

**PRSs 0-003, 0-012, and 0-030(i) Voluntary Corrective Action/Measure Fact Sheet
Removal of Underground Blow-off Tank, and Septic System Drainlines**

SRS: 0-003 = 26

0-012 = 36

0-030(i) = 43

Erosion Matrix Score: 0-003 = 25.1

0-012 = 10.6

0-030(i) = TBD

Description and History

PRS 0-003 is a former container storage area, approximately 100 ft², located at the east end of the Western Steam Plant. Historical information indicates that the area was used to store 55-gallon steel drums on wooden pallets. These drums contained chemicals such as sodium hydroxide and hexameta phosphate that were added to the boiler feed water to maintain a pH of 10 to 10.5 to prevent the build up of calcium and magnesium carbonate on the heated boiler metal. Oxygen scavengers and chelating compounds were used sparingly, as needed, and may have been stored in the container storage area. The RFI Work Plan for OU 1071 stated that waste oils may also have been stored in the former container storage area, but there is no documentation of this. The types of processes at the Western Steam Plant would have precluded the use or generation of large volumes of oils and waste oils.

PRS 0-012 comprises the Western Steam Plant facility and its components. The Western Steam Plant began operating in 1949 and was put on standby status in 1952 until it was removed from service in 1990. According to the RFI Work Plan for OU 1071, three features of PRS 0-012 are of primary environmental concern: an underground filtration tank, the outfall from the filtration tank to Los Alamos Canyon, and floor drains. As part of the site survey conducted during the initial phase of the RFI, engineering drawings were obtained that identified the filtration tank as a blow-off tank that discharged to the sanitary sewer as opposed to an outfall to Los Alamos Canyon. The floor drains were shown to also discharge to the sanitary sewer as opposed to the street and parking area. A site reconnaissance verified the information on the engineering drawings. The four drainpipes that extend from the south wall of the plant, three of which discharge to the asphalt street and parking area, were found to receive rainwater from a roof drain system only, and not water from the floor drains. The fourth drainpipe from the roof drain system connects to the outfall that the work plan incorrectly identified as the filtration tank outfall.

PRS 0-030(i) is a former septic system that is believed to have served the west (Woman's Army Corps) mess hall, dormitories, barracks, military post office, officer's lounge, post exchange, and the Sundt Apartments along Finch Street and south of Trinity Drive in the late 1940s and early 1950s. The dimensions of the concrete septic tank were approximately 16 ft x 8 ft x 8 ft with 6 in-diameter vitrified clay pipe (VCP) inlet and outlet drainlines. The septic tank was removed during a VCA/VCM in 1996, but the inlet and outlet lines were grouted and left in place.

Contaminants

Based on the results of samples collected at PRSs 0-003 and 0-012 in 1997, and the results of the initial data assessment, several contaminants of potential concern (COPCs) were identified. At PRS 0-003, three inorganics, calcium, lead, and sodium, were detected above background values (BVs) in one sample, and 17 semivolatile organics (SVOCs) were detected in at least one sample. However, all but one of the SVOCs were polynuclear aromatic hydrocarbons (PAHs) that were attributed to the asphalt paving. The remaining SVOC and the three inorganic chemicals were carried forward to the risk-based screening assessment where they were eliminated as COPCs.

At PRS 0-012, four inorganics, copper, lead, mercury, and zinc, were detected above BVs in at least one soil sample. Sixteen organics, 14 of which were SVOCs, were detected in at least one sample. Thirteen of the SVOCs were PAHs that were attributed to sources other than the PRS. The four inorganics and the remaining three organics were eliminated as COPCs during the risk-based screening assessment.

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At PRS 0-030(i), five inorganic chemicals were detected above BVs and 28 organic chemicals were detected in one or more samples. All were carried forward to the risk-based screening assessment where they were eliminated as COPCs.

Rationale

These three PRSs are located on property that is slated for land transfer to either Los Alamos County or San Idelfonso Pueblo. The proposed VCA/VCM activities will cost-effectively remove legacy subsurface structures and associated potential contamination. Since COPCs are identified as each PRS, sampling will ensure that extent of potential contamination has been defined and as well as ensure that cleanup levels are achieved. Additionally, the waste types and volumes and recyclable materials generated during VCA/VCM activities are easily accommodated at local facilities. Completion of these VCA/VCM activities will constitute final remedies at each of the PRSs prior to transfer of the property.

Voluntary Corrective Action

The Voluntary corrective Action will consist of two distinct activities with a possibility of a third, limited, soil removal activity once initial sampling is completed.

The first activity will involve the removal of the underground blow-off tank and associated piping (PRS 0-012). The water currently contained in the tank will be re-sampled prior to disposal. It is currently assumed that the water will be pumped to the sanitary sewer or discharged per ESH-18 guidance, pending evaluation of sample results. The tank and associated piping will then be removed, and confirmatory samples will be collected. The resulting excavation will be backfilled and the asphalt driveway restored.

