DECISION DOCUMENT
Coal Ash Landfill, SWMU A-03
Hawthorne Army Depot
Hawthorne, Nevada
July 1999

1. PURPOSE OF DECISION DOCUMENT

1.1 Introduction

This decision document describes the rationale for the proposed closure of SWMU A-03, Coal Ash Landfill at the Hawthorne Army Depot (HWAD), Hawthorne, Nevada. This decision document was developed by the U.S. Army Corps of Engineers, Sacramento District (USACE), the HWAD, and Day & Zimmermann Hawthorne Corporation, with support from the Nevada Department of Conservation and Natural Resources, Division of Environmental Protection (NDEP).

1.2 Site Description and Background

SWMU A-03, known as the "Coal Ash Landfill," is located in the Western Area Demilitarization Facility (WADF), southeast of Building 117-2. Despite its name, the site was reportedly never used for disposal of coal ash, and Tetra Tech found no documentation that indicated the site was ever used for waste disposal. The site was proposed as a landfill for coal ash that was to be generated by the adjacent coal-fired boilers, which never became operational. An Ash Management Plan was developed for the site [Day & Zimmermann/Basil (D&Z/B), 1990]. Two shallow soil borings (B-1 and B-2) have been completed at the proposed coal storage site adjacent to the SWMU. The samples were reportedly collected and analyzed by D&Z/B. An Operation Permit was reportedly issued for the Coal Ash Landfill by NDEP. (T. Erickson personal communication, 2 November 1993).

Tetra Tech reviewed all previous work done for the Group B SWMUs and compiled an annotated bibliography for past work (Tetra Tech, 1993).

The depth to ground water beneath the site was estimated to be about 40 feet, based on results of the hydrogeologic study conducted by the USGS in the 103-41 area southwest of the site in 1979 (Van Denburg et al., 1980). Tetra Tech conducted a base-wide ground water level survey in March 1994. Based on this survey, ground water at SWMU A-03 was estimated at a depth of 15 feet.

1.3 Chemicals of Concern

Potential chemicals of concern at SWMU A-03 are listed in Table 1 below.

Table 1 - Summary of Chemicals of Concern

Chemical of Concern	Rationale Behind Designation	Reference
Metals	Constituent associated with fly ash	D&Z/B 1990
Semi-volatile	Constituent associated with fly ash	D&Z/B 1990

2. SUMMARY OF SITE RISK

The only confirmed detection of contaminants at the Coal Ash Landfill are from metals that are naturally found in the soils. The soil was analyzed for metals and semivolatile organic compounds (SVOCs). Metals detected were below site background levels and SVOCs were not detected.

3. SUMMARY OF REMEDIAL INVESTIGATIONS & REMEDIAL ACTIONS

3.1 Remedial Investigations

3.1.1 Objectives

There was one objective of the investigation at SWMU A-03:

- To confirm that surface soils were not contaminated with metals and semivolatile constituents that can be associated with fly ash.

3.1.2 Planned and Actual Investigation

Planned and actual field activities are described in Table 4. Figure A-03-2, located at the end of this document, shows the locations of actual field investigation activities at this SWMU. A permanent monument has been installed and surveyed and the SWMU boundaries delineated at the locations shown on this figure.

Table 2 - Summary of Planned and Actual Field Investigation

Planned Investigation	Actual Investigation
Near surface sampling - 2 random locations	Near surface sampling - 2 samples at 2 locations
Surveying - GPS at sampling locations	Surveying - GPS at sampling locations

3.1.3 Results

Tables 3 & 4 summarize the results of the metals and semivolatile organic compounds (SVOCs) analyses. The associated background levels and the proposed closure goals for metals are included in this table.

Table 3 - Summary of Metals Analytical Results

			Metals (mg/kg)							
			EPA Method 6010 (Method 7471 for Hg)							
Sample	Sampled Date	Sample (ft)	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
A3-SS01-1-S	13-Jul-94	0.25 - 0.50	9.6	82	ND*	2.7	ND	ND	ND	ND
A3-SS02-1-S	13-Jul-94	0.25 - 0.50	22	94	ND	1.8	ND	0.040	ND	ND
Background Samples	Soil Series	Mappable Unit	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
B-11	Mazuma	570	22	42	0.63	4.9	ND	ND	ND	ND
B-12	Mazuma	570	27	77	0.24	2.7	ND	ND	ND	ND
B-42	Mazuma	570	10	74	ND	1.7	ND	ND	ND	ND
Proposed Closure Goals**			30	5600	40	80000	1000	24	400	400

*ND = Below laboratory detection limit. Lab detection limits are shown in Appendix B.
**Appendix A contains the HWAD proposed closure goals for soils.

Table 4 - Summary of SVOCs Analytical Results

Sample Number	Sample Date	Sample Depth (ft)	SVOCs EPA Method
A3-SS01-1-S	13-Jul-94	0.25 - 0.50	ND*
A3-SS02-1-S	13-Jul-94	0.25 - 0.50	ND

*ND = Below laboratory detection limit. Lab detection limits are shown in Appendix B.

3.2 Remedial Actions

3.2.1 Summary of Remedial Alternatives

The remedial alternative for this site is no further action.

3.2.2 Summary of Remedial Actions

No remedial action has been taken. A photograph of the site's current condition is attached.

