Decision Document

Solid Waste Management Units J-25
Thorne Area Landfill
Hawthorne Army Depot
Hawthorne, Nevada

March 2000

Hawthorne Army
Depot

Decision Document SWMU J-25

March 2000

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ENVIRONMENTAL PROTECTION

The selected remedy is protective of human health and the environment. It has been shown that a complete pathway to human health and the environment does not exist, and there is no potential for an exposure pathway to be completed in the future.

U. S. Army

11 APR 2000

James A. Piner
Lt. Colonel, U.S. Army
Commanding

State of Nevada

24 April 2000

Paul Liebendorfer
Chief, Bureau of Federal Facilities

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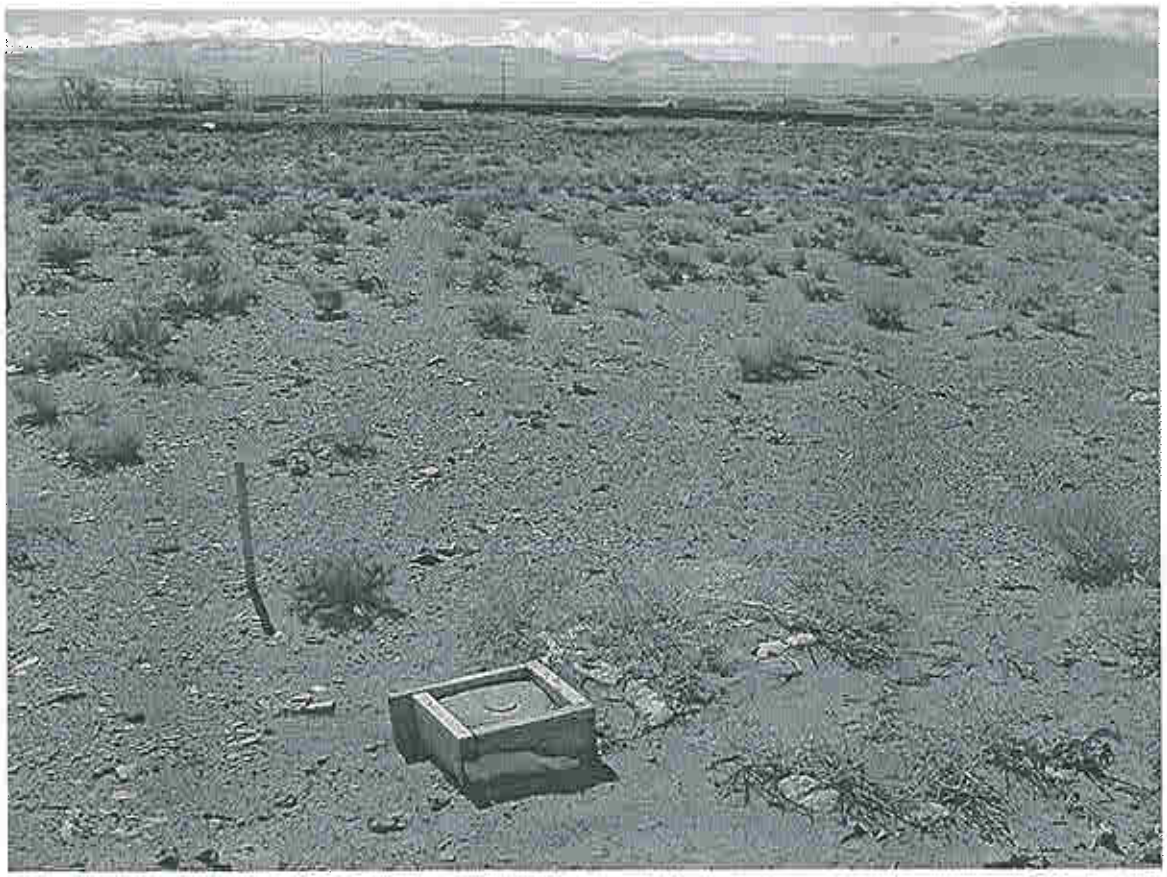
Hawthorne, Nevada



March 2000

Hawthorne Army Depot

Decision Document
SWMU J-25, Thorne Area Landfill
Hawthorne Army Depot
Hawthorne, Nevada

1.0 Introduction:

This decision document describes the rationale for the proposed closure of SWMU J-25, Thorne Area Landfill, at the Hawthorne Army Depot (HWAD), Hawthorne, Nevada. This document was prepared by the U.S. Army Corps of Engineers, Sacramento District, HWAD and the Nevada Department of Environmental Protection (NDEP).

Tetra Tech, Inc. (Tt), was tasked by the US Army Corps of Engineers, Sacramento District (USACE), to perform remedial investigations and ground water monitoring at the Hawthorne Army Depot (HWAD), Hawthorne, Nevada. These tasks were conducted from 1993 through 1997, primarily at solid waste management units (SWMUs) designated by the Army and the Nevada Division of Environmental Protection (NDEP). The NDEP is the lead regulatory agency for environmental issues at HWAD. The purpose of the monitoring was to determine the extent and degree of environmental impacts, if any, associated with activities performed at each SWMU. The primary goal of the investigation was to assess the environmental impacts and to report the findings, present conclusions, and recommend any remediation, if necessary.

With guidance from the NDEP, basewide proposed closure goals (PCGs) for soil were established as acceptable levels so that SWMU closure could be recommended and to assist in directing the investigative efforts toward those SWMUs where the target analytes were of greatest concern (Appendix A). These PCGs were used as action levels throughout this investigation and are used for comparison with the detected analytes in this report.

2.0 Site History

SWMU J25 is north of HWAD's northern magazine area on the north side of Thorne Road (Figure 1-1). This SWMU is a 22-acre site bordered on the south by the Southern Pacific railroad line and a ten-foot high loading dock (Figure 1-2). This railroad line is the main track that services HWAD.

The USACE, HWAD, and the NDEP agreed to define the boundaries of each SWMU using annotated monuments and survey pins. As part of Tt's 1997 field investigations, two survey monuments were constructed and surveyed at SWMU J25. A brass survey pin on each monument designates the monument numbers HWAAP-16-1996 and HWAAP-68-1996 and the SWMU number J25. Two corner pins were set and surveyed to define the SWMU boundary, with one of the monuments as the southern corner. The

locations of these corner markers and the SWMU boundary are shown on Figure 1-2. The survey data for this SWMU are presented in Appendix B.

3.0 Site Conditions

SWMU J25 is a landfill disposal area that contains drums and debris, including mine and bomb shells (USACE 1993). The site is located at a railroad loading dock near the former town of Thorne, which was originally used to load ore taken from the aluminum, gold, and silver mines located along the Ryan Canyon Road that leads into the Gillis and Gabbs Valley ranges (Figure 1-2).

Based on the disposal activities that likely occurred at SWMU J25, the target analytes for this remedial investigation are metals and explosives, due to the observed mines and shells, and volatile organic compounds (VOCs) as constituents of cleaning solvents possibly used to demilitarize these munitions.

4.0 INVESTIGATIONS

A site inspection of SWMU J25 was conducted by the Resource Applications, Inc. (RAI), in 1992 (RAI 1992). During Tt's 1994 remedial investigation of SWMU J25, Norcal Geophysical Consultants, Inc., of Petaluma, California, performed surface geophysical surveys. The 1994 remedial investigation of SWMU J25, the geophysical surveys included a vertical magnetic gradient (MAG) survey, an electromagnetic terrain conductivity (EMAG) survey, and a surface ground penetrating radar (SGPR) survey. Tt's sampling activities for the remedial investigation at SWMU J25 included collecting and analyzing subsurface soil samples from test pits and trenches. All of the soil samples that were collected were analyzed for all of the target analytes. Four test pits (TP01 through TP04), one 25-foot long by eight-foot deep trench (TR01) and two 25-foot long by five-foot deep trenches (TR02 and TR03), were excavated at this SWMU. Eighteen subsurface soil samples, including two collocated duplicate samples, were collected from four test pits and three trenches at SWMU J25 at depths from two to eight feet below ground surface (bgs). Figure 3-1 illustrates the excavations' locations

5.0 Investigation Results

During Tt's 1993 site inspection of SWMU J25, two small scrap piles adjacent to the loading dock ramp were noticed. They contained Navy underwater mine casings, metal tubes, and other debris mixed with soil. Approximately one dozen mine casings, apparently demilitarized and crushed, were removed from this SWMU prior to conducting the remedial investigation to facilitate the geophysical reconnaissance surveys. Also, two large pits were observed north of the loading dock at this SWMU, but these pits did not contain any debris and appeared to be used as soil borrow areas. During Tt's 1994 remedial investigation of SWMU J25, the MAG, EMAG, and SGPR

surveys found one MAG anomaly, one EMAG anomaly, and 16 SGPR anomalies (Figure 3-1). Cadmium (<0.02 mg/kg to 1.6 mg/kg), total chromium (2.1 mg/kg to 27.9 mg/kg), and lead (3.1 mg/kg to 35.9 mg/kg) were found in the subsurface soil samples collected from the test pits and trenches at concentrations greater than their respective maximum expected background concentrations of 1.08 mg/kg, 13.76 mg/kg, and 16.7 mg/kg. Of the metals concentrations found greater than their maximum expected background concentrations, only two concentrations of total chromium at 21.1 mg/kg and 27.9 mg/kg exceeded total chromium's PCG of 20 mg/kg. The samples that contained these concentrations of total chromium (J25-TP01-2-S and J25-TP01-3-S) were collected as collocated duplicate samples from test pit TP01 at depths of 2 feet and 2.5 feet bgs, respectively. Both of the soil samples from SWMU J25 that contained elevated concentrations of metals were collected from the subsurface soils (2 feet and 2.5 feet bgs); therefore, it appears that the vertical extent of the soils that may have been affected by metals is likely to be at the same depth that the metal debris was found (three feet bgs) and is not exposed at the surface nor has it migrated to greater depths.

