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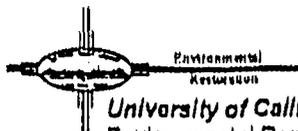


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Los Alamos National Laboratory

ENVIRONMENTAL RESTORATION



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Date: April 2, 1996
Refer to: EM/ER:96-176

Mr. David Neleigh
NM Federal Facilities Section
Multimedia Planning and Permitting Division
U.S. Environmental Protection Agency
Region 6, 6PD-N
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

**SUBJECT: RESPONSE TO THE NOTICE OF DEFICIENCY (NOD) FOR
POTENTIAL RELEASE SITES IN TECHNICAL AREA (TA) 39**

Dear Mr. Neleigh:

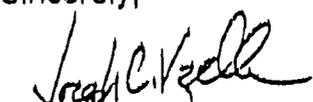
Enclosed is the Los Alamos National Laboratory's response to the Environmental Protection Agency's NOD on the Resource Conservation and Recovery Act Facility Investigation Report for potential release sites in TA-39 (former Operable Unit 1132). A certification form signed by the appropriate officials is also enclosed. This response is due to your office on April 9, 1996.

Please contact Gene Gould at (505) 667-0402 or Everett Trollinger at (505) 667-5801, if you have any questions about this response to the NOD.

Sincerely,

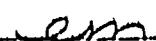

Jorg Jansen, Program Manager
Environmental Restoration

Sincerely,


Theodore J. Taylor, Program Manager
Los Alamos Area Office

JJ/TT/bp

Enclosure(s): Response to NOD for PRSs in TA-39 (2 copies)
Certification

Received by ER-RPF
APR 16 1996


Cy w/enc.):

S. Anderson, NMED-AIP, MS J993
G. Gould, ESA-DE, MS G787
B. Garcia, NMED-HRMB
D. Griswold, ERD, AL, MS A906
J. Harry, EM/ER, MS M992
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Cy (w/o enc.):

T. Baca, EM, MS J591
T. Glatzmaier, DDEES/ER, MS M992
D. McInroy, EM/ER, MS M992
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W. Spurgeon, EM-453, DOE-HQ
J. Vozella, LAAO, MS A316
EM/ER File (CT #C056), 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 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 Title: Response To The Notice Of Deficiency For Potential Release Sites In Technical Area 39

Name:  Date: 4-4-96
Jorg Jansen, Program Manager
Environmental Restoration Project
Los Alamos National Laboratory

or

Tom Baca, Program Director
Environmental Management
Los Alamos National Laboratory

Name:  Date: 4/4/96
Joseph 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

NOTICE OF DEFICIENCY COMMENTS
RFI REPORT TA-39

GENERAL COMMENTS

Comment 1: (Sites in Aggregate 2). The report should provide additional information concerning current and historical waste handling practices, and characteristics of the current and historical wastes. Waste information should include waste types and characterization data, rates of waste generation, waste management practices from generation to disposal, and references to or records of those activities (U.S. EPA OSWER 1989, 1994). Chemical analysis of the wastes should be performed to provide compound-specific information (U.S. EPA OSWER 1989). For example, no information is presented concerning the (1) characteristics and volumes of the wastes stored in Areas 1, 2, and 3, (2) age of Area 3, (3) length of time that wastes are stored in these areas, (4) frequency of waste disposal, (5) records of waste management, (6) ultimate fate of wastes from these areas, or (7) historic drainage pathways, previous structures, and the addition or removal of paved parking or storage areas. According to EPA guidance and policy directives (U.S. EPA OSWER 1989, 1994), the respondent should collect and present unit-specific data necessary to characterize each contaminant source—that is, each PRS. The report should be revised to include this information. If no records are available, LANL should so state.

Discussion: Of the PRSs in Aggregate 2, the only one currently being used is PRS 39-002(a) - Area 1, as a satellite storage area for hazardous waste. Stored wastes consist of solvent- or adhesive-contaminated rags or paper wipes, which are contained in a covered 55-gal. drum situated on a pallet. All available information on historical waste management practices was presented in Sections 2.3 and 5.2.1 of the OU 1132 RFI Work Plan.

Proposed Text Changes: None.

Comment 2: (Analytical data). Samples are designated as AAA3602, AAA3603, and so forth. However, several sample numbers are missing from this sequence (for example AAA3604, AAA3608, AAA3621, AAA3631, AAA3636, AAA3640, AAA3644, AAA3649, AAA3652, AAA3655, AAA3658, AAA3662, and others). Explain the numbering system and the absence of those sample numbers.

Discussion: The reasons for the absence of the referenced sample numbers are as follows: sample AAA3631 is a field blank; samples AAA3636, AAA3640, AAA3644, AAA3649, AAA3652, AAA3658, and AAA3662 are rinsates. According to the sample collection log and the log book entries recorded during sampling, sample numbers AAA3604, AAA3608, AAA3621, and AAA3655 were not assigned to any collected samples.

The sample numbering system is not always sequential because sample numbers are generally preassigned in anticipation of sampling-specific features. If those features cannot be sampled, the preassigned number is not reassigned to another sample. Consequently, if the actual number of samples taken is not identical to the number that was anticipated, then the sample numbers will not be sequential. All of the useable data were used in developing site recommendations and are presented in the RFI report.

Proposed Text Changes: None.

Comment 3: (Field screening data). According to the RFI report, field screening data were collected during field activities. However, the report fails to present or discuss these data. Present this information to support the selection of sampling locations. Also, include copies of field notes with the field screening data to enable a thorough assessment of field screening procedures and results.

Discussion: For the Phase 1 investigation work at Aggregate 2 and 4 described in the RFI report, sampling locations were selected based upon visual observation, because field screening results were in no case sufficiently elevated to warrant biasing a sampling location. Inasmuch as field screening data were not used to bias sampling locations, providing these data and field notes seems excessive. These data reside in LANL's Records Processing Facility (RPF) as part of the historical record for site activities. Field screening data will, of course, be provided when it is used as a tool in biasing sampling locations or in determining the extent of a site cleanup.

Proposed Text Changes: None.

Comment 4: *Figures 1-2, 1-3, and 1-4 are confusing, because several sets of numbers used to identify or describe different facilities—such as building numbers, PRS numbers, and TA numbers—are not explained in the figure legends. For each figure, provide a definition in the legend for the numbering systems used. Also, present a single map indicating the boundaries of the north, central, and south portions of OU 1132 shown on these figures.*

Discussion: The referenced figures have been revised to better clarify the information being presented. In addition, Figure 1-1 has been modified to more clearly illustrate the northern, southern, eastern, and western boundaries of OU 1132. Figure 5-7 in the RFI Work Plan illustrates the locations of the north, central, and south portions of OU 1132.

Proposed Text Changes: Replace the original Figures 1-1, 1-2, 1-3, and 1-4 with the revised Figures 1-1, 1-2, 1-3, and 1-4.

SPECIFIC COMMENTS

Comment 5: *(Executive summary, page 1). According to the report, "twenty-seven Potential Release Sites (PRS) have been identified. Of these, seven were recommended for No Further Action (NFA)." On page 2 of the Executive Summary, eight PRSs are listed for NFA. This discrepancy should be clarified.*

Discussion: The Executive Summary states that the seven PRSs were recommended for no further action (NFA) in the RFI Work Plan submitted to EPA in 1993. As a result of the investigations described in the RFI report, an additional eight PRSs are recommended for NFA. There is no discrepancy in the text.

Proposed Text Changes: None.

Comment 6: *(Chapter 1, Aggregate 2: Storage Areas, Section 1.2.2.1, page 1-7). According to the RFI report, "an amount of soil sufficient for the specified number of sample containers was collected in the bowl, mixed, and apportioned among the containers." EPA guidance documents recommend placing aliquots for the analyses of volatile organic compounds (VOC) directly into sample jars, without mixing, to avoid the loss of volatile components to the atmosphere (EPA 1995). As a result, analytical data for VOCs may not be representative of actual conditions. Explain how this sample collection method accurately represents the actual level of VOCs in the soil.*

Discussion: Section 1.2.2.1 of the RFI report states that Aggregate 2 samples were analyzed for volatile organic compounds (VOCs). This statement is incorrect; no Aggregate 2 samples were, in fact, analyzed for VOCs. Therefore, the methodology used for sample collection was appropriate.