4. PUBLIC/COMMUNITY INVOLVEMENT

It is U.S. Department of Defense (DOD) and Army policy to involve the local community throughout the investigation process at an installation. To initiate this involvement, HWAD has established a repository library in the local public library, which includes final copies of all past studies and documents regarding environmental issues at the facility. This repository will be maintained and updated with all future final documents as they are issued to HWAD.

HWAD has solicited community participation in establishment of the restoration advisory board (RAB). However, because of insufficient public response, HWAD has not formed a RAB. HWAD will continue to solicit community involvement, if sufficient community interest can be obtained.

5. CONCLUSIONS AND RECOMMENDATIONS

All samples had non-detect levels of SVOCs. Samples analyzed for metals had concentrations below the proposed closure goals. It is recommended that no further investigation be performed at this SWMU and the site be closed with regard to these chemicals of concern and without land use restrictions.

6. DECLARATION

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

U.S. ARMY

27 July 1999
Date

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

STATE OF NEVADA

7/21/99
Date

Paul Liebendorfer
Chief, Bureau of Federal Facilities

REFERENCES

D&Z/B. 1990. Western Area Demilitarization Facility, Boiler Building 117-2, Ash Management Plan. Prepared by Day & Zimmermann/Basil for submittal to Nevada DEP. August 4, 1990.

Erickson, T. November, 2, 1993. Personal Communication (information to T. Whitehead). Day & Zimmermann/Basil, Hawthorne, Nevada.

Jacobs Engineering. 1988. Facility Assessment, Hawthorne Army Ammunition Plant, TES IV Work Assignment No. 419.

RAI. 1992. Site Screening Inspection (SSI) for the Hawthorne Army Ammunition Plant, Hawthorne, NV. Prepared for the U.S. Army Corps of Engineers Toxic and Hazardous Materials Agency by Resource Applications, Inc., Falls Church, VA. December 1992. Contract No. DAAA 15-90-D-003, Task 5.

Tetra Tech. 1993. Draft Technical Memorandum for Group B SWMUs, Hawthorne Army Ammunition Plant. November 22, 1993.

Tetra Tech. 1994a. Remedial Investigation, Group B SWMUs, Final Work Plan, Volume 1, Investigation Description, and Volume 2, Sampling and Analysis Plans, Hawthorne Army Ammunition Plant. May 1994.

Tetra Tech. 1994b. Site Safety and Health Plan, Hawthorne Army Ammunition Plant. June 1994.

Tetra Tech. 1994c. Final Chemical Data Acquisition Plan, Hawthorne Army Ammunition Plant. June 28, 1994.

Tetra Tech. 1995. Group B Chemical Data Submittal, Hawthorne Army Ammunition Plant. March 1995.

Tetra Tech. 1996. Hawthorne Army Depot Remedial Investigation Group B Solid Waste Management Units, Final Closure Report, SWMU A-03 Coal Ash Landfill, SWMU B-28a 108-20a EO Spill Impoundment, SWMU B-28b 108-20b EO Spill Impoundment, SWMU B-28c 104-8 EO Spill Impoundment, SWMU B-28d 104-10 EO Spill Impoundment, SWMU I-14 Bldg 46 Spill Site, SWMU J-04 107 Drum Storage, SWMU J-05 Dock 1 Landfill, SWMU J-06 Dock 2 Landfill, SWMU J-07 Dock 3 Landfill, SWMU J-08 Dock 4 Landfill, SWMU

