

TA-15



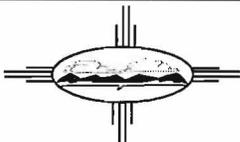
PRS 15-009(e)

SEPTIC TANK

TA-15

SRS Ranking-46

HSWA Module



*Los Alamos National Laboratory
Environmental Restoration Project*

2/10/99



Unit Type: Septic Tank
SRS No. 46
PRS 15-009(e) on Watercourse List

**Los Alamos National Laboratory
Environmental Restoration Project
PRS Fact Sheet for Voluntary Corrective Action
PRS 15-009(e) - Septic System**

Description:

PRS 15-009(e) is an enclosed septic tank located near PRS 15-004(f), Firing Site E-F. It is located approximately 175 ft south-southeast of Building TA-15-27. The septic tank was constructed in 1947 and has a capacity of 1,200 gallons.

Contaminants:

Phase I RCRA Facility Investigation sampling revealed that beryllium, lead, mercury, and uranium were present.

Rationale:

This septic tank is being emptied to remove the possibility of waste leaking from the tank and contaminating either the groundwater or the surface water in the canyon below the PRS.

Voluntary Corrective Action:

The water will be pumped into a tanker truck and disposed off at TA-50 as nonhazardous, low-level radioactive waste. After the contaminated water is removed, the septic tank will be pressure washed. The empty tank will be filled with concrete and left in place.

Additional sampling of soil around the septic tank and along the outfall will also be conducted.

Expected Waste Types and Volumes:

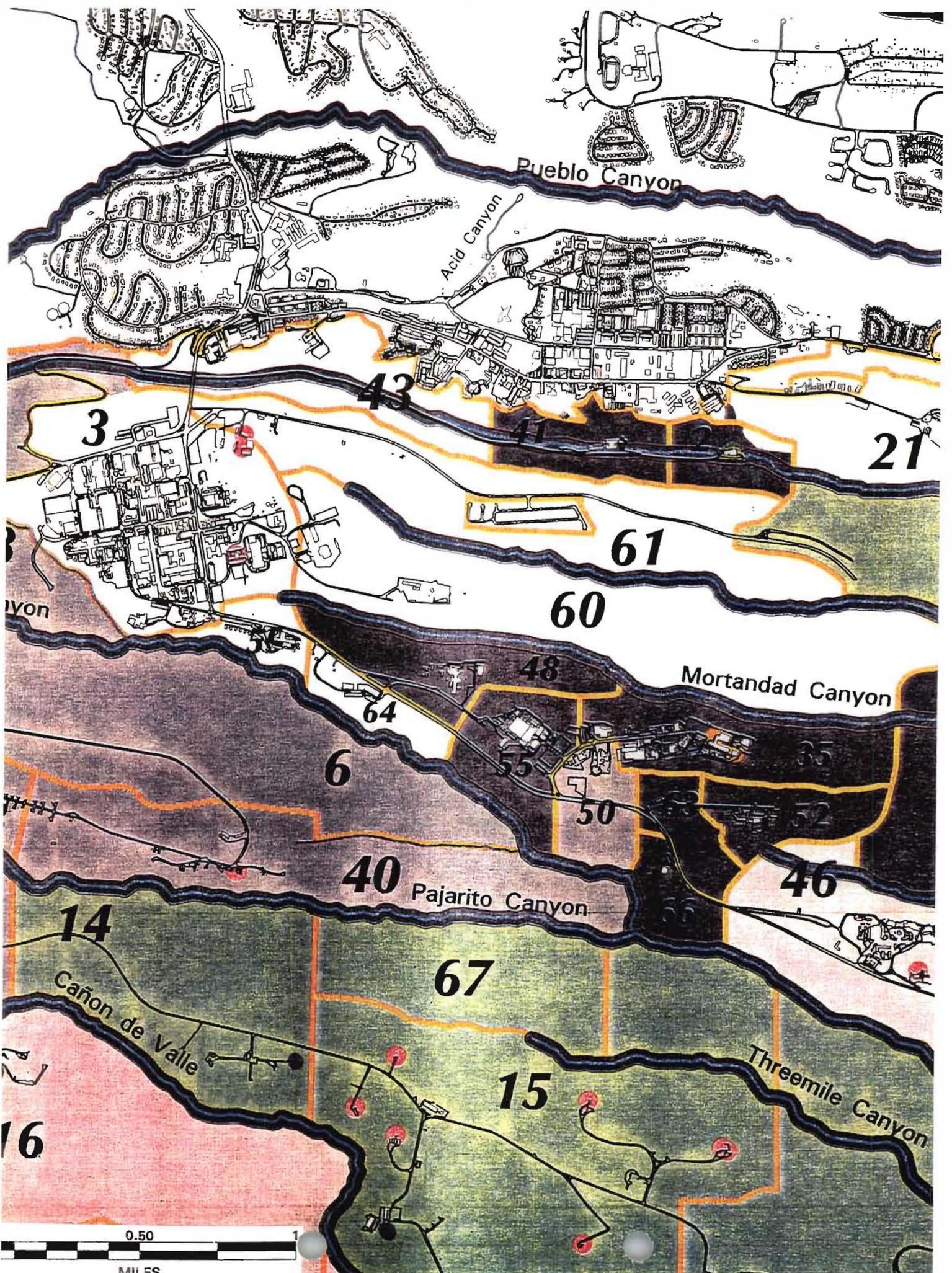
The volume of waste will be approximately one 55-gallon drum of sampling waste and personal protective equipment (PPE); one 55-gallon drum of sludge; 1,000 gallons of contaminated liquid; two 55-gallon drums of decontamination wastes; and 10 to 15 cubic yards of contaminated soil.

