5.21 SWMU 31: DEMILITARIZATION AREA (NORTHEAST OF SWMU 1)

5.21.1 Site Description and Waste Generation

SWMU 31 is an active open burning and open detonation area located in the south central portion of TEAD-S (Figure 5.21-1). The site occupies approximately 29 acres and consists of 20 detonation pits approximately 15 ft deep (NUS 1987). This site has been active since the 1970s (USAEHA 1986). Munitions detonated in the pits contain explosive or reactive compounds including TNT, RDX, Nitrostarch, PETN, Composition B, Tetryl, and black powder (NUS 1987). NUS (1987) noted that lead azide and lead styphnate are components of some of these munitions, and that significant quantities of lead may result as residue after detonation. Explosives-contaminated wood and metal parts are burned in a separate trench within SWMU 31 (USAEHA 1986). SWMU 31 is currently operating under RCRA interim status (NUS 1987).

5.21.2 Site Hydrogeology

SWMU 31 is located in a low-lying area at the base of a plateau. Surface water probably occurs primarily as runoff after major storms, and flows south past the TEAD-S boundary and then west to a low area south of SWMU 1. Water may also become ponded in the pits at this SWMU. The site is underlain by a Quaternary pediment capped by alluvium. Subsurface lithologic descriptions are based on field boring logs from the two closest downgradient monitoring wells (S-4, S-17-88), and from a completed but dry well nearby (S-9).

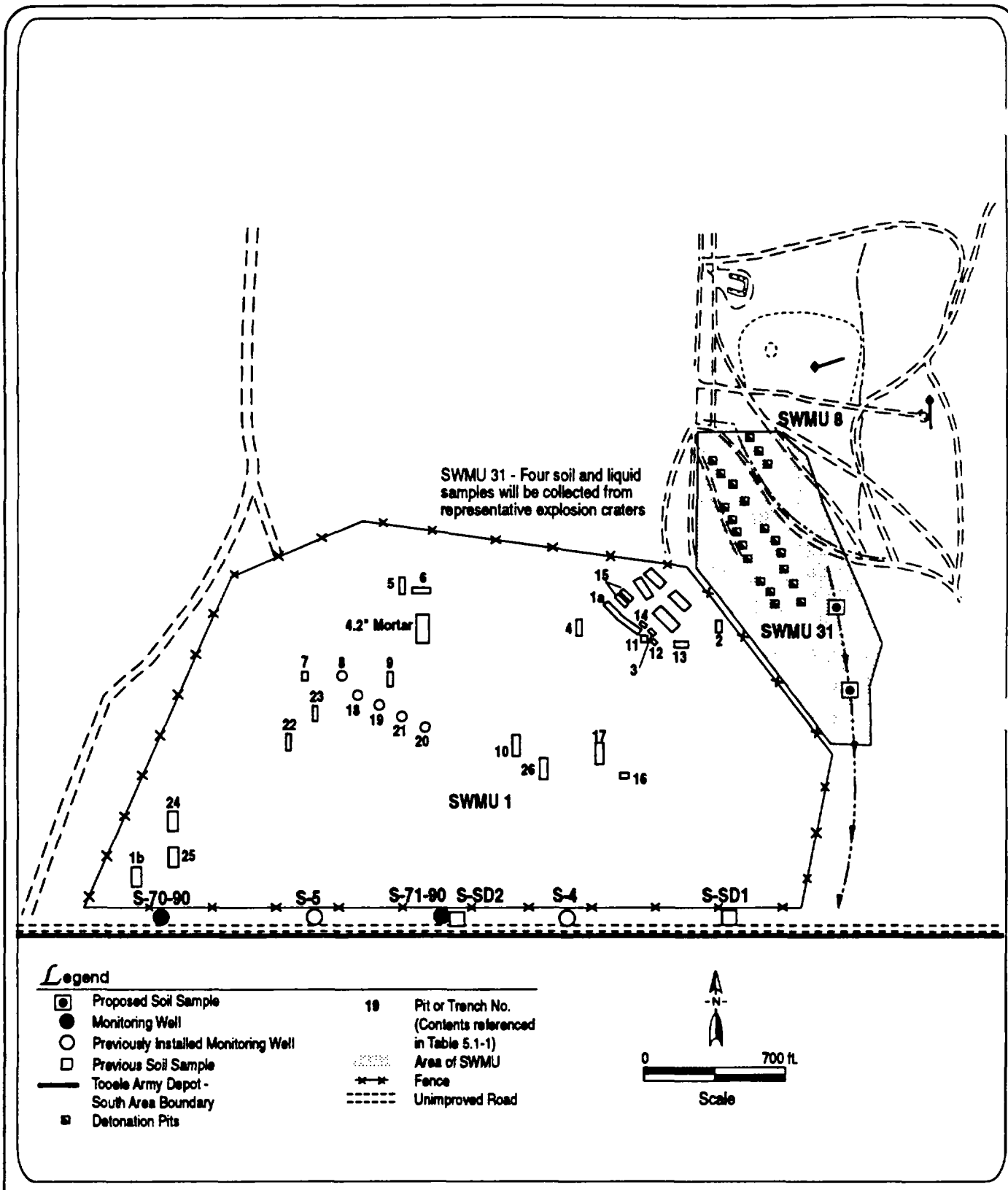
Surface soil down to a depth of approximately 1 ft is composed of yellowish-brown, clayey sand, and clayey silt (SM, ML). The unsaturated zone is composed of approximately 70 ft of firm, light gray to light yellowish-gray, clayey silt and silty clay (ML, CL). The saturated zone from approximately 70 to 84 ft is light gray, silty clay and clayey silt (ML, CL). The depth to groundwater in July 1990 is estimated to be 74 ft below ground surface. The groundwater elevation is approximately 5,018 ft msl. Groundwater at SWMU 31 flows south toward the TEAD-S southern boundary or southwest into SWMU 1.