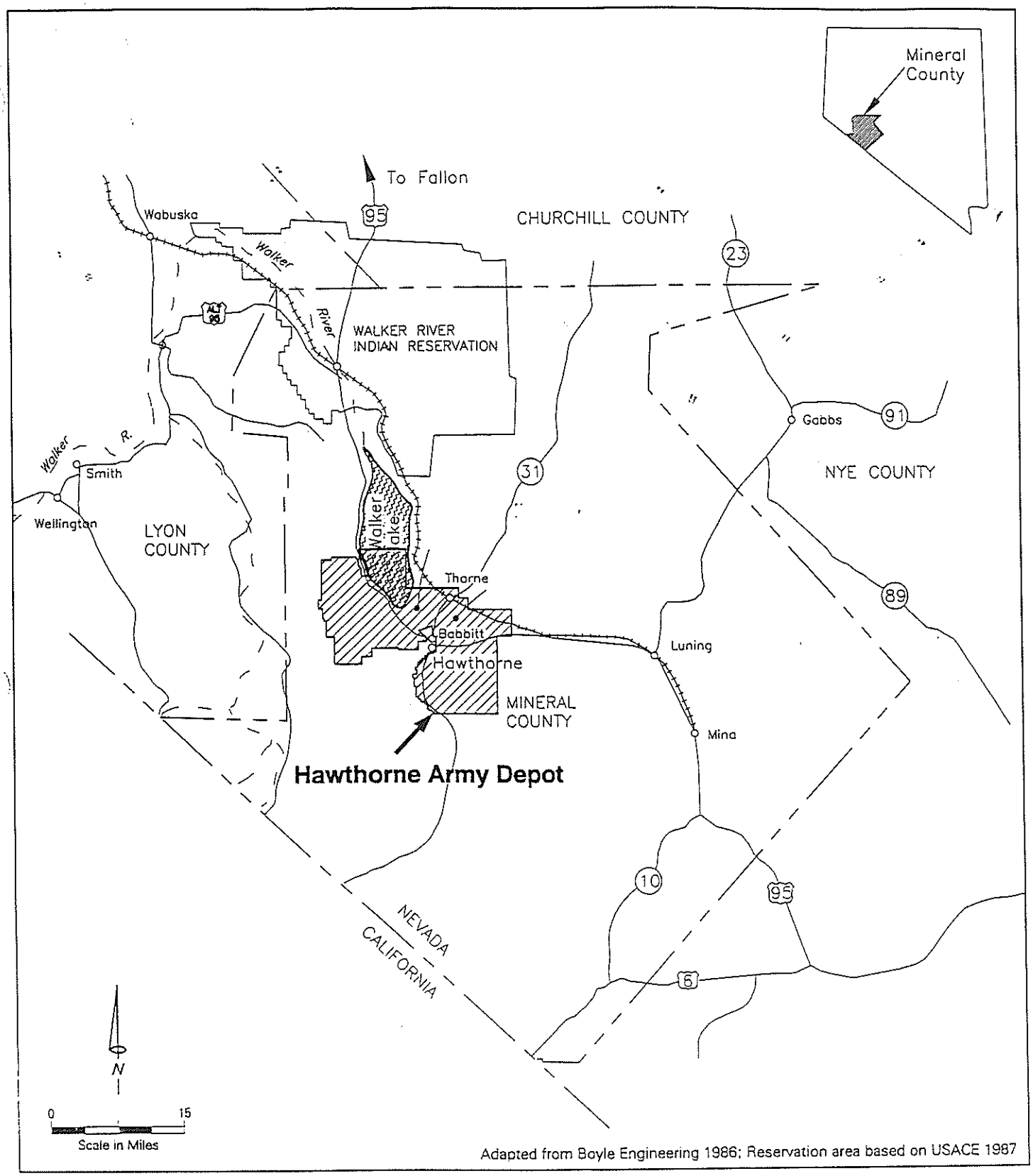
J-09 Dock 5 Landfill, SWMU J-10 Dock 6 Landfill, SWMU J-13 WADF South Dump, SWMU J-17 Thorne Drum Area, SWMU J-21 Bldg 97 Old Dock Area, SWMU J-22 50 Group Pits, SWMU J-24 Trench near 50-60.

USACE. 1993. Installation Action Plan for Hawthorne Army Ammunition Plant (HWAAP), prepared by S. Hong.

USATHAMA. 1977. Installation Assessment of Naval Ammunition Depot, Hawthorne, NV. U.S. Army Toxic and Hazardous Materials Agency, Aberdeen Proving Ground, MD. Records Evaluation Report No. 114.

Van Denburgh, A.S., D.H. Schaefer, M.W. Marker, and R.L. Carman. 1980. Ground Water Contamination by Percolating Waste, Hawthorne Army Ammunition Plant, Mineral County, NV, Phase IV, Reconnaissance near Walker Lake. U.S. Geological Survey Administrative Report.

