ER Site No. 137: Bldg 6540/6542 Septic System

ADS: 1295
Operable Unit: Septic Tanks and Drainfields

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Site History

ER Site 137 includes the two septic systems located southwest of Building 6540. Buildings 6540 and 6542 are located in the northeast quadrant of Technical Area III. Building 6540 was constructed in 1959 to house instrumentation for the short rocket-sled track, the centrifuge, and high explosives (HE) test facilities. In the mid-1960s, a darkroom was constructed to develop black-and-white and high-speed color photographs of various experiments. The darkroom facility was in use from 1966 until 1989.

Two septic tanks and leachfields served the building. A 1900-L (500-gal) tank and a leachfield with six 10-cm by 18-m (4-in by 60-ft) distribution lines are located across the fence directly southwest of Building 6542, and a 3400-L (900-gal) tank and a leachfield with 12 distribution lines are located south of the 1900-L tank. The total leaching area is 268 m2 (2880 ft2). The south system was installed to replace the undersized north system. Both septic tanks are now inactive.

Approximately 19 L (5 gal) each of fixer and developer solution from the darkroom were discharged to the septic system every two to three months. Small quantities of trichloroethene (TCE) were used for cleaning parts. Estimated effluent discharge rates range between 190 and 3040 L/day (60 and 800 gal/day).

The site is approximately 145 meters (475 feet) above the regional water table.

Constituents of Concern

The constituents of concern at the site include photoprocessing wastes (silver, cyanide, hexavalent chromium, and cadmium) and TCE. Shallow subsurface soil samples collected in 1991 just below the drain lines from the 3400-L tank were analyzed for Semi-Volatile Organic Compounds(SVOCs) and toxic metals during installation of a new sanitary sewer line.

Current Hazards

No known surface or subsurface hazards have been identified, based on environmental soil and soil-gas sampling that has been conducted at the site.

Current Status of Work

Septic tank sampling was performed in the spring of 1994 to characterize the waste in the tanks for disposal.

Passive soil gas sampling was performed at the site in the summer of 1994. No significant Volatile Organic Compounds (VOC) anomalies were found.

Soil sampling in the two drainfields and on either side of both septic tanks was completed in the fall of 1994.

Disposal of the contents of the septic tanks was completed in 1995. The tanks were decontaminated and then backfilled with clean soil. The abandoned drainfields drainlines are still present at the site. The south system drainlines are buried at an average depth of five feet below the surface, and those for the north septic system are an average of three feet deep.

A confirmatory sampling No Further Action (NFA) proposal was submitted to the New Mexico Environment Department/Hazardous Radioactive Materials Bureau (NMED/HRMB) in January 1997. NMED issued a Request for Supplemental Information (RSI) in June 1999. SNL/NM responded to the RSI in September 1999.

Future Work Planned

Additional work may be completed at this site pursuant to the Small Septic Systems sampling and analysis plan (SAP).

Waste Volume Estimated/Generated

Around 2 drums of liquid radioactive waste, 4 drums of hazardous waste, 21 drums of mixed waste, and one mixed waste PPE drum were generated.

Information for ER Site 137 was last updated Jan 7, 2002.