

5.9 SWMU 14: BUILDING S-108 (FORMER MOTOR POOL)

5.9.1 Site Description and Waste Generation

Building S-108 is located in the administration area and currently houses the Chemical Surety Office (Figure 5.9-1). This building was previously named S-108, but was renumbered 5108 in 1991. A hard-packed gravel apron and parking lot surround the building. The building was formerly a motor pool area where spills of petroleum products, solvents, and oils may have occurred (USAEHA 1986). The Installation Assessment (USATHAMA 1979) also reported that this building was once used for processing M12 (machine gun) links and for welding. Potential contaminants from this operation may include hydrochloric, chromic, and phosphoric acids and metal dust.

5.9.2 Site Hydrogeology

SWMU 14 is located on southwest-sloping topography at approximately 5,350 ft above msl in the northeastern part of TEAD-S. The site is underlain by coarse alluvial gravels of Quaternary age. Details on subsurface lithology are extrapolated from the two closest monitoring wells (S-32-90, S-36-90) and from soil samples S-SS-14-01, S-SS-14-02, S-SS-14-03, and S-SS-14-BK.

The unsaturated zone is approximately 215 ft thick and is composed of pale brown to light yellowish-brown silty gravel with a trace of fine- to coarse-grained sand (GP, GW, GM). Based on bore log descriptions, the saturated zone, from approximately 220 to 235 ft, is composed of pale brown to light yellowish-brown, clayey gravel and gravelly clay (GM, GP, CL). The depth to groundwater in July 1990 was estimated to be 245 ft.

The groundwater elevation at SWMU 14 is approximately 5,105 ft msl (Plate 3). The hydraulic gradient is believed to be flat in this area, so that groundwater may be stagnant or may flow in any direction at a very low velocity. SWMU 14 may be located on a groundwater high that extends southwest along Montgomery Road past SWMUs 21 and 22 to SWMU 5. The groundwater high may be attributed to leakage from a water main that follows the road or to building discharge in and near SWMUs 22 and 5.

5.9.3 Previous Sampling and RFI-Phase I Sampling Results

No previous sampling was conducted at SWMU 14. During the RFI-Phase I, soil gas analyses were conducted at 12 locations surrounding Building 5108, and four soil samples were collected. To detect either fuel or solvent spills, the soil gas samples were analyzed for benzene, toluene, xylene, trans-dichloroethylene, trichloroethylene, and tetrachloroethylene. Soil samples were collected from locations with the highest probability of contamination based on soil gas results. One soil sample was collected northwest of SWMU 14 to determine background soil conditions. All soil samples, except the background sample, were analyzed for volatile organics, semivolatile organics, total petroleum hydrocarbons, and metals. The background sample was analyzed for metals only. Detections in the soil and soil gas samples are presented in Table 5.9-1. Soil and soil gas sampling locations, detected compounds, and their concentrations are presented in Figures 5.9-2 through 5.9-4.

