



Department of Energy
 Field Office, Albuquerque
 Los Alamos Area Office
 Los Alamos, New Mexico 87544

Releigh

DEC 3 1992

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 TA-10

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. William Honker
 Chief, RCRA Permits Branch
 U. S. Environmental Protection Agency
 Region 6
 1445 Ross Avenue, Suite 1200
 Dallas, TX 75202-2733

Dear Mr. Honker:

The Department of Energy has reviewed the Notice of Deficiency on the Resource Conservation and Recovery Act (RCRA) Facility Investigation Work Plan for Operable Unit 1079. Enclosed is our response to the comments.

If you have any questions on the response, please contact Mr. Steve Slaten at (505) 665-5050.

Sincerely,

Joseph C. Vozella

Joseph C. Vozella, Acting Chief
 Environment, Safety, and Health
 Branch

LESH:2SS-048

Enclosure

cc w/enclosure:
 M. Duran, MMES/ES&H, LAAO

cc w/o enclosure:
 K. Bitner, ERPO, AL
 R. Vocke, EM-13, LANL, MS M992
 J. Aldrich, EES-1, LANL, MS D462
 G. Allen, CLS-6, LANL, MS E525



3382

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

DATE: November 24, 1992
IN REPLY REFER TO: ADO-92-1174
MAIL STOP: A120
TELEPHONE: (505) 667-9390
(FTS) 843-9390

Mr. Jerry L. Bellows
Area Manager
Department of Energy
MS A316
Los Alamos Area Office
Los Alamos, NM 87544-5000

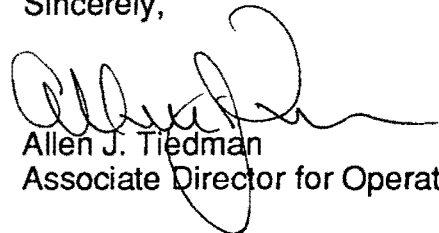
RECEIVED
NOV 24 1992
U.S. DEPARTMENT OF ENERGY
WASHINGTON, D.C.

RE: NOTICE OF DEFICIENCY (NOD) FOR OPERABLE UNIT (OU) 1079 PLAN

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Sincerely,


Allen J. Tiedman
Associate Director for Operations

AJT:amj

Enclosure: Draft letter to Mr. William Honker



20003144
US DOE / LAAO

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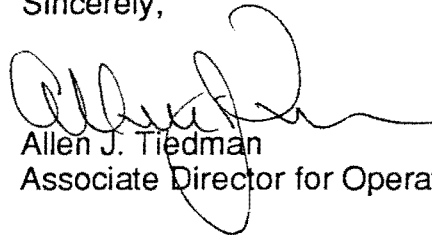
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Cy: J. Shipley, EE-AETO, MS F641
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K. Armstrong, EM-DO, MS K498, (A.I. #528)
EM-13 FILE, (EM-13:92-1252))
CLS-6 FILE
CRM-4, MS A150
RPF, MS M707

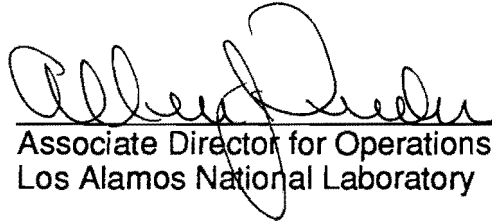
CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate 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 Titles:

Response to Notice of Deficiency for Operable Unit 1079

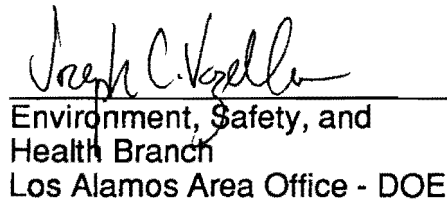
Name:


Associate Director for Operations
Los Alamos National Laboratory

Date:

11/24/92

Name:


Environment, Safety, and
Health Branch
Los Alamos Area Office - DOE

Date:

12/3/92

Notice of Deficiency Response for OU 1079 RFI Work Plan

The following comments have been drafted in response to the Notice of Deficiency received by the DOE from EPA Region VI on October 5, 1992. The responses follow the format and sequence of the List of Deficiencies.