No explosives or VOCs were found in any of the 18 subsurface soil samples collected from the test pits and trenches at SWMU J25.

No ground water samples were collected near SWMU J25 that could assess if the disposal activities at this SWMU affected the ground water with the target analytes. However, only two elevated concentrations of total chromium were found in the subsurface soils at this SWMU, indicating that the soils at SWMU J25 have not been affected with most of the target analytes to a degree that would require soil remediation. Therefore, it is not likely that the disposal activities have affected the ground water in the vicinity of SWMU J25 at a depth of 120 feet bgs, based on the lack of target analytes in the soil samples collected from this SWMU and the depth to the shallowest ground water.

6.0 Remediation

No remediation action was required for this site.

7.0 Remediation Results

Not applicable

8.0 Public Involvement:

It is the U.S. Department of Defense and Army policy to involve the local community throughout the investigation process at an installation. To initiate this involvement, HWAD has established and maintains a repository library at the local public library. This repository includes final copies of all past studies and other documents regarding environmental issues at HWAD. As future environmental documents are made available to HWAD the repository shall be updated.

HWAD has solicited community participation in establishment of a restoration and advisory board (RAB). To date there has been insufficient response and HWAD has not formed a RAB. HWAD has held open houses to inform the public of on going

environmental issues. HWAD continues to solicit community involvement, and will establish a RAB should sufficient community interest be obtained.

9.0 Recommendations

There is no evidence of any of the chemicals of concern, in excess of PCG's, at SWMU J-25, execpt for two test results of total chromium. The concentrations of chromium are quite close to the background concentrations. These levels fall below the concentrations required to produce a significant risk to human health. SWMU J-25 should be closed without land use restrictions and documented on the depot site master plan.

10.0 REFERENCES

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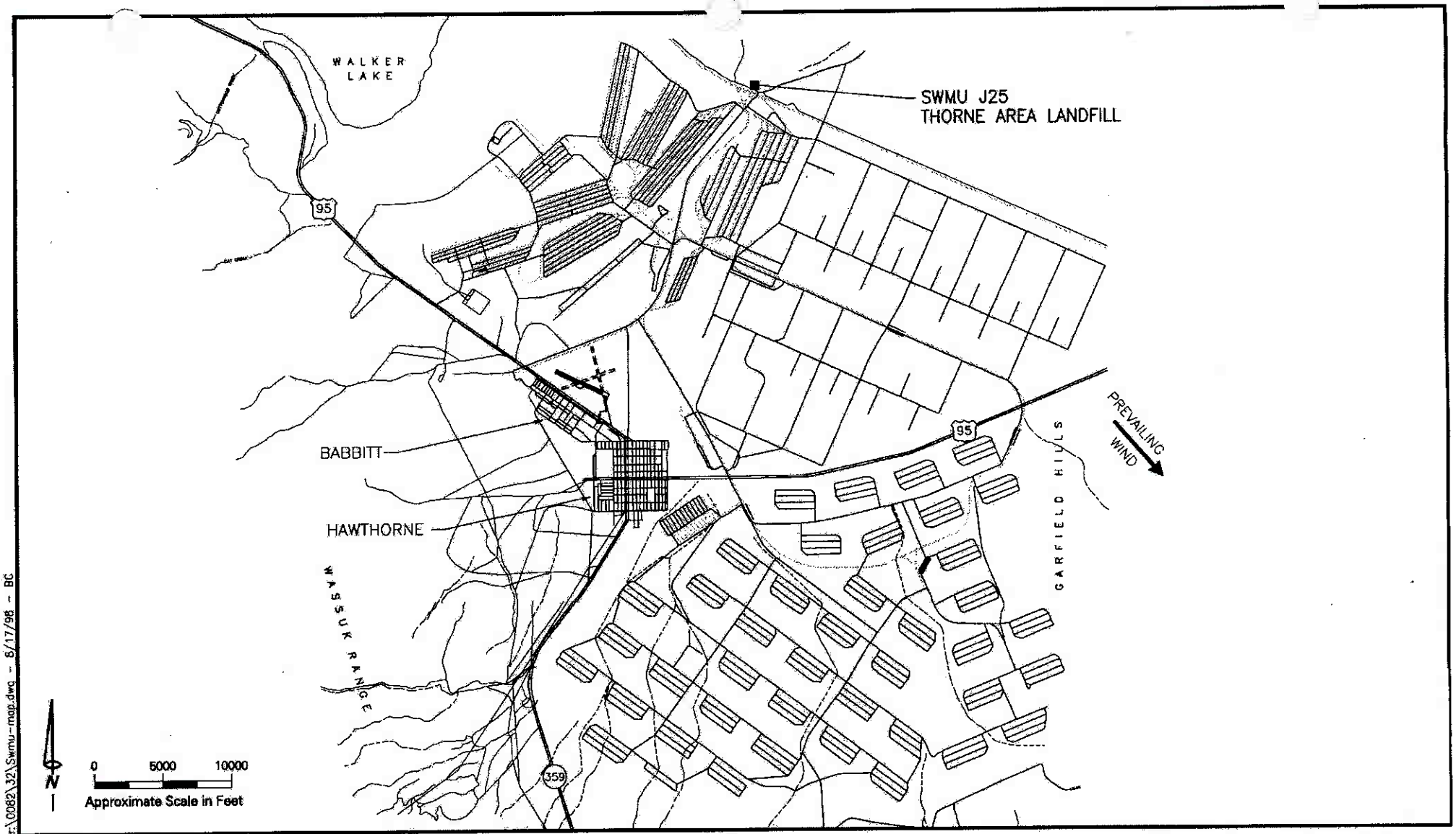

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SOURCE: TETRA TECH FINAL DATA PACKAGE, 1996 (REV. 1997)

Site Location Map
SWMU J25
Thorne Area Landfill
Hawthorne Army Depot
Hawthorne, Nevada
Figure 1-1

Tetra Tech, Inc.

Legend:

- Boundary Corner Pin
- Railroad
- SWMU Monument

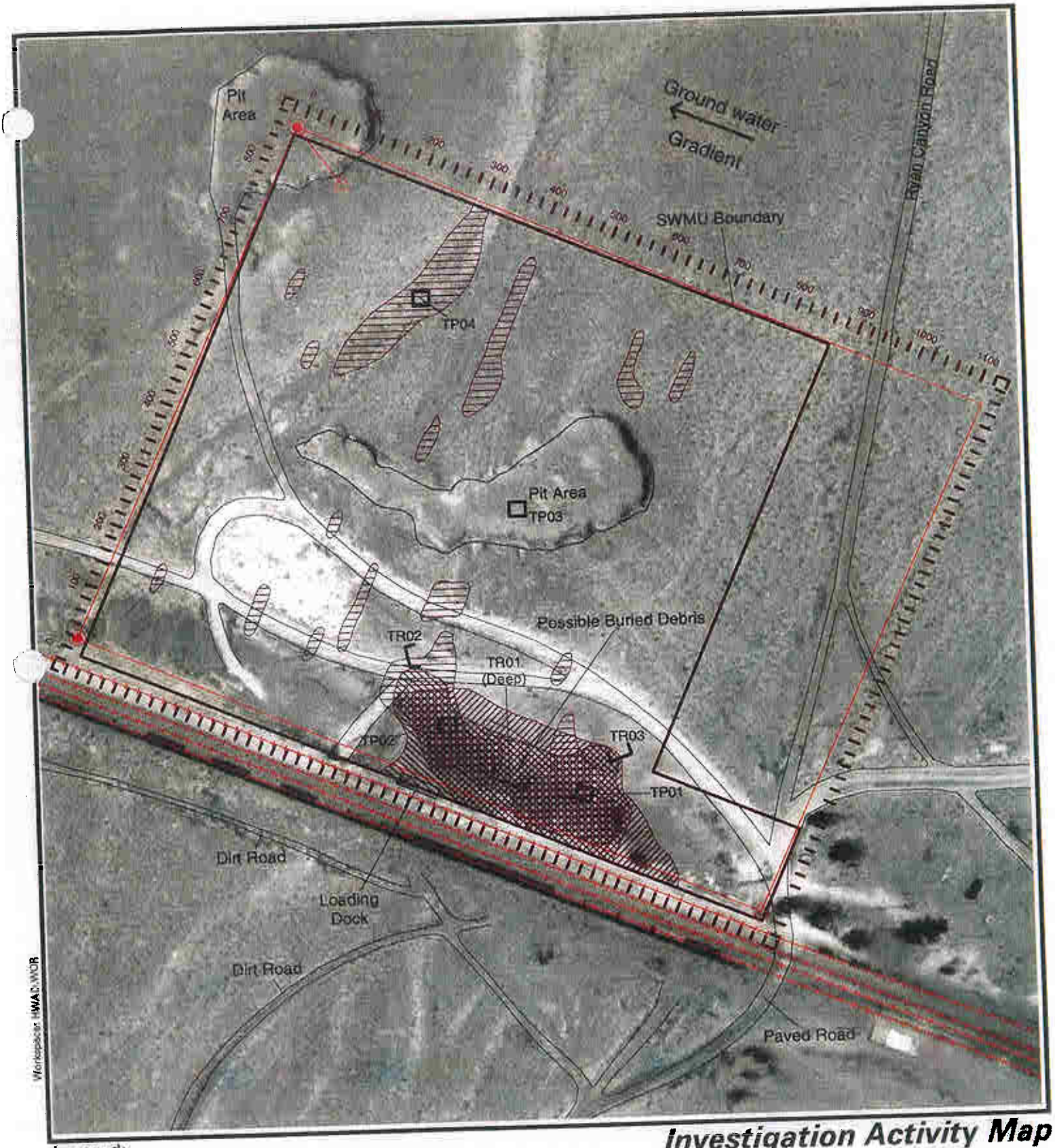
N

0 100 200

Approximate Scale in feet

Tetra Tech, Inc.

Site Map
SWMU J25
Thorne Area Landfill
Hawthorne Army Depot
Hawthorne, Nevada
Figure 1-2



Legend:

- MAG Anomaly
- Boundary Corner Pin
- EMAG Anomaly
- Railroad
- SGPR Anomaly
- SWMU Monument
- Test Pit
- Trench

N

0 100 200

Approximate Scale in feet

Investigation Activity Map
SWMU J25
Thorne Area Landfill

Hawthorne Army Depot
Hawthorne, Nevada

Figure 3-1

Tetra Tech, Inc.

Appendix A

Proposed Closure Goals
Hawthorne Army Depot
Hawthorne, Nevada

Constituent of Concern	Chemical Classification	Carcinogenic (C) or Non-carcinogenic (NC)	HWAD Proposed Closure Goals for Soil (mg/kg)	HWAD Proposed Closure Goal Source
Nitrate	Anion	NC	128,000	Calculated Subpart S[a]
2-Amino-dinitrotoluene	Explosive	NC	-	NA[b]
4-Amino-dinitrotoluene	Explosive	NC	-	NA
1,3-Dinitrobenzene	Explosive	NC	8	Calculated Subpart S
2,4-Dinitrotoluene	Explosive	NC	160	Calculated Subpart S
2,6-Dinitrotoluene	Explosive	NC	80	Calculated Subpart S
HMX	Explosive	NC	4,000	Calculated Subpart S
Nitrobenzene	Explosive	NC	40	Calculated Subpart S
Nitrotoluene (2-, 3-, 4-)	Explosive	NC	800	Calculated Subpart S
RDX	Explosive	NC	64	Calculated Subpart S
Tetryl	Explosive	NC	800	Calculated Subpart S
1,3,5-Trinitrobenzene	Explosive	NC	4	Calculated Subpart S
2,4,6-Trinitrotoluene	Explosive	C	233	Calculated Subpart S
Aluminum	Metal	NC	80,000	Calculated Subpart S
Arsenic (cancer endpoint)	Metal	C & NC	30	Background[c]
Barium and compounds	Metal	NC	5,600	Calculated Subpart S
Beryllium and compounds	Metal	C	1	Background
Cadmium and compounds	Metal	NC	40	Calculated Subpart S
Chromium III and compounds	Metal	NC	80,000	Calculated Subpart S
Lead	Metal	NC	1000	PRG[d]
Mercury and compounds (inorganic)	Metal	NC	24	Calculated Subpart S
Selenium	Metal	NC	400	Calculated Subpart S
Silver and compounds	Metal	NC	400	Calculated Subpart S
Acenaphthene	PAH	NC	4,800	Calculated Subpart S
Benzo[a]anthracene	PAH	C	0.96	Calculated Subpart S
Benzo[a]pyrene	PAH	C	0.10	Detection Limit[e]
Benzo[b]fluoranthene	PAH	C	0.96	Calculated Subpart S
Benzo[k]fluoranthene	PAH	C	10	Calculated Subpart S
Chrysene	PAH	C	96	Calculated Subpart S
Dibenz[ah]anthracene	PAH	C	0.96	Calculated Subpart S
Fluoranthene	PAH	NC	3,200	Calculated Subpart S
Fluorene	PAH	NC	3,200	Calculated Subpart S
Indeno[1,2,3-cd]pyrene	PAH	C	-	NA
Naphthalene	PAH	NC	3,200	Calculated Subpart S
Pyrene	PAH	NC	2,400	Calculated Subpart S
Total Petroleum Hydrocarbons as Diesel (TPH-d)	PAH	C	100	NDEP Level Clean-up[f]
Polychlorinated biphenyls (PCBs)	PCBs	C	25	TSCA[g]
Bis(2-ethylhexyl)phthalate (DEHP)	SVOC	C	1,600	Calculated Subpart S
Bromoform (tribromomethane)	SVOC	C	89	Calculated Subpart S

Proposed Closure Goals
Hawthorne Army Depot
Hawthorne, Nevada

Constituent of Concern	Chemical Classification	Carcinogenic (C) or Non-carcinogenic (NC)	HWAD Proposed Closure Goals for Soil (mg/kg)	HWAD Proposed Closure Goal Source
Butyl benzyl phthalate	SVOC	NC	16,000	Calculated Subpart S
Dibromochloromethane	SVOC	C	83	Calculated Subpart S
Dibutyl-phthalate	SVOC	NC	8,000	Calculated Subpart S
Diethyl phthalate	SVOC	NC	64,000	Calculated Subpart S
Phenanthrene	SVOC		-	NA
Phenol	SVOC	NC	48,000	Calculated Subpart S
Acetone	VOC	NC	800	Calculated Subpart S
Anthracene	VOC	NC	24,000	Calculated Subpart S
Benzene	VOC	C	24	Calculated Subpart S
Bis(2-chloroisopropyl)ether	VOC	C	3,200	Calculated Subpart S
Bromomethane	VOC	NC	112	Calculated Subpart S
Carbon tetrachloride	VOC	C	5	Calculated Subpart S
Chlorobenzene	VOC	NC	1,600	Calculated Subpart S
Chloroform	VOC	C	115	Calculated Subpart S
Chloromethane	VOC	C	538	Calculated Subpart S
Dibromomethane	VOC	C	0.008	Calculated Subpart S
1,2-Dichlorobenzene	VOC	NC	7,200	Calculated Subpart S
1,4-Dichlorobenzene	VOC	C	18,300	Calculated Subpart S
Dichlorodifluoromethane	VOC	C	16,000	Calculated Subpart S
Ethylbenzene	VOC	NC	8,000	Calculated Subpart S
Methylene bromide	VOC	NC	800	Calculated Subpart S
Methylene chloride	VOC	C	4,800	Calculated Subpart S
2-Methylnaphthalene	VOC		-	NA
1,1,2,2-Tetrachloroethane	VOC	C	35	Calculated Subpart S
Tetrachloroethylene (PCE)	VOC	C & NC	800	Calculated Subpart S
Toluene	VOC	NC	16,000	Calculated Subpart S
1,1,1-Trichloroethane	VOC	NC	7,200	Calculated Subpart S
Trichloroethylene (TCE)	VOC	C & NC	480	Calculated Subpart S
Trichlorofluoromethane	VOC	NC	24,000	Calculated Subpart S
1,2,3-Trichloropropane	VOC	C	480	Calculated Subpart S
Vinyl chloride	VOC	C	0.37	Calculated Subpart S
Xylene Total (m-, o-, p-)	VOC	NC	160,000	Calculated Subpart S
2,3,7,8-TCDD	Dioxin	C	0.000005	Calculated Subpart S

[a] RCRA 55 FR 30870

[b] Not available

[c] Highest background concentration detected in 50 background soil samples

[d] Smucker, Stanford J. USEPA Rgion IX, Preliminary Remedial Goals, Second Half, Sep. 1995

[e] Method detection limit for Volatile Organic Compounds by EPA Method 8260 or

Semi-Volatile Organic Compounds analyzed by EPA Method 8270

[f] Nevada Division of Environmental Protection

[g] Cleanup level for PCB spills in accordance with Toxic Substance and Control Act Spill Policy Guidelines 40 CFR 761