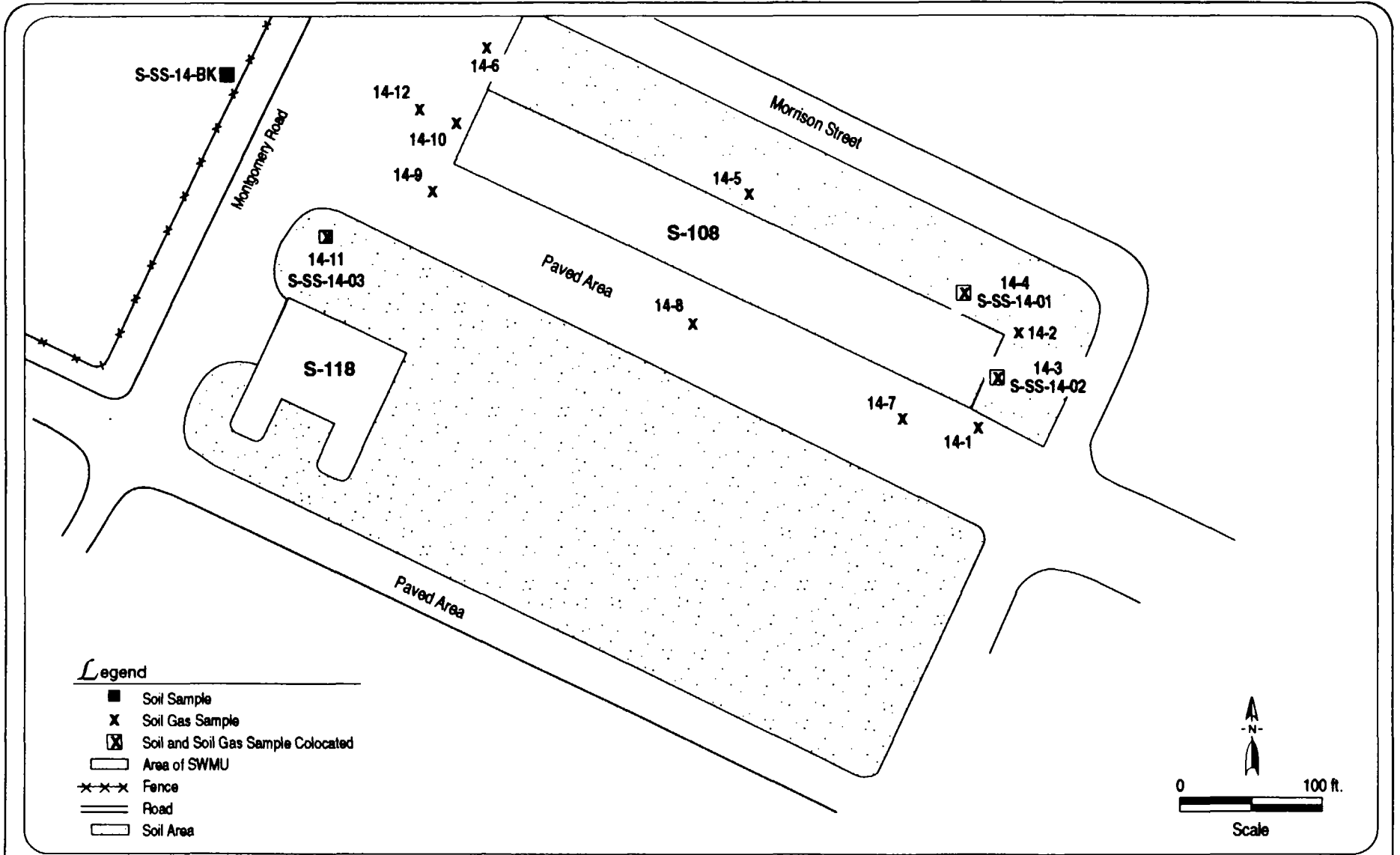


Figure 5.9-1
Site Map
SWMU 14 - Building S-108
(Former Motor Pool) as Remodeled, 1988
 Tooele Army Depot - South Area
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SOIL (µg/g)

Analytical Groups and Analytes Detected	S-SS-14-01	S-SS-14-02	S-SS-14-03	S-SS-14-BK ¹
Volatile Organics:				
Acetone (ACET)	0.025	0.020	0.013	
Unknowns		0.0087*	0.0064*	
Semivolatile Organics:				
1,1,2,2-Tetrachloroethane (TCLEA)	0.22*	NA	NA	
Unknowns	9.3*	12*	18*	
Metals:				
Arsenic (As)	15	16	42	17
Beryllium (Be)	LT 0.41	0.24	0.26	0.24
Chromium (Cr)	23	18	17	20
Copper (Cu)	24*	28*	41*	15
Lead (Pb)	22	35	19	22
Mercury (Hg)	LT 0.026	LT 0.026	0.50	0.030
Silver (Ag)	0.13	0.27	0.19	0.52
Sodium (Na)	LT 260	LT 100	4800	2200
Zinc (Zn)	LT 40	60	59	50
Petroleum Hydrocarbons:				
	LT 130	LT 130	260	