Figures



Adapted from Boyle Engineering 1986; Reservation area based on USACE 1987

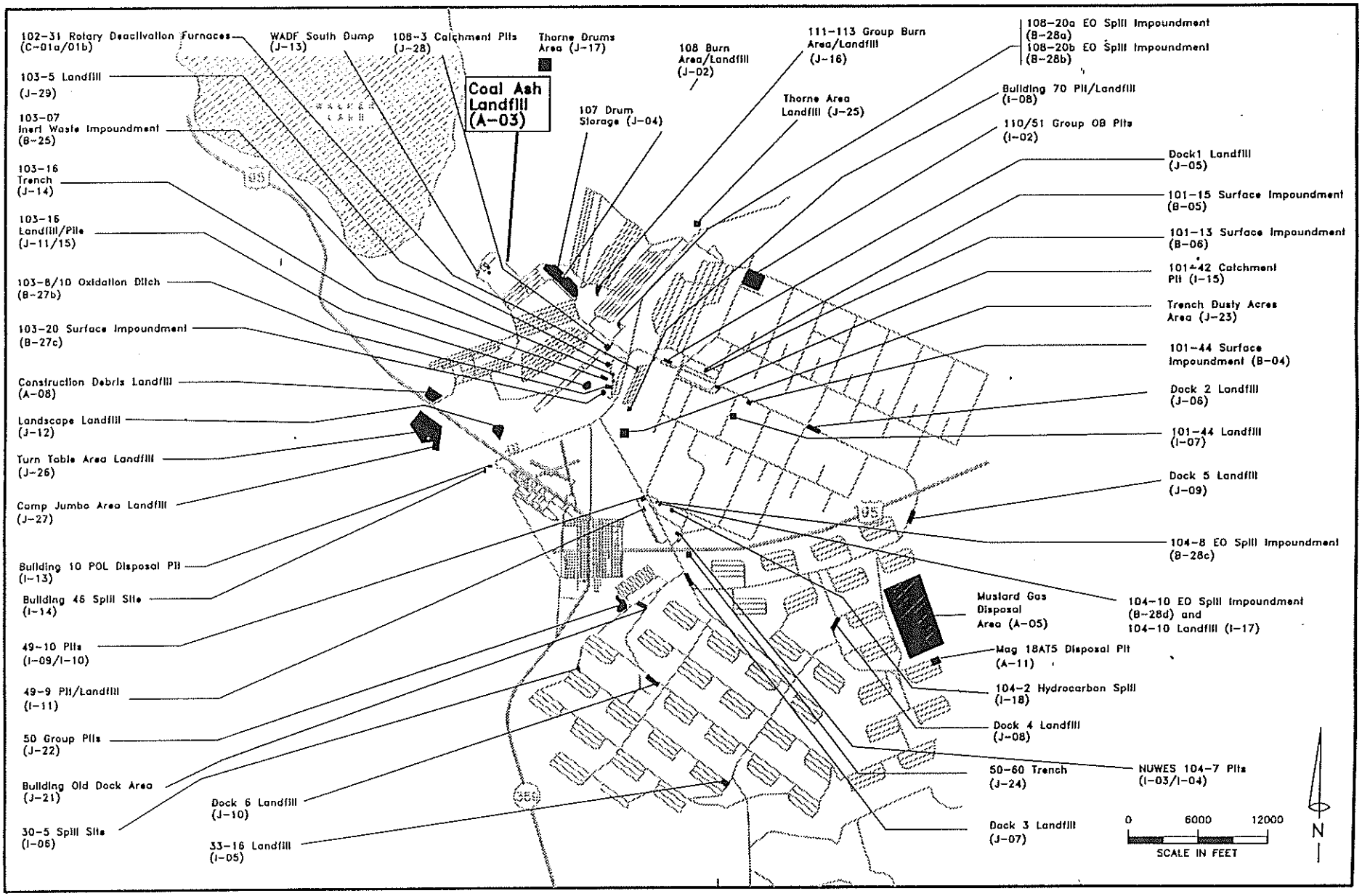
Location Map

Legend

Hawthorne Army Depot

Hawthorne Army Depot
Hawthorne, Nevada

Tetra Tech, Inc.

