TA-18 1/19/96

Expedited Cleanup Completion Report for

Potential Release Site
18-003(e)
Septic System

Field Unit 2

Environmental
Restoration
Project

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Revision 1

A Department of Energy
Environmental Cleanup Program

Los Alamos
NATIONAL LABORATORY

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Expedited Cleanup Plan Completion Report
Potential Release Site 18-003(e)
Septic System

1.0 SUMMARY OF EXPEDITED CLEANUP

1.1 Overview

Potential Release Site (PRS) 18-003(e) consists of a deactivated septic tank at Technical Area (TA)-18 (Figure 1). PRS 18-003(e) is included in Table A of the Hazardous and Solid Waste Amendments (HSWA) Module of the Laboratory's RCRA permit.

The septic system, consisting of a septic tank and associated drainfield, is located south of Building TA-18-37 within the outer security fence of TA-18. The associated drainfield is located southeast of the septic tank. The site lies entirely on DOE-owned land in Pajarito Canyon.

The concrete septic tank is cylindrical and has a 500-gal. capacity. A 2-ft-diameter cast-iron manhole lid provided access to the tank. When deactivated in approximately 1969, the tank was filled with sand to the upper concrete cover, preventing personnel entry.

PRS 18-003(e), in service from 1951 until 1969, served Buildings TA-18-28, -31, -37, and -129 and may have received discharge from two other septic tanks within TA-18. The septic tank received primarily sanitary waste, although it also received water from a sink in a small machine shop added to Building TA-18-28 in 1964.

In 1994, this septic tank and its associated drainfield were sampled as part of the RFI Phase I characterization. Sampling results were reported in the Expedited Cleanup Plan for Solid Waste Management Unit 18-003(e) (June 1995). No radionuclides were detected in the septic tank at concentrations above background. The levels of detected metals were significantly below screening action levels (SALs) and no identifiable compounds were detected in the semi-volatile organic compound (SVOC) analysis.

The volatile organic compound (VOC) analysis of the tank contents revealed slightly elevated concentrations. The maximum reported constituent concentrations (in ppm) were acetone, 0.270; 2-butanone, 0.24; 1,2 dichloroethane (1,2 DCA), 0.007; cis-1,2-dichloroethylene (cis 1,2 DCE), 0.660; and trichloroethene (TCE), 0.200.

TCE was also detected in soils within the associated drainfield. However, the detected concentrations are low, not considered to be a hazard, and do not pose a potential risk to human health or the environment.

VOCs were not detected in soils surrounding the tank. Furthermore, all reported levels of constituents from remaining analyses were below background levels.

As noted previously, the tank did not receive waste after 1969. Although the waste contains RCRA-regulated constituents, RCRA regulations do not apply to waste generated before 1980. Therefore, the waste in the tank is not classified as RCRA waste. However, there is a continuing potential for release of the listed contaminants to the soil and underlying shallow groundwater. Best management practice suggests that elimination of a source for further environmental release is appropriate. Therefore, an expedited cleanup (EC) plan for this PRS was proposed. The request for a Class III permit modification to the HSWA Module to conduct this EC was submitted on June 2, 1995.