The second planned activity will involve the removal of the VCP inlet and outlet drainlines at PRS 0-030(i). These were left in place during the original VCA/VCM to remove the concrete septic tank. The VCP will be exposed with a backhoe and removed. Details of the removal activity will be finalized following a review of the original VCA/VCM results. Confirmatory samples will be collected at approximately 28 foot intervals, at two depths if possible, beneath the pipe, at locations with visible staining indicating possible leaks or at joints between adjoining sections of pipe. If necessary, based on field screening or appearance, soil beneath the VCP will be removed and additional confirmatory samples collected. The resulting trench will then be backfilled and the site restored.

As appropriate, a third corrective action activity may be required to remove PAH contaminated soil within PRS 0-003. Existing data will be reviewed and new data may be collected. A decision will then be made regarding the source of any potential contamination and the necessity to remove contaminated structures or materials.

Anticipated Waste Types and Volumes

Four separate waste streams are anticipated from this VCA/VCM as presented in the following table.

| ITEM | WASTE TYPE | ANTICIPATED VOLUME |
|--|---------------------------|---------------------------|
| PAH contaminated soil | Solid | 4 yd ³ |
| Steel tank and piping | Solid (metal for recycle) | 4 yd ³ |
| VCP pipe | Solid | 3 yd ³ |
| PPE, plastic sheeting, and disposable sampling equipment | Solid | < 1 yd ³ |

Estimated Cost

The cost of remedial activities, including planning, sampling and analysis, cleanup, waste disposal, site restoration, and report preparation is estimated to be \$625,000.

Schedule

The field work portion of this VCA/VCM is expected to begin in November 1999 and take approximately 4 weeks to complete. The VCA/VCM report is expected to be completed in June 2000.

Reference List of Past Plans, Reports, NODs, RSI, etc.

- RFI Work Plan for Operable Unit 1071 (LA-UR-92-810), Subsections 5.0 and 5.10, June 1994.
- Voluntary Corrective Action Completion Plan for Potential Release Sites 0-030 (d,h,i,j,k,n,o,p) Town Site Septic Tank Systems (LA-UR-96-936), March 1996.
- Voluntary Corrective Action Completion Report for Potential Release Sites 0-030 (h,i,n,o,p) Group 0-3 Septic Tanks (LA-UR-96-3351), September 1996.
- RFI Report for Potential Release Sites 0-003 and 0-012 (LA-UR-97-3828), September 1997.