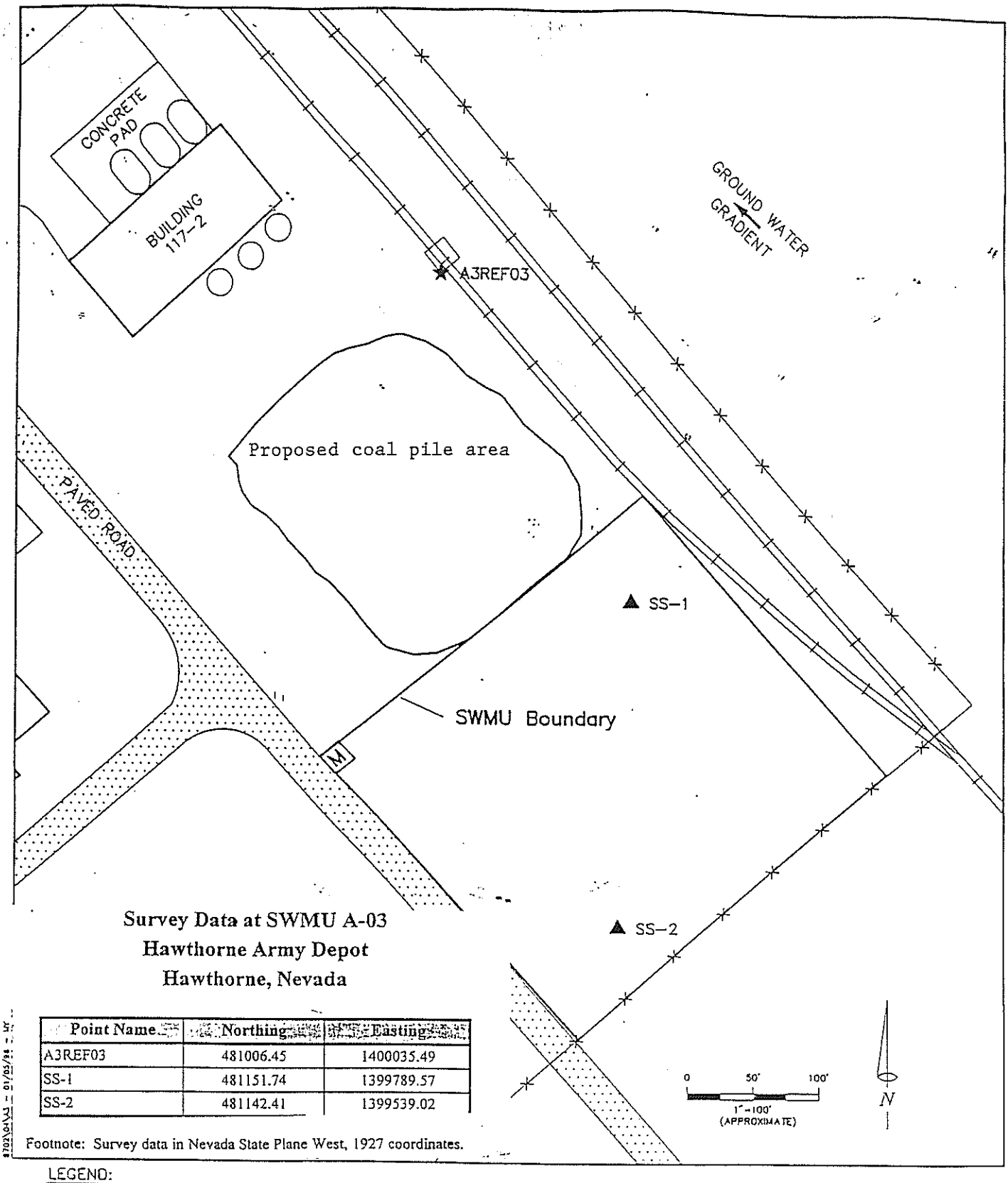


TETRA TECH

Location Map
Hawthorne Army Depot

Hawthorne, Nevada

Figure SWMU-A-03-1



Survey Data at SWMU A-03
Hawthorne Army Depot
Hawthorne, Nevada

Point Name	Northing	Easting
A3REF03	481006.45	1400035.49
SS-1	481151.74	1399789.57
SS-2	481142.41	1399539.02

Footnote: Survey data in Nevada State Plane West, 1927 coordinates.

LEGEND:

★ SWMU reference point

▲ SS-X Surface sample location and number

M Monument location

TETRA TECH

Activity Map
SWMU A-03
Coal Ash Landfill

Hawthorne Army Depot
Hawthorne, Nevada

Source: Base map digitized from Aerial Photo Survey, June 1994. Geophysical data from Geophysical Survey, NORCAL, August 1994.

Figure A-03-2

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

SITEID	SAMPID	AMETHOD	ANALYTE	UNIT	DETLMT	SURRTIC	QCCONC
A03	A03-SS01-1-S	8270	4-Nitroaniline	mg/kg	0.2		
A03	A03-SS01-1-S	8270	4-Nitrophenol	mg/kg	0.1		
A03	A03-SS01-1-S	8270	Benzyl alcohol	mg/kg	0.2		
A03	A03-SS01-1-S	8270	4-Bromophenyl phenyl ether	mg/kg	0.1		
A03	A03-SS01-1-S	8270	2,4-Dimethylphenol	mg/kg	0.2		
A03	A03-SS01-1-S	8270	4-Methylphenol	mg/kg	0.3		
A03	A03-SS01-1-S	8270	1,4-Dichlorobenzene	mg/kg	0.2		
A03	A03-SS01-1-S	8270	4-Chloroaniline	mg/kg	0.2		
A03	A03-SS01-1-S	8270	bis(2-Chloroisopropyl)-ether	mg/kg	0.2		
A03	A03-SS01-1-S	8270	Phenol	mg/kg	0.1		
A03	A03-SS01-1-S	8270	bis(2-Chloroethyl) ether	mg/kg	0.2		
A03	A03-SS01-1-S	8270	bis(2-Chloroethoxy) methane	mg/kg	0.2		
A03	A03-SS01-1-S	8270	bis(2-Ethylhexyl)-phthalate	mg/kg	0.1		
A03	A03-SS01-1-S	8270	Di-n-octyl phthalate	mg/kg	0.1		
A03	A03-SS01-1-S	8270	Hexachlorobenzene	mg/kg	0.1		
A03	A03-SS01-1-S	8270	2,4,6-Tribromophenol Rep.	mg/kg		SUR	2.51
A03	A03-SS01-1-S	8270	Anthracene	mg/kg	0.1		
A03	A03-SS01-1-S	8270	1,2,4-Trichlorobenzene	mg/kg	0.2		
A03	A03-SS01-1-S	8270	2,4-Dichlorophenol	mg/kg	0.2		
A03	A03-SS01-1-S	8270	2,4-Dinitrotoluene	mg/kg	0.1		
A03	A03-SS01-1-S	8270	Pyrene	mg/kg	0.1		
A03	A03-SS01-1-S	8270	Dimethyl phthalate	mg/kg	0.2		
A03	A03-SS01-1-S	8270	Phenol-d5 Reported	mg/kg		SUR	2.51
A03	A03-SS01-1-S	8270	Dibenzofuran	mg/kg	0.1		
A03	A03-SS01-1-S	8270	Terphenyl-d14 Reported	mg/kg		SUR	1.68
A03	A03-SS01-1-S	8270	Benzo(g,h,i)perylene	mg/kg	0.1		
A03	A03-SS01-1-S	8270	Indeno(1,2,3-c,d)pyrene	mg/kg	0.2		
A03	A03-SS01-1-S	8270	Benzo(b)fluoranthene	mg/kg	0.1		
A03	A03-SS01-1-S	8270	Fluoranthene	mg/kg	0.1		
A03	A03-SS01-1-S	8270	Benzo(k)fluoranthene	mg/kg	0.1		
A03	A03-SS01-1-S	8270	Acenaphthylene	mg/kg	0.2		
A03	A03-SS01-1-S	8270	Chrysene	mg/kg	0.1		
A03	A03-SS01-1-S	8270	2-Fluorobiphenyl Reported	mg/kg		SUR	1.68