Proposed Text Changes: (Page 1-7). Finally, the samples were sent to an analytical laboratory, where analyses included gamma spectroscopy, cyanide, PCBs, total petroleum hydrocarbons (TPH), metals, volatile-organic-compounds-(VOCs), semivolatille organic compounds (SVOCs), and HE.

Comment 7: (Chapter 1, Analytical Methods, Section 1.2.4.3, page 1-9). The RFI report indicates that, because no visibly contaminated areas were found, only subsurface samples were analyzed for VOCs. However, discolored soil was identified near PRS 39-007(a) (Section 4.1.7, p. 4-32), and all stains were identified immediately east of PRS 39-007(d) (Section 4.1.8, p. 4-37). Explain this discrepancy.

Discussion: With respect to PRS 39-007(a), when the field team evaluated the site for a sampling location, a small area of soil appeared to be discolored as if by oil drippings from parked vehicles. The stain was small, about 1 to 2 ft in diameter, and located 5 to 10 ft away from the concrete pad used as a storage area. The discolored soil was, in fact, sampled, but this point was not expressed clearly in the RFI report. It is unlikely, however, that this discoloration occurred as a result of contaminant runoff from the concrete pad. Had the stain occurred as a result of a spill from the pad, the discoloration would have been contiguous with it, and the pad itself would be expected to show signs of staining. On the basis of these observations, the team decided to sample as close to the pad's edge as practical and intercept the most likely point of drainage from the pad, rather than to sample only the stained area.

Surface samples were not analyzed for VOCs at either PRSs 39-007(a) or (d) because the warm, dry nature of the environmental setting led the team to conclude that VOCs would not have had an opportunity to infiltrate into the soil before evaporating. This rationale was presented in the OU 1132 RFI Work Plan (Section 4.3.2.2), which was approved by EPA.

Proposed Text Changes: (Page 1-9). The analytical approach was to analyze surface soils for appropriate analytes from areas of known contamination or where contamination was visually evident, and to analyze all subsurface samples for VOCs. ~~Only subsurface areas were analyzed for VOCs, because no visibly contaminated areas were found.~~

(Section 4.1.7.1, page 4-32). One sample was collected at the southeast corner of the building, in the area of backflow of runoff from the pad (ID# 39-1066(AAA3622)); and two samples were located in the area most likely to receive runoff from the pad (ID# 39-1065(AAA3620), and ID# 39-1067 (AAA3623)). One of these samples (ID# 39-1065 (AAA3620)) was collected from the discolored soil.

(Section 4.1.8.1, page 4-37). . . one at the southeast end of the pad, within a few feet of the drain and within the oil-stained area, at location ID# 39-1071 (AAA3629); . . .

Comment 8: (Chapter 3, Organics, Section 3.2.2.3, page 3-5). EPA has already recommended that LANL collect data from background locations at its facility for use in data comparisons for PAHs.

Discussion: All of the PAH data included in this RFI report were re-evaluated using the methodology described below, which has been accepted by EPA Region 9. One or more samples collected at each of four PRSs [(39-002(a), -002(c), -002(d), and -002(e))] contained measured concentrations of one or more PAHs in excess of its SAL. In each case, the samples showing elevated concentrations of PAHs were collected from locations either next to and downgradient from an asphalt pad or in the drainage path within 5 ft of a roof drain. These conditions are illustrated in Figures 4-1 through 4-5 of the RFI report. Because in every case the elevated concentrations of PAHs can be attributed to an anthropogenic source, none of the PAHs were carried forward as COCs.

Our re-evaluation of the PAH data results in no change to any of the conclusions or recommendations presented in the RFI report.

~~Proposed Text Changes: (Page 3-5). Polycyclic aromatic hydrocarbons (PAH) results are compared with UTLs estimated from background data given by Bradley, et al. (1994, 1-144). This data set was chosen because (a) the analyses included all of the individual PAHs of interest, (b) the analytical methods and the QA/QC measures were consistent with those used here, and (c) the data were collected specifically to identify background concentrations of PAHs in soil. The UTL values used in the background comparison are presented in Appendix D. screening action levels (SALs), because background concentrations of PAHs are assumed to be negligible except when in proximity to an anthropogenic source. For samples in which PAH concentrations exceeded SALs, sample locations were evaluated to determine whether or not the source of PAHs was anthropogenic (e.g., asphalt pads, roofing material, vehicle emissions). PAHs measured in samples collected at or very near such sources are not carried forward in the screening assessment, by virtue of their anthropogenic origin. In samples where PAHs are present above SALs, and such concentrations cannot be attributed to an anthropogenic source, the PAHs are carried forward as contaminants of concern (COCs).~~

Comment 9: (Chapter 3, RCRA Risk-Based Screening Action Levels, Section 3.3, page 3-5). The report indicates that screening action levels (SAL) are based on regulatory levels including maximum contaminant levels and proposed RCRA Subpart S (Corrective Action for SWMUs) risk-based methodology. Because LANL has indicated that off-site disposal of contaminated soil is a potential remedy, characterization of contaminated soil may depend on the toxicity characteristic rule analysis or other analytical requirements that may be imposed by the disposal facility (OFR 1995). Therefore, although certain chemicals may be eliminated as contaminants of concern (COC) for risk purposes, they may be COC for disposal purposes.

Discussion: The issues of human health risk related to contaminant levels and waste disposal requirements are separate. LANL understands that waste must be disposed of in accordance with applicable regulations.

Proposed Text Changes: None.

Comment 10: (Chapter 4, PRS 39-002(a), Section 4.1.1, page 4-1). According to the report, because Area 3, PRS-002(a), is an asphalt-covered parking lot, it was not sampled. However, based on the figures presented in the report, surface runoff from Area 3 probably drained into the southern ditch. Explain why this drainage pathway was not sampled.

Also, provide additional information concerning the physical characteristics of, and the waste handling practices at, Areas 1, 2, and 3. Information concerning physical characteristics should include historic drainage pathways, previous structures, and the addition or removal of paved parking or storage areas. Waste information should include waste types, rates of waste generation, the ultimate fate of waste materials, and references to, or records of, these activities. If no records are available, LANL should so state.

Discussion: Section 5.2.1.1.1 of the RFI Work Plan indicates that there is no visible or documented evidence of spills or leaks and that this area was used for delivery and pickup of materials to be used at the site. Section 4.1.1 of the RFI report offers an explanation for not sampling that area or the drainage pathway. The field team evaluated the PRS and the drainage area and concluded that no meaningful data would be gained by sampling. The nearest downgradient location that could be sampled was 100 to 200 ft away. That area also drains the whole of the parking area, building roofs, and the major access road, which is frequently traveled. Any chemicals that had been spilled would have been well diluted and dispersed before reaching the sampling point and, if contaminants had been found, it would not necessarily have been possible to attribute them to Area 3. Consequently, the field team concluded that sampling was not appropriate.

With respect to the second part of the NOD comment, all of the information available on physical characteristics of the site, waste handling practices, waste types, rates of generation, and fate of waste materials for this PRS was presented in Sections 2.3 and 5.2.1.1.1 of the RFI Work Plan.

Proposed Text Changes: None.

Comment 11: (Chapter 4, PRS 39-002(a), Section 4.1.1.1, page 4-2). According to the report, the storm drain east of Area 1, PRS 39-002(a), was not sampled. Figures presented in the report indicate that drainage from Area 1 might have transported contaminants into this storm drain. The report should explain why this storm drain was not sampled. The report should also explain when the storm drain was installed, the extent of the associated storm system, and where runoff from this storm drain discharges.

Discussion: The storm drain was not included in the field investigation because the potential for runoff from PRS 39-002(a) to enter it is negligible. Specifically, there is a concrete walkway that is elevated several inches from the surrounding soil surface and acts as a dam to runoff water. Observations during intense rainfall indicate that runoff travels mainly to the north and infiltrates the unpaved area. A 4- to 6- in. storm would probably be necessary for runoff to breach the dam and enter the storm drain. Although intense thunderstorms can cause flash flooding in the area, these storms rarely deposit more than 1 to 2 in. of precipitation.

Proposed Text Changes: None.

Comment 12: (Chapter 4, PRS 39-002(a), Section 4.1.1.1, page 4-2). Two surface soils samples (AAA3602 and AAA3603) were collected from ID #39-1051, and three (AAA3605, AAA3606, and AAA3607) were collected from ID #39-1053. Explain whether these were grab samples or composite samples. Also explain why multiple samples were collected at one location.