Overall Comments:

1. Table E-1 of the Work Plan gives a summary of only the Phase I field investigation activities. The full RFI Work Plan contains activities through phase 2. The RFI field work is scheduled to be completed in Feb. 1996. The final RFI report is planned to be delivered to the EPA in March 1997. The activities required to go from the "completion of field work" milestone to the "final RFI report" milestone include a significant amount of information analysis, followed by the formal draft preparation process, and finally include a series of internal and DOE review cycles. The time frame given in the Work Plan seems to be within reason for the activities envisioned.
2. The proposed RCRA Subpart S action levels are given in Appendix F of the November 1991 version of the IWP. Since the Work Plan is tiered to the IWP, Subpart S was not included as an appendix. However, for the convenience of the reader, a copy of the IWP appendix F could be included as part of the Work Plan.
3. The specific analytical methods for each generic analyte are given in the LANL Quality Assurance Project Plan (LANL-ER-QAPjP) For Soil/Sediment samples, these methods are summarized in table IX.2 of that document. The primary nonradionuclide methods of interest for OU 1079 include:

1. Volatile organics	EPA SW-846 Method 8240
2. Semivolatile organics	EPA SW-846 Method 8270
3. Organochlorine Pesticides and PCBs	EPA SW-846 Method 8080
4. Inorganics (metals)	EPA SW-846 Method 6010
5. High Explosives	USATHAMA

The first four are EPA standard methods. The specific constituents analyzed by the application of these specific methods are given in tables V.3, V.4, V.5, and V.7 of that document. The high explosive method is that of the U.S. Army Toxic and Hazardous Materials Agency.

Tables in the Work Plan specify which analytical methods to apply to any particular sample. For example, tables 5.1-4, 5.2-1, and 5.2-2 specify the analysis to be performed on each sample taken at TA-10 (by specific sample number) within the three SWMU aggregates. Similar tables are given for each of the other technical areas in the Work Plan. These tables, in conjunction with the specified standard analytical methods, determine the specific constituents for which analysis will be conducted.

Specific Comments:

- 3.3.1 Sludge from SWMU 32-002 (b) septic tank was analyzed at the time the septic tank was removed. A copy of the "Volatile Organics Result Sheet" from this analysis is attached.

- 3.6.1.1.1 There is no need to include the details of the USATHAMA method for high explosives in the Work Plan. Strike the reference indicating that the method is contained in Appendix C.

- 5.1.2.5 The wording will be changed to read "..no radioactive contamination...".

- 5.1.2.6.2 The sampling plan for the Firing Site SWMU aggregate, which includes the stream channel transect sampling, was focused on surface sampling for contamination constituents generated during the test firing operations, i.e. lead, beryllium, barium and explosive constituents. Characterizing the potential contamination from the liquid disposal system is included in a separate sampling plan focused on subsurface investigations. Although the potential for subsurface contamination to reach the surface seems small, we will add two downstream transects to enhance the completeness of this particular sampling plan relative to the potential for the liquid disposal system to have contributed to channel contamination. The sample analysis for the samples collected from these additional transects, as well as the transect adjacent to the liquid disposal system, will be analyzed for TAL metals, explosive constituents, and Semivolatiles. The analysis of the upstream transect samples will remain as originally planned. These changes in the Channel Sediment Sampling plan are shown in the revised version of figure 5.1-3 and table 5.1-4, attached.

5.2.1 We will conduct the economic analysis required to calculate Vmax and determine specific locations for each of the boreholes. Should the value of Vmax be too small to provide any benefit, the full characterization sampling plan (used as the baseline in the economic analysis) will be implemented. In either case, the sampling plan will give specific borehole locations. This information will be provided by 1 February 1993

Although "missing the plume altogether is a possibility for phase I sampling..." as mentioned on page 5-33, it is highly unlikely due to historical knowledge of the plume locations. In addition, should a plume be missed during phase I sampling, additional samples would be taken until the plume is located since it is known to exist. This commitment to bounding the lateral and vertical extent of the contamination is reflected in the flow diagram on page 5-31.

