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Los Alamos National Laboratory Environmental Restoration Project

Expedited Cleanups and Voluntary Corrective Actions for Fiscal Year 1996

**Field Unit 4
Allyn Pratt, FPL**



3145

EC/VCA for FY96
Field Unit 4

EC/VCA PRS	Avg. SRS Score	Description and Potential COCs	Estimated Cost FY96 \$	Nature and Extent Definition	Preliminary Volume Estimate	Projected start date
VCA: 2-004 (b) 2-004 (c) 2-004 (d) 2-004 (g)	71	(b, c, d) Three 1200 gal. stainless steel USTs used to store flushed effluents for the ion exchange system and 300 gal. portable tank. (g) 300 gal. Portable tank. Potential COCs: Metals, Co-60, Cs-137, U.	150,024	Phase 1 Investigation	1000 gals liquid and 10 cy soil	May 10, 1996
EC: 2-009 (a) 2-009 (d)	76	(a) contamination uphill of the "boulder". (d) contamination near east site of TA-2-1. Potential COCs: Cs-137, Sr-90, U, Pu, Metals.	153,774	Phase 1 Investigation	15 cy soil	March 1, 1996
EC: 35-003 (a) 35-003 (b) 35-003 (c) 35-003 (n)	69	(a) Liquid waste stored in 600-gal. reinforced concrete-underground storage tank at TA-35-4. Liquid was caustic-treated for acidity in the tanks. (b) Liquid waste stored in 600-gal. reinforced concrete- underground storage tank at TA-35-5. Liquid was caustic-treated for acidity in the tanks. (c) Liquid waste stored in 600-gal. reinforced concrete-underground storage tank at TA-35-6. Liquid was caustic-treated for acidity in the tank. (n) Liquid waste phase separator pit at TA-35-3 contaminated by wastewater from radiochemistry laboratories and operations form radioactive hot cells in TA-35-2. Potential COCs: rad, metals, SVOCs.	284,235 Note: Accounts for only FY96 part of cost.	Investigation Pending		After February, 1996

EC/VCA PRS	Avg. SRS Score	Description and Potential COCs	Estimated Cost FY96 \$	Nature and Extent Definition	Preliminary Volume Estimate	Projected start date
EC: 35-009 (a) 35-009 (b) 35-009 (c)	60	<p>(a) South side of trailer TA-35-236, south of TA-35-34. Septic systems discharged into drain fields on south rim of the mesa. In 1968 drain field was plugged and system was daylighted. Abandoned in place in 1975.</p> <p>(b) Location of drain fields uncertain, possibly southeast side of TA-35-67, shown from aerial photograph as lacking in vegetation in 1965. Abandoned in place in 1975.</p> <p>(c) Septic system at TA-35-44 discharged into a leach field of three trenches 1,600 sq. ft. under dirt access road along mesa edge on west side of TA-35-261 trailer. Abandoned in 1990 and left in place. Pumped on a weekly basis.</p> <p>Potential COCs: Hazardous industrial wastes.</p>	257,004	Phase 1 Investigation	125 cy soil	December 1, 1995
EC: 35-015(a)	72	<p>Tank farm and waste oil treatment system on west side of TA-35-86 reprocessed used oil from Helios CO₂ laser and included oil surge tanks TA-35-149 through -154, a grease trap, and an oil treatment unit. Separated water discharged into Ten Site Canyon near TA-35-207 from oil recycling process plus spills from the tank thru storm sewer. Area paved after facility moved in late 1980s. Contaminated soils not completely removed during decommissioning.</p> <p>Potential COCs: oil, metals, PCBs, SVOCs, rad.</p>	171,295	Phase 1 Investigation	10 cy soil	November 15, 1995
VCA: 35-018(a)	60	<p>Transformer located at substation TA-35-32 near southwest corner of Building TA-35-29. Dripping PCB-contaminated dielectric oil on porous concrete pad with no spill containment or drip pan.</p> <p>Potential COCs: PCBs.</p>	108,594	Phase 1 Investigation	5 cy soil	January 3, 1996

Voluntary Corrective Action

PRS: 2-004(b), 2-004(c), 2-004(d), and 2-004(g)

Average SRS Score	Estimated Cost FY96 \$	Preliminary Volume Estimate	Projected Start Date
71	150,024	1000 gallons liquid and 10 cy soil	May 10, 1996

Site Description:

PRSs 2-004(b, c, and d) are three 1200 gallon stainless steel underground storage tanks (tanks TA-2-54, -55 and -56, respectively) used to store flushed effluents from the ion exchange system at the Omega West Reactor. The underground tanks are located at the west end of TA-2, and just west of building TA-2-49. The tanks were lined with a rubber polymer material in order to keep residue precipitation to a minimum.

