgement to assess the data. The laboratory's TPO should be notified.

3. If mass assignment is in error (such as m/z 199 is indicated as the base peak rather than m/z 198), classify all associated data as unusable (R).

4. If ion abundance criteria are not met, professional judgement may be applied to determine to what extent the data may be utilized. Guidelines to aid in the application of professional judgement in evaluating ion abundance criteria are discussed as follows:

Applicable Task(s):

Training Requirement	[illegible]																						
	Personnel																						
	PPL	PTM	PTL	Sup	SSO	IHT	RCT	HPT	RSP	CP	Othr	Othr	Othr	Othr	Othr	Othr	Othr	Othr	Othr	Othr	Othr	Othr	Othr
Health Physics Checklist Indoctrination	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
Rad. Worker II	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
40 hr. HAZWOPER	C	C	C	C	C	C	C	C	C	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
24 hr. Supervised Fieldwork	F	F	F	F	F	F	F	F	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
☐ 24 hr. HAZWOPER										AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
☐ 8 hr. Supervised Fieldwork										AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
8 hr. Annual Refresher	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
8 hr. HAZWOPER Supervisor		C	C	C																			
☐ SSO					F/C																		
☐ IHT						F/C																	
☐ Health Physics Personnel							F/C	F/C	F/C														
☐ 1st Aid																							
☐ CPR																							
☐ First Responder Awareness Level																							
☐ First Responder Operations Level																							
PPE (per Section 7.1 of HASP)		F or C	F or C	F or C	F or C	F or C	F or C	F or C	F or C	F or C	F or C	F or C	F or C	F or C	F or C	F or C	F or C	F or C	F or C	F or C	F or C	F or C	F or C
☐ Fire Extinguisher Use (per 29 CFR 1926.150(c)(1)(ii))																							
☐ Fire Fighting Equipment (29 CFR 1926.150)		R	R	R	R	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
☐ Hearing Conservation (Per Section 4.2.2.7 of HASP)																							
☐ Respiratory Protection - Level C (Per Section 7..1 of HASP and 29 CFR 1910.134(b)(1) and (e)(2))																							

Applicable Task(s):

Training Requirement	[illegible] Personnel																						
	FFL	FTM	FTL	Sup	SSO	IHT	RCT	HPT	RSP	CP	Othr	Othr	Othr	Othr	Othr	Othr	Othr	Othr	Othr	Othr	Othr	Othr	Othr
☐ Respiratory Protection - Level B [Per Section 7.1 of HASP and 29 CFR 1910.134(b)(1) and (e)(2)]																							
☐ Level B Equip. Supvr [Per Site-Specific SOP - Per Section 7.1 of HASP and 29 CFR 1910.134(b)(1) and (e)(2)]																							
☐ Plutonium Safety *[LANL]*																							
☐ Tritium Safety *[LANL]*																							
☐ Spot Test for High Explosives (HE) *[contact DX-16 at 7-4574]*																							
☐ High Explosives (HE) Identification/Hazard Awareness Video *[contact DX-16 at 7-4574]*																							
☐ RCRA Training																							
☐ DOT Training																							
Sanitation *[29 CFR 1926.51]*		R	R	R	R																		
☐ Materials Handling, Storage, Use, Disposal *[29 CFR 1926.250 and 252]*		R	R	R	R																		
Signs, Signals, Barricades *[29 CFR 1926.200]*		R	R	R	R																		
☐ Traffic Flagging and Safety *[29 CFR 1926.201]*																							
☐ Stairways, Ladders *[29 CFR 1926.1060(a) and 1053(b)(15) and 32(i)]*		R	R	R	R																		
☐ Tools - Hand and Power *[29 CFR 1926.302(e)(1)]*		R	R	R	R																		
☐ Excavation/Trenching Competent Person *[29 CFR 1926.651(k)(1) and 32(i)]*										C/F													

Applicable Task(s):

