

N00639.AR.002069
NSA MID SOUTH
5090.3a

TECHNICAL MEMORANDUM SOIL SAMPLING AND REMOVAL REPORT SOLID WASTE
MANAGEMENT UNIT 3 MILLINGTON SUPPACT TN
1/7/2004
ENSAFE



TECHNICAL MEMORANDUM

To: Distribution
From: Phil Atkinson, EnSafe Inc.
Re: SWMU 3 Soil Sampling and Removal Report
NSA Mid-South, Millington, Tennessee
Date: January 7, 2004 (Revision 0)

Distribution:
Jim Reed, NAVFAC EFD SOUTH
Tonya Barker/Rob Williamson,
NSA Mid-South
Jennifer Herndon, USEPA
Roger Donovan, TDEC
Jack Carmichael, USGS
EnSafe Project Team

Summary

This report documents the sampling and removal of soil with chromium concentrations above the Region 9 industrial preliminary remediation goals (PRGs) at SWMU 3, the former N-121 plating shop, at NSA Mid-South. The sampling, excavation, and disposal were conducted in accordance with applicable federal, state, and local laws and regulations. The primary references for this report are the *Abbreviated Work Plan — Building N-121 Soil Sampling* (EnSafe, May 1999) and the *Comprehensive RCRA Facility Investigation Work Plan* (E/A&H, 1994).

Based on the analytical results for samples from the excavation, soil containing chromium above the Region 9 industrial PRG was removed, and EnSafe recommends no further action for this site.

To find specific details about the project, please refer to the following table.

For Details On	Refer To
Background Information	Pages 1, 2
Sampling Methodology	Page 2
Sampling Locations and Results	Figure 2
Sampling Results and Removal Action	Page 4
Conclusions/Recommendations	Page 5

Background Information

Site Description

SWMU 3, former N-121 plating shop, is on the Northside of NSA Mid-South. The facility, which operated as a plating shop training facility between 1951 and 1976, used metals, cyanide-based solutions, and solvents. In January 2001, the building superstructure was demolished, leaving the

concrete slab. The site, previous sampling results, and site histories and investigations are detailed in the *Abbreviated Work Plan — Building N-121 Soil Sampling* (EnSafe, May 1999) and the *SWMU 3 RCRA Facility Investigation Report* (EnSafe/Allen and Hoshall, April 1996). Figure 1 shows the location of SWMU 3.

Slab Removal

On May 2, 2003, the concrete slab was sampled as detailed in the *Foundation Sampling and Removal Work Plan* (EnSafe, April 2003). Sampling results showed that the material did not exceed a screening level. Therefore, on June 12, 2003, EnSafe Ops demolished the concrete slab and transported it to BFI North Shelby County Landfill for disposal.