Operator logs show that on the average, radioactivity of the ion exchange effluent water was 1 mR/h. There were at least six incidents recorded when the activity of the water was measured to be greater than 50 mR/h. Total gamma activity averaged near 10^5 pCi/L, due to the cobalt-60 isotope. Other isotopes known to have contaminated the ion exchange effluent water include manganese-54, chromium-51, scandium-46, and antimony-124.

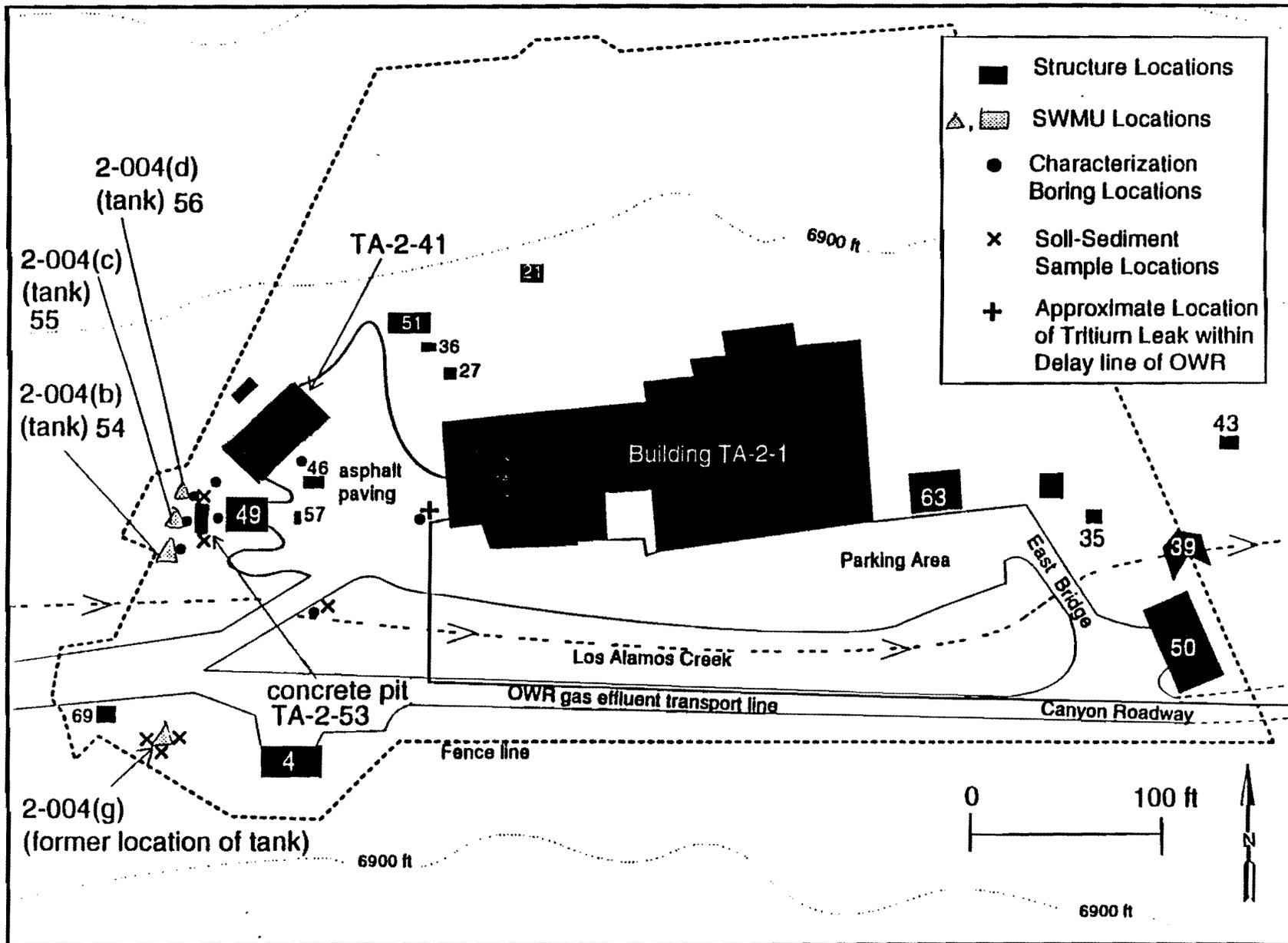
PRS 2-004(g) is the site where a 300 gallon portable tank was located south of the guard station (TA-2-69), at the southwest portion of TA-2. The tank was used to store liquids from other tanks at TA-2 in emergency situations. The tank was located on a platform. The tank and platform were probably removed from the site during the 1985-1986 decommissioning and decontamination project, though the actual removal date is unknown.

