

5.22 SWMU 32: RAILROAD SCRAP YARD

5.22.1 Site Description and Waste Generation

SWMU 32 is located in the northeast portion of TEAD-S adjacent to SWMU 28 (Figure 5.22-1). NUS (1987) reported that in this area, metal piping, shelving, machine parts, and plastic hose covered an area approximately 60 by 600 ft. There were also drums present, some of which contained metal scrap and some of which were empty. During EBASCO's initial site visit in August 1989, a variety of scrap metal was strewn on the ground adjacent to the tracks. Among the scrap, two 55-gallon drums containing an unknown fluffy material resembling insulation were observed. This product was sampled in October 1989, and the lab results are presented in Section 5.22.3. All metal scrap was removed from SWMU 32 between EBASCO's initial site visit in August 1989 and field mobilization in April 1990, and no ground staining or other evidence of contamination remains there.

5.22.2 Site Hydrogeology

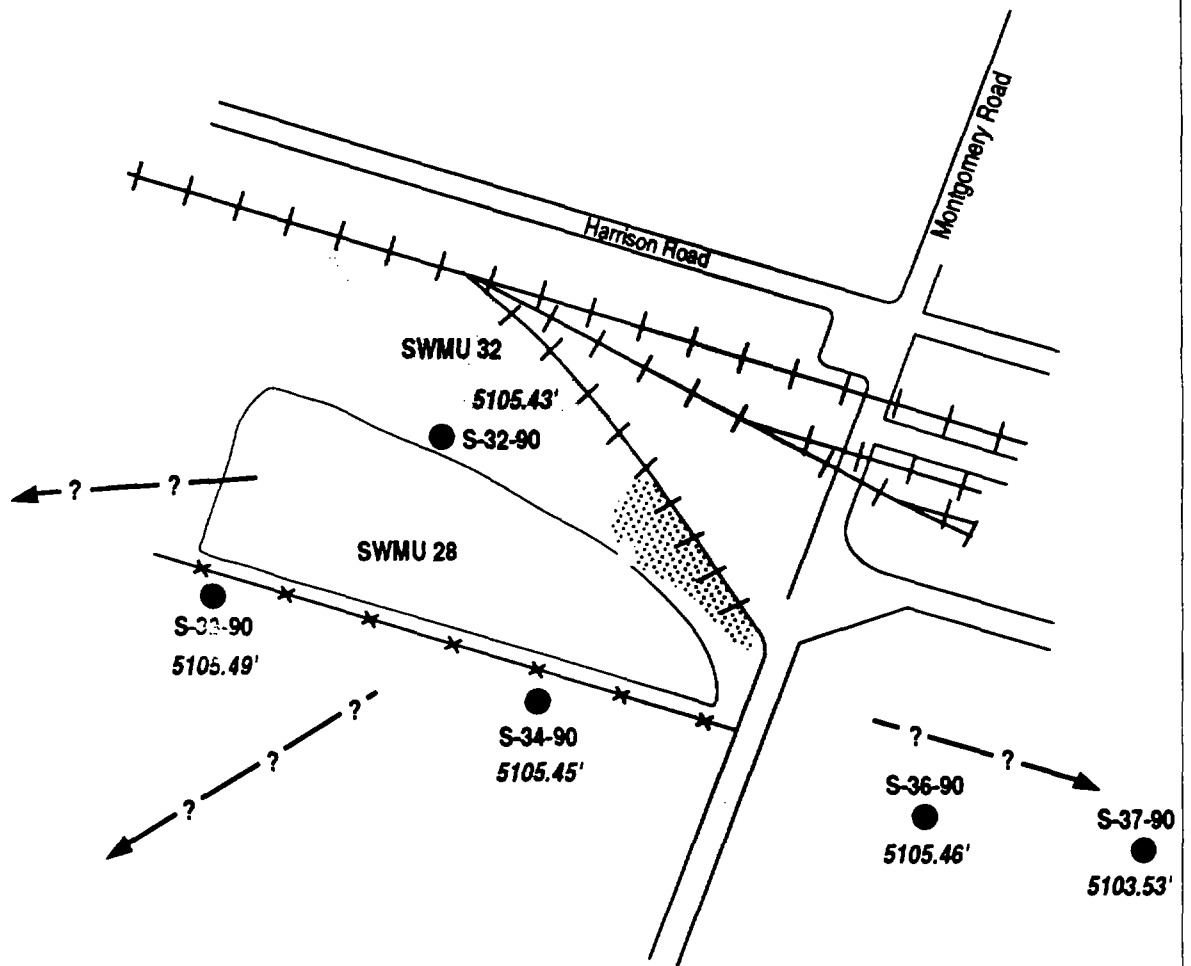
The land around SWMU 32 slopes gently to the southwest and is underlain by coarse alluvial gravels of Quaternary age. Subsurface lithologic data for this area are available in the field boring logs (Appendix A) from the three closest monitoring wells (S-32-90, S-33-90, S-34-90).

Surface soil at SWMU 32 is loose, yellowish-brown, organic rich (e.g., roots and rootlets) silt with minor gravel (ML). The unsaturated zone is approximately 200 ft thick and is composed of pale brown, silty gravel (GM) with minor silty clay (CL, ML) interbeds.