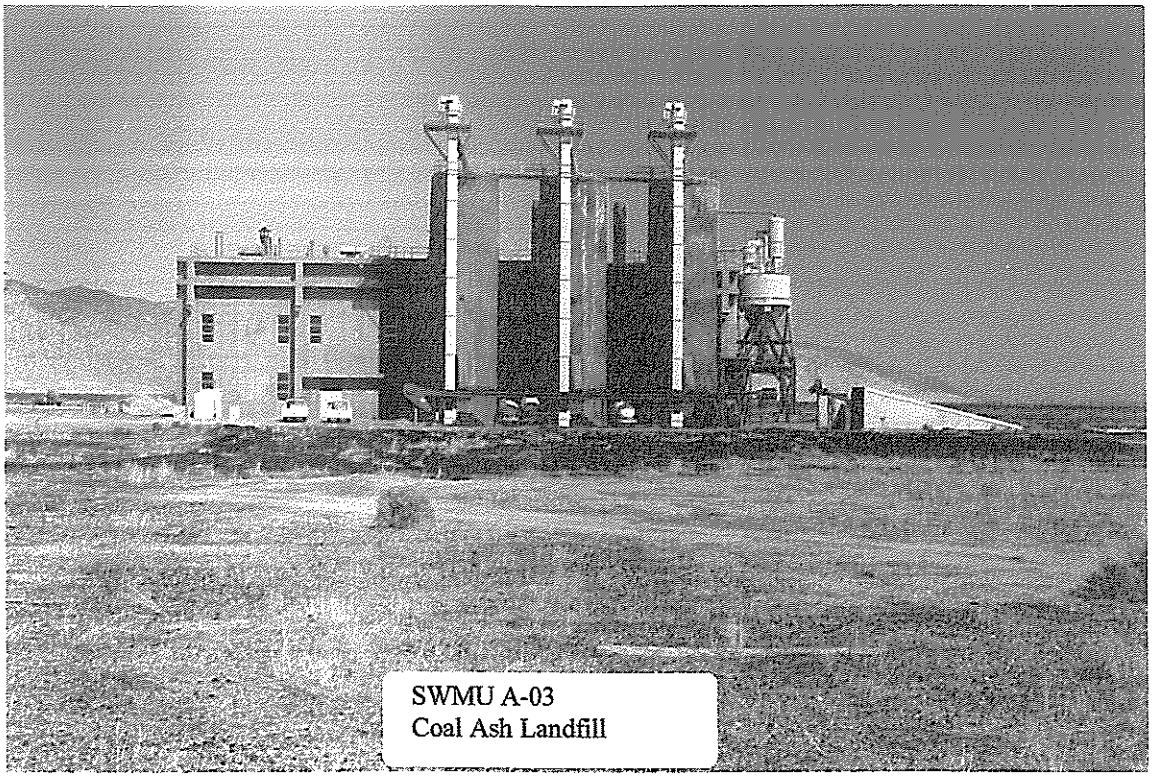
SITEID	SAMPID	AMETHOD	ANALYTE	UNIT	DETLMT	SURRTIC	QCCONC
A03	A03-SS01-1-S	8270	2-Fluorophenol Reported	mg/kg		SUR	2.51
A03	A03-SS01-1-S	8270	Nitrobenzene-d5 Reported	mg/kg		SUR	1.68
A03	A03-SS01-1-S	8270	Benzo(a)pyrene	mg/kg	0.1		
A03	A03-SS01-1-S	8270	2,4-Dinitrophenol	mg/kg	0.1		
A03	A03-SS01-1-S	8270	Dibenz(a,h)anthracene	mg/kg	0.1		
A03	A03-SS01-1-S	8270	4,6-Dinitrophenol-o-cresol	mg/kg	0.2		
A03	A03-SS01-1-S	8270	1,3-Dichlorobenzene	mg/kg	0.2		
A03	A03-SS01-1-S	8270	Benzo(a)anthracene	mg/kg	0.1		
A03	A03-SS01-1-S	8270	4-Chloro-3-methylphenol	mg/kg	0.2		
A03	A03-SS01-1-S	8270	2,6-Dinitrotoluene	mg/kg	0.2		
A03	A03-SS01-1-S	8270	N-Nitrosodimethylamine	mg/kg	0.2		
A03	A03-SS01-1-S	8270	N-Nitroso-di-n-propylamine	mg/kg	0.2		
A03	A03-SS01-1-S	8270	Benzoic acid	mg/kg	1		
A03	A03-SS01-1-S	8270	Hexachloroethane	mg/kg	0.2		
A03	A03-SS01-1-S	8270	4-Chlorophenyl phenyl ether	mg/kg	0.1		
A03	A03-SS01-1-S	6010	Lead, Total	mg/kg	5		
A03	A03-SS01-1-S	7471	Mercury, Total	mg/kg	0.04		
A03	A03-SS01-1-S	6010	Silver, Total	mg/kg	0.9		
A03	A03-SS01-1-S	6010	Arsenic, Total	mg/kg	4		
A03	A03-SS01-1-S	6010	Barium, Total	mg/kg	0.2		
A03	A03-SS01-1-S	6010	Cadmium, Total	mg/kg	0.2		
A03	A03-SS01-1-S	6010	Chromium, Total	mg/kg	0.6		
A03	A03-SS01-1-S	8270	Hexachlorocyclopentadiene	mg/kg	0.1		
A03	A03-SS01-1-S	D 2216	Moisture, percent in soil	Percent			
A03	A03-SS01-1-S	6010	Selenium, Total	mg/kg	5		
A03	A03-SS01-1-S	8270	Isophorone	mg/kg	0.2		
A03	A03-SS01-1-S	8270	Acenaphthene	mg/kg	0.1		
A03	A03-SS01-1-S	8270	Diethyl phthalate	mg/kg	0.2		
A03	A03-SS01-1-S	8270	Di-n-butyl phthalate	mg/kg	0.1		
A03	A03-SS01-1-S	8270	Phenanthrene	mg/kg	0.1		
A03	A03-SS01-1-S	8270	Butyl benzyl phthalate	mg/kg	0.1		
A03	A03-SS01-1-S	8270	N-Nitrosodiphenylamine	mg/kg	0.1		
A03	A03-SS01-1-S	8270	Fluorene	mg/kg	0.1		