Status:

Phase 1 RFI Investigation is complete. RFI Report is in progress.

Contaminants of Potential Concern:

The contaminant found to be above UTLs or SALs is chromium.



Expedited Cleanup
PRS: 2-009(a) and 2-009(d)

Average SRS Score	Estimated Cost FY96 \$	Preliminary Volume Estimate	Projected Start Date
76	153,774	15 cy soil	March 1, 1996

Site Description:

PRS 2-009(a) consists of one area of contamination suspected to have been caused by the water boiler reactor (Omega East Reactor) that had been housed in building TA-2-1, prior to the existence of the Omega West Reactor. This area was not part of the 1986 decontamination effort that consisted of the removal and decontamination of decommissioned structures. During the decontamination project several areas of radioactively contaminated soil were also removed and backfilled with clean soil. PRS 2-009(a) is located southeast of building TA-2-1, and directly south of a boulder located to the southeast of the fenced portion of TA-2.

PRS 2-009(d) is an area of radioactive contaminated soil east of building TA-2-1. It is unknown whether the contamination is associated with the "chemical shack" (building TA-2-3), a drum storage area, or some other source.

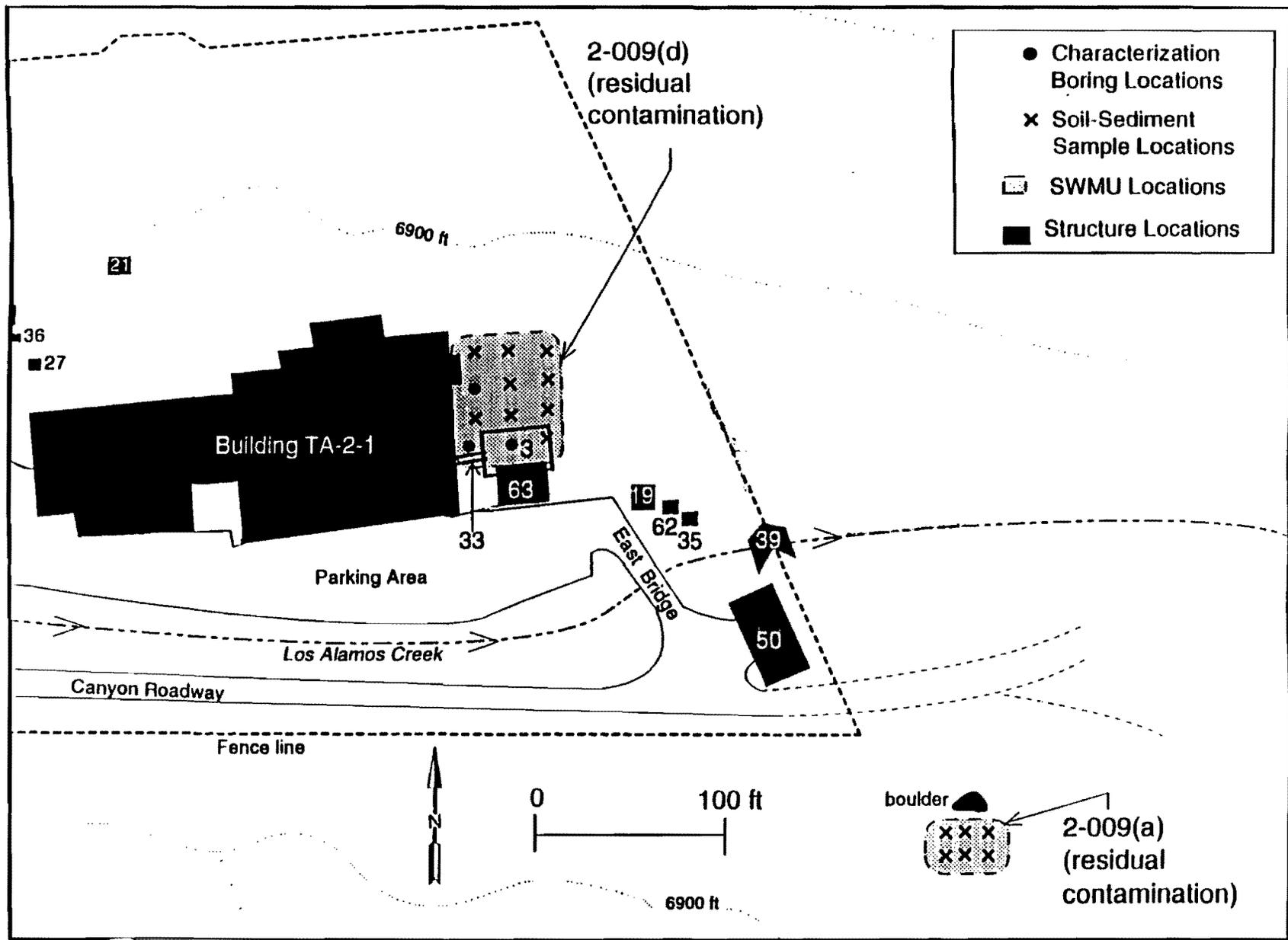
Status:

Phase 1 RFI Investigation is complete. RFI Report is in progress.

Contaminants of Potential Concern:

The contaminants found to be above UTLs or SALs are:

Cesium-137
Strontium-90
Uranium-234 and -235
Lead
Mercury



Expedited Cleanup

PRS: 35-003(a), 35-003(b), 35-003(c), and 35-003(n)

Average SRS Score	Estimated Cost FY96 \$	Preliminary Volume Estimate	Projected Start Date
69	284,235 plus	15cy	After February , 1996

Site Description:

The PRSs for this Expedited Cleanup (EC) project are all associated with the former acid waste treatment plant that was located east of building TA-35-2, and primarily consisted of water treatment facilities in and around building TA-35-7 during the 1950s and 1960s. PRS 35-003(n) is the site associated with the former phase separator pit, while 35-003(a), 35-003(b), and 35-003(c) are sites associated with acidic wastewater storage and treatment tanks.

Decontamination and decommissioning (D&D) of the majority of the acid waste treatment facilities and associated structures and pipelines was conducted from 1981 to 1985. The phase separator pit (PRS 35-003(n)), and three associated tanks (PRSs 35-003(a, b, c)) are currently undergoing D&D activities. Once the D&D activities are completed, follow-on sampling will be performed to determine if any contamination exists below the area where D&D took place. Any residual contamination will then be removed as specified in the EC Plan.

PRS 35-003(n) is located between building TA-35-2 and building TA-35-7, and had the structure designation of TA-35-3. PRSs 35-003(a, b, and c) are located just east of 35-003(n), and had structure designations of TA-35-4, TA-35-5, and TA-35-6 respectively.