5-99

1 Metals analysis only
 * Detected in associated method blank
 NA Not analyzed
 LT Less than
 µg/g Microgram per gram

TABLE 5.9-1

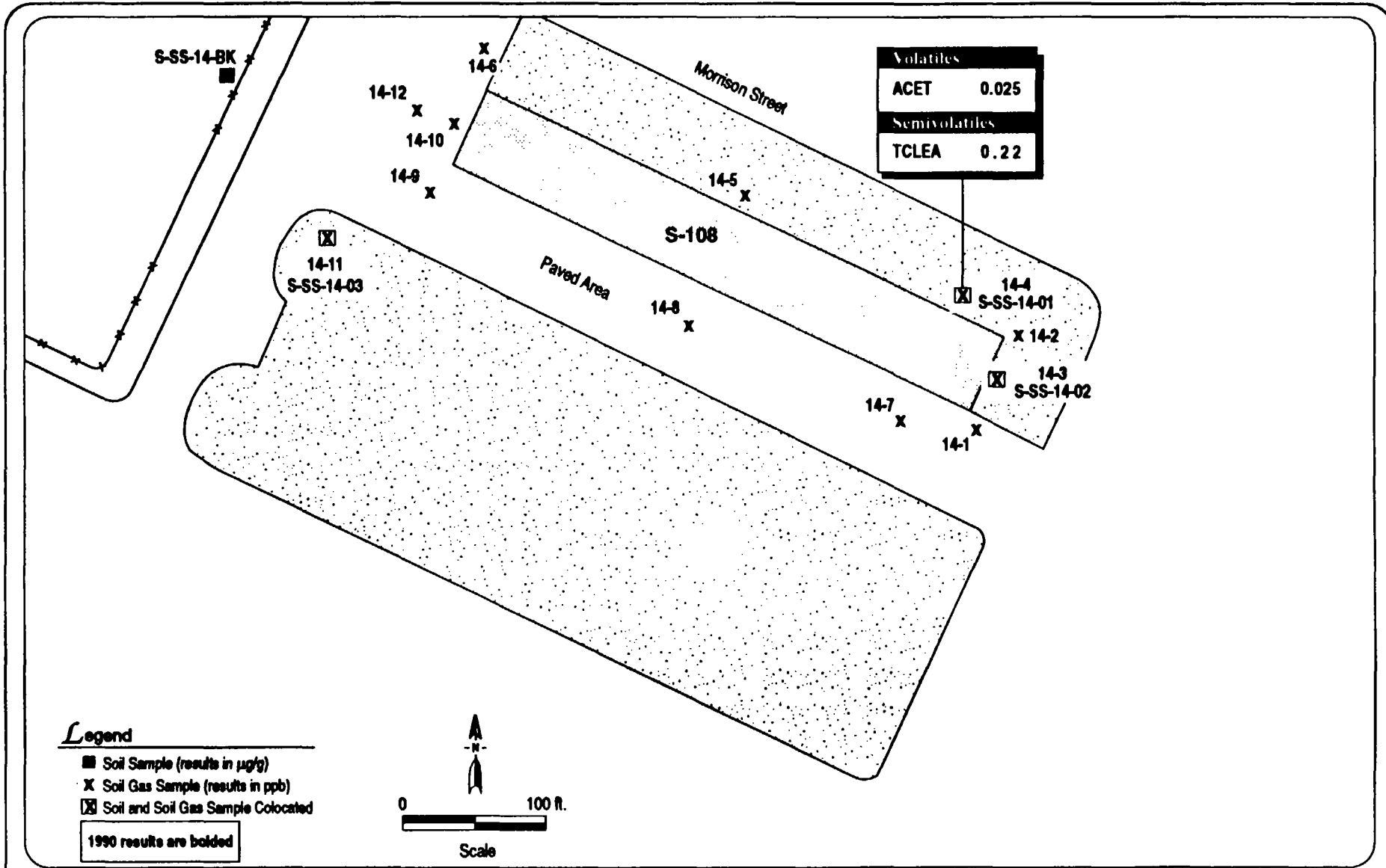
Summary of RFI-Phase I Investigations for
SWMU 14: Building S-108 (Former Motor Pool)