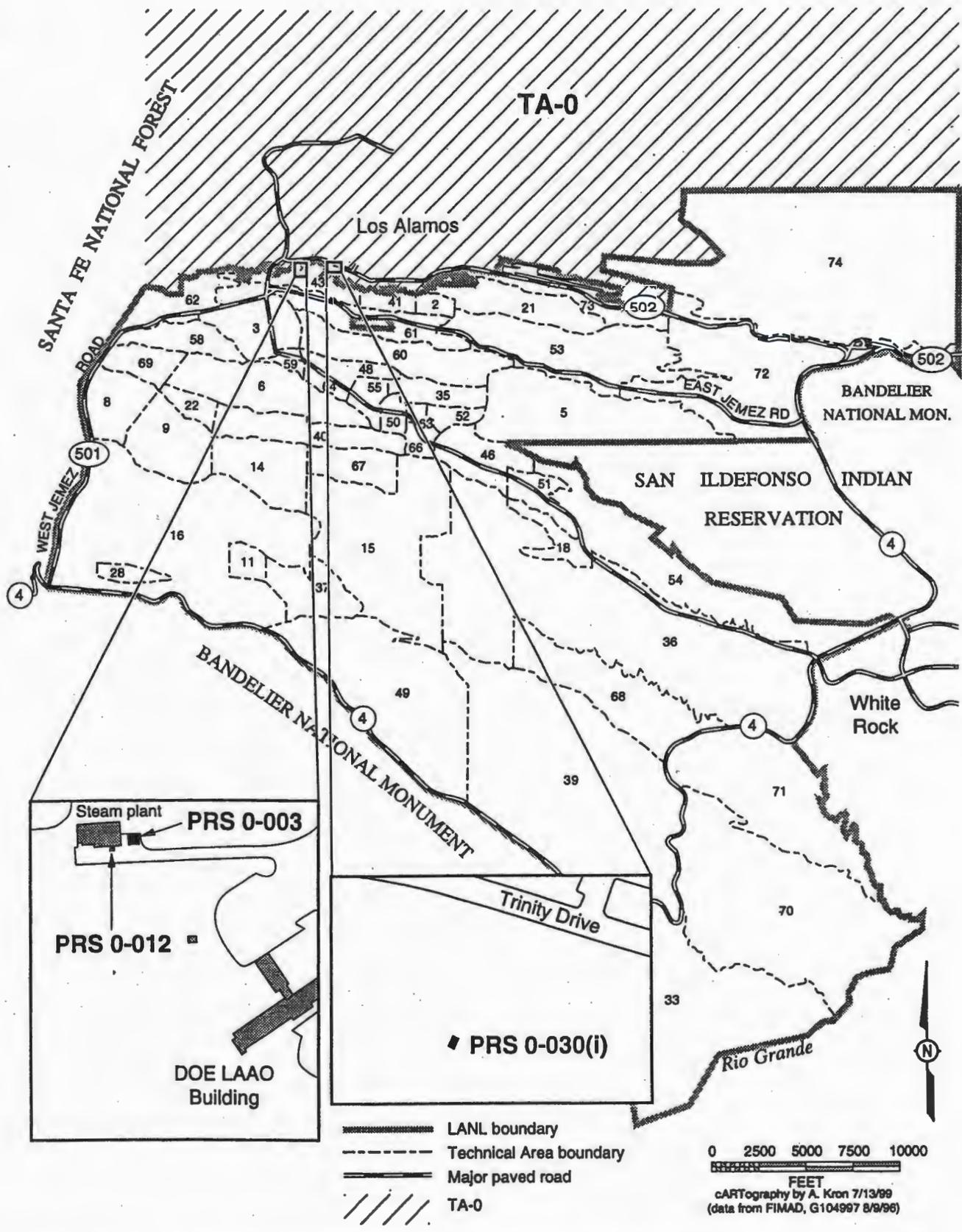


Figure 2.1-1 Location of TA-0 with respect to Laboratory technical areas and surrounding land holdings.