Discussion: First, to clarify, samples AAA3605, AAA3606, and AAA3607 (rather than a second AAA3605, as stated in Comment 12) were collected from ID #39-1053. All of the samples (including AAA3602 and AAA3603) were grab samples. Co-located samples were collected from each of these locations for quality assurance purposes (to indicate the degree of analytical variability).

Proposed Text Changes: None.

Comment 13: (Chapter 4, PRS 39-002(a), Figure 4-1, page 4-3). Designate Areas 1, 2, and 3 on Figure 4-1.

Discussion: The only area designated on Figure 4-1 is Area 1. Area 2 is situated inside of Building TA-39-2 and Area 3 is on the southern end of this building, which is not represented in the figure. Consequently, neither Area 2 nor Area 3 appears on Figure 4-1. However, we have modified the figure to illustrate more clearly the location of Area 1.

Proposed Text Changes: Replace the original Figure 4-1 with the revised Figure 4-1.

Comment 14: (Chapter 4, PRS 39-002(b), Section 4.1.2, page 4-10). The report does not include sufficient background information to support the limited biased sampling strategy used to characterize the potential contamination at this PRS. Although current physical characteristics generally support the selection of these biased sampling locations, the existing conditions may not be representative of historical conditions. Therefore, biased sampling locations this PRS may not characterize the complete nature and extent of contamination.

Provide additional information concerning the physical characteristics of, and the waste handling practices at, PRS 39-002(b). Information concerning physical characteristics should include historical drainage pathways, previous structures, and the addition or removal of paved parking or storage areas. Waste information should include waste types, rates of waste generation, the ultimate fate of waste materials, and references to, or records of, those activities. If no records are available, LANL should so state.

Discussion: The Phase 1 (i.e., investigatory) sampling strategy employed was presented in Sections 4.2.2 and 5.2.4.1.2 of the OU 1132 RFI Work Plan, which was approved by EPA. The purpose of the Phase 1 investigation was not to characterize the extent of contamination, but rather to determine the presence or absence of contamination.

With respect to the second part of the NOD comment, all of the information available on physical characteristics of the site, waste handling practices, waste types, rates of generation, and fate of waste materials for this PRS was presented in Sections 2.3 and 5.2.1.1.2 of the RFI Work Plan.

Proposed Text Changes: None.

Comment 15: (Chapter 4, PRS 39-002(b), Section 4.1.2, page 4-10). According to the report, polychlorinated biphenyls (PCB) were used in explosives tests and were recovered from electric transformers. Provide historical and information concerning the handling and disposal of PCBs at this PRS. Also, specify whether PCBs are currently being used.

Discussion: Historically, all of the firing points had step-down transformers that contained PCB-containing oil. These transformers were flushed several years ago by a licensed PCB disposal firm, and the PCB-containing oil was replaced with clean oil. PCBs were not used in explosives tests, per se; PCB-containing capacitors and transformers composed part of the electrical systems used in explosives tests, but the capacitors were located in a building and both the capacitors and transformers were shielded from the detonations. Several years ago, all PCB-containing capacitors at TA-39 were shipped to a licensed PCB incineration firm for disposal in accordance with Toxic Substances Control Act (TSCA) regulations. No PCB-containing equipment is currently being used in any capacity at TA-39.

Proposed Text Changes: None.

Comment 16: (Chapter 4, PRS 39-002(b), Section 4.1.2.5, page 4-14). According to the report, LANL recommends NFA for this PRS and delays cleanup until the nearby firing site has been decommissioned. PCB contamination was discovered during the RFI at the site; based on the information provided in the report, this contamination may have resulted from transformer oil spills. According to the Toxic Substances Control Act (TSCA) (CFR 1995), cleanup of PCBs must begin within 24 hours of the discovery of the spill. Explain the delay in cleaning up the PCBs found at this PRS.

Discussion: LANL informed EPA of the existence of PCBs at this site via the 1988 and 1990 SWMU reports, the OU 1132 RFI Work Plan, and the TA-39 RFI Report. LANL understands that 40 CFR 701.120 generally requires that certain PCB-containing oil spills be decontaminated or remediated to requirements established by EPA. LANL believes that it is not required to report this spill under 40 CFR 701.125 because, after evaluating the waste profile forms generated as a result of the VCA, it is clear that the spill involved less than 10 pounds of PCBs. Therefore, it is not addressed under 40 CFR 701.125(a)(1)(i) or (ii).

Proposed Text Changes: None.

Comment 17: (Chapter 4, PRS 39-002(c), Section 4.1.3, page 4-15). The report does not include sufficient background information to support the limited "biased" sampling strategy used to characterize

the potential contamination at this PRS. Although current physical characteristics generally support the selection of these biased sampling locations, the existing conditions may not be representative of historical conditions. Therefore, biased sampling locations this PRS may not characterize the complete nature and extent of contamination.

Provide additional information concerning the physical characteristics of, and the waste handling practices at, PRS 39-002(c). Information concerning physical characteristics should include historical drainage pathways, previous structures, and the addition or removal of paved parking or storage areas. Waste information should include waste types, rates of waste generation, the ultimate fate of waste materials, and references to, or records of, these activities. If no records are available, LANL should so state.

Discussion: The Phase 1 (i.e., Investigatory) sampling strategy employed was presented in Sections 4.2.2 and 5.2.4.1.2 of the OU 1132 RFI Work Plan, which was approved by EPA. The purpose of the Phase 1 investigation was not to characterize the extent of contamination, but rather to determine the presence or absence of contamination.

With respect to the second part of the NOD comment, all of the information available on physical characteristics of the site, waste handling practices, waste types, rates of generation, and fate of waste materials for this PRS was presented in Sections 2.3 and 5.2.1.1.3 of the RFI Work Plan.

Proposed Text Changes: None.

Comment 18: *(Chapter 4, PRS 39-002(c), Section 4.1.3.5, page 4-20). Based on the elevated concentrations of uranium, lead, and PCBs the report recommends a voluntary corrective action (VCA) for this PRS. The report indicates that concentrations of uranium are 38 times greater than their SAL, and that lead concentrations are about 400 times greater than their SAL. At PRS 39-002(a), contamination of similar magnitude was recommended for expedited corrective action (ECA). Consequently, the report should explain the recommendation of a VCA, instead of an ECA, at this PRS.*

Discussion: PRS 39-002(c) is not on the LANL HSWA permit. At the time this recommendation was made, LANL's programmatic approach was to propose VCA for non-HSWA PRSs and EC for HSWA PRSs.

The statement in Comment 18 that lead concentrations are about 400 times greater than its SAL is incorrect. The RFI report correctly states that the highest measured lead concentration at this PRS was 389 ppm, which is below the SAL for lead of 400 ppm.

Proposed Text Changes: None.

Comment 19: *(Chapter 4, PRS 39-002(d), Section 4.1.4, page 4-20). The report does not include sufficient background information to support the limited "biased" sampling strategy used to characterize the potential contamination at this PRS. Although current physical characteristics generally support the selection of these biased sampling locations, the existing conditions may not be representative of historical conditions. Therefore, biased sampling locations this PRS may not characterize the complete nature and extent of contamination.*

Provide additional information concerning the physical characteristics of, and the waste handling practices at, PRS 39-002(d). Information concerning physical characteristics should include (1) historical drainage pathways, (2) previous structures, (3) whether the electric closet was used to house PCB-containing transformers, (4) whether the electric closet is connected to a drainage system, and (5) the addition or removal of paved parking or storage areas. Waste information should include waste types, rates of waste

generation, the ultimate fate of waste materials, and references to, or records of, these activities. If no records are available, LANL should so state.

Discussion: The Phase 1 (i.e., investigatory) sampling strategy employed was presented in Sections 4.2.2 and 5.2.4.1.2 of the OU 1132 RFI Work Plan, which was approved by EPA. The purpose of the Phase 1 investigation was not to characterize the extent of contamination, but rather to determine the presence or absence of contamination.

With respect to the second part of the NOD comment, all of the information available on physical characteristics of the site, waste handling practices, waste types, rates of generation, and fate of waste materials for this PRS was presented in Sections 2.3 and 5.2.1.1.4 of the RFI Work Plan.

Proposed Text Changes: None.