Training Requirement	Personnel																						
	FPL	PTM	FTL	Sup	SSO	IHT	RCT	HPT	RSP	CP	Othr	Othr	Othr	Othr	Othr	Othr	Othr	Othr	Othr	Othr	Othr	Othr	Othr
☐ Excavation/Trenching Protective Systems Competent Person *[29 CFR 1926.652(a)(i) and 32(f)]*										C/F													
☐ Confined Space Entry *[per 29 CFR 1910.146(g)]*																							
☐ Confined Space Entry Supervisor *[per 29 CFR 1910.146(g) and (j)]*										C/F													
☐ Electrical Safety Awareness *[Subpart K of 29 CFR 1926]*										C/F													
☐ Lockout/Tagout (Booklet)																							
☐ Lockout/Tagout Red Control of Hazardous Energy Sources *[per 29 CFR 1926.416(a)(4) and 417(a) and 32(m)]*										C/F													
☐ Motor Vehicles, Mechanized Equipment, and/or Material Handling Equipment *[specify equip. type and training requirement per Subparts O and W of 29 CFR 1926]*		R	R	R	R					C/F													
☐ Forklift Safety *[per 29 CFR 1910.178(l)]*										C/F													
☐ Crane & Rigging Operator Safety *[ANSI B30]*																							
☐ Crane & Rigging Safety *[29 CFR 1926.251, 405, 550(a)]*										C/F													
☐ Hoists *[29 CFR 1926.405, 552]*										C/F													
☐ Conveyors *[29 CFR 1926.555 and ANSI/ASME B20.1b5.2a]*										C/F													
☐ Welding and Cutting *[29 CFR 192F [illegible]d) and 351(d) an[illegible]]*										C/F													

Applicable Task(s):

Training Requirement	Personnel																						
	FFL	FTM	FTL	Sup	SSO	IHT	RCT	HPT	RSP	CP	Othr	Othr	Othr	Othr	Othr	Othr	Othr	Othr	Othr	Othr	Othr	Othr	Othr
☐ Scaffolding *[29 CFR 1926.451(a)(3) and 32(f)]*										C/F													
☐ Arsenic - Inorganic *[29 CFR 1926.1118]*																							
☐ Asbestos Worker *[specify applicable OSHA or EPA std.]*																							
☐ Asbestos Competent Person *[specify OSHA or EPA std.]*		C	C	C	C					C													
☐ Benzene *[29 CFR 1926.1128]*																							
☐ Beryllium *[LANL-AR 6-7]*																							
☐ Bloodborne Pathogens *[29 CFR 1910.1030]*																							
☐ Cadmium *[29 CFR 1926.63]*																							
☐ Formaldehyde *[29 CFR 1926.1148]*																							
☐ Lead *[29 CFR 1926.62]*																							
☐ Vinyl Chloride *[29 CFR 1926.1117]*																							
☐ Other (specify):																							

11.0 MEDICAL SURVEILLANCE

The medical surveillance requirements of this section have been established in accordance with Section 11 of the HASP, unless noted otherwise below.

TABLE 11
MEDICAL SURVEILLANCE REQUIREMENTS

☐ Not Applicable; rationale:

Hazard	Task(s)	Exposure Level Triggering Medical Surveillance Requirement	Requirement
☐ Hazardous Waste Operations		Potential for exposure to hazardous substances or health hazards ≥ PELs or published exposure limits during HAZWOPER work	29 CFR 1926.65(f)
☐ Arsenic (inorganic)		> 5 mg/m^3	29 CFR 1926.1118(n)
☐ Asbestos		≥ 0.1 fiber/cc	29 CFR 1926.1101(m)
☐ Benzene		≥ 0.5 ppm	29 CFR 1926.1128(l)
☐ Beryllium		> 0.5 mg/m^3	LANL AR 6-7 and TB 607
☐ Bloodborne Pathogens (Or Potentially Infectious Materials)		Any occupational exposure	29 CFR 1910.1030(f)
☐ Cadmium		≥ 2.5 mg/m^3 and all employees performing tasks involving cadmium (e.g., brazing, burning, cutting, painting, welding)	29 CFR 1926.1127(l)
☐ Formaldehyde		≥ 0.5 ppm	29 CFR 1926.1148(l)
☐ Hearing Protection		≥ 85 dBA	29 CFR 1910.95(g)
☐ Lead		≥ 30 mg/m^3	29 CFR 1926.62(j)
☐ Repiratory Protection		Use of respirators	29 CFR 1926.134
☐ Vinyl Chloride		> 0.5 ppm	29 CFR 1926.1117(k)
☐ Other *(specify)*			