Samples for this SWMU aggregate will be analyzed for VOA (SW-8240), Semivolatiles (SW-8270), TAL Metals, and 20 random samples for explosive constituents. This analytical selection covers the compounds listed in Appendix VIII that are likely to be present due to historical operations.

5.2.2.2 The Vmax determination in 5.2.1 will provide the necessary information to give specific locations for each of the boreholes called for in this sampling plan as well.

8.1.6 We have included an additional figure (8.1-6) with the appropriate scale to show the locations of the two transects not shown in figure 8.1-3 on page 8-14. Also, the specifics of the planned analysis for these particular samples (SWMU 1.002 samples 9-20) are given in Table 8.7-1, and consist of TAL Metals, Semivolatiles (SW-8720), and Volatiles (SW-8240). Note that the samples will be analyzed for Volatiles only if field screening gives a positive result.

8.2.6 The correlation between the FUSRAP sample location designations given in the text (page 8-17) and the sample location numbers on figure 8.1-3 is as follows: B-3 (29), B-4 (30), C-5 (31), C-6 (32), C-7 (33), D-7 (34), and E-8 (35).

The wording describing the surface sampling of the treated effluent outfall and the floor drain outfall is obscure indeed. To clarify, there are a total of six (6) samples associated with two outfalls -- three sample points each. Referring to figure 8.1-3:

1. Treated Effluent Outfall = sample points 41, 42, and 43
2. Floor Drain Outfall = sample points 44, 45, and 46.

The cliff-face sampling at TA-45 was completed in July 1992. We will re-examine the locations of the chosen sampling points to confirm that they correspond to best judgment drainage path locations. Those sample locations deemed to be poorly chosen will be re-sampled.

- 8.3.6 The five boreholes will be placed as close to the bottom of the original drainage leading from the vehicle decontamination facility as can be determined from the site survey and old photographs.

HSE-9 ORGANIC ANALYSIS SECTION
VOLATILE ORGANICS RESULT SHEET

SAMPLE NUMBER: 88-00292 REQUEST SHEET: 88.7017
NUMBER OF REPLICATE RUNS: Several at different dilutions

SURROGATE SPIKE RECOVERIES: (% RECOVERY)

COMPOUND ACCEPTABLE RANGE (CLP)

1,2-DICHLOROETHANE d4	<u>87.4</u>	(76-114)	} mean
TOLUENE d8	<u>111.8</u>	(88-110)	
p-BROMOFLUOROBENZENE	<u>79.3</u>	(86-115)	

CAS #	COMPOUND	RESULT +/- (ppb)	MDL (ppb)
----- Concentrations are corrected for dilution			
74873	CHLOROMETHANE	LMOL	30.0
73839	BROMOMETHANE		30.0
75014	VINYL CHLORIDE		30.0
75003	CHLOROETHANE		30.0
75092	METHYLENE CHLORIDE	> 1 ppm	30.0
75150	CARBON DISULFIDE	LMOL	30.0
75354	1,1-DICHLOROETHENE	LMOL	30.0
75343	1,1-DICHLOROETHANE	Detected, tentatively identified	30.0
540590	1,2-DICHLOROETHENE	> 20 (TOTAL)	30.0
67663	CHLOROFORM	18,720 (18.7ppm)	30.0
107062	1,2-DICHLOROETHANE	LMOL	30.0
78933	2-BUTANONE		30.0
71556	1,1,1-TRICHLOROETHANE		30.0
56235	CARBON TETRACHLORIDE		30.0
108054	VINYL ACETATE		30.0
75274	BROMODICHLOROMETHANE	Detected	30.0
78875	1,2-DICHLOROPROPANE	LMOL	30.0
10061015	cis-1,3-DICHLOROPROPENE	LMOL	30.0
79016	TRICHLOROETHENE	131.45 / 13.1	30.0
124481	DIBROMOCHLOROMETHANE	LMOL	30.0
79005	1,1,2-TRICHLOROETHANE		30.0
71432	BENZENE		30.0
10061026	trans-1,3-DICHLOROPROPENE		30.0
75252	BROMOFORM		30.0
108101	4-METHYL-2-PENTANONE		30.0
591786	2-HEXANONE		30.0
127184	TETRACHLOROETHENE		30.0
79345	1,1,2,2-TETRACHLOROETHANE **		30.0
108883	TOLUENE	57.0 ± 5.7	30.0
108907	CHLOROBENZENE	LMOL	30.0
100414	ETHYLBENZENE	Detected	30.0
100425	STYRENE	LMOL	30.0
33027	XYLENES	100.2 ± 10.0 (TOTAL)	30.0
15501	1,2-DICHLOROETHANE	LMOL	30.0
41731	1,3-DICHLOROETHANE	LMOL	30.0
06467	1,4-DICHLOROETHANE	Detected	30.0