Appendix B

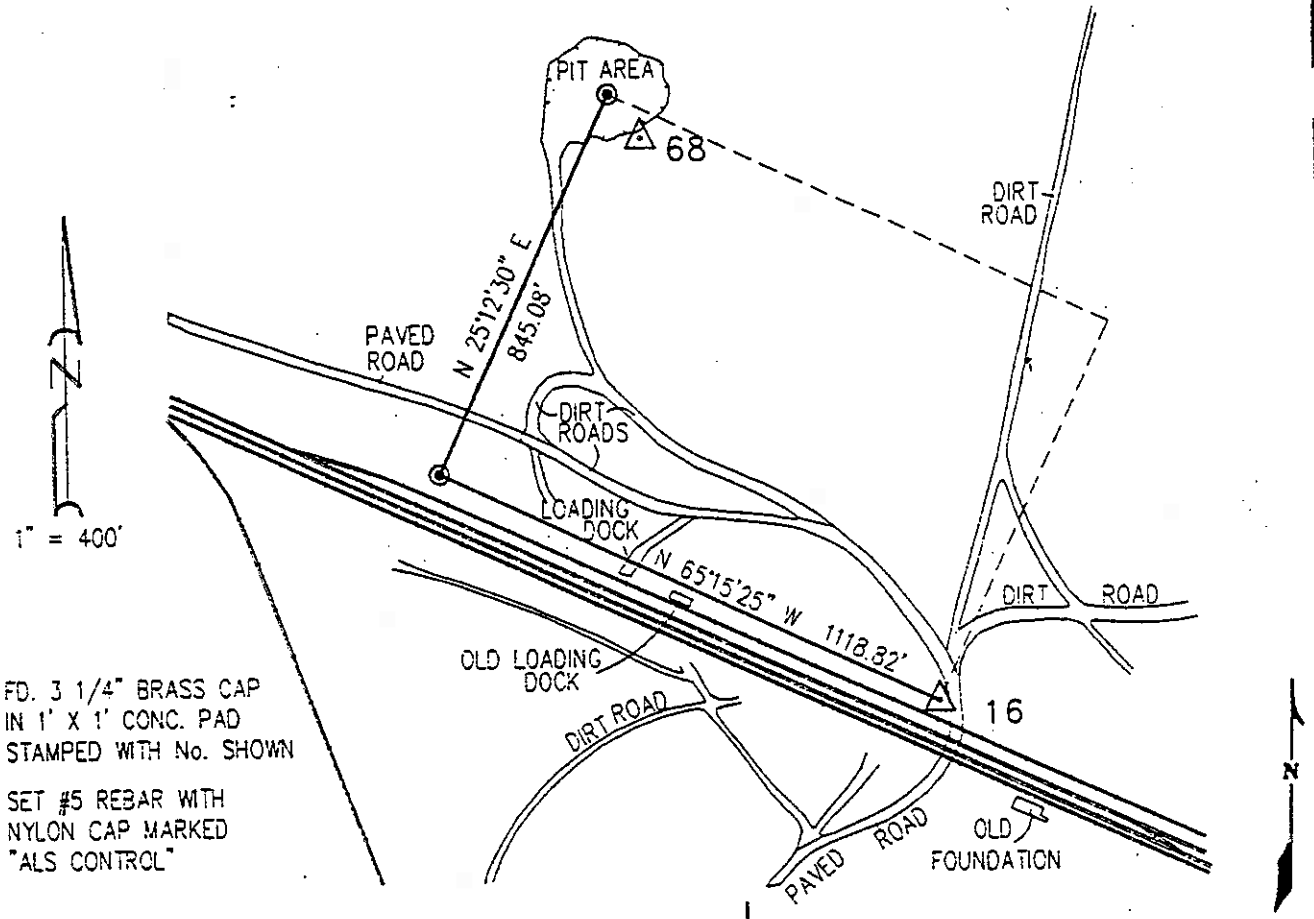
COUNTRY	TYPE OF MARK	STATION	
USA	BRASS CAP	16	
LOCALITY	STAMPING ON MARK	AGENCY (CAST IN MARKS)	ELEVATION (FT) (M)
HAWTHORNE NEV.	16 J-25	COE HWAAP	4202.88
LATITUDE	LONGITUDE	DATUM	DATUM
38°36'08.48721"N	118°35'22.66845"W	NAD '27	NGVD '29
(NORTHING)(EASTING) (FT) (M)	(EASTING)(NORTHING) (FT) (M)	GRID AND ZONE	ESTABLISHED BY (AGENCY)
1402391.18	498200.57	NEVADA SP WEST	A.L.S.
(NORTHING)(EASTING) (FT) (M)	(EASTING)(NORTHING) (FT) (M)	GRID AND ZONE	DATE 1997 / ORDER 2ND

TO OBTAIN GRID AZIMUTH, ADD ° ' " TO THE GEODETIC AZIMUTH

TO OBTAIN GRID AZ. (ADD)(SUB.) ° ' " TO THE GEODETIC AZIMUTH

OBJECT	AZIMUTH OR DIRECTION (GEODETIC)(GRID) (MAGNETIC)	BACK AZIMUTH	GEOD DISTANCE (METERS) (FEET)	GRID DISTANCE (METERS) (FEET)
	° ' "	° ' "		

MONUMENTS 16 AND 68 – SWMU J-25
FROM HIGHWAY 95, TAKE THORNE ROAD NORTHEAST 5.4 MILES TO THE TOWN OF THORNE. ACROSS RAILROAD TRACKS TO J-25 SITE. SEE MAP BELOW.
MONUMENTS ARE 3 1/4" BRASS CAPS SET IN 1' X 1' CONCRETE PADS AND ARE MARKED WITH 4" X 4" X 6' WOOD POSTS, PAINTED WHITE.



SKETCH

DA FORM 1 OCT 84 1959 REPLACES DA FORMS 1959 AND 1960, 1 FEB 57, WHICH ARE OBSOLETE.

DESCRIPTION OR RECOVERY OF HORIZONTAL CONTROL STATION
For use of this form, see TM 5-237; the proponent agency is TRADOC.

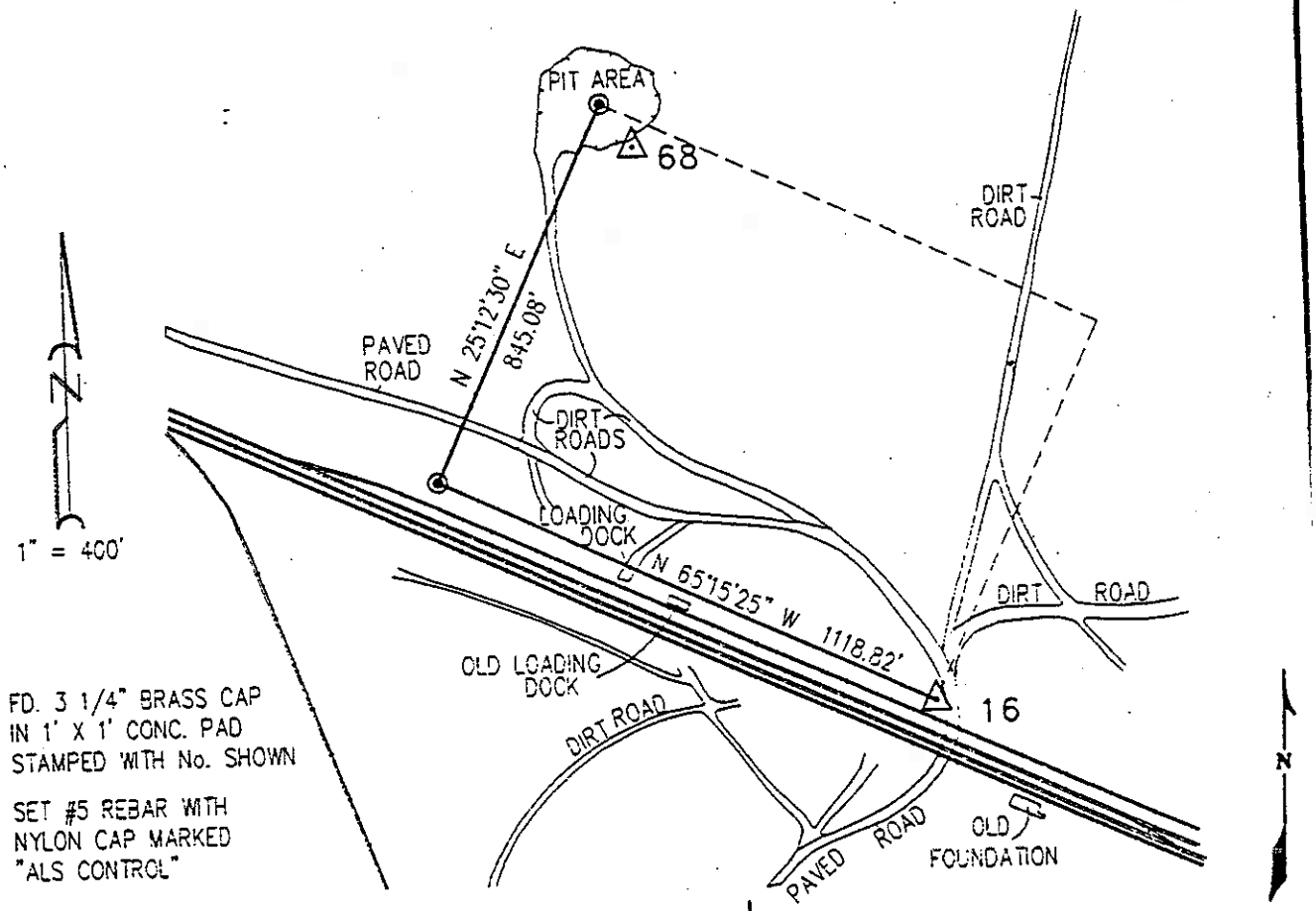
COUNTRY	TYPE OF MARK	STATION	
USA	BRASS CAP	68	
LOCALITY	STAMPING ON MARK	AGENCY (CAST IN MARKS)	ELEVATION (FT) (M)
HAWTHORNE NEV.	68 J-25	COE HWAAP	4214.52
LATITUDE	LONGITUDE	DATUM	DATUM
38°36'19.79879" N	118°35'30.11757" W	NAD '27	NGVD '29
(NORTHING)(EASTING) (FT) (M)	(EASTING)(NORTHING) (FT) (M)	GRID AND ZONE	ESTABLISHED BY (AGENCY)
1403535.44	497609.36	NEVADA SP WEST	A.L.S.
(NORTHING)(EASTING) (FT) (M)	(EASTING)(NORTHING) (FT) (M)	GRID AND ZONE	DATE 1997 / ORDER 2ND