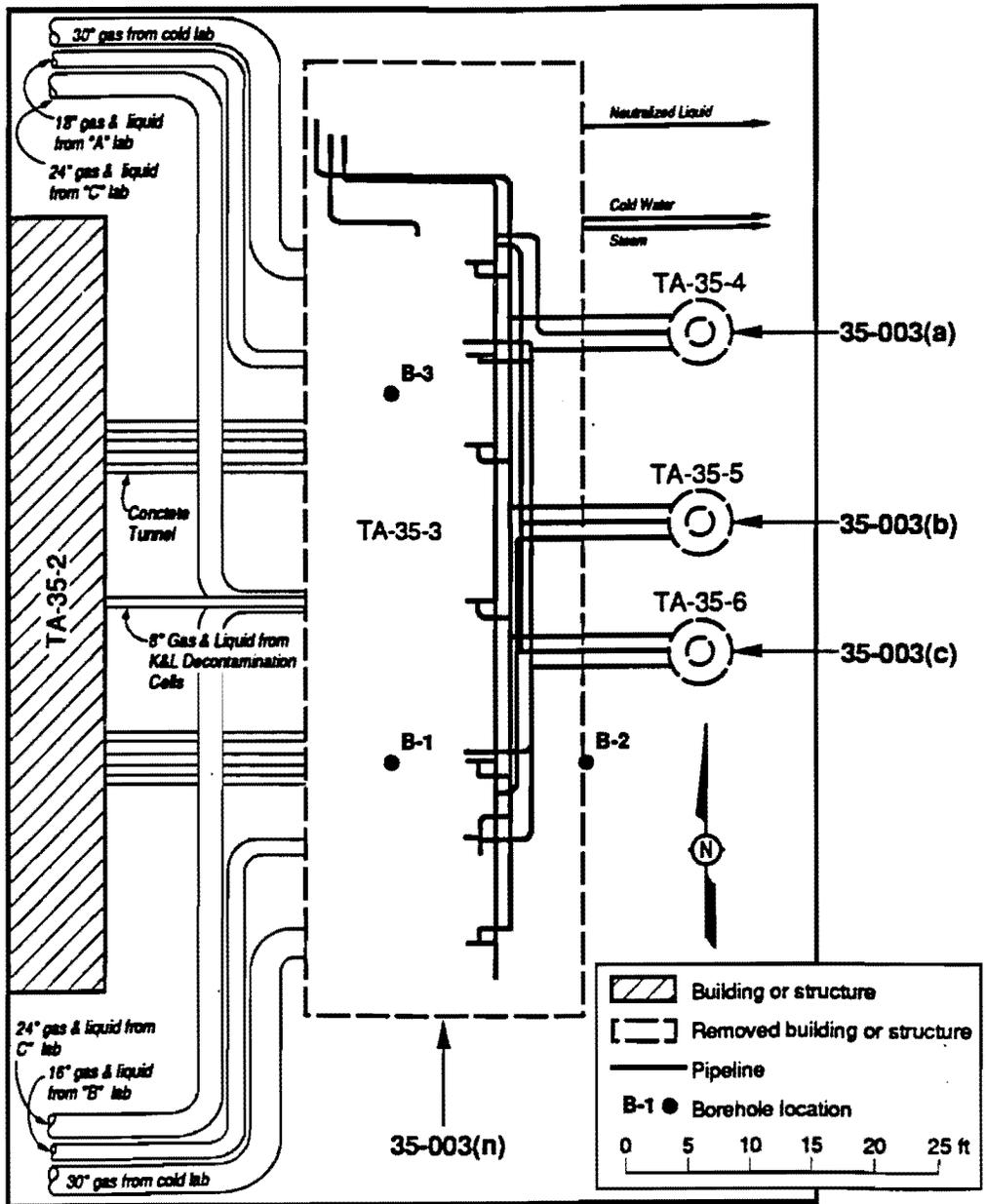
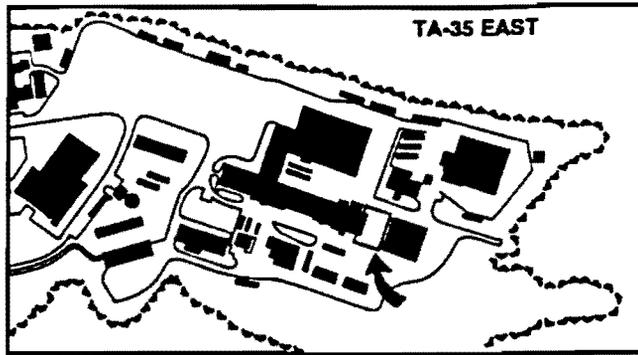
Status:

D&D activities are ongoing, and expected to be completed by February 1996. Follow-on sampling will take place at that time prior to remediation activities.