SITEID	SAMPID	AMETHOD	ANALYTE	UNIT	DETLMT	SURRTIC	QCCONC
A03	A03-SS01-1-S	8270	Hexachlorobutadiene	mg/kg	0.2		
A03	A03-SS01-1-S	8270	Pentachlorophenol	mg/kg	0.1		
A03	A03-SS01-1-S	8270	2,4,6-Trichlorophenol	mg/kg	0.2		
A03	A03-SS01-1-S	8270	2-Nitroaniline	mg/kg	0.2		
A03	A03-SS01-1-S	8270	2-Nitrophenol	mg/kg	0.2		
A03	A03-SS01-1-S	8270	Naphthalene	mg/kg	0.2		
A03	A03-SS01-1-S	8270	2-Methylnaphthalene	mg/kg	0.2		
A03	A03-SS01-1-S	8270	3,3-Dichlorobenzidine	mg/kg	0.1		
A03	A03-SS01-1-S	8270	2-Methylphenol (o-Cresol)	mg/kg	0.2		
A03	A03-SS01-1-S	8270	1,2-Dichlorobenzene	mg/kg	0.2		
A03	A03-SS01-1-S	8270	2-Chlorophenol	mg/kg	0.2		
A03	A03-SS01-1-S	8270	2,4,5-Trichlorophenol	mg/kg	0.2		
A03	A03-SS01-1-S	8270	Nitrobenzene	mg/kg	0.2		
A03	A03-SS01-1-S	8270	3-Nitroaniline	mg/kg	0.2		
A03	A03-SS02-1-S	8270	4-Nitroaniline	mg/kg	0.2		
A03	A03-SS02-1-S	8270	4-Nitrophenol	mg/kg	0.1		
A03	A03-SS02-1-S	8270	Benzyl alcohol	mg/kg	0.2		
A03	A03-SS02-1-S	8270	4-Bromophenyl phenyl ether	mg/kg	0.1		
A03	A03-SS02-1-S	8270	2,4-Dimethylphenol	mg/kg	0.2		
A03	A03-SS02-1-S	8270	4-Methylphenol	mg/kg	0.3		
A03	A03-SS02-1-S	8270	1,4-Dichlorobenzene	mg/kg	0.2		
A03	A03-SS02-1-S	8270	4-Chloroaniline	mg/kg	0.2		
A03	A03-SS02-1-S	8270	bis(2-Chloroisopropyl)-ether	mg/kg	0.2		
A03	A03-SS02-1-S	8270	Phenol	mg/kg	0.1		
A03	A03-SS02-1-S	8270	bis(2-Chloroethyl) ether	mg/kg	0.2		
A03	A03-SS02-1-S	8270	bis(2-Chloroethoxy) methane	mg/kg	0.2		
A03	A03-SS02-1-S	8270	bis(2-Ethylhexyl)-phthalate	mg/kg	0.1		
A03	A03-SS02-1-S	8270	Di-n-octyl phthalate	mg/kg	0.1		
A03	A03-SS02-1-S	8270	Hexachlorobenzene	mg/kg	0.1		
A03	A03-SS02-1-S	8270	2,4,6-Tribromophenol Rep.	mg/kg		SUR	2.5
A03	A03-SS02-1-S	8270	Anthracene	mg/kg	0.1		
A03	A03-SS02-1-S	8270	1,2,4-Trichlorobenzene	mg/kg	0.2		
A03	A03-SS02-1-S	8270	2,4-Dichlorophenol	mg/kg	0.2		

