

# DRAFT

## VOLUNTARY CORRECTIVE ACTION FACT SHEET FOR PRS 21-024(I)

### Description and History

Potential Release Site (PRS) 21-024(i) is a septic system that routed waste from building TA-21-152 through a concrete septic tank TA-21-181 (abandoned in place in 1965), and then to the surface at the southeast portion of building TA-21-209. Blow-down from cooling towers at buildings TA-21-166 and TA-21-167 was also routed to this septic system. Influent to PRS 21-024(i) entered via a 6-in. vitrified-clay pipe (VCP) into a concrete septic tank (5 ft x 10 ft x unknown depth) and effluent from this tank discharged through a 6-in. VCP onto a broad, gentle slope approximately 30 ft from the south edge of DP Mesa. This slope is characterized by bedrock, small areas of very thin sediment accumulation, and no vegetation. This slope descends to a steep bedrock cliff (approximately 40 ft high) and eventually to a large, shallow, sloping bench (approximately 50 ft wide) that accommodates broader areas of sediment accumulation. The entire PRS 21-024(i) septic system is believed to be in place.

### Contaminants

Initial reconnaissance sampling was conducted at PRS 21-024(i) in 1988. Phase I activities at PRS 21-024(i) were conducted in 1992 and 1993 and included radiation surveys, surface and shallow-subsurface sampling in the upper outfall area, and subsurface borehole sampling adjacent to the suspected septic tank location (Fig. 2). Samples were analyzed for volatile organic compounds, semivolatile organic compounds, metals, americium-241, cesium-137 (by gamma spectroscopy), isotopic plutonium, radium-226 (by gamma spectroscopy), strontium-90, isotopic thorium, isotopic uranium, total uranium, and tritium.

Analytical results indicate that arsenic is the only Resource Conservation and Recovery Act constituent present in the outfall area at concentrations greater than its screening action level. Lead, barium, chromium, and vanadium are also considered chemicals of potential concern for the outfall area based on the results of a multiple constituent evaluation. Results also indicate that alpha radioactivity, americium-241, strontium-90, uranium-234, uranium-235, uranium-238, plutonium-239, and tritium are present at concentrations greater than background. Tritium was also detected in a borehole drilled in the vicinity of the septic tank. Actinium-227 and its decay series progeny may be present in the outfall area and may be the source of the high alpha radioactivity.



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HSWA CANAL 1/1106/21/21-024(C+I) + 21-024(I)

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## Rationale

PRS 21-024(i) has a ranking of 53 in the Site Ranking System. In addition, water quality samples indicate that storm water runoff from the site exceeds New Mexico Environment Department water quality standards for several constituents. In addition, radioactive contamination is present in the outfall and maybe present in the septic tank. Therefore, a ~~voluntary corrective action (VCA)~~ will be conducted at this site. *accelerated cleanup*