Contaminants of Potential Concern:

The contaminants of potential concern at these PRSs are:

- Gross alpha/beta activity
- Gross gamma activity
- PCBs
- Metals
- Inorganics
- Semivolatile organics (SVOCs)
- Volatile organics (VOCs)



Expedited Clean-up

PRS: 35-009(a), 35-009(b), and 35-009(c)

Average SRS Score	Estimated Cost FY96 \$	Preliminary Volume Estimate	Projected Start Date
60	257,004	125 cy soil	December 1, 1995

Site Description:

These PRS's are inactive septic systems located on the eastern end of Ten-Site Mesa.

PRS 35-009(a) was constructed in 1951 and was abandoned in place in 1975. It is located on the west side of structure TA-35-34 and consists of a 1,500-gal. tank (TA-35-14), a dosing chamber (TA-35-15), and a distribution box (TA-35-16). The system discharged to a drain field and outfall located on the south rim of the mesa. The drain field is located on the south side of trailer TA-35-236. Archival information indicated that the drain field had been plugged and the system "daylighted". Most of the drainfield has been removed except for three branches of the distribution piping system and the locally remaining soil around the piping.

PRS 35-009(b) was constructed in 1965 or 1966 and, like PRS 35-009(a), was abandoned in place in 1975. It is located south of building TA-35-67 and consists of a reinforced concrete tank (TA-35-76) and a reinforced concrete distribution box (TA-35-77). The leach field is located south of building TA-35-67 and under building TA-35-390. The outfall for this system is located on the south rim of the mesa.

PRS 35-009(c) was in use from approximately 1961 until 1990. It consists of a 1,290-gal. tank (TA-35-44) and a distribution box (TA-35-45). The leach field, consisting of 3 trenches covering a total area of 1,600 ft², is located under a dirt access road that runs east and west along the mesa edge on the west side of trailer TA-35-261. The system discharged to Mortandad Canyon through two outfalls located on the north rim of Ten-Site Mesa.

Status:

The Phase I RFI Field investigations have been completed and the RFI Report is under preparation.

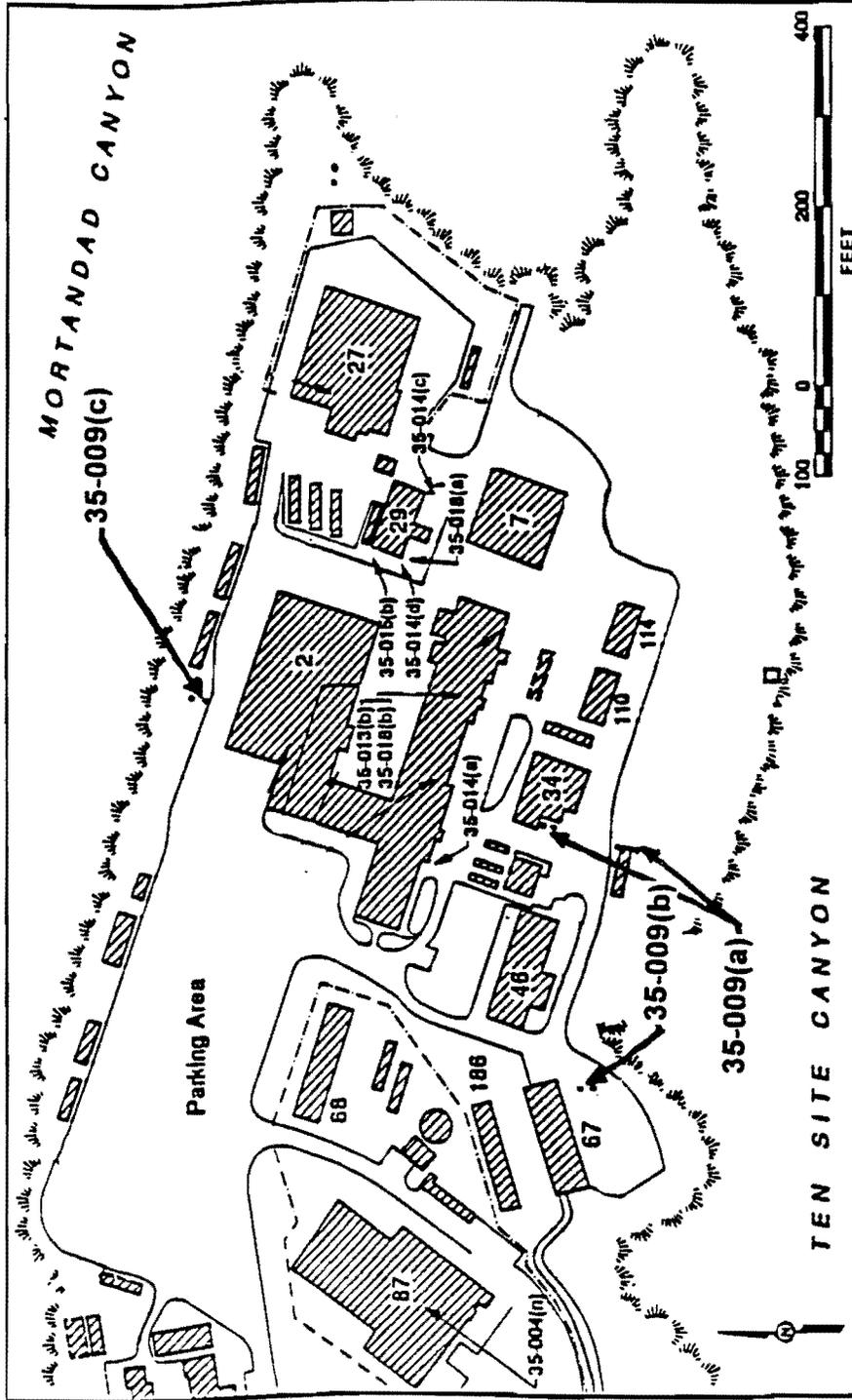
Contaminants of Potential Concern:

The contaminants found above UTLs or SALs are:

Hazardous industrial wastes

Semi-volatile organic compounds: Benzo(a)pyrene
Benzo(k)fluoranthene
Indeo(1, 2, 3-cd)pyrene

TA-35 EAST



**Expedited Clean-up
PRS: 35-015(a)**

Average SRS Score	Estimated Cost FY96 \$	Preliminary Volume Estimate	Projected Start Date
72	171,295	10 cy soil	November 15, 1995

Site Description:

This PRS consists of a waste oil treatment system formerly located on the west side of building TA-35-86. The system reprocessed used oil from the Helios CO₂ laser located in TA-35-86. The treatment facility consisted of oil tanks (TA-35-149 through 154), a grease trap, and an oil treatment unit. Separated water from the oil-recycling process was discharged into Ten-Site Canyon near TA-35-207. Use of the facility was discontinued in 1988 or 1989. A 1994 survey found that approximately 80% of the area of the facility was covered with concrete pads. There were no significant oil spills visible on the concrete pads although oil staining was present in a collection basin associated with the facility.

Status:

Phase I RFI Field investigations have been completed and the RFI Report is being prepared.

Contaminants of Potential Concern:

The contaminants found to be above UTLs or SALs are:

- oil
- metals
- Poly-chlorinated biphenyls (PCBs)
- Semi-volatile organic compounds
- Radionuclides