Comment 20: *(Chapter 4, PRS 39-002(d), Section 4.1.4.5, page 4-24). According to the report, LANL proposes NFA for this PRS. However, the report indicates that an electric closet (sump) is located near the firing area and that it may receive debris from explosives tests. If the sump is connected to a drainage system, action should be taken to prevent wastes from the explosives tests from being introduced into the sump.*

Discussion: There is no sump at this location. The feature we sampled and described as a "sump" was an electrical access box built into the ground with an open grating over the top. There is no drain line leaving the box; however, there is a 4- to 6-in. pipe (about 8 in. above the bottom of the box), which is an electrical conduit and signal cable race way that connects to another similar box about 100 ft east. There is no drain from the second box.

Proposed Text Changes: (Page 4-20) This area is a gravel pad on the outside southwest corner of Building TA-39-57, the blockhouse for PRS 39-004(d). It is unpaved and includes an electrical closet — a ~~concrete-lined sump~~ measuring approximately 5 ft x 5 ft x 4 ft deep and covered with a steel grating. The electrical closet sump may act as an accumulation point for debris from explosives tests conducted at the firing site, 15 to 20 ft away.

Comment 21: *(Chapter 4, PRS 39-002(e), Section 4.1.5, page 4-24). If the paved area between the storage area and the unpaved area was not paved at one time, contaminants may have accumulated in the area that is now covered with asphalt. Provide additional justification for the selection of sampling locations.*

Also, provide additional information concerning the physical characteristics of, and the waste handling practices at, PRS 39-002(e). Information concerning physical characteristics should include historical drainage pathways, previous structures, and the addition or removal of paved parking or storage areas. Waste information should include waste types, rates of waste generation, the ultimate fate of waste materials, and references to, or records of, these activities. If no records are available, LANL should so state.

Discussion: Sampling was conducted in accordance with Sections 4.2.2 and 5.2.4.1.2 of the OU 1132 RFI Work Plan, which was approved by EPA.

With respect to the second part of the NOD comment, all of the information available on physical characteristics of the site, waste handling practices, waste types, rates of generation, and fate of waste materials for this PRS was presented in Sections 2.3 and 5.2.1.1.5 of the RFI Work Plan.

Proposed Text Changes: None.

Comment 22: (Chapter 4, PRS 39-002(f), Section 4.1.6, page 4-28). If the paved area between the storage area and the main stream channel was not at one time covered with asphalt, contaminants may have accumulated in the area that is now covered with asphalt. Provide additional justification for the selection of sampling locations.

Also, provide additional information concerning the physical characteristics of, and the waste handling practices at, PRS 39-002(f). Information concerning physical characteristics should include historical drainage pathways, previous structures, and the addition or removal of paved parking or storage areas. Waste information should include waste types, rates of waste generation, the ultimate fate of waste materials, and references to, or records of, these activities. If no records are available, LANL should so state.

Discussion: Sampling was conducted in accordance with Sections 4.2.2 and 5.2.4.1.2 of the OU 1132 RFI Work Plan, which was approved by EPA.

The asphalt pad was installed at the time Building TA-39-88 was built and before any activities were conducted at the site. All of the information available on physical characteristics of the site, waste handling practices, waste types, rates of generation, and fate of waste materials for this PRS was presented in Sections 2.3 and 5.2.1.1.6 of the RFI Work Plan.

Proposed Text Changes: None.

Comment 23: (Chapter 4, PRS 39-002(f), Section 4.1.6.4, page 4-32). The report states that "copper was the only COC; it was detected at a maximum concentration of 3200 milligrams per kilogram (mg/kg), 200 mg/kg above its SAL. A difference of this magnitude is not considered to constitute a potential risk. Any concentration over the SAL should be considered a potential risk, because the SAL is a breakpoint. EPA recommends that copper be evaluated as a potential health risk."

Discussion: LANL acknowledges that when measured concentrations of a chemical exceed its SAL, a potentially unacceptable risk to human health might exist. To determine whether or not such a risk exists at PRS 39-002(f), a preliminary risk assessment was performed for copper, using a long-term industrial worker exposure scenario and the methodology described in EPA's Risk Assessment Guidance for Superfund (1989). Under the long-term worker exposure scenario, the results demonstrate that the Hazard Quotient is less than one, which indicates that no unacceptable risk to human health will result from exposure to the maximum concentration of copper detected at this PRS.

Proposed Text Changes: None.

Comment 24: (Chapter 4, PRS 39-007(a), Section 4.1.7, page 4-32). According to the report, transformer oil was stored at this PRS. LANL should provide historical and current information concerning the handling and disposal of PCBs at this PRS.

Also, provide additional information concerning the physical characteristics of, and the waste handling practices at, PRS 39-007(a). Information concerning physical characteristics should include historical drainage pathways, previous structures, and the addition or removal of paved parking or storage areas. Waste information should include waste types, rates of waste generation, the ultimate fate of waste materials, and references to, or records of, these activities. If no records are available, LANL should so state.

Discussion: All available information on the historical management of PCBs and hazardous wastes and on the physical characteristics of the site is presented in the OU 1132 RFI Work Plan. No PCB wastes or hazardous wastes are currently being handled or stored at this PRS. In fact, a VCA was performed at this PRS during the summer of 1995, and all PCB-contaminated wastes were packaged and are being disposed in accordance with TSCA regulations.

Proposed Text Changes: None.

Comment 25: (Chapter 4, PRS 39-007(a), Figure 4-7, page 4-34). The figure does not clearly show whether soil samples were collected from the stained soil. LANL should modify the figure to show the area of stained soil. LANL should also justify its selection of sampling locations, because soilman/soil samples were not collected from drainage pathways as they were at PRS 39-002(e) and 39-002(f).

Discussion: A revised Figure 4-7 is attached. Sampling was conducted as close to the potential source as possible and within the area of the stained soil (see response to Comment 7 for detailed rationale).

Proposed Text Changes: Replace original Figure 4-7 with revised Figure 4-7.

Comment 26: (Chapter 4, PRS 39-007(a), Section 4.1.7.5, page 4-36). According to the report, LANL recommends VCA, instead of ECA, for this PRS. High concentrations of PCBs were discovered at this site; based on the information presented in the report, this contamination may have resulted from transformer oil spills. According to TSCA (OFR 1995) cleanup of PCB spills must begin within 24 hours of the discovery of the spill. LANL should explain the delay in cleaning up the PCBs found at this site.

Discussion: LANL informed EPA of the existence of PCBs at this site via the 1988 and 1990 SWMU reports, the OU 1132 RFI Work Plan, and the TA-39 RFI Report. LANL understands that 40 CFR 761.120 generally requires that certain PCB-containing oils spills be decontaminated or remediated to requirements established by EPA. This PRS was remediated via VCA during the summer of 1995, and the preliminary remediation goal (PRG) that LANL was required by EPA Region 6 to use to drive the PCB cleanup was 0.743 ppm. The 95% upper confidence limit (UCL) on the residual PCB contamination at this PRS is 0.258 ppm, which demonstrates that the cleanup exceeded EPA's requirements.

Proposed Text Changes: None.

Comment 27: (Chapter 4, PRS 39-007(d), Section 4.1.8, page 4-37). Justify the selection of analyses for the soil samples collected at this storage area. VOC analysis was not conducted for samples collected at this PRS, although the report indicates that (1) acetone, oil, and kerosene have been stored at this area, and (2) releases of these solvents have stained the soil next to the east side of the storage area. EPA recommends that the stained soil be analyzed for VOCs.

Discussion: Our response to Comment 7 presents the rationale for not performing VOC analyses on the samples collected at this PRS. The report incorrectly states that acetone was stored at this area; according to the best available information, site operators never stored solvents there. During the time of the field investigation, there was a drum onsite, which had previously contained acetone but was empty when it was brought to PRS 39-007(d). The materials stored historically at this PRS included mineral oil, spindle oil, kerosene, and silicon oil.

Proposed Text Changes: On the northeast side of the pad are stored drums of solvents (acetone, oil and kerosene), with the dispensing valves directed outward and very near the berm's outer edge.

Comment 28: (Chapter 4, PRS 39-007(d), Figure 4-8, page 4-38). The figure does not clearly show whether soil samples were collected from the stained soil. Modify the figure to show the area of stained soil.

Discussion: So modified.

Proposed Text Changes: Replace original Figure 4-8 with revised Figure 4-8.