SOIL GAS (ppb)

Sample Number	11DCE	Benzene	TRCLE	Toluene	TCLEE	Xylene	Remarks
14-01	LT 5	LT 5	150	LT 5	LT 5	5.2	**
14-02	130	260	LT 5	110	4.6	LT 5	**
14-02 ^d	LT 5	LT 5	LT 5	LT 5	13	LT 5	**
14-03	120	LT 5	LT 5	90	LT 5	LT 5	**
14-04	LT 5	150	LT 5	13	LT 5	LT 5	**
14-05	LT 5	180	LT 5	LT 5	LT 5	LT 5	**
14-06	LT 5	LT 5	LT 5	LT 5	10	25	**
14-07	LT 5	LT 5	LT 5	7.9	LT 5	LT 5	**
14-08	LT 5	LT 5	35	LT 5	LT 5	LT 5	**
14-09	LT 5	LT 5	LT 5	56	LT 5	50	**
14-10	LT 5	LT 5	LT 5	13	LT 5	26	**
14-10 ^d	LT 5	LT 5	LT 5	9.7	LT 5	23	**
14-11	LT 5	LT 5	46	10	LT 5	63	**
14-12	LT 5	LT 5	14	LT 5	LT 5	44	**

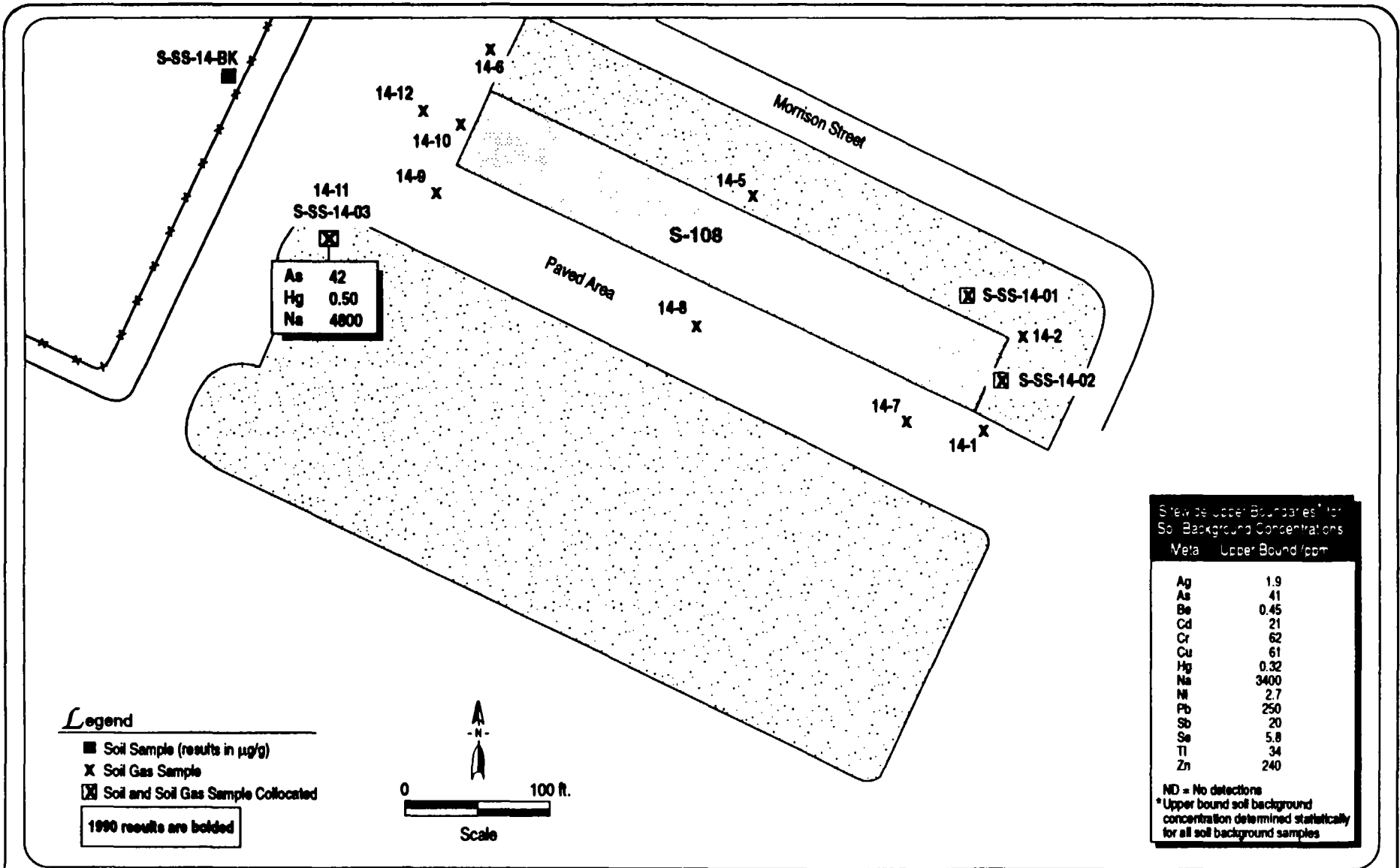
S-100

d Duplicate sample
 11DCE Dichloroethylene
 LT Less than
 ppb Parts per billion
 TCLEE Tetrachloroethylene
 TRCLE Trichloroethylene
 ** Detection was a multippeak response indicative of a fuel product



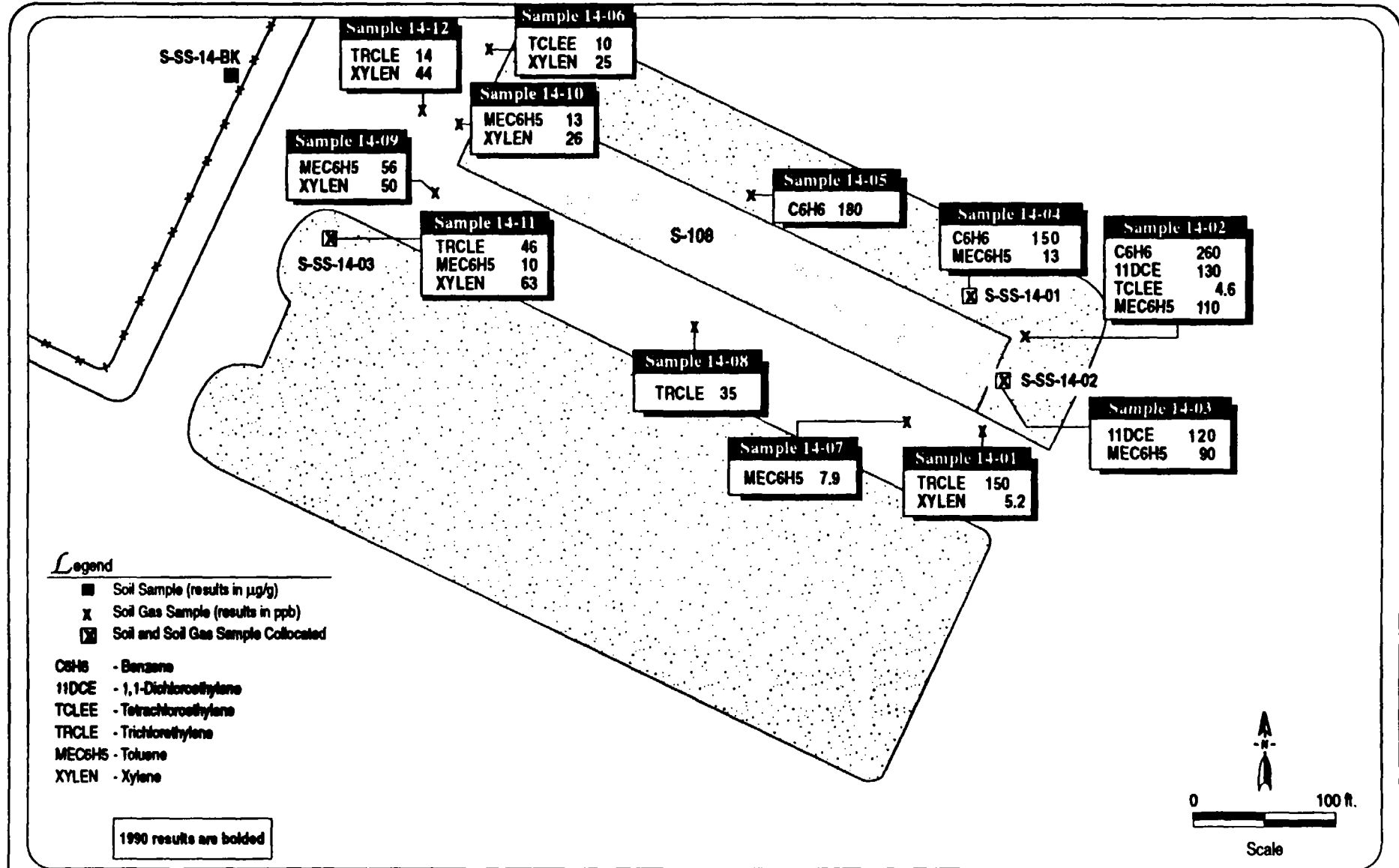
Tooele Army Depot - South Area
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Figure 5.9-2
SWMU 14 - Building S-108
(Former Motor Pool) as Remodeled, 1988
Organics