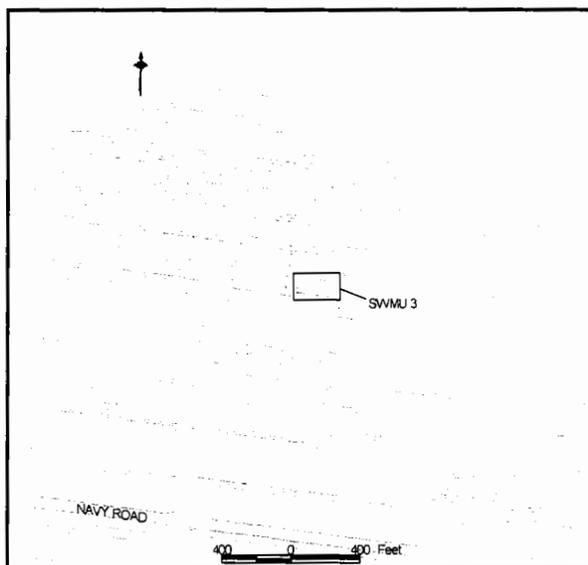
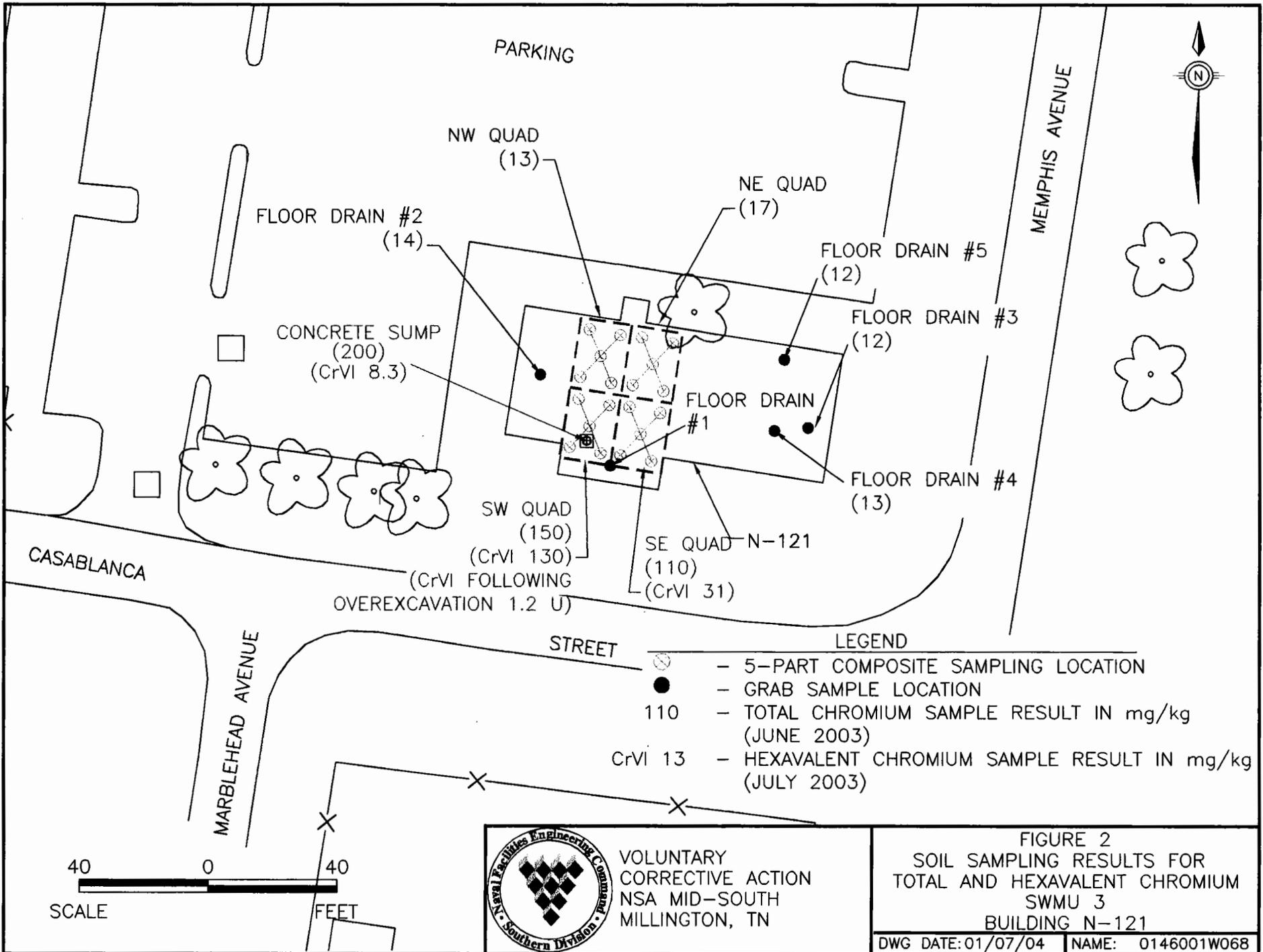


Figure 1 — Site Vicinity Map

Sampling Methodology

The overall goal was to sample native soils beneath the former N-121 building slab to determine if past operations had impacted the soil. To facilitate sample collection after the building slab removal, a global positioning system unit was used to locate features within the slab that could be sources for possible impacted soil. These features included five¹ floor drains, a concrete box which appeared to be a sump, and a network of channels. Following the slab removal, grab samples were collected in the location of the floor drains and the concrete sump. The network of channels, located in approximately the central one-third of the slab, was divided into equally sized quadrants for sampling. A five-part composite sample was collected from each channel quadrant. The sampling locations are shown on Figure 2.