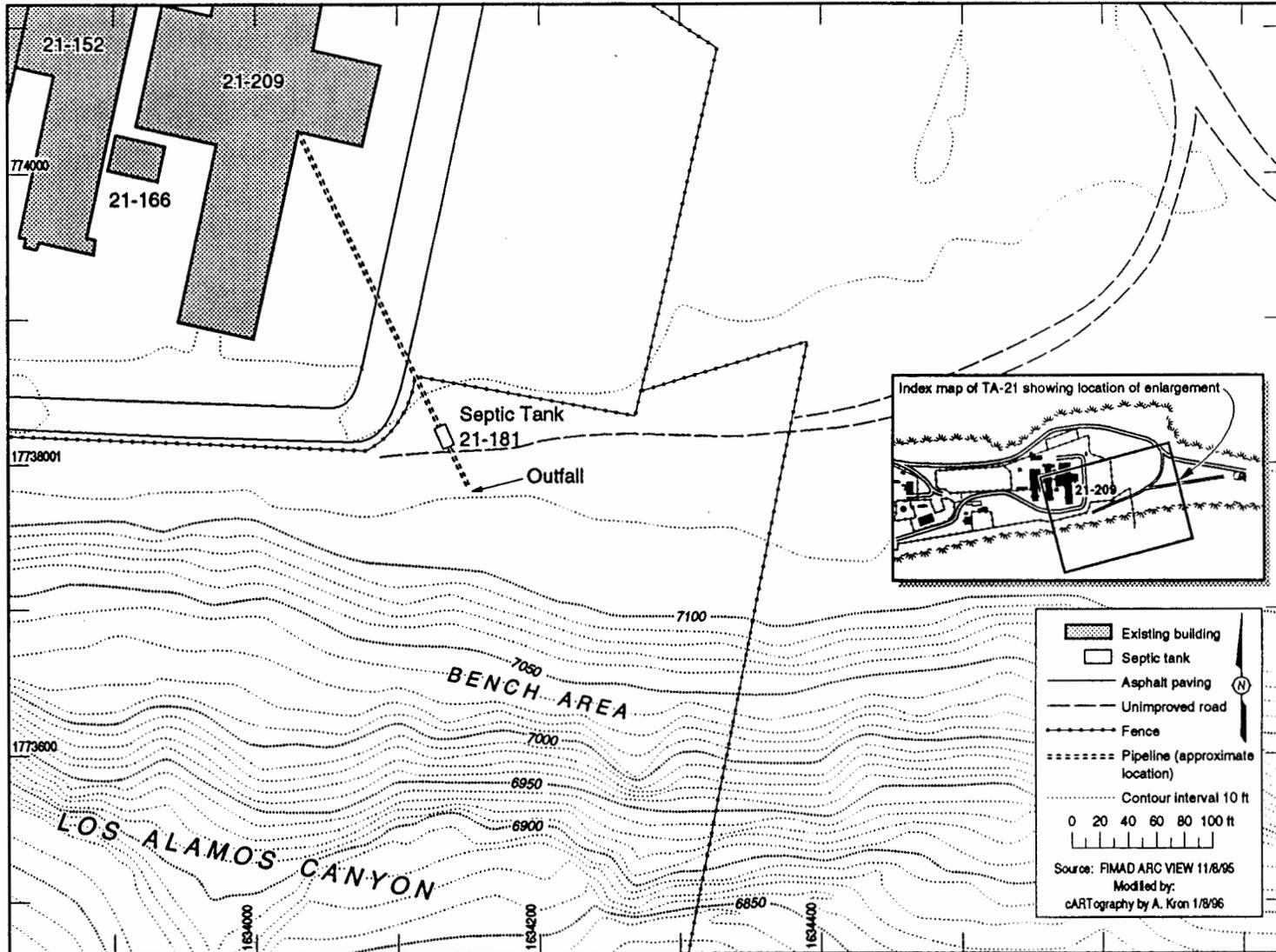
## ~~Voluntary Corrective Action~~ AC

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The ~~VCA~~ at PRS 21-024(i) will include removal of the entire septic system and any contaminated soil in the vicinity. Based on common septic tank abandonment practices at Technical Area (TA) 21, the septic tank is expected to contain fill material and sludge. If the tank is found not to be contaminated or pose no health risks it may be left in place. However, if tank is found to be highly contaminated, the tank and any associated contaminated soil will be sent to TA-54 for disposal. *How?*

Field screening will be conducted on soils in the outfall area and the associated drainage area to verify that the extent of contaminated soil to be removed during the VCA meets remediation goals to be developed in the VCA plan. Metals screening will be conducted using an x-ray fluorescence (XRF) portable detector, and radioactivity screening will be conducted using a field instruments for detection of low-energy radiation (FIDLER). Contaminated soil will be removed using a vacuum excavation device. The soil will be collected on-site in appropriate containers and sent to TA-54 for disposal. *LEVELS?*

## Estimated Cost

The VCA activities at PRS 21-024(i), including planning, cleanup, waste disposal, site restoration, and report preparation, are expected to cost approximately \$251,000.



Location of PRS 21-024(I).