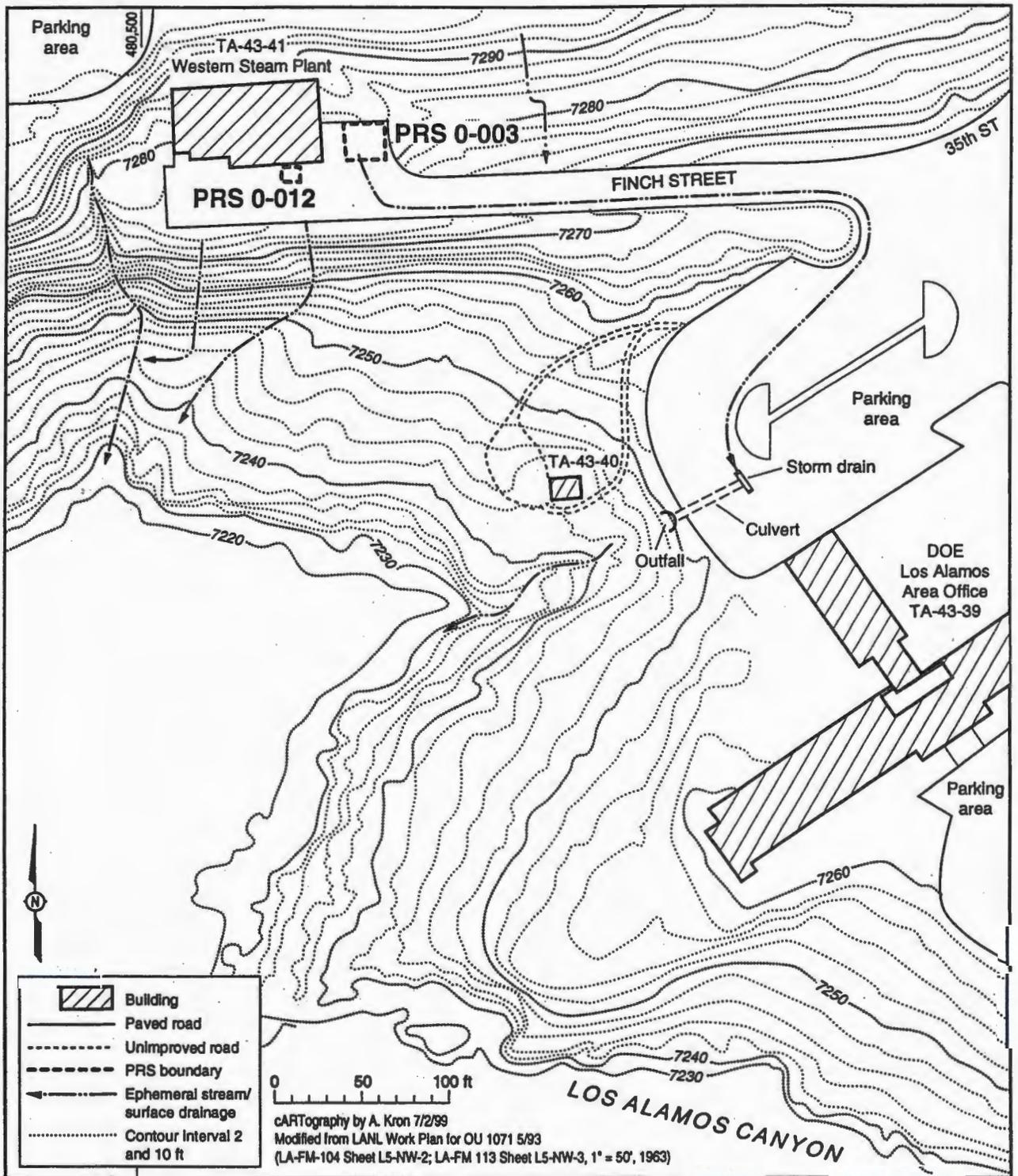


Figure 2.1-2 Locations of PRSs 0-003 and 0-012.

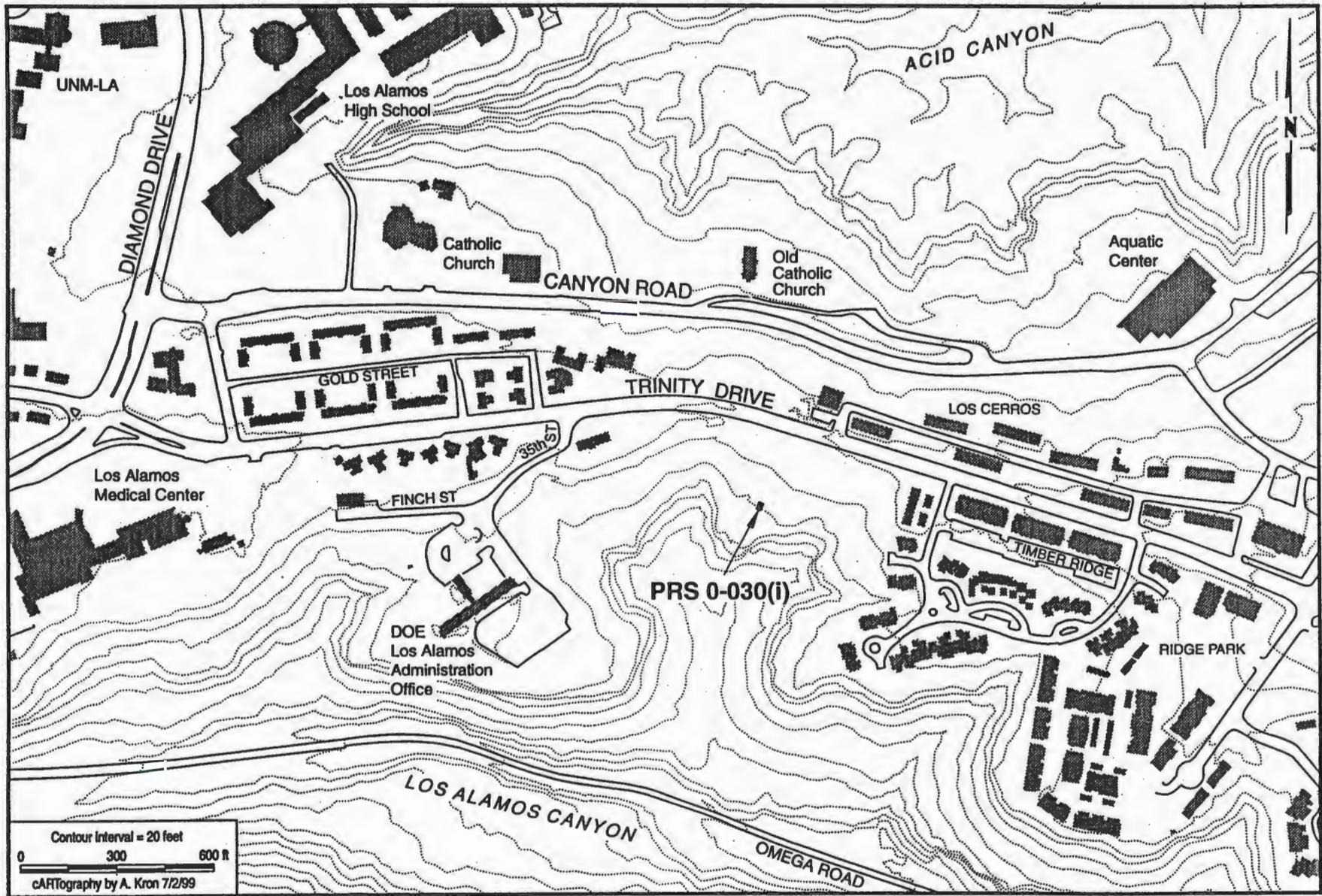


Figure 2.3-1 Location of PRS 0-030(i).