¹One of the floor drains was located in the quadrant sampling area; therefore, this floor drain was not sampled.



VOLUNTARY
CORRECTIVE ACTION
NSA MID-SOUTH
MILLINGTON, TN

FIGURE 2
SOIL SAMPLING RESULTS FOR
TOTAL AND HEXAVALENT CHROMIUM
SWMU 3
BUILDING N-121
DWG DATE: 01/07/04 NAME: 0146001W068

Soil samples were collected on June 12, 2003, and submitted to STL-Savannah for volatile organic compounds² (VOCs) and Appendix IX metals analysis. Metals and VOCs were compared to the USEPA Region 9's 2002 residential and industrial PRGs, and metals were also compared to their background reference concentrations (RCs) for NSA Mid-South³.

Sampling Results and Removal Action

Except for chromium, VOCs and metals were below the PRGs at each sampling location. The chromium results, analyzed by Appendix IX metals, are totaled results and do not differentiate between chromium III and chromium VI, the two chromium forms⁴. All Appendix IX chromium results did not exceed the chromium III or total chromium PRGs. However, the Appendix IX total chromium results exceeded the chromium VI residential and industrial PRGs at three locations: the southwest and southeast quadrants and the sump.



A track hoe was used to remove approximately 40 cubic yards of soil from the southwest quadrant.

Therefore, to determine if the hexavalent chromium concentrations in soil exceed the PRG for chromium VI, these three locations were re-sampled on July 14, 2003 and analyzed for chromium VI. Chromium's RC and PRGs are summarized in Table 1; sampling results are shown on Figure 2.

	Residential	Industrial	Reference Concentration
Chromium III	100,000	100,000	23.9
Total Chromium (1:6 ratio)	210.68	448.31	23.9
Chromium VI	30.1	64.05	23.9

²The VOC samples collected from the channel area were grab samples collected from the middle of each quadrant.

³From the technical memorandum *Reference Concentrations* (E/A&H, 1996).

⁴Chromium has three PRG values: chromium III, chromium VI, and total chromium (1:6 ratio Cr VI:Cr III). Chromium VI (hexavalent chromium) is more toxic and unstable than chromium III. Each chromium form can be analyzed separately in the laboratory.

Hexavalent chromium exceeded its residential and industrial PRG in the composite sample collected from the southwest quadrant and was below the industrial PRG for the southeast quadrant and the sump. The BRAC cleanup team (BCT) decided to remove the soil from the southwest quadrant to concentrations below chromium's industrial PRG. Therefore, on October 16, 2003, approximately 40 yds³ of soil were removed from this quadrant, directly loaded into dump-trucks, and transported to Waste Management Landfill located in Tunica, MS, for disposal. Prior to disposal, the soil was sampled for landfill classification,⁵ and a soil disposal application was approved by the landfill. The disposal manifests are included in Attachment B.

Immediately following the soil removal action, one additional composite sample was collected from the excavated area and submitted for chromium VI analysis. The laboratory results indicated that remaining soils were below the residential and industrial PRGs for chromium VI. Therefore, on December 2, 2003, the former Building N-126 area was graded and seeded. All confirmation soil sampling results are included in Attachment A.

Conclusions and Recommendations

Based on the confirmation soil sampling results beneath the former N-121 building slab, the objectives of this voluntary corrective action were met. Following the soil removal, soil metals results were below the industrial PRGs. Because all final confirmation samples are below this cleanup level, EnSafe recommends no further action for this site.



Following removal activities, the area was backfilled and graded. Grass seed and straw were also spread over the area.