Comment 29: (Chapter 4, PRS 39-008(a), Section 4.2.1.1.1, page 4-45). Justify the changes to the RFI work plan sampling strategy for the active sand filter. Based on the information presented in the report, EPA has determined that LANL has failed to adequately characterize the depth of contamination. According to the report, LANL determined the sampling depth from engineering drawings. However, the work plan required subsurface sampling to a depth of 2 feet below the sand-tuff interface. Subsurface samples should have been (1) collected continuously from ground surface the total depth of the boring, and (2) field-screened until clean soil was encountered. Then, the samples for analysis should have then been selected from the soil that was most contaminated.

Discussion: The team exercised its best field judgment in determining the locations at which samples were collected, bearing in mind that the objective of the investigation was to identify the presence of contamination, rather than the extent of contamination. We believe our sampling location was biased in favor of identifying the area of maximum contamination (see Section 4.2.1.1.1 of the RFI report for rationale). The team did not use the results of field screening to indicate the presence or absence of contamination because the limits of detection of the field screening instruments are much higher than those of fixed laboratory analysis; consequently, field screening instruments would have been likely to give "false negative" results.

Proposed Text Changes: None.

Comment 30: (Chapter 4, PRS 39-008(a), Section 4.2.1.3.1, page 4-52). Also, according to the report, LANL collected no samples from the sand media within the inactive sand filter. The filter has accumulated potentially hazardous contaminants and may be a source of contamination. EPA recommends that samples from within the inactive sand filter be collected to properly characterize its potential as a source of contamination.

Discussion: Samples were, indeed, collected from the filter medium. Although the sampling results are described in Table 4-31 as "soil" concentrations, all of these results in fact represent contaminant concentrations in the sand filter itself.

Proposed Text Changes: None.

Comment 31: (Chapter 4, PRS 39-008(a), Section 4.2.1.3.6, page 4-54). The no further action recommendation for this PRS is based on partial data, because additional samples are needed to adequately characterize the inactive sand filter. After samples have been collected, the recommendations in this section should be modified to reflect the results of the additional sampling data.

Discussion: See response to the previous comment.

Proposed Text Changes: None.

Comment 32: (Chapter 4, PRS 39-006(a), Section 4.2.1.4.1, page 4-55). According to the report, samples AAA6289 and AAA6290 were collected from boring ID #39-1088. However, Figure 4-11 indicates that samples AAA6291 through AAA6294 were collected from this boring; Figure 4-10 indicates that samples AAA6289 and AAA6290 were collected from boring ID #39-1087. Explain these discrepancies.

Discussion: There is an error in the designation of these samples in the text. The information in Figure 4-11 is correct.

Proposed Text Changes: In addition, at location ID# 39-1088 a corehole was drilled and the core was sampled at depths of 9 ft (AAA6293 AAA6289) and 11 ft (AAA6294 AAA6290).

Comment 33: (Chapter 4, PRS 39-006(a), Section 4.2.1.5.1, page 4-60). According to the report, LANL collected no samples from the contents of the septic tank. Potentially hazardous contaminants may have accumulated in this area. EPA recommends that additional subsurface soil samples be collected to adequately characterize the active septic tank.

Discussion: Sampling at this PRS was conducted in accordance with Section 5.4.4.1.3.1 of the OU 1132 RFI Work Plan, which was approved by EPA. This section of the work plan presents the rationale for not collecting samples from within the active septic tank. Nonetheless, LANL acknowledges that Comment 33 has merit and, therefore, agrees to sample the septic tank in FY 96 to ascertain whether or not it contains hazardous contaminants.

Proposed Text Changes: None.

Comment 34: (Chapter 4, PRS 39-006(a), Section 4.2.1.5.5, page 4-62). The no further action recommendation for this PRS is based on partial data, because additional samples are needed to adequately characterize the active septic tank. After samples have been collected, the recommendations in this section should be modified to reflect the results of the additional sampling data.

Discussion: LANL concurs. After sampling has been accomplished and the results evaluated, LANL will transmit to EPA via letter a summary of the data for this PRS and a recommendation for NFA or voluntary corrective action (VCA), as appropriate.

Proposed Text Changes: Because no human health COCs were identified for this the area around the septic tank, LANL is preliminarily recommending NFA for this unit the active septic tank. A final recommendation will be made after the contents of the tank are sampled and the results are evaluated.

Comment 35: (Chapter 4, PRS 39-005, Section 4.2.3.1, page 4-66). According to the RFI report, "because the precise location of the former pit is not known, samples were collected from the location thought most likely to have been the site of the pit." No HE or HE metabolites were measured in the samples collected. Justify the selected sampling locations. Also, explain why a geophysical survey was not used to determine the location of the pit before sampling.

Discussion: First, the statement that "no HE or HE metabolites were measured. . ." is incorrect. Analyses for HE were performed on all samples collected at this PRS, and no HE was detected in any of them.

A geophysical survey was conducted to determine the location of the pit prior to sampling; the results of the survey are included in the RFI report as Appendix A. The electromagnetic induction (EM) and

magnetometer/gradimeter (MAG) surveys conducted at PRS 39-005 indicated no anomalous conditions or buried targets. The results support the anecdotal report that the seepage pit had been removed. The field team evaluated the area where the pit was supposed to have been located. The short distance between the building and the tuff cliff limited the position of the pit to that shown in Figure 4-12 of the RFI Work Plan. The field team decided that the best location for sampling was midway between the northernmost and southernmost possible pit boundaries and at a location slightly downgradient from that area. The rationale was that these locations would have intercepted the pit location, or any HE that might have migrated from the pit, regardless of the pit's location.

Proposed Text Changes: None.

SANTA FE NATIONAL FOREST

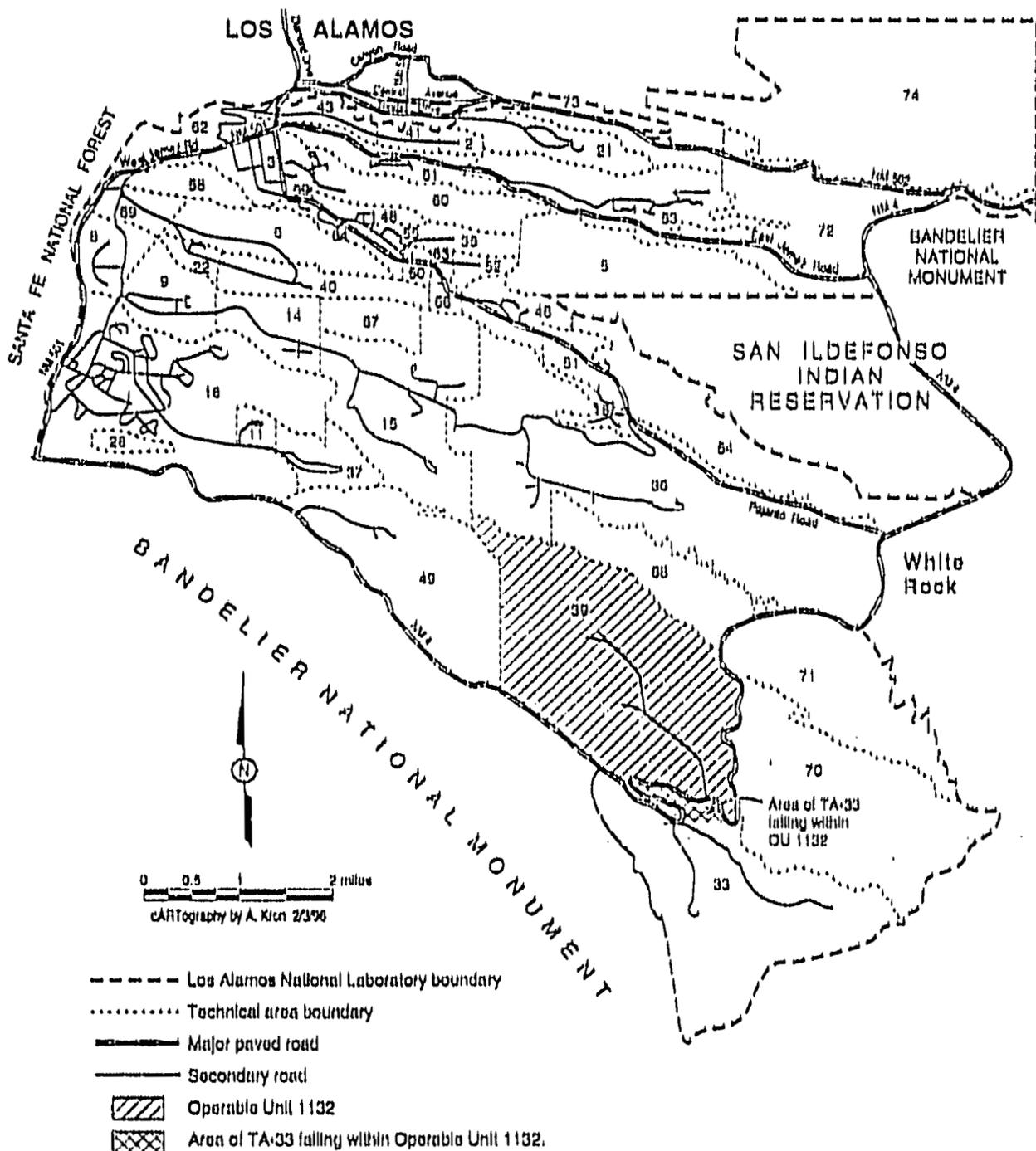


Figure 1-1. Location of Los Alamos National Laboratory and TA-39 (Operable Unit 1132).