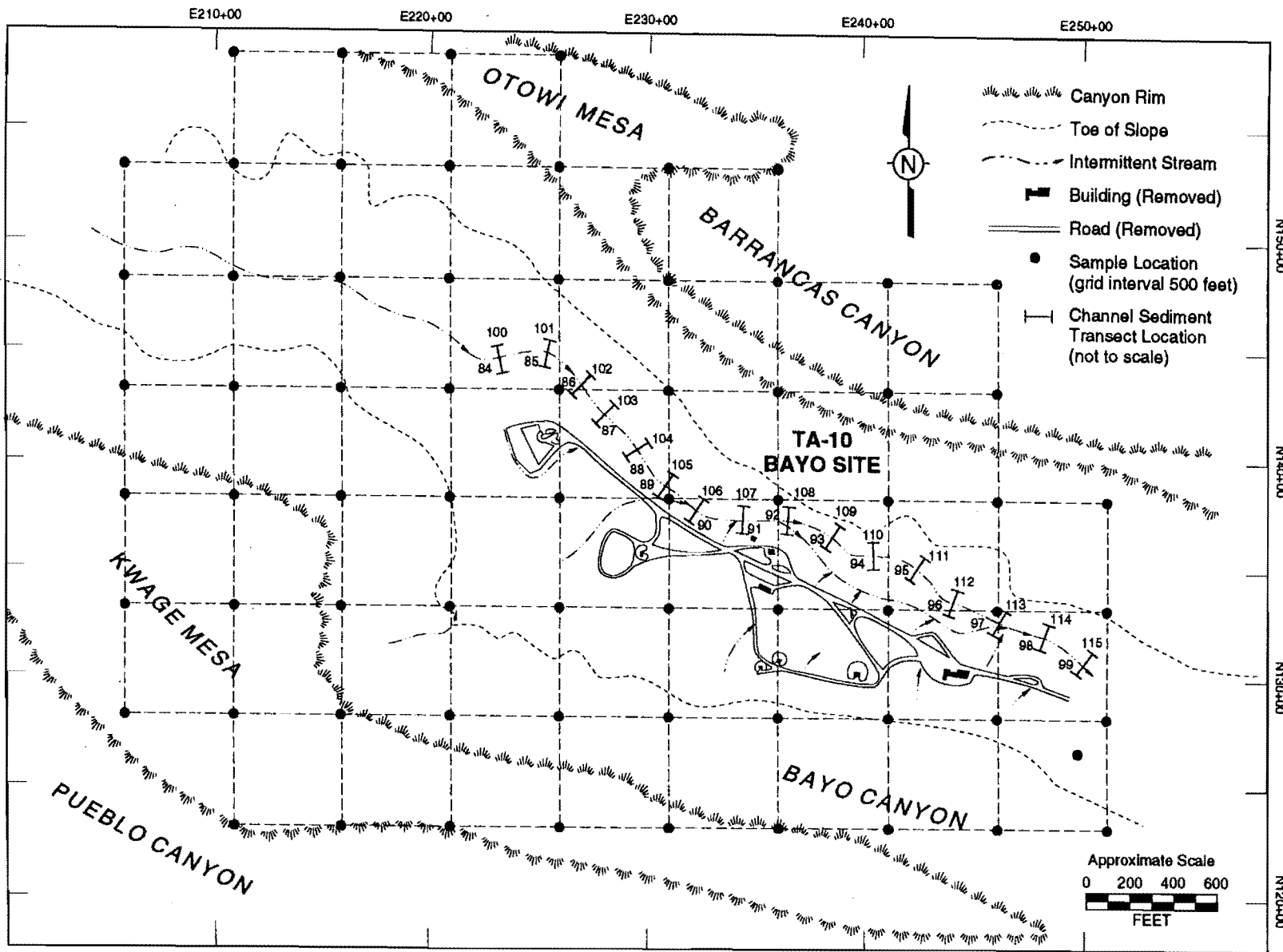


Figure 5.1-3 TA-10 surface sampling locations (modified from Mayfield et al. 1979, 06-0041).

TABLE 5.1-4 SCREENING AND ANALYSIS FOR TA-10 INVESTIGATION OF FIRING SITES SWMU AGGREGATE

Sample Type/Location	Sample Number	Sample Depth	Sample Identification	Field Screening							Laboratory Analysis								
				Gross Alpha	Gross Beta	Gross Gamma	Combustible Gas/oxygen	Organic Vapor	Lithological Logging	Gamma Spectrometry	Total Uranium	Strontium-90	Beryllium	Lead	TAL Metals	Explosives	Semivolatiles (SW 8270)	Barium	PCB (SW 8080)
SWMU Aggregate 10-001 (a-d)																			
Firing Sites																			
Surface Soils (grid)	1-68	5-10 cm		X	X	X					X	X	X	X				X	
Surface Soils (random grid with low radioactivity)	69-73	5-10 cm		X	X	X					X	X	X	X	X	X		X	
Surface Soils (grid with highest radioactivity or near firing sites)	10 of 68	5-10 cm	(see Fig. 5.1-3)	X	X	X				X	X	X	X	X	X	X		X	
Field Duplicates	74-79	5-10 cm		X	X	X					X	X	X	X				X	
Rinsate Blank	80-83			X	X	X					X	X	X	X				X	
Channel Sediment Sampling																			
Channel Bottom	84-96	5-10 cm		X	X	X				●	X	X	X	X				X	
Channel Bottom	97-99	5-10 cm		X	X	X				●	X	X		X			X		
Channel Bank	100-112	5-10 cm		X	X	X				●	X	X	X	X	X		X		
Channel Bank	113-115	5-10 cm		X	X	X				●	X	X		X			X		
Random Samples	3 of 32																X		
Field Duplicates	115-116			X	X	X					X	X	X	X					
Rinsate Blank	117-118			X	X	X					X	X	X	X				X	