TO OBTAIN GRID AZIMUTH, ADD ° TO THE GEODETIC AZIMUTH

TO OBTAIN GRID AZ. (ADD)(SUB.) ° TO THE GEODETIC AZIMUTH

OBJECT	AZIMUTH OR DIRECTION (GEODETIC)(GRID) (MAGNETIC)	BACK AZIMUTH	GEOD. DISTANCE (METERS) (FEET)	GRID DISTANCE (METERS) (FEET)
	° ' "	° ' "		

MONUMENTS 16 AND 68 - SWMU J-25
FROM HIGHWAY 95, TAKE THORNE ROAD NORTHEAST 5.4 MILES TO THE TOWN OF THORNE, ACROSS RAILROAD TRACKS TO J-25 SITE. SEE MAP BELOW.
MONUMENTS ARE 3 1/4" BRASS CAPS SET IN 1' X 1' CONCRETE PADS AND ARE MARKED WITH 4" X 4" X 6' WOOD POSTS, PAINTED WHITE.



SKETCH

DA FORM 1 OCT 64 1959 REPLACES DA FORMS 1958 AND 1960, 1 FEB 57, WHICH ARE OBSOLETE.

DESCRIPTION OR RECOVERY OF HORIZONTAL CONTROL STATIO
For use of this form, see TM 5-237; the proponent agency is TRADOC.

SWMU J25 Survey Data
Hawthotne Army Depot
Hawthorne, Nevada

SWMU	Point ID	Northing (feet)	Easting (feet)	Elevation
J25	HWAAP-16-1996	1402391.18	498200.57	4202.88
J25	HWAAP-68-1996	1403535.44	497609.36	4214.52
J25	Pin 1	1403624.06	497544.39	NE
J25	TP01	1402585.24	497940.90	NE
J25	TP02	1402699.22	497739.06	NE
J25	TP03	1403027.00	497854.78	NE
J25	TP04	1403354.98	497721.77	NE
J25	TR01	1402596.00	497800.95	NE
J25		1402630.16	497857.84	NE
J25	TR02	1402790.06	497700.08	NE
J25		1402826.15	497739.08	NE
J25	TR03	1402632.81	497979.02	NE
J25		1402658.64	498014.43	NE

Notes:
NE = Not established.
Coordinate data based on electronic map file using the NAD 1927 datum.
Elevation data based on surveyors map using NGVD 1929 datum.

Appendix C

Metals
Method 6010A (APCL)

Sample ID	Location ID	Sample Date	Depth (feet)	Lab	Aluminum, Total	Arsenic, Total	Barium, Total	Beryllium, Total	Cadmium, Total	Chromium, Total	Lead, Total	Nickel, Total	Selenium, Total	Silver, Total
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
J25-TP01-1-S	TP01	5/21/97	5	APCL	5470	7	91.6	<0.018	<0.021	4.7	3.4	NA	<0.19	<0.072
J25-TP01-2-S	TP01	5/21/97	2	APCL	5460	7.7	81.2	<0.018	0.41	21.1	21	NA	<0.19	<0.071
J25-TP01-3-S	TP01	5/21/97	2.5	APCL	6100	7.5	82.2	<0.018	1.6	27.9	35.9	NA	<0.19	<0.072
J25-TP02-1-S	TP02	5/21/97	6	APCL	8840	9.6	139	<0.019	<0.022	7.3	5	NA	<0.2	<0.077
J25-TP02-2-S	TP02	5/21/97	2.5	APCL	4600	7.8	74.4	<0.017	<0.02	5	9.2	NA	<0.18	<0.071
J25-TP03-1-S	TP03	5/20/97	4.5	APCL	5070	8.5	332	<0.018	<0.021	5.4	4.5	NA	<0.19	<0.073
J25-TP03-2-S	TP03	5/20/97	3	APCL	9380	9.3	130	<0.018	<0.021	7.2	5.6	NA	<0.19	<0.072
J25-TP04-1-S	TP04	5/21/97	5	APCL	3210	4.5	42.3	<0.017	<0.02	2.4	3.5	NA	<0.18	<0.07
J25-TP04-2-S	TP04	5/21/97	3	APCL	3570	3.9	54.7	<0.017	<0.02	2.1	3.4	NA	<0.18	<0.07
J25-TR01-1-S	TR01	5/21/97	4	APCL	5620	9.9	70.9	<0.018	<0.021	5	3.5	NA	<0.19	<0.074
J25-TR01-2-S	TR01	5/21/97	8	APCL	4520	6	117	<0.018	<0.021	8.4	4.2	NA	<0.19	<0.071
J25-TR01-3-S	TR01	5/21/97	4	APCL	5920	8.3	76.4	<0.019	<0.022	7.7	3.7	NA	<0.2	<0.075
J25-TR01-4-S	TR01	5/21/97	8	APCL	4490	6.8	63.9	<0.018	<0.021	3.5	3.1	NA	<0.19	<0.071
J25-TR02-1-S	TR02	5/21/97	5	APCL	5800	6.8	124	<0.018	<0.021	5.3	3.6	NA	<0.19	<0.074
J25-TR02-2-S	TR02	5/21/97	5	APCL	7760	8.9	134	<0.018	<0.021	6	4.8	NA	<0.19	<0.073
J25-TR02-3-S	TR02	5/21/97	5	APCL	8090	9.1	110	<0.018	<0.022	6.3	4.7	NA	<0.19	<0.075
J25-TR03-1-S	TR03	5/21/97	6	APCL	5300	9.7	65	<0.017	<0.02	3.7	4.3	NA	<0.18	<0.07
J25-TR03-2-S	TR03	5/21/97	6	APCL	3770	7.7	41.2	<0.017	<0.02	2.6	3.3	NA	<0.18	<0.07
Analyses					18	18	18	18	18	18	18	0	18	18
Detections					18	18	18	0	2	18	18	0	0	0
Minimum Concentration					3210	3.9	41.2	0	0.41	2.1	3.1	0	0	0
Maximum Concentration					9380	9.9	332	0	1.6	27.9	35.9	0	0	0
HWAD - PCG					80000	100	2000	1	20	20	100	NE	20	100
HWAD - PCG Hits					0	0	0	0	0	2	0	NE	0	0
Maximum Background Concentration					12365	18.1	447	0.58	1.08	13.76	16.7	0	0	0
Background Hits					0	0	0	0	1	2	2	0	0	0

Notes:
NA = Not analyzed.
NE = Not established.