5.21.3 Previous Sampling and RFI-Phase I Sampling Results

No sampling of soil or groundwater has been performed at SWMU 31. Monitoring wells that were originally planned at this SWMU were canceled because open detonation occurring at SWMU 31 during the RFI-Phase I field program was believed to create sufficient force that wells in the planned locations would be destroyed.

5.21.4 Contamination Assessment

Explosives and metals above background concentrations may occur in SWMU 31 because of open detonation of munitions there. However, open detonation is an effective method of explosives destruction, as is indicated by little or no explosives contamination detected in SWMUs 1 and 25, where this operation was conducted in the past.



Source:

ERTEC 1982
EBASCO Field Measurement
USATHAMA 1979
Basic Information Maps 1985
EPIC 1986

Figure 5.21-1
SWMU 31 - Demilitarization Area (Northeast of SWMU 1)
Proposed Sampling Locations

Tooele Army Depot - South Area
Prepared by: Ebasco Services Incorporated

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5.21.5 Recommendations

A Phase II program is recommended at SWMU 31. Approximately four soil borings and four surface water samples should be collected from representative explosion craters. In addition, two surficial soil samples should be collected in the streambed downslope from this SWMU. The soil borings should be sampled at the 0- to 6-inch, 6- to 12-inch, and 2- to 3-ft depth intervals. All soil and water samples from the craters should be analyzed for explosives and metals. A representative number of the crater samples should also be analyzed for total organic carbon, pH, and electrical conductance. The samples from the streambed should also be analyzed for volatile and semivolatile organics and agent breakdown products since this streambed leads from SWMUs 8 and 9.

The results of the Phase II investigations at SWMUs 8 and 31 should be used to determine which unit should include the area of overlap. Any corrective measures study of this unit would be performed at the time of closure under the RCRA open burning/open detonation permit.