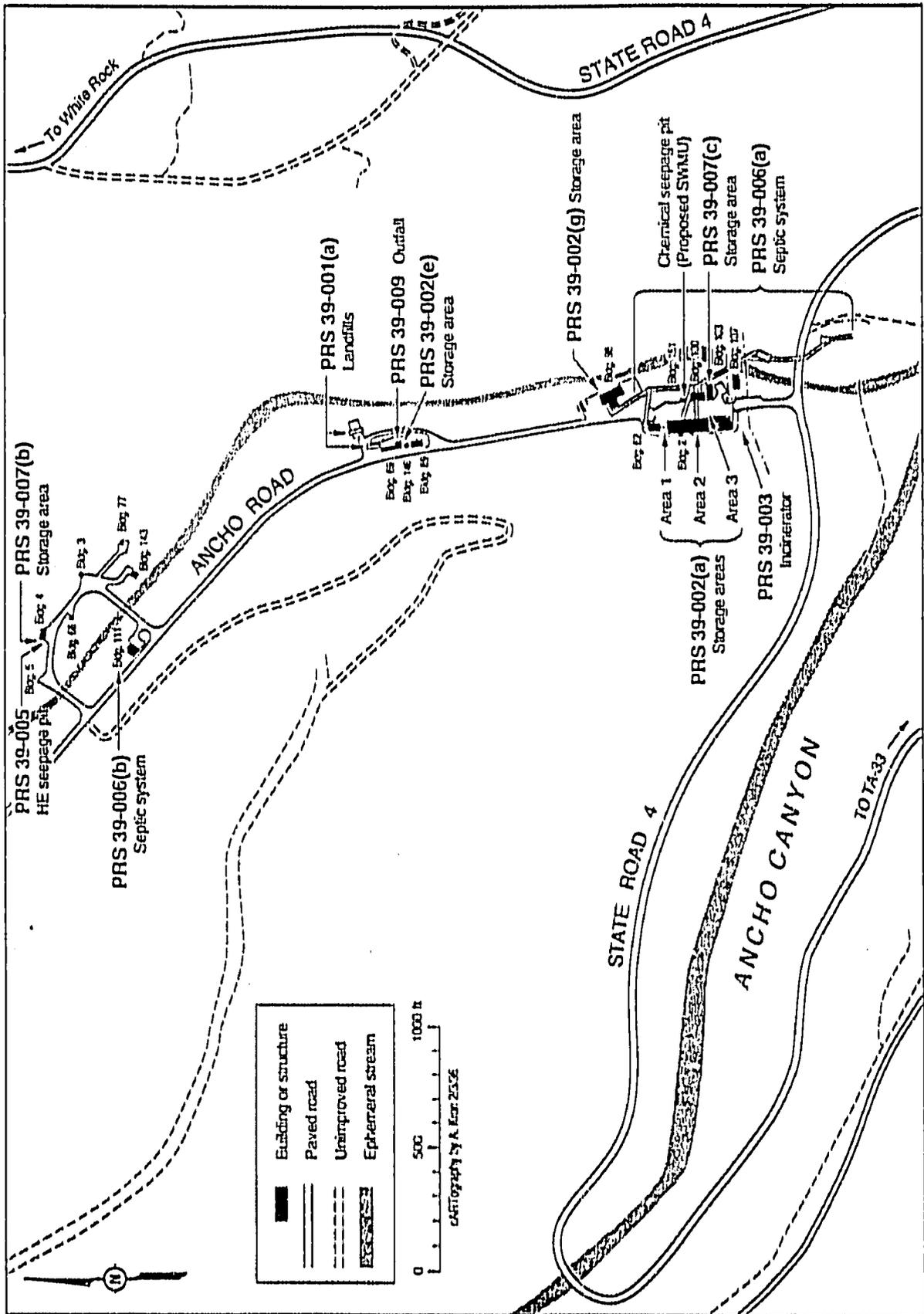


Figure 1-2. Locations of buildings and PRSs in the southern portion of OU 1132.

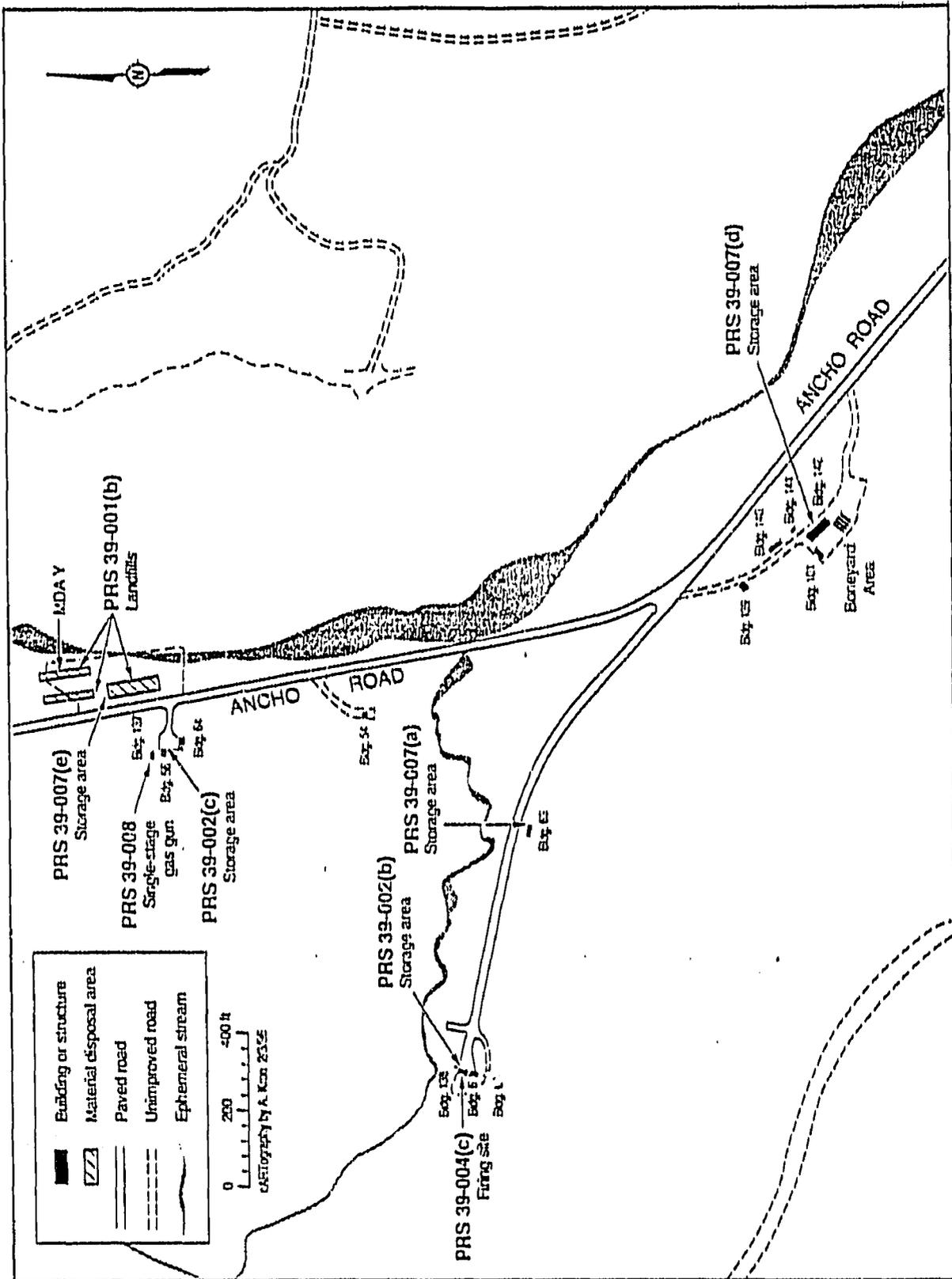


Figure 1-3. Locations of buildings and PRSs in the central portion of OU 1132.