12.0 QUALITY CONTROL & QUALITY ASSURANCE (QC/QA)

12.1 SITE INSPECTIONS

In accordance with Section 12 of the HASP, the FTL shall see that the following inspections are conducted and documented, and that appropriate actions are taken and documented to rectify identified deficiencies, if any.

TABLE 12
INSPECTION REQUIREMENTS

Inspection	Inspector	Task(s)
☐ Job Site, Material and Equipment (in accordance with 29 CFR 1926.20(b)(2))	SSO	
☐ General Sanitation (i.e., potable and non-potable water, toilets, washing facilities, eating and drinking areas, vermin control, and/or change rooms; in accordance with 29 CFR 1926.51)	SSO	
☐ Materials handling, storage, use and disposal (in accordance with 29 CFR 1926.250 and 252)	SSO	
☐ Signs, Signals and Barricades (in accordance with 29 CFR 1926.200)	SSO	
☐ Motor vehicles and mechanized equip. (in accordance with Subpart O of 29 CFR 1926)	SSO, QP or CP as required	
☐ Material handling equipment (e.g., rubber-tired scraper, loader and dozers) equipped with rollover protective structures and overhead protection (in accordance with Subpart W of 29 CFR 1926)	QP or CP as required	
☐ Excavations/Trenches(per 29 CFR 1926.651(k))	QP or CP as required	
☐ Excavations/Trenches Protective Systems (per 29 CFR 1926.652)	QP or CP as required	
☐ PPE (Section 7 and 29 CFR 1926.95)	User	
☐ Fall Protection (per 29 CFR 1926.20(b)(2) and ANSI A10.14)	QP or CP as required, and User	
☐ Respiratory Protective Equipment (Section 7 and 29 CFR 1910.134(f))	User	
☐ Incident/emergency response equipment (prior to each use and at least monthly)	SSO	
☐ Fire fighting equipment (per 29 CFR 1926.150(a) and (c))	SSO	
☐ Derricks (e.g., drill rigs) and Cranes (in accordance with Table 4-3 and per 29 CFR 1926.550(a)(5),(6) and 406(a))	QP or CP as required	
☐ Rigging (in accordance with Table 4-3 and per 29 CFR 1926.251(a))	QP or CP as required	
☐ Personnel hoists (at least weekly, per 29 CFR 1926.552(c)(17)(iii) and 406(a))	QP or CP as required	
☐ Material hoists (in accordance with 29 CFR 1926.552(b) and 406(a))	QP or CP as required	
☐ Conveyors (in accordance with 29 CFR 1926.555)	QP or CP as required	
☐ Stairways and Ladders (in accordance with Subpart X of 29 CFR 1926)	SSO, QP or CP as required	
☐ Tools - hand and power (in accordance with Subpart I of 29 CFR 1926)	User and SSO	
☐ Welding and cutting equipment (in accordance with Subpart J of 29 CFR 1926)	QP or CP as required	
☐ Electrical equipment (per 29 CFR 1926.403(b) and/.or 416(f)(8))	QP or CP as required	
☐ Scaffolding (in accordance with Subpart L of 29 CFR 1926)	QP or CP as required	
☐ Fork lifts (in accordance with 29 CFR 1910.178)	QP or CP as required	
☐ Other (specify):		
QP = Qualified Person; CP = Competent Person (per 29 CFR 1926.32(f) or (m))		