VOCs
Method 8260A (APCL)

Sample ID	Location ID	Sample Date	Depth (feet)	Lab	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
J25-TP01-1-S	TP01	5/21/97	5	APCL	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0004	<0.0002	<0.0001
J25-TP01-2-S	TP01	5/21/97	2	APCL	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0004	<0.0002	<0.0001
J25-TP01-3-S	TP01	5/21/97	2.5	APCL	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0004	<0.0002	<0.0001
J25-TP02-1-S	TP02	5/21/97	6	APCL	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0004	<0.0002	<0.0001
J25-TP02-2-S	TP02	5/21/97	2.5	APCL	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0004	<0.0002	<0.0001
J25-TP03-1-S	TP03	5/20/97	4.5	APCL	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0004	<0.0002	<0.0001
J25-TP03-2-S	TP03	5/20/97	3	APCL	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0004	<0.0002	<0.0001
J25-TP04-1-S	TP04	5/21/97	5	APCL	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0004	<0.0002	<0.0001
J25-TP04-2-S	TP04	5/21/97	3	APCL	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0004	<0.0002	<0.0001
J25-TR01-1-S	TR01	5/21/97	4	APCL	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0004	<0.0002	<0.0001
J25-TR01-2-S	TR01	5/21/97	8	APCL	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0004	<0.0002	<0.0001
J25-TR01-3-S	TR01	5/21/97	4	APCL	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0004	<0.0002	<0.0001
J25-TR01-4-S	TR01	5/21/97	8	APCL	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0004	<0.0002	<0.0001
J25-TR02-1-S	TR02	5/21/97	5	APCL	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0004	<0.0002	<0.0001
J25-TR02-2-S	TR02	5/21/97	5	APCL	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0004	<0.0002	<0.0001
J25-TR02-3-S	TR02	5/21/97	5	APCL	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0004	<0.0002	<0.0001
J25-TR03-1-S	TR03	5/21/97	6	APCL	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0004	<0.0002	<0.0001
J25-TR03-2-S	TR03	5/21/97	6	APCL	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0004	<0.0002	<0.0001
Analyses					18	18	18	18	18	18	18	18	18	18	18
Detections					0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration					0	0	0	0	0	0	0	0	0	0	0
Maximum Concentration					0	0	0	0	0	0	0	0	0	0	0
HWAD - PCG					NE	7200	35	NE	NE	NE	NE	NE	480	NE	NE
HWAD - PCG Hits					NE	0	0	NE	NE	NE	NE	NE	0	NE	NE

Notes:
NA = Not analyzed.
NE = Not established.

VOCs
Method 8260A (APCL)

Sample ID	Location ID	Sample Date	Depth (feet)	Lab	1,2-Dibromoethane (EDB)	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Chlorotoluene	4-Chlorotoluene
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
J25-TP01-1-S	TP01	5/21/97	5	APCL	<0.0005	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002
J25-TP01-2-S	TP01	5/21/97	2	APCL	<0.0005	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002
J25-TP01-3-S	TP01	5/21/97	2.5	APCL	<0.0005	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002
J25-TP02-1-S	TP02	5/21/97	6	APCL	<0.0006	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002
J25-TP02-2-S	TP02	5/21/97	2.5	APCL	<0.0005	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002
J25-TP03-1-S	TP03	5/20/97	4.5	APCL	<0.0005	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002
J25-TP03-2-S	TP03	5/20/97	3	APCL	<0.0005	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002
J25-TP04-1-S	TP04	5/21/97	5	APCL	<0.0005	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002
J25-TP04-2-S	TP04	5/21/97	3	APCL	<0.0005	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002
J25-TR01-1-S	TR01	5/21/97	4	APCL	<0.0005	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002
J25-TR01-2-S	TR01	5/21/97	8	APCL	<0.0005	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002
J25-TR01-3-S	TR01	5/21/97	4	APCL	<0.0005	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002
J25-TR01-4-S	TR01	5/21/97	8	APCL	<0.0005	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002
J25-TR02-1-S	TR02	5/21/97	5	APCL	<0.0005	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002
J25-TR02-2-S	TR02	5/21/97	5	APCL	<0.0005	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002
J25-TR02-3-S	TR02	5/21/97	5	APCL	<0.0005	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002
J25-TR03-1-S	TR03	5/21/97	6	APCL	<0.0005	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002
J25-TR03-2-S	TR03	5/21/97	6	APCL	<0.0005	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002
Analyses					18	18	18	18	18	18	18	18	18	18	18
Detections					0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration					0	0	0	0	0	0	0	0	0	0	0
Maximum Concentration					0	0	0	0	0	0	0	0	0	0	0
HWAD - PCG					0.008	7200	NE	NE	NE	NE	NE	150	NE	NE	NE
HWAD - PCG Hits					0	0	NE	NE	NE	NE	NE	0	NE	NE	NE

Notes:
NA = Not analyzed.
NE = Not established.

VOCs
Method 8260A (APCL)

Sample ID	Location ID	Sample Date	Depth (feet)	Lab	4-Isopropyltoluene	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
J25-TP01-1-S	TP01	5/21/97	5	APCL	<0.0002	<0.0002	<0.0001	<0.0005	<0.0002	<0.0003	<0.0003	<0.0001	<0.0002	<0.0007	<0.0002
J25-TP01-2-S	TP01	5/21/97	2	APCL	<0.0002	<0.0002	<0.0001	<0.0005	<0.0002	<0.0003	<0.0003	<0.0001	<0.0002	<0.0007	<0.0002
J25-TP01-3-S	TP01	5/21/97	2.5	APCL	<0.0002	<0.0002	<0.0001	<0.0005	<0.0002	<0.0003	<0.0003	<0.0001	<0.0002	<0.0007	<0.0002
J25-TP02-1-S	TP02	5/21/97	6	APCL	<0.0002	<0.0002	<0.0001	<0.0006	<0.0002	<0.0003	<0.0003	<0.0001	<0.0002	<0.0008	<0.0002
J25-TP02-2-S	TP02	5/21/97	2.5	APCL	<0.0002	<0.0002	<0.0001	<0.0005	<0.0002	<0.0003	<0.0003	<0.0001	<0.0002	<0.0007	<0.0002
J25-TP03-1-S	TP03	5/20/97	4.5	APCL	<0.0002	<0.0002	<0.0001	<0.0005	<0.0002	<0.0003	<0.0003	<0.0001	<0.0002	<0.0007	<0.0002
J25-TP03-2-S	TP03	5/20/97	3	APCL	<0.0002	<0.0002	<0.0001	<0.0005	<0.0002	<0.0003	<0.0003	<0.0001	<0.0002	<0.0007	<0.0002
J25-TP04-1-S	TP04	5/21/97	5	APCL	<0.0002	<0.0002	<0.0001	<0.0005	<0.0002	<0.0003	<0.0003	<0.0001	<0.0002	<0.0007	<0.0002
J25-TP04-2-S	TP04	5/21/97	3	APCL	<0.0002	<0.0002	<0.0001	<0.0005	<0.0002	<0.0003	<0.0003	<0.0001	<0.0002	<0.0007	<0.0002
J25-TR01-1-S	TR01	5/21/97	4	APCL	<0.0002	<0.0002	<0.0001	<0.0005	<0.0002	<0.0003	<0.0003	<0.0001	<0.0002	<0.0008	<0.0002
J25-TR01-2-S	TR01	5/21/97	8	APCL	<0.0002	<0.0002	<0.0001	<0.0005	<0.0002	<0.0003	<0.0003	<0.0001	<0.0002	<0.0007	<0.0002
J25-TR01-3-S	TR01	5/21/97	4	APCL	<0.0002	<0.0002	<0.0001	<0.0005	<0.0002	<0.0003	<0.0003	<0.0001	<0.0002	<0.0008	<0.0002
J25-TR01-4-S	TR01	5/21/97	8	APCL	<0.0002	<0.0002	<0.0001	<0.0005	<0.0002	<0.0003	<0.0003	<0.0001	<0.0002	<0.0007	<0.0002
J25-TR02-1-S	TR02	5/21/97	5	APCL	<0.0002	<0.0002	<0.0001	<0.0005	<0.0002	<0.0003	<0.0003	<0.0001	<0.0002	<0.0007	<0.0002
J25-TR02-2-S	TR02	5/21/97	5	APCL	<0.0002	<0.0002	<0.0001	<0.0005	<0.0002	<0.0003	<0.0003	<0.0001	<0.0002	<0.0007	<0.0002
J25-TR02-3-S	TR02	5/21/97	5	APCL	<0.0002	<0.0002	<0.0001	<0.0005	<0.0002	<0.0003	<0.0003	<0.0001	<0.0002	<0.0008	<0.0002
J25-TR03-1-S	TR03	5/21/97	6	APCL	<0.0002	<0.0002	<0.0001	<0.0005	<0.0002	<0.0003	<0.0003	<0.0001	<0.0002	<0.0007	<0.0002
J25-TR03-2-S	TR03	5/21/97	6	APCL	<0.0002	<0.0002	<0.0001	<0.0005	<0.0002	<0.0003	<0.0003	<0.0001	<0.0002	<0.0007	<0.0002
Analyses					18	18	18	18	18	18	18	18	18	18	18
Detections					0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration					0	0	0	0	0	0	0	0	0	0	0
Maximum Concentration					0	0	0	0	0	0	0	0	0	0	0
HWAD - PCG					NE	10	NE	NE	NE	89	112	10	2000	NE	120
HWAD - PCG Hits					NE	0	NE	NE	NE	0	0	0	0	NE	0

Notes:
NA = Not analyzed.
NE = Not established.