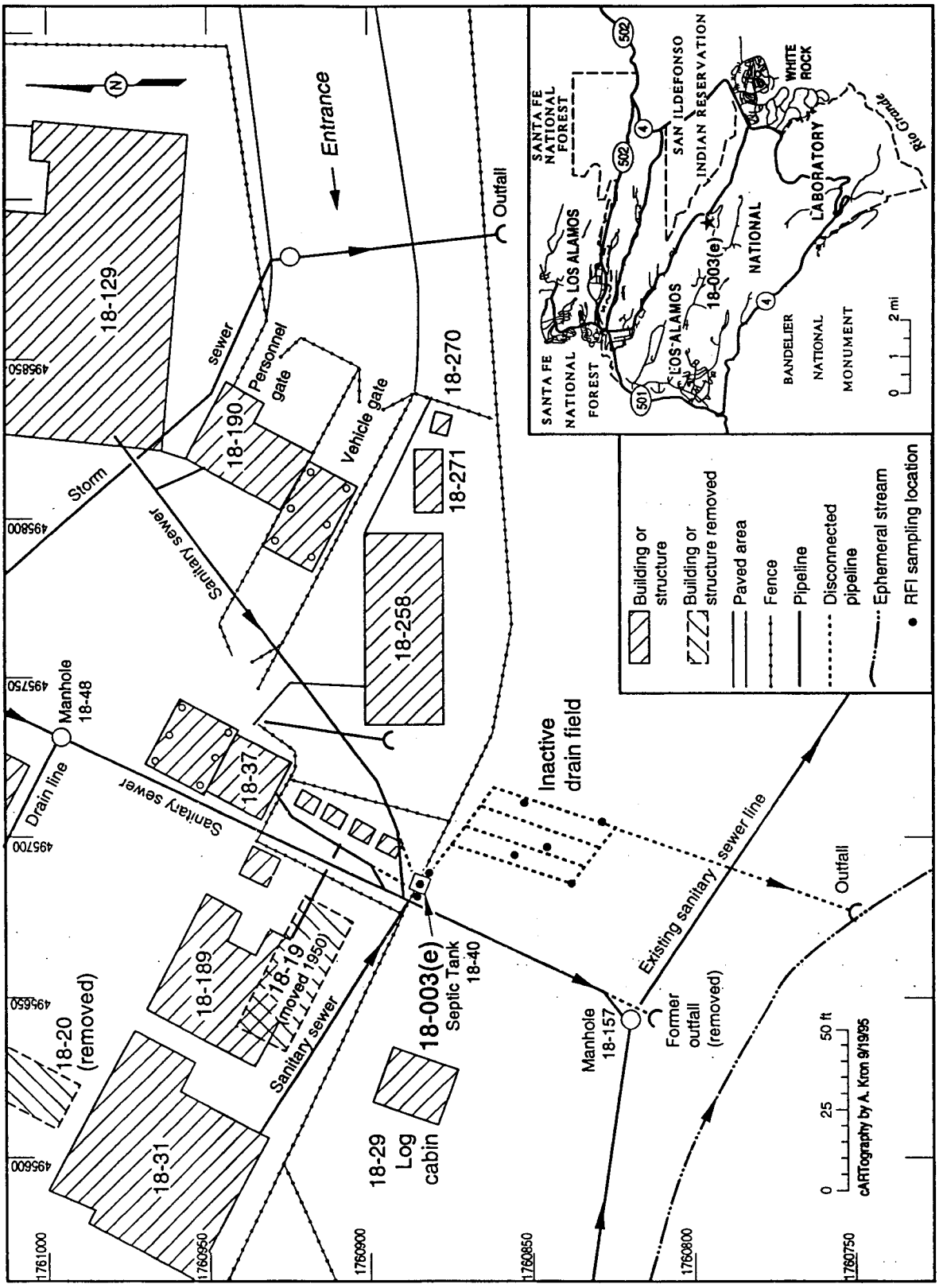

Figure 1. Location of PRS 18-003(e) septic system.

1.2 Expedited Cleanup

The EC was limited to the removal of contaminated septic tank contents. Cleanup began August 24, 1995 and was completed on September 5, 1995. No further sampling of PRS 18-003(e) was conducted.

The cleanup consisted of removing the septic tank's overburden, removing the contents of the tank, performing three pressure steam washes of the interior of the tank, and removing the wash water. Attempts were made to remove the lid of the septic tank before washing and filling its interior, but the lid was an integral unit and not easily removed. Therefore, all cleanup was conducted through the manhole opening. Once the cleanup was finished, the interior of the tank was filled with a flowable concrete to ensure that the inlet and outlet ports were properly plugged.

Field monitoring for radioactive constituents and VOCs was also performed during the cleanup. All screening data are available upon request.

2.0 SITE RESTORATION

Every effort was made to return the area to its pre-investigative condition. Excavated overburden was returned and compacted, and the ground surface was returned to its original condition.

3.0 MODIFICATIONS TO EXPEDITED CLEANUP PLAN

The cleanup activities followed the approved EC plan, with the exception of minor deviations described below.

The original plan included cutting the inlet and outlet lines from outside the septic tank. This proved difficult because of the proximity of an adjoining concrete structure and the presence of utility lines. It was determined that the flowable fill concrete method would achieve the same goal as described in the plan. Additionally, this method was easier and more cost effective to perform.

At the request of the New Mexico Environment Department (NMED), a visual inspection of the tank was performed by ICF Kaiser Engineers to confirm the tank's integrity. It appeared intact and in good condition.

4.0 QUANTITIES AND TYPES OF WASTE GENERATED

The waste consisted of 19 55-gal. drums of septic contents, one-half of a 60-gal. drum of septic contents, and 2 60-gal. drums of personal protective equipment (PPE). It was disposed of by Rollins Environmental Services, Inc. at Highway 36 Land Development Company, Deer Trail, Colorado (EPA ID No. COD 991 3004 84). This facility is an EPA-permitted disposal facility for RCRA hazardous waste.

5.0 OUTSTANDING ITEMS FROM THE ACCEPTANCE INSPECTION

The acceptance inspection checklist (Appendix A) was completed by an independent party. No outstanding items were identified. Based on this inspection, this action is certified (Appendix C) by the independent party.

6.0 PROBLEMS ENCOUNTERED AND LESSONS LEARNED

As described in Section 3, the only problems encountered were the result of differences between the actual configuration of the septic tank and what was expected based on available engineering drawings. This created some difficulty in rinsing the tank and in sealing the inlet and outlet pipes. Additional site inspection during the planning process will minimize these types of problems for future cleanups.

7.0 CONCLUSIONS

This report serves as the formal request for regulator concurrence to remove PRS 18-003(e) from the HSWA Module of the RCRA permit.

APPENDIX A

ACCEPTANCE INSPECTION CHECKLIST

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ACCEPTANCE INSPECTION CHECKLIST

Unit Number and Description

18-003(e), Septic Tank

- ✓ EPA and DOE notified at least 10 days in advance of field work.
- ✓ Tank contents removed and containerized.
- ✓ Tank inlet and outlet plugged.
- ✓ Tank interior washed.
- ✓ Wash liquid collected and containerized.
- ✓ All waste generated is characterized and managed appropriately.
- ✓ Tank backfilled.
- ✓ Site restored.

Reviewer: David McInroy

Signature _____

APPENDIX B

PHOTOGRAPH

PRS 18-003(e) - Pumping out septic tank

APPENDIX C

CERTIFICATION OF COMPLETION

Certification of Completion

I certify that all work pertaining to the expedited cleanup (EC) PRS 18-003(e) has been completed in accordance with the Department of Energy-approved EC plan entitled **EC Plan for Solid Waste Management Unit 18-003(e).** Based on my personal involvement or inquiry of the person or persons who managed this cleanup, a review of all data gathered, and a visit to the site, to the best of my knowledge and belief, all criteria of the plan have been met or exceeded. I believe that the completion of this EC is protective to both human health and the environment. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Gene Gould
Field Unit Two Project Leader
Environmental Restoration Project
Los Alamos National Laboratory

9/28/95
Date Signed

Dave McInroy
Compliance Manager, Independent Review
Environmental Restoration Project Office
Los Alamos National Laboratory

9/29/95
Date Signed