Cost:

It is anticipated that the planning, cleanup, sampling, waste disposal, and report writing will cost approximately \$95,000.

Schedule:

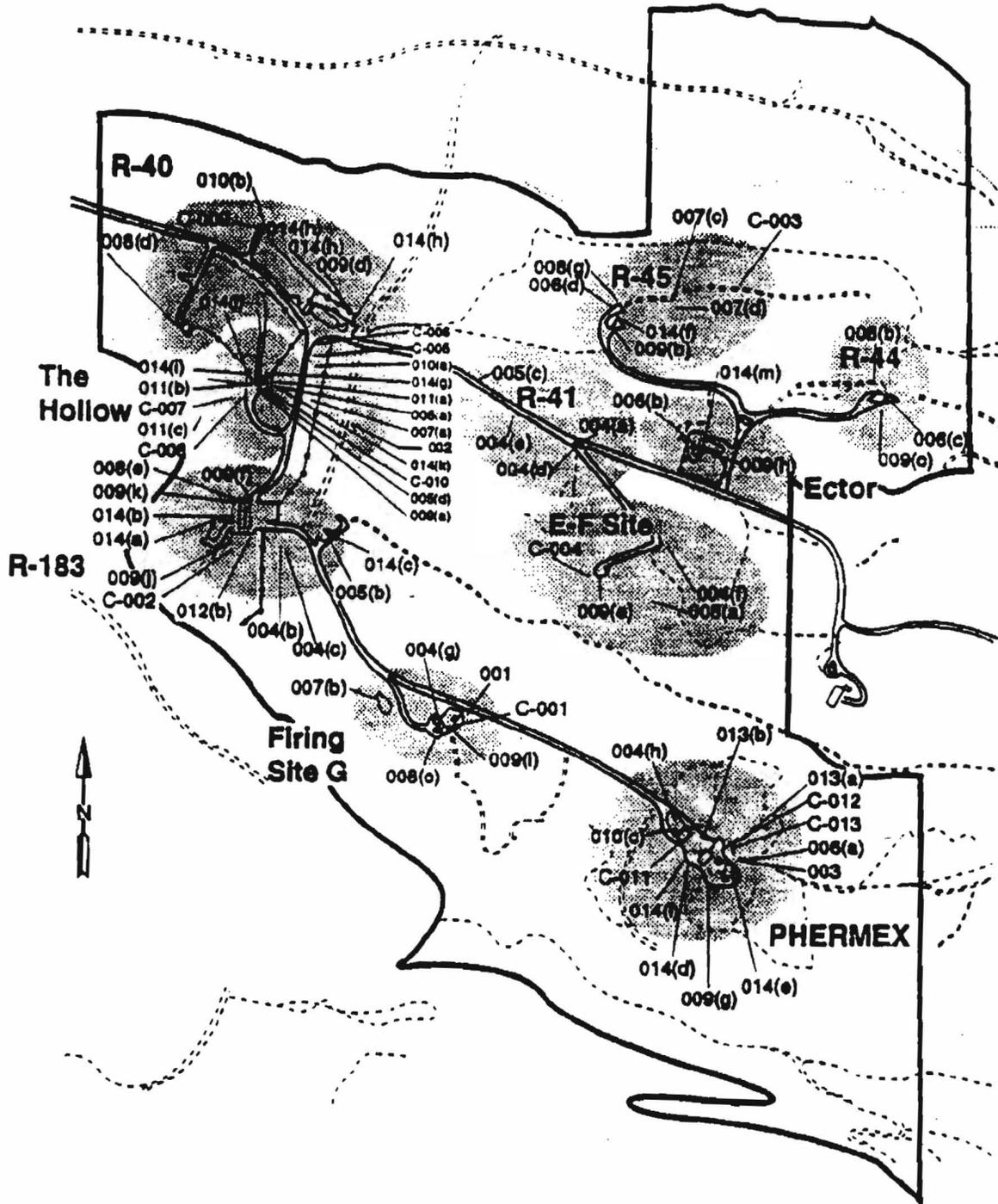
The VCA is scheduled for August 1997. The completion report will be submitted by September 30, 1997.