VOCs
Method 8260A (APCL)

Sample ID	Location ID	Sample Date	Depth (feet)	Lab	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromochloromethane	Dibromochloropropane	Dibromomethane	Dichlorodifluoromethane	Ethylbenzene	Hexachlorobutadiene	Isopropylbenzene	m-&p-Xylenes
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
J25-TP01-1-S	TP01	5/21/97	5	APCL	<0.0003	<0.0002	<0.0001	<0.0002	<0.0009	<0.0005	<0.0002	<0.0001	<0.0002	<0.0002	<0.0005
J25-TP01-2-S	TP01	5/21/97	2	APCL	<0.0003	<0.0002	<0.0001	<0.0002	<0.0009	<0.0005	<0.0002	<0.0001	<0.0002	<0.0002	<0.0005
J25-TP01-3-S	TP01	5/21/97	2.5	APCL	<0.0003	<0.0002	<0.0001	<0.0002	<0.0009	<0.0005	<0.0002	<0.0001	<0.0002	<0.0002	<0.0005
J25-TP02-1-S	TP02	5/21/97	6	APCL	<0.0003	<0.0002	<0.0001	<0.0002	<0.001	<0.0006	<0.0002	<0.0001	<0.0002	<0.0002	<0.0006
J25-TP02-2-S	TP02	5/21/97	2.5	APCL	<0.0003	<0.0002	<0.0001	<0.0002	<0.0009	<0.0005	<0.0002	<0.0001	<0.0002	<0.0002	<0.0005
J25-TP03-1-S	TP03	5/20/97	4.5	APCL	<0.0003	<0.0002	<0.0001	<0.0002	<0.0009	<0.0005	<0.0002	<0.0001	<0.0002	<0.0002	<0.0005
J25-TP03-2-S	TP03	5/20/97	3	APCL	<0.0003	<0.0002	<0.0001	<0.0002	<0.0009	<0.0005	<0.0002	<0.0001	<0.0002	<0.0002	<0.0005
J25-TP04-1-S	TP04	5/21/97	5	APCL	<0.0003	<0.0002	<0.0001	<0.0002	<0.0009	<0.0005	<0.0002	<0.0001	<0.0002	<0.0002	<0.0005
J25-TP04-2-S	TP04	5/21/97	3	APCL	<0.0003	<0.0002	<0.0001	<0.0002	<0.0009	<0.0005	<0.0002	<0.0001	<0.0002	<0.0002	<0.0005
J25-TR01-1-S	TR01	5/21/97	4	APCL	<0.0003	<0.0002	<0.0001	<0.0002	<0.001	<0.0005	<0.0002	<0.0001	<0.0002	<0.0002	<0.0005
J25-TR01-2-S	TR01	5/21/97	8	APCL	<0.0003	<0.0002	<0.0001	<0.0002	<0.0009	<0.0005	<0.0002	<0.0001	<0.0002	<0.0002	<0.0005
J25-TR01-3-S	TR01	5/21/97	4	APCL	<0.0003	<0.0002	<0.0001	<0.0002	<0.001	<0.0005	<0.0002	<0.0001	<0.0002	<0.0002	<0.0005
J25-TR01-4-S	TR01	5/21/97	8	APCL	<0.0003	<0.0002	<0.0001	<0.0002	<0.0009	<0.0005	<0.0002	<0.0001	<0.0002	<0.0002	<0.0005
J25-TR02-1-S	TR02	5/21/97	5	APCL	<0.0003	<0.0002	<0.0001	<0.0002	<0.001	<0.0005	<0.0002	<0.0001	<0.0002	<0.0002	<0.0005
J25-TR02-2-S	TR02	5/21/97	5	APCL	<0.0003	<0.0002	<0.0001	<0.0002	<0.001	<0.0005	<0.0002	<0.0001	<0.0002	<0.0002	<0.0005
J25-TR02-3-S	TR02	5/21/97	5	APCL	<0.0003	<0.0002	<0.0001	<0.0002	<0.001	<0.0005	<0.0002	<0.0001	<0.0002	<0.0002	<0.0005
J25-TR03-1-S	TR03	5/21/97	6	APCL	<0.0003	<0.0002	<0.0001	<0.0002	<0.0009	<0.0005	<0.0002	<0.0001	<0.0002	<0.0002	<0.0005
J25-TR03-2-S	TR03	5/21/97	6	APCL	<0.0003	<0.0002	<0.0001	<0.0002	<0.0009	<0.0005	<0.0002	<0.0001	<0.0002	<0.0002	<0.0005
Analyses					18	18	18	18	18	18	18	18	18	18	18
Detections					0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration					0	0	0	0	0	0	0	0	0	0	0
Maximum Concentration					0	0	0	0	0	0	0	0	0	0	0
HWAD - PCG					538	NE	NE	83	NE	800	16000	8000	NE	NE	160000
HWAD - PCG Hits					0	NE	NE	0	NE	0	0	0	NE	NE	0

Notes:
NA = Not analyzed.
NE = Not established.

VOCs
Method 8260A (APCL)

Sample ID	Location ID	Sample Date	Depth (feet)	Lab	Methylene chloride	MTBE	n-Butylbenzene	n-Propylbenzene	Naphthalene	o-Xylene	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Toluene
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
J25-TP01-1-S	TP01	5/21/97	5	APCL	<0.0007	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
J25-TP01-2-S	TP01	5/21/97	2	APCL	<0.0007	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
J25-TP01-3-S	TP01	5/21/97	2.5	APCL	<0.0007	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
J25-TP02-1-S	TP02	5/21/97	6	APCL	<0.0008	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
J25-TP02-2-S	TP02	5/21/97	2.5	APCL	<0.0007	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
J25-TP03-1-S	TP03	5/20/97	4.5	APCL	<0.0007	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
J25-TP03-2-S	TP03	5/20/97	3	APCL	<0.0007	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
J25-TP04-1-S	TP04	5/21/97	5	APCL	<0.0007	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
J25-TP04-2-S	TP04	5/21/97	3	APCL	<0.0007	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
J25-TR01-1-S	TR01	5/21/97	4	APCL	<0.0008	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
J25-TR01-2-S	TR01	5/21/97	8	APCL	<0.0007	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
J25-TR01-3-S	TR01	5/21/97	4	APCL	<0.0008	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
J25-TR01-4-S	TR01	5/21/97	8	APCL	<0.0007	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
J25-TR02-1-S	TR02	5/21/97	5	APCL	<0.0007	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
J25-TR02-2-S	TR02	5/21/97	5	APCL	<0.0007	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
J25-TR02-3-S	TR02	5/21/97	5	APCL	<0.0008	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
J25-TR03-1-S	TR03	5/21/97	6	APCL	<0.0007	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
J25-TR03-2-S	TR03	5/21/97	6	APCL	<0.0007	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
Analyses					18	18	18	18	18	18	18	18	18	18	18
Detections					0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration					0	0	0	0	0	0	0	0	0	0	0
Maximum Concentration					0	0	0	0	0	0	0	0	0	0	0
HWAD - PCG					4800	NE	NE	NE	3200	160000	NE	NE	NE	15	16000
HWAD - PCG Hits					0	NE	NE	NE	0	0	NE	NE	NE	0	0

Notes:
NA = Not analyzed.
NE = Not established.

5/5/98 9:52:19 AM

VOCs
Method 8260A (APCL)

Sample ID	Location ID	Sample Date	Depth (feet)	Lab	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl chloride
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
J25-TP01-1-S	TP01	5/21/97	5	APCL	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002
J25-TP01-2-S	TP01	5/21/97	2	APCL	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002
J25-TP01-3-S	TP01	5/21/97	2.5	APCL	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002
J25-TP02-1-S	TP02	5/21/97	6	APCL	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002
J25-TP02-2-S	TP02	5/21/97	2.5	APCL	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002
J25-TP03-1-S	TP03	5/20/97	4.5	APCL	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002
J25-TP03-2-S	TP03	5/20/97	3	APCL	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002
J25-TP04-1-S	TP04	5/21/97	5	APCL	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002
J25-TP04-2-S	TP04	5/21/97	3	APCL	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002
J25-TR01-1-S	TR01	5/21/97	4	APCL	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002
J25-TR01-2-S	TR01	5/21/97	8	APCL	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002
J25-TR01-3-S	TR01	5/21/97	4	APCL	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002
J25-TR01-4-S	TR01	5/21/97	8	APCL	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002
J25-TR02-1-S	TR02	5/21/97	5	APCL	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002
J25-TR02-2-S	TR02	5/21/97	5	APCL	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002
J25-TR02-3-S	TR02	5/21/97	5	APCL	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002
J25-TR03-1-S	TR03	5/21/97	6	APCL	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002
J25-TR03-2-S	TR03	5/21/97	6	APCL	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002
Analyses					18	18	18	18	18
Detections					0	0	0	0	0
Minimum Concentration					0	0	0	0	0
Maximum Concentration					0	0	0	0	0
HWAD - PCG					NE	NE	10	24000	24000
HWAD - PCG Hits					NE	NE	0	0	0

Notes:
NA = Not analyzed.
NE = Not established.