X Mandatory Analysis

● Analyze if Positive Field Screening Measurement

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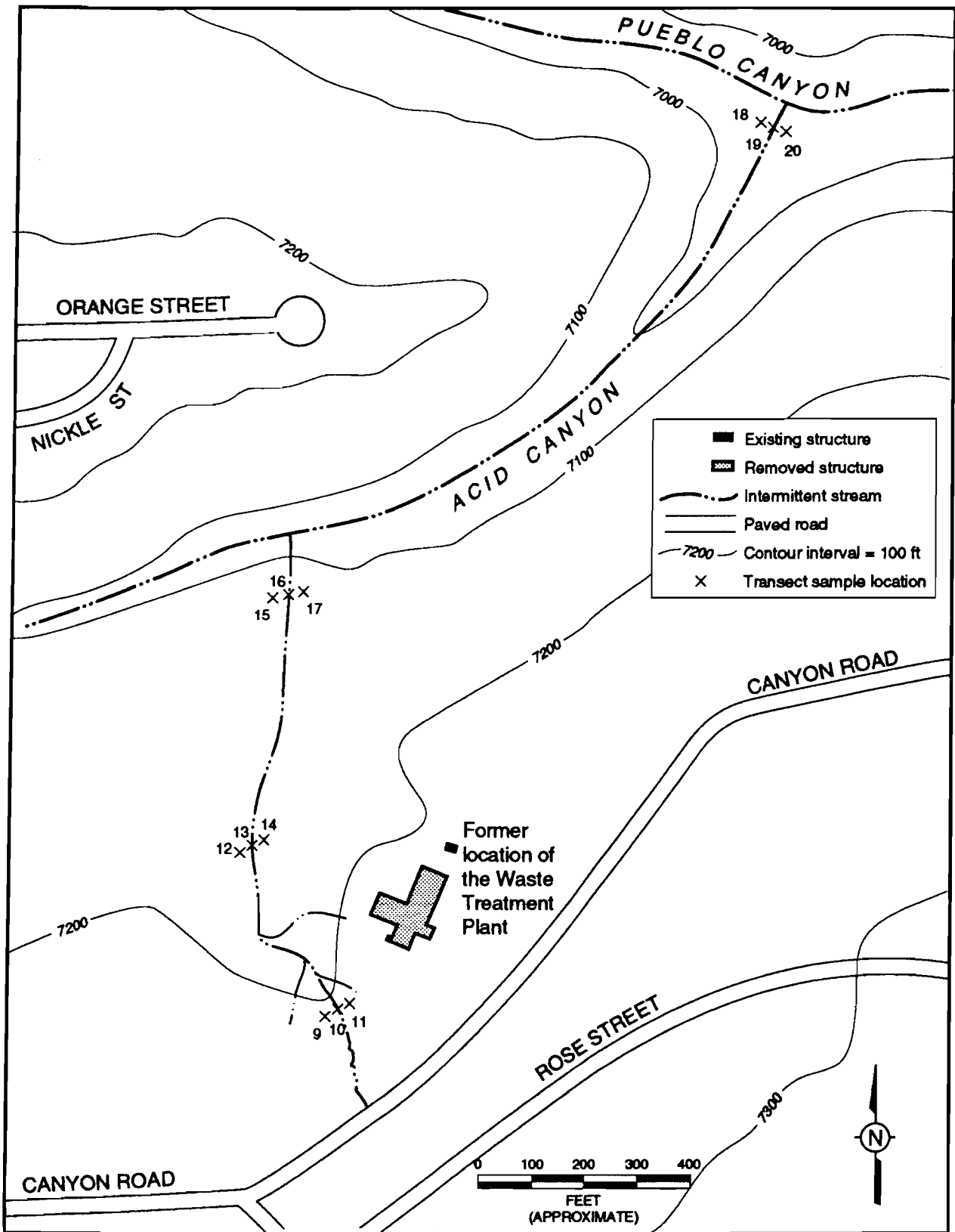


Figure 8.1-6. TA-45 transect sampling locations.

LIST OF DEFICIENCIES

Overall Comments:

1. The Implementation Dates in Table E-1 on page E-3 indicate that field work for Phase I of this RFI should be completed in FY-94, and Figure E-1 on page E-4 indicates that the RFI Report will be completed in March 1997. When is RFI field work scheduled to be completed? The time frame indicated for the final RFI Report deliverable is too long, and should be no later than 6-8 months after completion of field work.

2. In the Tables which show the laboratory analyses for the SWMU investigations in the work plan, the trigger levels for nonradionuclides are indicated to be the proposed RCRA Subpart S action levels. A copy of the Subpart S action levels should be included in the workplan, as an Appendix, so that these trigger levels can be easily located by anyone reading the work plan.

3. Los Alamos National Laboratory (LANL) should include in each work plan a list of the specific constituents for which analysis will be conducted in that work plan even though this may be repetitive of information provided in the Installation Work Plan (IWP). This information may be included as an Appendix.

4. As part of the ongoing RCRA Facility Assessment (RFA) conducted by LANL the following SWMUs do not appear to require an RFI; therefore, the HSWA permit does not need to be modified to include these units:

10-001(e)

10-006

Area of Concern C-31-001

Area of Concern C-32-001

Specific Comments

3.3.1 Overview of Historical Operations - TA 32 p.3-71 - SWMU 32-002(b) was removed in 1988, and the analyses done on this SWMU indicated concentrations of volatile organics, and semivolatiles. A summarized copy of this data should have been included in the work plan.

3.6.1.1.1 Firing Sites SWMU Aggregate - TA-10 p.3-131 - Appendix C does not contain the standard EPA method for high explosives (HE) which is a USATHAMA method.