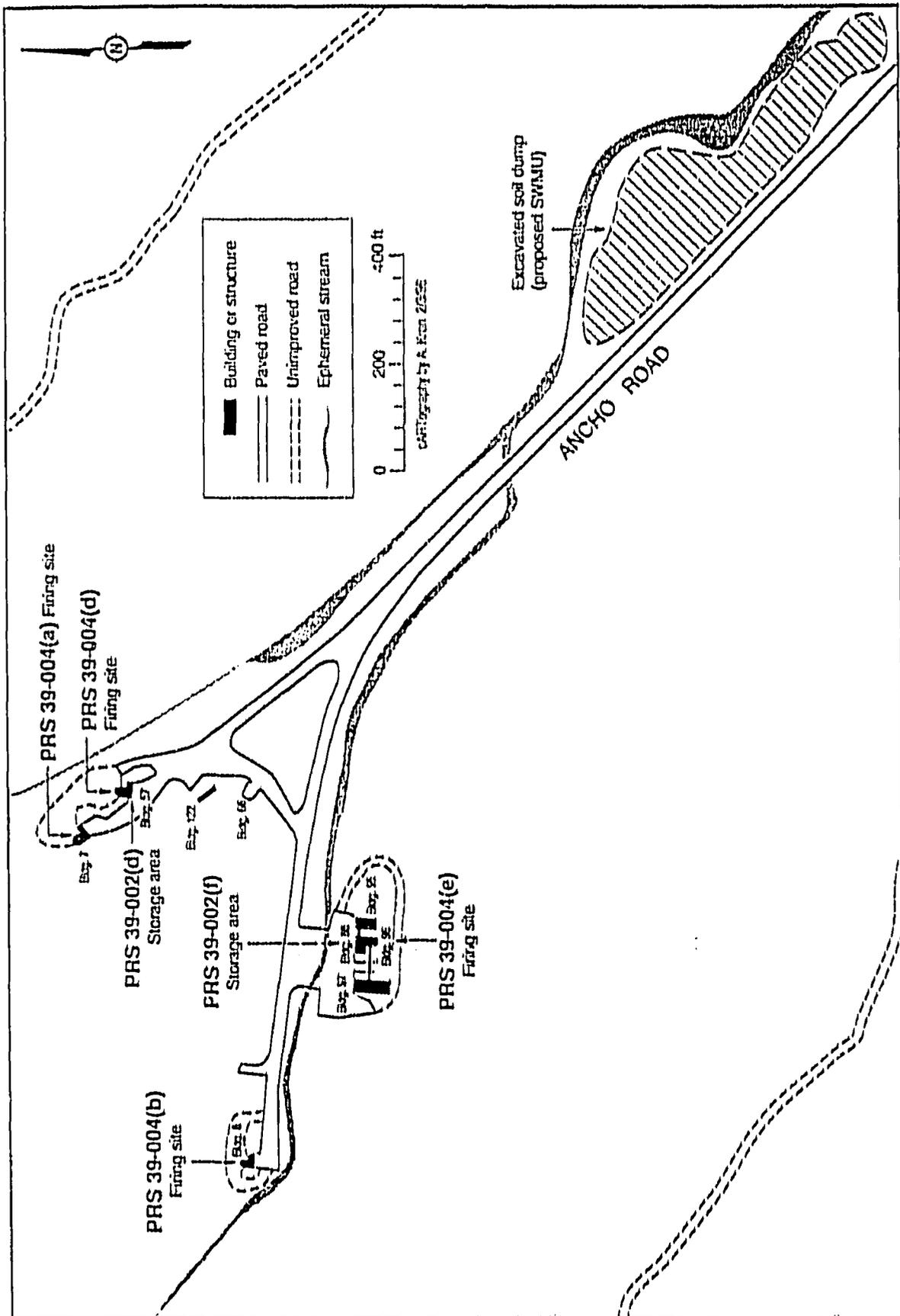


Figure 1-4. Locations of buildings and PRSs in the northern portion of OU 1132.

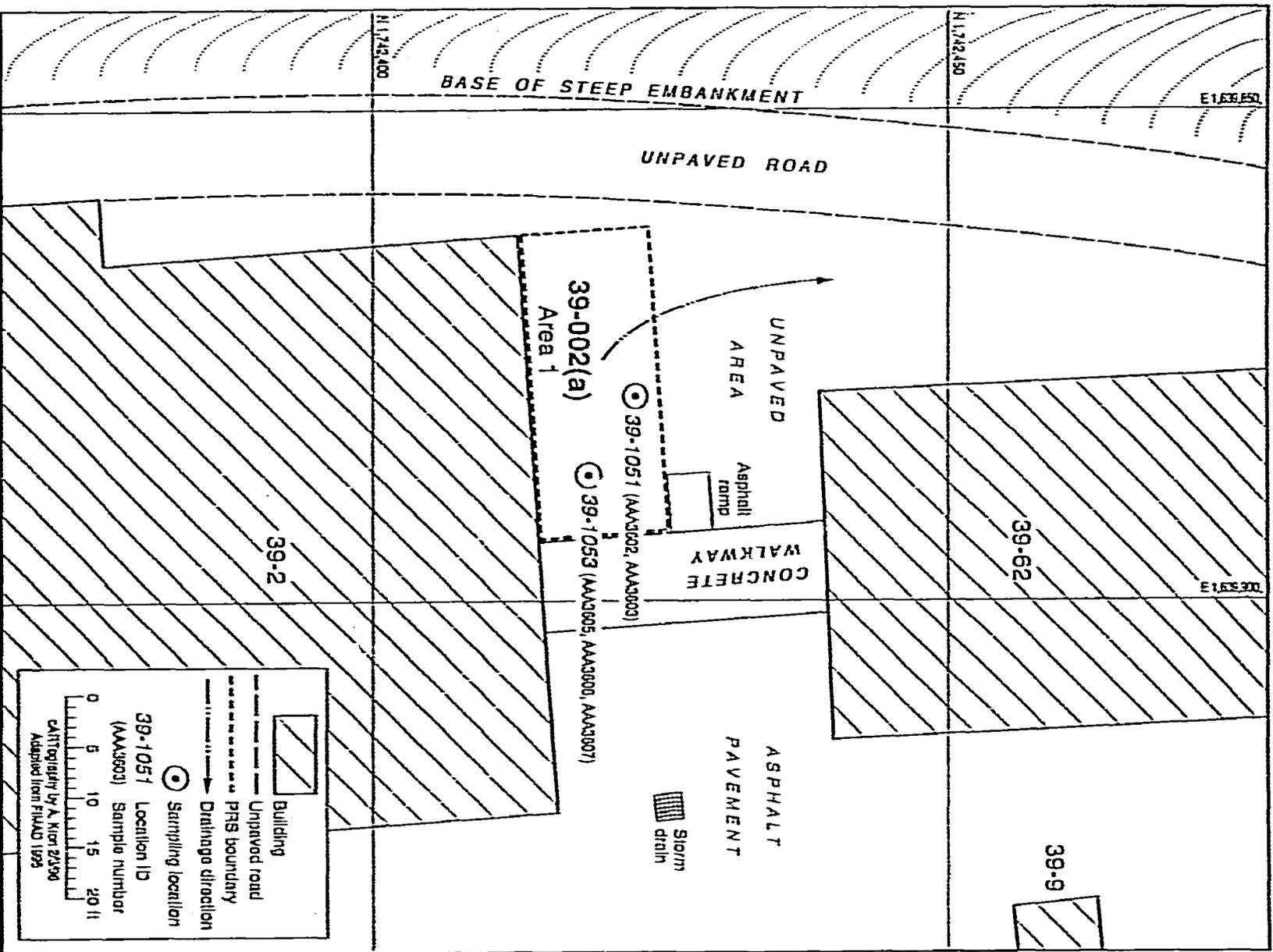


Figure 4-1. PRS 39-002(a) Area 1—storage area at TA-39-2, sampling locations 39-1051 and 39-1053.