Explosives
Method 8330 (APCL)

Sample ID	Location ID	Sample Date	Depth (feet)	Lab	1,3,5-Trinitrobenzene	1,3-Dinitrobenzene	2,4,6-Trinitrotoluene	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Nitrotoluene	3-Nitrotoluene	4-Nitrotoluene	HMX	Nitrobenzene
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
J25-TP01-1-S	TP01	5/21/97	5	APCL	<0.014	<0.026	<0.042	<0.027	<0.059	<0.076	<0.065	<0.076	<0.048	<0.058
J25-TP01-2-S	TP01	5/21/97	2	APCL	<0.013	<0.026	<0.041	<0.027	<0.058	<0.074	<0.064	<0.074	<0.048	<0.057
J25-TP01-3-S	TP01	5/21/97	2.5	APCL	<0.013	<0.026	<0.041	<0.027	<0.058	<0.075	<0.064	<0.075	<0.048	<0.057
J25-TP02-1-S	TP02	5/21/97	6	APCL	<0.015	<0.028	<0.045	<0.029	<0.063	<0.08	<0.069	<0.08	<0.051	<0.061
J25-TP02-2-S	TP02	5/21/97	2.5	APCL	<0.013	<0.026	<0.041	<0.027	<0.057	<0.074	<0.063	<0.074	<0.047	<0.056
J25-TP03-1-S	TP03	5/20/97	4.5	APCL	<0.014	<0.026	<0.042	<0.027	<0.059	<0.076	<0.065	<0.076	<0.048	<0.058
J25-TP03-2-S	TP03	5/20/97	3	APCL	<0.014	<0.026	<0.042	<0.027	<0.058	<0.075	<0.065	<0.075	<0.048	<0.057
J25-TP04-1-S	TP04	5/21/97	5	APCL	<0.013	<0.025	<0.04	<0.026	<0.057	<0.073	<0.063	<0.073	<0.046	<0.056
J25-TP04-2-S	TP04	5/21/97	3	APCL	<0.062	<0.034	<0.056	<0.042	<0.045	<0.086	<0.062	<0.073	<0.058	<0.064
J25-TR01-1-S	TR01	5/21/97	4	APCL	<0.065	<0.035	<0.059	<0.044	<0.047	<0.091	<0.065	<0.077	<0.061	<0.068
J25-TR01-2-S	TR01	5/21/97	8	APCL	<0.063	<0.034	<0.057	<0.042	<0.046	<0.088	<0.063	<0.074	<0.059	<0.065
J25-TR01-3-S	TR01	5/21/97	4	APCL	<0.067	<0.036	<0.06	<0.045	<0.048	<0.093	<0.067	<0.079	<0.062	<0.069
J25-TR01-4-S	TR01	5/21/97	8	APCL	<0.063	<0.034	<0.057	<0.042	<0.045	<0.088	<0.063	<0.074	<0.059	<0.065
J25-TR02-1-S	TR02	5/21/97	5	APCL	<0.065	<0.035	<0.059	<0.044	<0.047	<0.091	<0.065	<0.077	<0.061	<0.067
J25-TR02-2-S	TR02	5/21/97	5	APCL	<0.065	<0.035	<0.058	<0.043	<0.047	<0.09	<0.065	<0.076	<0.06	<0.067
J25-TR02-3-S	TR02	5/21/97	5	APCL	<0.066	<0.036	<0.06	<0.044	<0.048	<0.092	<0.066	<0.078	<0.062	<0.068
J25-TR03-1-S	TR03	5/21/97	6	APCL	<0.062	<0.034	<0.056	<0.042	<0.045	<0.086	<0.062	<0.073	<0.058	<0.064
J25-TR03-2-S	TR03	5/21/97	6	APCL	<0.062	<0.034	<0.056	<0.042	<0.045	<0.087	<0.062	<0.073	<0.058	<0.064
Analyses					18	18	18	18	18	18	18	18	18	18
Detections					0	0	0	0	0	0	0	0	0	0
Minimum Concentration					0	0	0	0	0	0	0	0	0	0
Maximum Concentration					0	0	0	0	0	0	0	0	0	0
HWAD - PCG					4	8	233	2.6	80	800	800	800	4000	40
HWAD - PCG Hits					0	0	0	0	0	0	0	0	0	0

Notes:
NA = Not analyzed.
NE = Not established.

Explosives
Method 8330 (APCL)

Sample ID	Location ID	Sample Date	Depth (feet)	Lab	RDX	Tetryl	2-Amino-4,6-dinitrotoluene	4-Amino-2,6-dinitrotoluene
					mg/kg	mg/kg	mg/kg	mg/kg
J25-TP01-1-S	TP01	5/21/97	5	APCL	<0.053	<0.047	NA	NA
J25-TP01-2-S	TP01	5/21/97	2	APCL	<0.052	<0.047	NA	NA
J25-TP01-3-S	TP01	5/21/97	2.5	APCL	<0.052	<0.047	NA	NA
J25-TP02-1-S	TP02	5/21/97	6	APCL	<0.056	<0.05	NA	NA
J25-TP02-2-S	TP02	5/21/97	2.5	APCL	<0.051	<0.046	NA	NA
J25-TP03-1-S	TP03	5/20/97	4.5	APCL	<0.053	<0.047	NA	NA
J25-TP03-2-S	TP03	5/20/97	3	APCL	<0.052	<0.047	NA	NA
J25-TP04-1-S	TP04	5/21/97	5	APCL	<0.051	<0.045	NA	NA
J25-TP04-2-S	TP04	5/21/97	3	APCL	<0.044	<0.057	NA	NA
J25-TR01-1-S	TR01	5/21/97	4	APCL	<0.046	<0.06	NA	NA
J25-TR01-2-S	TR01	5/21/97	8	APCL	<0.044	<0.058	NA	NA
J25-TR01-3-S	TR01	5/21/97	4	APCL	<0.047	<0.061	NA	NA
J25-TR01-4-S	TR01	5/21/97	8	APCL	<0.044	<0.058	NA	NA
J25-TR02-1-S	TR02	5/21/97	5	APCL	<0.046	<0.06	NA	NA
J25-TR02-2-S	TR02	5/21/97	5	APCL	<0.046	<0.059	NA	NA
J25-TR02-3-S	TR02	5/21/97	5	APCL	<0.047	<0.061	NA	NA
J25-TR03-1-S	TR03	5/21/97	6	APCL	<0.044	<0.057	NA	NA
J25-TR03-2-S	TR03	5/21/97	6	APCL	<0.044	<0.057	NA	NA
Analyses					18	18	0	0
Detections					0	0	0	0
Minimum Concentration					0	0	0	0
Maximum Concentration					0	0	0	0
HWAD - PCG					64	800	NE	NE
HWAD - PCG Hits					0	0	NE	NE

Notes:
NA = Not analyzed.
NE = Not established.

Explosives
Method 8330M (APCL)

Sample ID	Location ID	Sample Date	Depth (feet)	Lab	Picric Acid
					mg/kg
J25-TP01-1-S	TP01	5/21/97	5	APCL	<0.71
J25-TP01-2-S	TP01	5/21/97	2	APCL	<0.7
J25-TP01-3-S	TP01	5/21/97	2.5	APCL	<0.71
J25-TP02-1-S	TP02	5/21/97	6	APCL	<0.76
J25-TP02-2-S	TP02	5/21/97	2.5	APCL	<0.7
J25-TP03-1-S	TP03	5/20/97	4.5	APCL	<0.72
J25-TP03-2-S	TP03	5/20/97	3	APCL	<0.71
J25-TP04-1-S	TP04	5/21/97	5	APCL	<0.69
J25-TP04-2-S	TP04	5/21/97	3	APCL	<0.69
J25-TR01-1-S	TR01	5/21/97	4	APCL	<0.73
J25-TR01-2-S	TR01	5/21/97	8	APCL	<0.7
J25-TR01-3-S	TR01	5/21/97	4	APCL	<0.74
J25-TR01-4-S	TR01	5/21/97	8	APCL	<0.7
J25-TR02-1-S	TR02	5/21/97	5	APCL	<0.73
J25-TR02-2-S	TR02	5/21/97	5	APCL	<0.72
J25-TR02-3-S	TR02	5/21/97	5	APCL	<0.74
J25-TR03-1-S	TR03	5/21/97	6	APCL	<0.69
J25-TR03-2-S	TR03	5/21/97	6	APCL	<0.69

Analyses	18
Detections	0
Minimum Concentration	0
Maximum Concentration	0
HWAD - PCG	NE
HWAD - PCG Hits	NE

Notes:
NA = Not analyzed.
NE = Not established.

Appendix D

J-25, Panoramic view toward south from railroad loading dock at SWMU. #R1-P30/31, 9/1/93

September 1993

February 2000