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Figure 5.9-3
SWMU 14 - Building S-108
(Former Motor Pool) as Remodeled, 1988
Metals



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Figure 5.9-4
 SWMU 14 - Building S-108
 (Former Motor Pool) as Remodeled, 1988
 Soil Gas Detections

5.9.4 Contamination Assessment

Soil gas analyses indicated low concentrations (less than 500 parts per billion) of fuel- and solvent-related volatile organics. Benzene was detected at the highest concentration, but toluene was detected most frequently. Fuel-related volatile organic compounds were detected in every sampled location, with the highest concentrations east and northeast of Building 5108.

Although low levels of fuel-related organic compounds and chlorinated solvents were detected in soil gas samples, these compounds were not identified in soil samples. Trichloroethylene recoveries in MS/MSD samples corresponding to soil samples S-SS-14-01, 02, and 03 were outside the 95 percent confidence limit (Section 3.10). Therefore, the contamination assessment is based on qualified volatile organics results. However, the semivolatiles and TPH in soil confirm the absence of significant contamination at SWMU 14. No semivolatiles were detected. Only one soil sample showed a detection of TPH and this detection was at a low concentration. The soil gas compounds and the low-concentration TPH detection are probably related to the present use of this area as a parking lot. Acetone was also detected at low concentrations in each soil sample, indicating possible laboratory contamination since acetone is commonly used in laboratories as a glassware rinse. Since groundwater in the area is 280 ft or more below the surface, it is unlikely that groundwater has been affected by this site.

Arsenic, mercury, and sodium were slightly above background levels in one sample (S-SS-14-03). These concentrations may reflect natural variation in soils or low level contamination. However, these metals are not likely to be related to any releases from a former motor pool building and are more likely to occur naturally in the soil.

5.9.5 Recommendations

No further investigations are recommended at SWMU 14. Analytical results indicated low level organic contamination of soil, which is probably associated with the parking lot. These low levels of organics have little potential of infiltrating to groundwater.