The saturated zone from approximately 205 to 240 ft is composed of pale brown, clayey gravel, gravelly clay, and gravelly silt (GM, ML, CL). The screened interval was 20 ft in wells S-32-90, S-33-90, and S-34-90, from 215 to 235 ft, 220 to 240 ft, and 209 to 229 ft, respectively. Three monitoring wells were installed south of SWMU 32 at SWMU 28 (S-32-90, S-33-90, S-34-90). Groundwater was measured in July 1990 at 219 ft in well S-32-90, 207 ft in well S-33-90, and 209 ft in well S-34-90, at an elevation of 5,105 ft msl in all three wells. The hydraulic gradient is flat in this area; therefore, groundwater flows very slowly or not at all. The direction of groundwater flow is indeterminate; however, groundwater flows west or southwest from other sites along the west side of Montgomery Road. The groundwater high that may control groundwater flow directions at this site may extend to SWMU 5, following a water main that parallels Montgomery Road (see Plate 3).

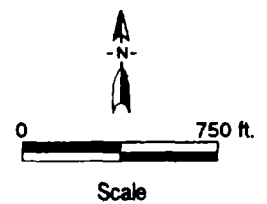
5.22.3 Previous Sampling and RFI-Phase I Sampling Results

No historical sampling of groundwater or soil was conducted at SWMU 32 prior to the RFI-Phase I. In October 1989 following EBASCO's initial site visit, a grab sample of unidentified white fluffy material was collected from two 55-gallon drums that were among the scrap identified at the SWMU. This material resembled weathered fiberglass or other fibrous, friable insulation. The samples were analyzed for EP toxicity and ICP metals, chloride, semivolatile organics, organophosphorus pesticides, chlorinated herbicides, oil and grease,



Legend

- 5105.48' Monitoring Well and Groundwater Elevation
- Area of SWMU
- ← - - - Groundwater Flow Direction, July 1990
- × × × Fence
- ==== Road
- +++ Railroad
- Coal Unloading Area



Source:
 EBASCO Field Measurement
 Basic Information Maps 1985
 EPIC 1982

Figure 5.22-1
Site Map
SWMU 32 - Railroad Scrap Yard
 Tooele Army Depot - South Area
 Prepared by: Ebasco Services Incorporated

moisture, pH, reactivity, and flashpoint. Detections resulting from these analyses are presented in Table 5.22-1.

No soil sampling was conducted at SWMU 32 during the RFI-Phase I because the site history investigation and site visit revealed no evidence of releases of chemical wastes. The EP toxicity metals analysis indicated that chromium, at 24,000 µg/l exceeded the toxicity characteristic maximum concentration of 5,000 µg/l. However, it is unlikely that significant contamination could have migrated from this drum into the surrounding soil, and the drum had been removed by the time of the RFI-Phase I field program. Three monitoring wells were installed during the RFI-Phase I at adjacent SWMU 28. Detections in groundwater samples from these nearby wells are summarized in Table 5.18-1. Because of suspect detections of cyclohexanone and explosives after the original Phase I sampling, these three wells were resampled during the interim sampling program. Figures 5.18-1 through 5.18-4 illustrate sampling locations, compounds detected, and their associated concentrations.

5.22.4 Contamination Assessment

The organic compounds identified in the groundwater samples from well S-32-90 include methylene chloride and the explosive RDX. Methylene chloride was also detected in the method blank for the analytical procedure at approximately the same low concentration and is, therefore, considered to be a result of laboratory contaminants (EPA 1990). RDX was detected at a very low concentration (0.85 µg/l) that may indicate a release of SWMU 28 contaminants to the groundwater, since high explosives may have been disposed of there. However, no explosives are likely to be associated with the scrap metal and drums that were stored in SWMU 32.

5.22.5 Recommendations

No additional characterization of SWMU 32 is recommended. However, annual monitoring of the groundwater monitoring wells surrounding SWMU 28 is recommended. Although groundwater flow directions in this area are unclear, any contamination released to groundwater in the area of these two SWMUs is likely to be detected in one or more of these wells.

PRODUCT

Analytical Groups and Analytes Detected	PR - 32
Semivolatile Organics (µg/g):	
2,3-Dimethylheptane	0.52 J, B
2,4-Dimethylheptane	0.87 J, B
2,5-Dione-3-hexene	3.9 J, B
3,4-Dimethylheptane	0.36 J,B
Unknowns	10 J,B
Organophosphorous Pesticides (µg/g):	
Coumaphous	0.030 (0.019)
EP Toxic Metals (µg/l):	
Arsenic (As)	110 (10)
Barium (Ba)	110 (250)
Cadmium (Cd)	26 (4.0)
Chromium (Cr)	24000 (5.0)
Lead (Pb)	3100 (5.0)
Silver (Ag)	36 (5.0)
Chlorinated Herbicides:	BDL
Reactivity:	
Cyanide	
Sulfide	
pH:	10
Flashpoint:	NF (60°C)
Moisture:	21.85%

5-235

J Estimated value below detection limit
 B Detected in method blank
 () Detection limit
 mg/g Microgram per gram
 mg/l Microgram per liter

NF No flashpoint
 X Sample is non-reactive
 BDL Below detection limit

Reference: MetaTrace, Inc. 1989