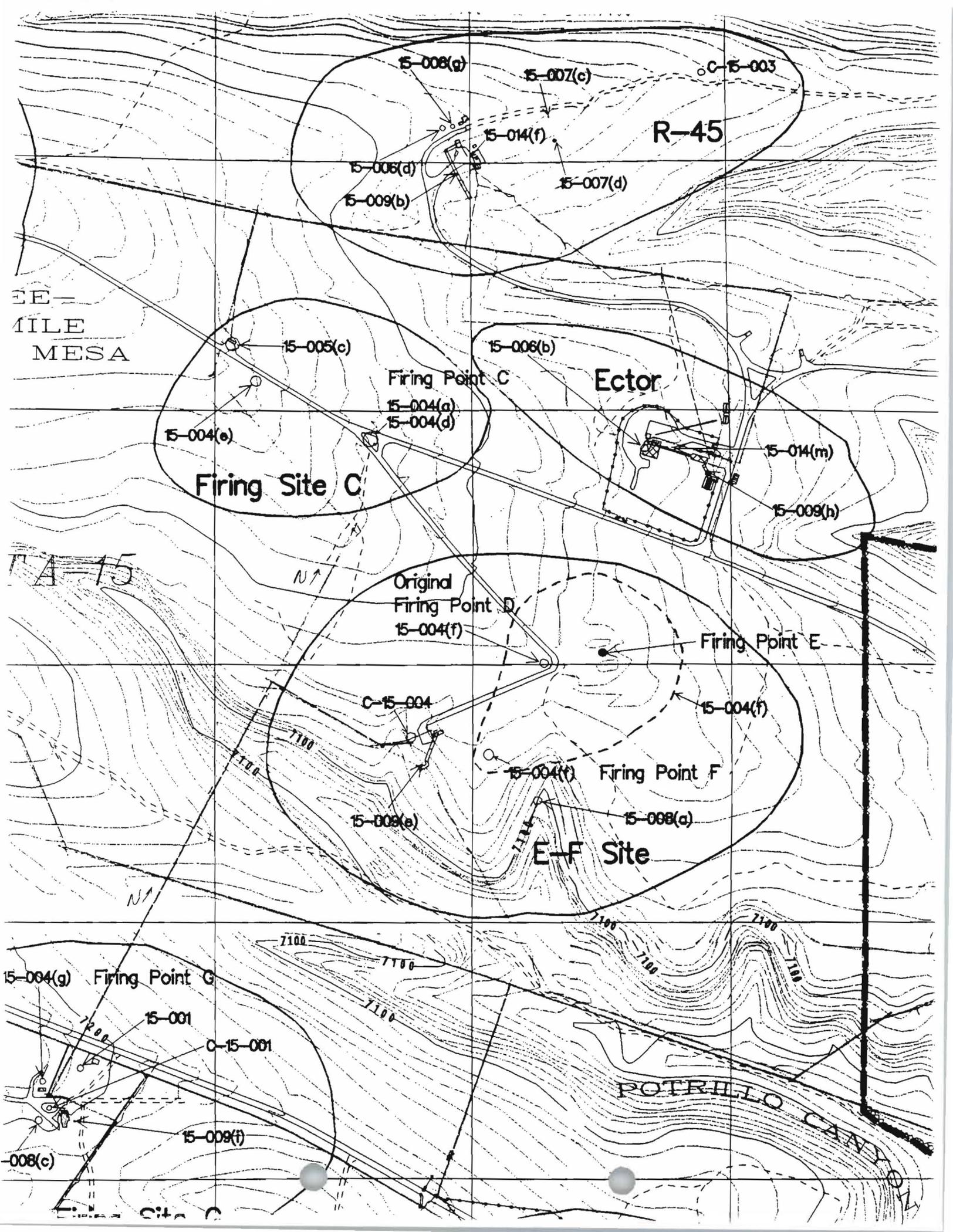


0.50

MILES

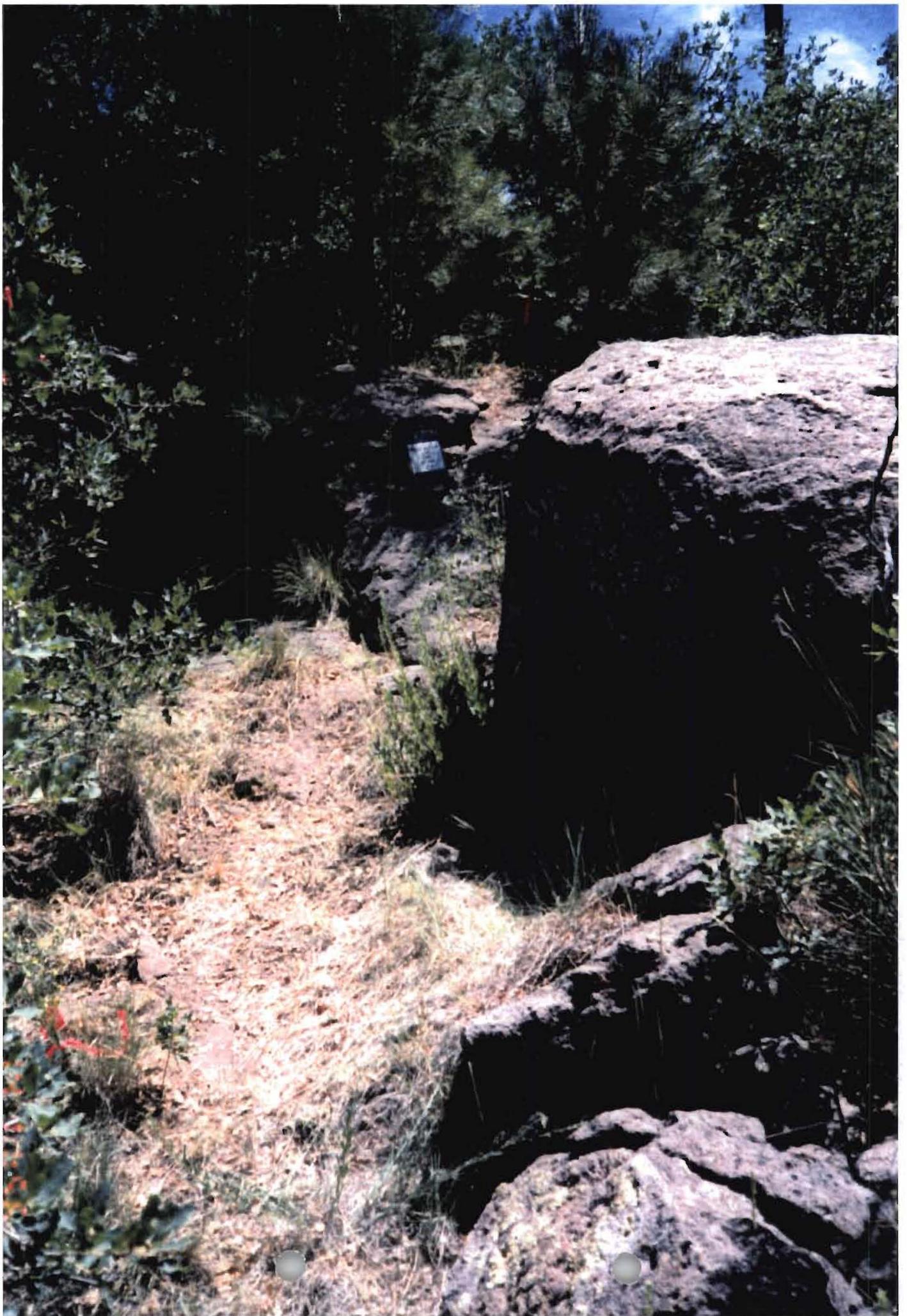
TA - 15





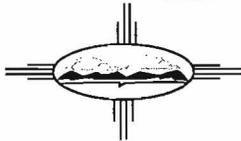


Septic TANK @ E-F



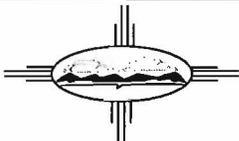
PRS Description

- **PRS 15-009(e) is an inactive septic tank**
 - ◆ capacity approximately 1,200 gallons
- **Location - within secured boundaries of TA-15**
 - ◆ located approximately 175 ft south-southeast of Building TA-15-27 (underground control room at E-F Site)
 - ◆ 800 ft SSW of E-F Firing Site mounds
- **Land slope approximately 10%** - DRAINAGE AREA
- **Serviced Building TA-15-27 only**
 - ◆ sanitary waste



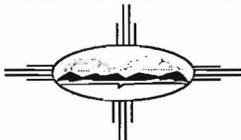
PRS Description (concluded)

- **Put in service in 1947; discontinued in 1981**
 - ◆ **No discharges since firing operations ceased**
- **On list of PRSs in or near a watercourse**
Nearest watercourse is Potrillo Canyon
(located less than 1/4 mile north)
- **RFI report dated November 1995**
- **Land use is continued Laboratory usage,**
i.e., industrial land use



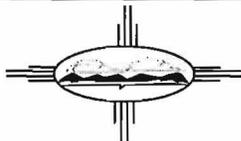
PRS Characterization

- Tank contains approximately 1,000 gallons of liquid and very little sludge
- Contents screened for radioactivity (alpha, beta, and gamma)
- Two samples of the liquid collected and submitted to offsite fixed laboratory in 1994
- Samples analyzed for VOCs, SVOCs, HE, metals (Pb, Hg, and Be), uranium, and tritium per approved work plan



PRS Characterization (concluded)