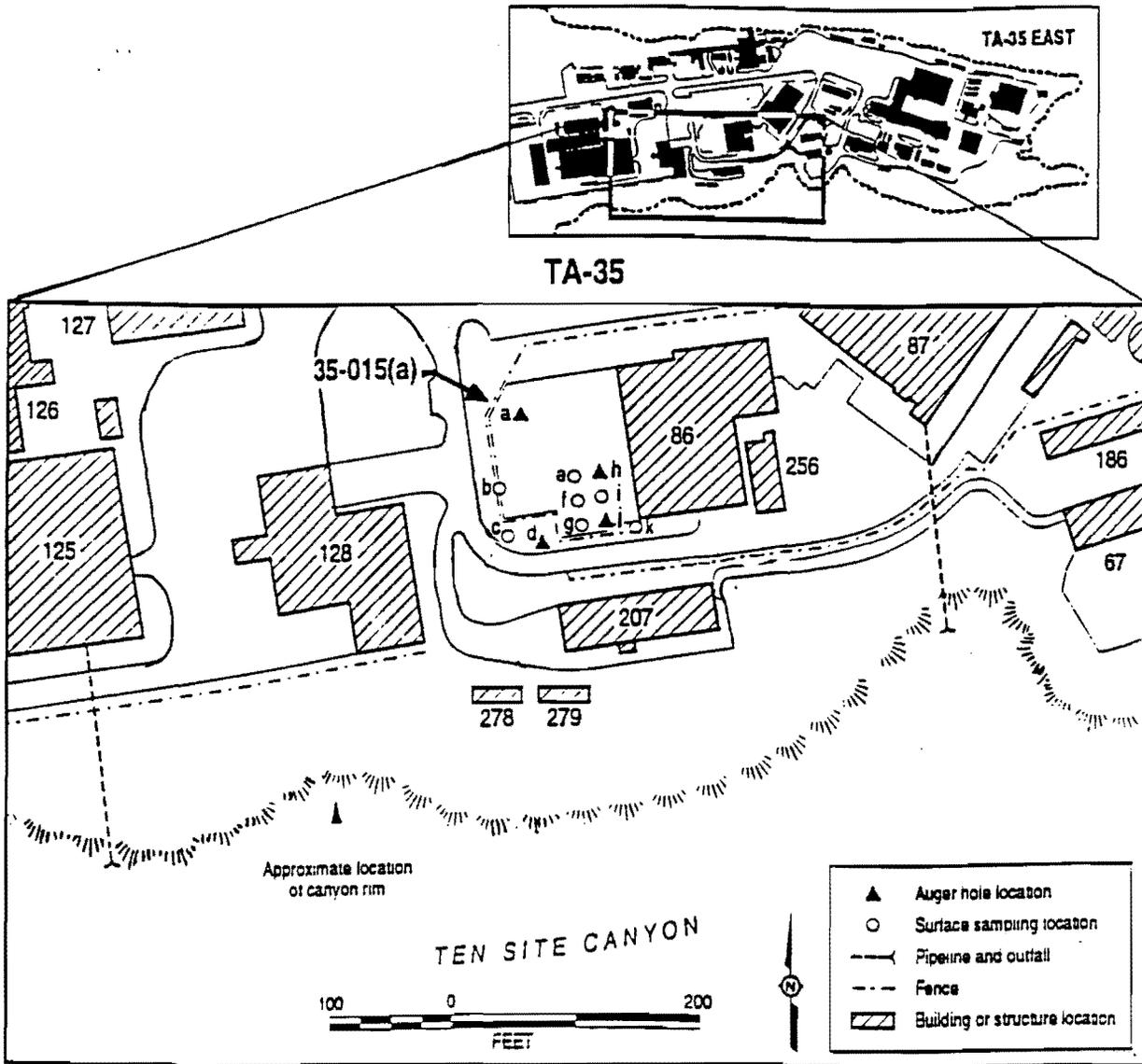


FIG 7-55(64) / EPA / 031694

ENG-R5117 (LANL 1986, 31438)

Voluntary Corrective Action
PRS: 35-018(a)

Average SRS Score	Estimated Cost FY96 \$	Preliminary Volume Estimate	Projected Start Date
60	108,594	5 cy soil	January 3, 1996

Site Description:

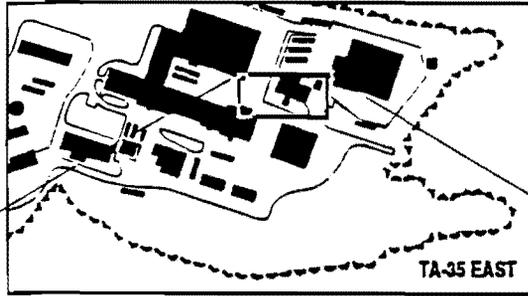
PRS 35-018(a) is associated with a transformer which was reported to be leaking PCB-contaminated dielectric oil. The transformer was located at substation TA-35-32, near the southwest corner of building TA-35-29. In a 1985 assessment survey, the transformer was reported to be dripping onto a porous concrete pad with no drip pan or spill containment. A 1995 survey found that the transformer had been replaced with one containing non-PCB containing dielectric oil. There was no clear evidence of oil staining on the concrete pad. Analytical results from the April 1995 RFI Phase I sampling found PCBs to be present in the soil surrounding the pad. Additional samples were collected in October 1995 in order to establish the extent of the PCB contamination.

Status:

Phase I RFI Field investigations and supplemental field investigations are complete. The RFI Phase Report is under preparation.

Contaminants of Potential Concern:

The contaminant found to be above UTLs or SALs is poly-chlorinated biphenyls (PCBs).



TA-35