SITEID	SAMPID	AMETHOD	ANALYTE	UNIT	DETLMT	SURRTIC	QCCONC
A03	A03-SS02-1-S	8270	2,4-Dinitrotoluene	mg/kg	0.1		
A03	A03-SS02-1-S	8270	Pyrene	mg/kg	0.1		
A03	A03-SS02-1-S	8270	Dimethyl phthalate	mg/kg	0.2		
A03	A03-SS02-1-S	8270	Phenol-d5 Reported	mg/kg		SUR	2.5
A03	A03-SS02-1-S	8270	Dibenzofuran	mg/kg	0.1		
A03	A03-SS02-1-S	8270	Terphenyl-d14 Reported	mg/kg		SUR	1.67
A03	A03-SS02-1-S	8270	Benzo(g,h,i)perylene	mg/kg	0.1		
A03	A03-SS02-1-S	8270	Indeno(1,2,3-c,d)pyrene	mg/kg	0.2		
A03	A03-SS02-1-S	8270	Benzo(b)fluoranthene	mg/kg	0.1		
A03	A03-SS02-1-S	8270	Fluoranthene	mg/kg	0.1		
A03	A03-SS02-1-S	8270	Benzo(k)fluoranthene	mg/kg	0.1		
A03	A03-SS02-1-S	8270	Acenaphthylene	mg/kg	0.2		
A03	A03-SS02-1-S	8270	Chrysene	mg/kg	0.1		
A03	A03-SS02-1-S	8270	2-Fluorobiphenyl Reported	mg/kg		SUR	1.67
A03	A03-SS02-1-S	8270	2-Fluorophenol Reported	mg/kg		SUR	2.5
A03	A03-SS02-1-S	8270	Nitrobenzene-d5 Reported	mg/kg		SUR	1.67
A03	A03-SS02-1-S	8270	Benzo(a)pyrene	mg/kg	0.1		
A03	A03-SS02-1-S	8270	2,4-Dinitrophenol	mg/kg	0.1		
A03	A03-SS02-1-S	8270	Dibenz(a,h)anthracene	mg/kg	0.1		
A03	A03-SS02-1-S	8270	4,6-Dinitrophenol-o-cresol	mg/kg	0.2		
A03	A03-SS02-1-S	8270	1,3-Dichlorobenzene	mg/kg	0.2		
A03	A03-SS02-1-S	8270	Benzo(a)anthracene	mg/kg	0.1		
A03	A03-SS02-1-S	8270	4-Chloro-3-methylphenol	mg/kg	0.2		
A03	A03-SS02-1-S	8270	2,6-Dinitrotoluene	mg/kg	0.2		
A03	A03-SS02-1-S	8270	N-Nitrosodimethylamine	mg/kg	0.2		
A03	A03-SS02-1-S	8270	N-Nitroso-di-n-propylamine	mg/kg	0.2		
A03	A03-SS02-1-S	8270	Benzoic acid	mg/kg	1		
A03	A03-SS02-1-S	8270	Hexachloroethane	mg/kg	0.2		
A03	A03-SS02-1-S	8270	4-Chlorophenyl phenyl ether	mg/kg	0.1		
A03	A03-SS02-1-S	6010	Lead, Total	mg/kg	5		
A03	A03-SS02-1-S	7471	Mercury, Total	mg/kg	0.04		
A03	A03-SS02-1-S	6010	Silver, Total	mg/kg	0.9		
A03	A03-SS02-1-S	6010	Arsenic, Total	mg/kg	4		

SITEID	SAMPID	AMETHOD	ANALYTE	UNIT	DETLMT	SURRTIC	QCCONC
A03	A03-SS02-1-S	6010	Barium, Total	mg/kg	0.2		
A03	A03-SS02-1-S	6010	Cadmium, Total	mg/kg	0.2		
A03	A03-SS02-1-S	6010	Chromium, Total	mg/kg	0.6		
A03	A03-SS02-1-S	8270	Hexachlorocyclopentadiene	mg/kg	0.1		
A03	A03-SS02-1-S	D 2216	Moisture, percent in soil	Percent			
A03	A03-SS02-1-S	6010	Selenium, Total	mg/kg	5		
A03	A03-SS02-1-S	8270	Isophorone	mg/kg	0.2		
A03	A03-SS02-1-S	8270	Acenaphthene	mg/kg	0.1		
A03	A03-SS02-1-S	8270	Diethyl phthalate	mg/kg	0.2		
A03	A03-SS02-1-S	8270	Di-n-butyl phthalate	mg/kg	0.1		
A03	A03-SS02-1-S	8270	Phenanthrene	mg/kg	0.1		
A03	A03-SS02-1-S	8270	Butyl benzyl phthalate	mg/kg	0.1		
A03	A03-SS02-1-S	8270	N-Nitrosodiphenylamine	mg/kg	0.1		
A03	A03-SS02-1-S	8270	Fluorene	mg/kg	0.1		
A03	A03-SS02-1-S	8270	Hexachlorobutadiene	mg/kg	0.2		
A03	A03-SS02-1-S	8270	Pentachlorophenol	mg/kg	0.1		
A03	A03-SS02-1-S	8270	2,4,6-Trichlorophenol	mg/kg	0.2		
A03	A03-SS02-1-S	8270	2-Nitroaniline	mg/kg	0.2		
A03	A03-SS02-1-S	8270	2-Nitrophenol	mg/kg	0.2		
A03	A03-SS02-1-S	8270	Naphthalene	mg/kg	0.2		
A03	A03-SS02-1-S	8270	2-Methylnaphthalene	mg/kg	0.2		
A03	A03-SS02-1-S	8270	3,3-Dichlorobenzidine	mg/kg	0.1		
A03	A03-SS02-1-S	8270	2-Methylphenol (o-Cresol)	mg/kg	0.2		
A03	A03-SS02-1-S	8270	1,2-Dichlorobenzene	mg/kg	0.2		
A03	A03-SS02-1-S	8270	2-Chlorophenol	mg/kg	0.2		
A03	A03-SS02-1-S	8270	2,4,5-Trichlorophenol	mg/kg	0.2		
A03	A03-SS02-1-S	8270	Nitrobenzene	mg/kg	0.2		
A03	A03-SS02-1-S	8270	3-Nitroaniline	mg/kg	0.2		

Site Photograph


SWMU A-03
Coal Ash Landfill