- **Analytical results indicate that beryllium, lead, mercury, and uranium are present in the liquid**
- **Lead and mercury not above RCRA characteristic waste; beryllium and uranium are not RCRA-listed wastes**
- **No HE or other organics detected**
- **Based on sample results, tank contents are considered to be nonhazardous, low-level radioactive waste**



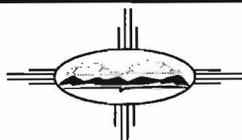
Analytical Results

INORGANIC CHEMICALS AND RADIONUCLIDES DETECTED IN THE SEPTIC TANK AT PRS 15-009(e)

Sample ID	Location ID	Beryllium ($\mu\text{g/L}$)	Lead ($\mu\text{g/L}$)	Mercury ($\mu\text{g/L}$)	Uranium ($\mu\text{g/L}$)
RCRA Waste Toxicity Characteristic	N/A	N/A	5000	200	N/A
AAB 3499	15-2237	0.3(J)	23(J)	1.4(R)	251
AAB 3500	15-2237	<1.0(UJ)	462(J)	2.2(R)	65.3

N/A = Not applicable

Note: Not RCRA Waste

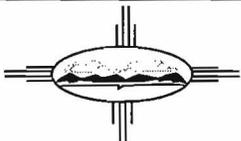


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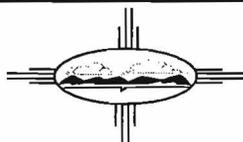
Action Rationale

- Tank contains 1,000 gallons of liquid with low level rad and mercury
- Remove potential for release to environment
- Potential for contamination outside of tank unknown



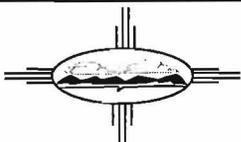
Proposed Cleanup

- **Pump tank contents into tanker truck**
- **Pressure wash interior of the tank**
- **Analyze rinsate water for metals and uranium for waste characterization**
- **A representative sample of concrete from the interior tank will be collected and analyzed for TAL metals and uranium**
- **When confirmed clean by laboratory analysis, fill tank with flow-crete to prevent any infiltration of materials**



Proposed Cleanup (continued)

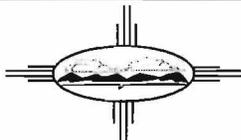
- **Drill and extract soil samples from**
 - ◆ **inlet and outlet locations** *inlet = where the joint is at tank*
 - ◆ **both sides of tank at bottom edge**
 - ◆ **to a depth of 5 ft below bottom of tank**
- **Sample surface and subsurface soil at outfall as well as down channel at approximately 10 ft and 50 ft**



Proposed Cleanup (concluded)

- **Soil samples will be sent to offsite fixed laboratory for TAL metals and uranium**
 - ◆ **if soil samples indicate contamination above the applicable Region 9 PRGs, soil will be remediated**

Residential

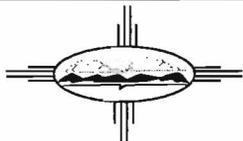


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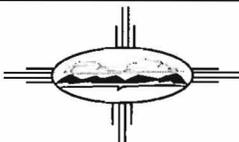
Waste Volume Generated

- **Sampling waste/PPE: <one 55-gallon drum**
- **Sludge: < one 55-gallon drum**
- **Contaminated liquid: 1,000 gallons**
- **Decontamination wastes: < two 55-gallon drums**
- **Contaminated soil (if any): estimated at 10-15 cubic yards**



Schedule/Cost Estimate

- **Timeframe - summer 1997**
- **Duration - 12 working days; exclusive of laboratory analysis turnaround**
 - ◆ mobilization
 - ◆ empty tank contents
 - ◆ rinse tank interior
 - ◆ drilling
 - ◆ sample collection
 - ◆ soil removal (if necessary)
 - ◆ demobilization



Schedule/Cost Estimate (concluded)

- **If laboratory results show cleanup achieved, will fill tank with flow-crete**
- **Cost estimate - \$95,000**
- **Write completion report**
- **Submit NFA permit modification request**