5.1.2.5. Design Criteria - TA-10 p.5-20 - In the second paragraph of this section, the second sentence indicates that no contamination has been found in stream sediment samples. There is no indication from the data presented in Chapter 5 that hazardous constituents have been sampled.

If any hazardous constituents have been sampled for then the analytical results should be presented; otherwise, this sentence should be changed to read that no radioactive contamination has been previously found in the stream sediments.

5.1.2.6.2 Sample Collection - TA-10 Channel Sediments p. 5-21 - The Problem Statement (5.1.2.1 on page 5-15) indicates that it is expected that surface contaminants from anywhere in the TA-10 site will be concentrated in the Bayo Canyon channel. Some samples will be collected from the stream as part of this work plan and other additional samples may be collected as part of the Canyons RFI work plan. As part of a thorough investigation of this OU 1079, the channel sediments should be adequately sampled. Analysis of these samples should be for Appendix VIII constituents. The sample transects indicated should be extended further downstream to incorporate any runoff from the liquid disposal systems near the radiochemistry laboratory. LANL should sample at least two more downstream transects.

5.2.1 DQO Process for SWMUs with Known Residual Contamination - Subsurface Disposal SWMU Aggregate p. 5-25 through 5-34 - The definition of a maximum removal remediation volume, VMAX, is not quantified. In sampling plans for the areas of known residual contamination in TA-10, an initial borehole will be placed in the center of the existing plumes, and additional boreholes will be placed at a distance as determined by VMAX, and if the extent of contamination is not bounded by the VMAX, then three additional boreholes will be drilled at a distance two times the radius of the VMAX. LANL must present sampling plans which show actual sampling locations. It cannot be determined from the text where additional boreholes, other than the original borehole will be placed.

One of the primary purposes of an RFI is to determine the lateral and vertical extent of contamination. Text on p.5-33, the last paragraph of 5.2.1.6.2.1 SWMU 10-003(a-o) TA-10 Central Area indicates that, "Missing a plume altogether is a possibility for the Phase I sampling, but because of the data available after Phase I coring and analysis, it should not be a significant likelihood for Phase II." This is not an acceptable approach for an RFI work plan. If no plume was discovered during Phase I sampling would there be Phase II sampling?

LANL should use a more direct approach to sampling. In Chapter 3, 3.1.4.1.3 Nature and Extent of Existing Contamination p.3-48, text indicates that five plumes of contamination have been identified and diagrams for the estimated extent of these plumes are presented. Boreholes should be located just outside the edge of the estimated plumes in order to determine the extent of contamination. Samples should be analyzed for Appendix VIII constituents unless a reduction in analysis can be justified by LANL.

5.2.2.2 The Decision Process - DQO Process for SWMUs with Unknown Residual Contamination p. 5-35 - The location of these boreholes should be identified in the work plan, so they may be evaluated.

8.1.6 Sampling Plan - SWMU 1-002 Untreated Industrial Waste Line p. 8-12 - The sampling locations in Figure 8.1-3 do not show all the locations for the transects proposed for the Acid Canyon to Pueblo Canyon surface samples, and it is unclear if each of the three samples collected at the transect will be analyzed for TAL metals and semivolatile organics, explosives and volatiles. Please elaborate on the transect sampling and provide a figure depicting sampling locations.

8.2.6 Sampling Plan - SWMU 45-001 p. 8-17 - Samples designated as B-3, B-4, C-5, C-7, D-7 and E-8 are not shown on Figure 8.1-3, please clarify or supply a figure with these samples located.

Also, the last paragraph of these section discusses collecting six additional surface soil samples from the canyon bottom, and the next sentence discusses collecting three samples from the canyon bottom, as does Figure 8.1-2 Flow diagram for the Phase I sampling on page 8-13, please clarify the number and location of samples.

For the 10 samples to be collected from the cliff face, it might be advisable to use best judgement in determining sample locations by sampling areas which appear to be part of drainage paths rather than collecting samples randomly as indicated in the Work plan. random samples.

8.3.6 Sampling Plan - SWMU 45-002 p. 8-19 - Describe where these boreholes will be located in relation to the drainage channel.