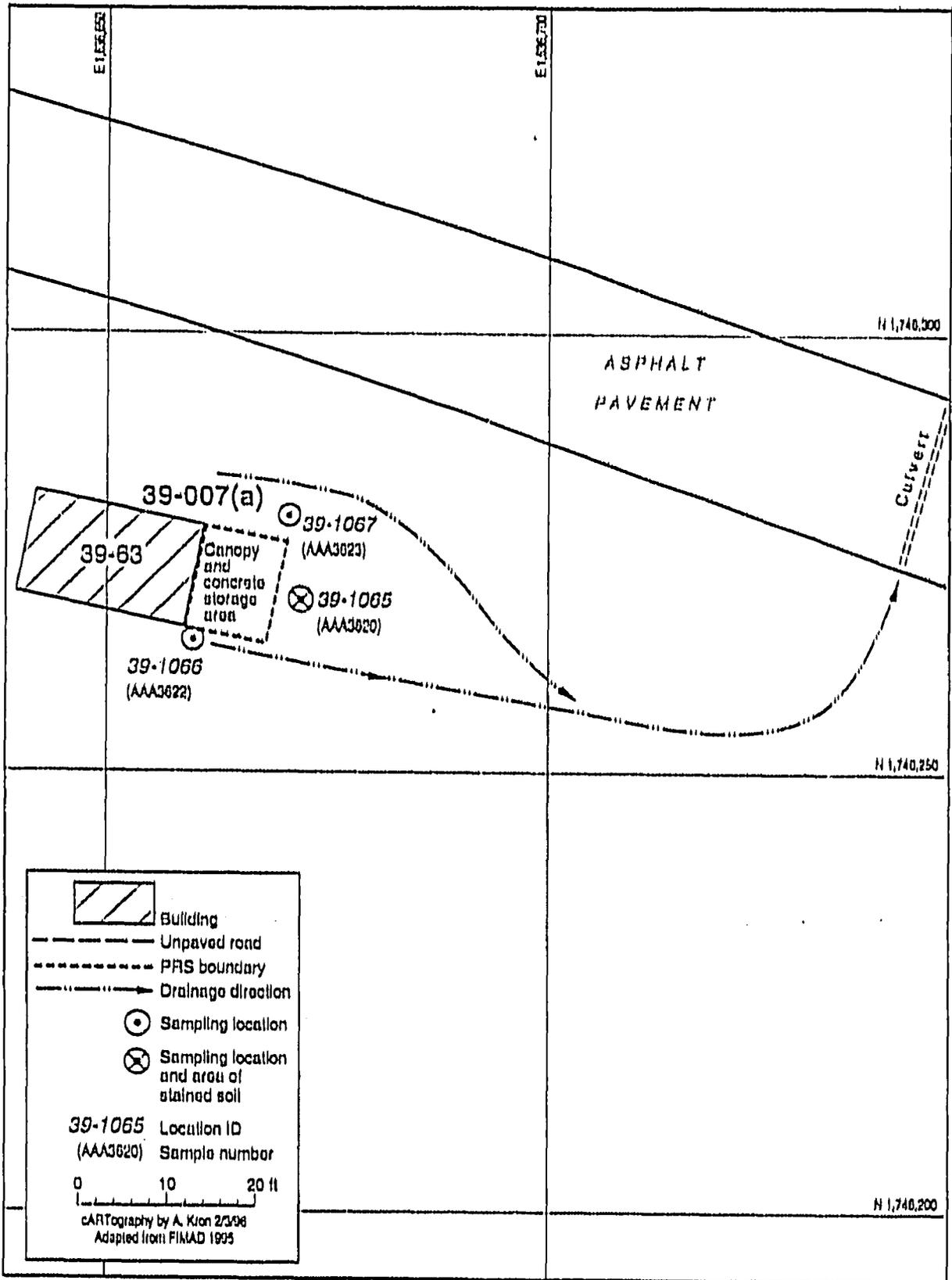


Figure 4-7. PRS 39-007(a)—storage area at TA-39-63, sampling locations 39-1065, 39-1066 and 39-1067.

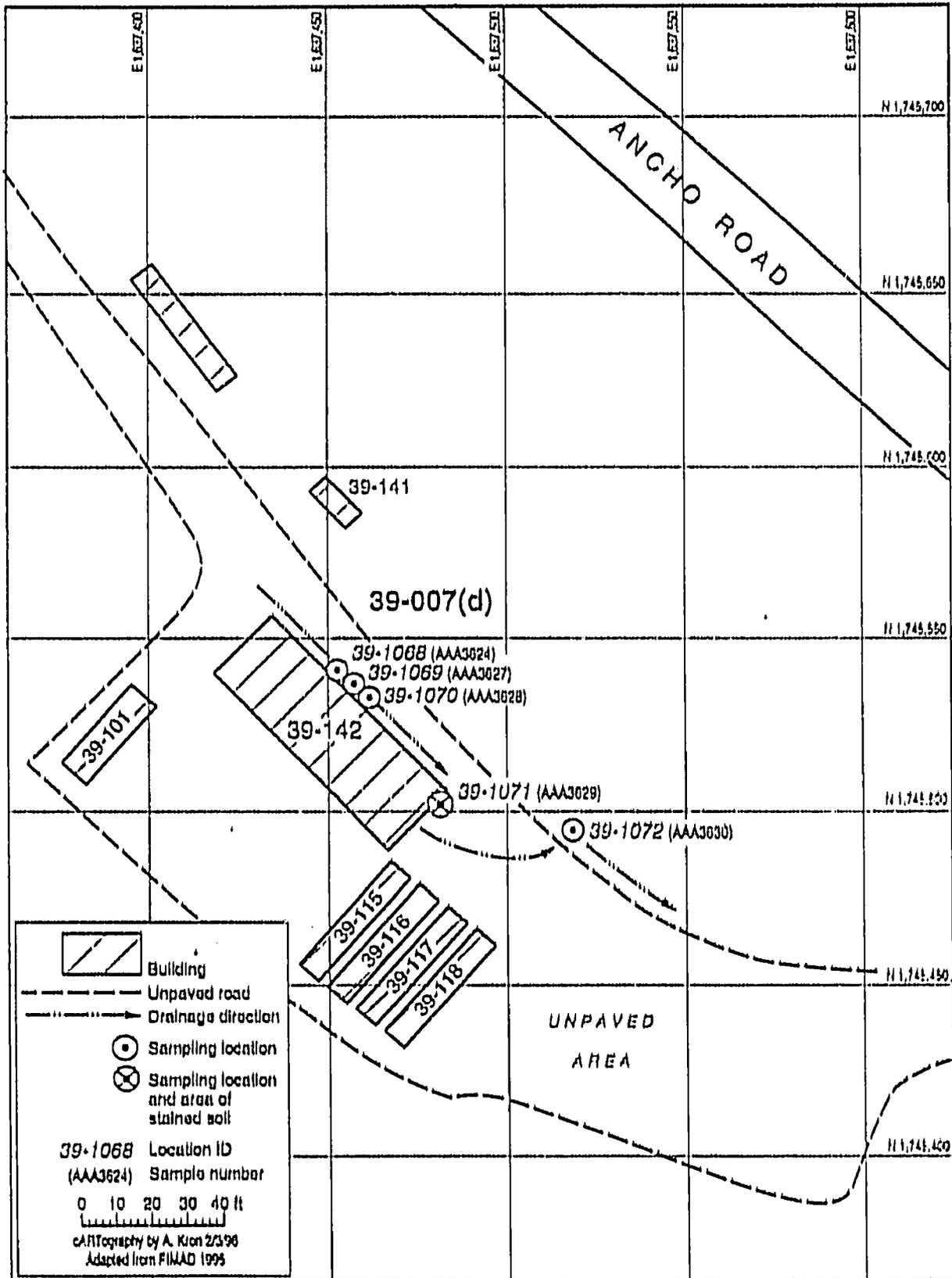


Figure 4-8. PRS 39-007(d)--storage area at TA-39-142, sampling locations 39-1068, 39-1070 and 39-1071.