⁵ TCLP metals and total and amenable cyanide

Appendix A
Laboratory Report

VOC and Metals Results

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
84454-1	003SFD0201	Solid	06/13/03	06/12/03 11:25	MEM192
84454-2	003SFD0301	Solid	06/13/03	06/12/03 10:45	MEM192
84454-3	003SFD0401	Solid	06/13/03	06/12/03 10:25	MEM192
84454-4	003SFD0501	Solid	06/13/03	06/12/03 11:05	MEM192
84454-5	003SNWCQ01	Solid	06/13/03	06/12/03 12:05	MEM192

Parameter	Units	Lab Sample IDs				
		84454-1	84454-2	84454-3	84454-4	84454-5

Volatiles by GC/MS (8260)

		84454-1	84454-2	84454-3	84454-4	84454-5
Chloromethane	ug/kg dw	5.2U	5.4U	5.5U	5.3U	5.2U
Bromomethane (Methyl bromide)	ug/kg dw	5.2U	5.4U	5.5U	5.3U	5.2U
Vinyl chloride	ug/kg dw	5.2U	5.4U	5.5U	5.3U	5.2U
Chloroethane	ug/kg dw	5.2U	5.4U	5.5U	5.3U	5.2U
Methylene chloride (Dichloromethane)	ug/kg dw	0.70J	0.79J	1.2J	0.80J	0.83J
Acetone	ug/kg dw	6.3J	54U	55U	53U	52U
Carbon disulfide	ug/kg dw	5.2U	5.4U	5.5U	5.3U	5.2U
1,1-Dichloroethene	ug/kg dw	5.2U	5.4U	5.5U	5.3U	5.2U
1,1-Dichloroethane	ug/kg dw	5.2U	5.4U	5.5U	5.3U	5.2U
cis-1,2-Dichloroethene	ug/kg dw	5.2U	5.4U	0.58J	5.3U	5.2U
trans-1,2-Dichloroethene	ug/kg dw	5.2U	5.4U	5.5U	5.3U	5.2U
Chloroform	ug/kg dw	5.2U	5.4U	5.5U	5.3U	5.2U
1,2-Dichloroethane	ug/kg dw	5.2U	5.4U	5.5U	5.3U	5.2U
2-Butanone (MEK)	ug/kg dw	12J	27U	28U	27U	26U
1,1,1-Trichloroethane	ug/kg dw	5.2U	5.4U	5.5U	5.3U	5.2U
Carbon tetrachloride	ug/kg dw	5.2U	5.4U	5.5U	5.3U	5.2U
Bromodichloromethane	ug/kg dw	5.2U	5.4U	5.5U	5.3U	5.2U
1,1,2,2-Tetrachloroethane	ug/kg dw	5.2U	5.4U	5.5U	5.3U	5.2U
1,2-Dichloropropane	ug/kg dw	5.2U	5.4U	5.5U	5.3U	5.2U
trans-1,3-Dichloropropene	ug/kg dw	5.2U	5.4U	5.5U	5.3U	5.2U
Trichloroethene	ug/kg dw	5.2U	5.4U	1.6J	5.3U	5.2U
Dibromochloromethane	ug/kg dw	5.2U	5.4U	5.5U	5.3U	5.2U
1,1,2-Trichloroethane	ug/kg dw	5.2U	5.4U	5.5U	5.3U	5.2U
Benzene	ug/kg dw	5.2U	5.4U	5.5U	5.3U	5.2U
cis-1,3-Dichloropropene	ug/kg dw	5.2U	5.4U	5.5U	5.3U	5.2U
Bromoform	ug/kg dw	5.2U	5.4U	5.5U	5.3U	5.2U
2-Hexanone	ug/kg dw	26U	27U	28U	27U	26U
4-Methyl-2-pentanone (MIBK)	ug/kg dw	26U	27U	28U	27U	26U
Tetrachloroethene	ug/kg dw	1.2J	1.2J	2.8J	1.1J	1.4J
Toluene	ug/kg dw	2.1J	2.7J	5.9	1.9J	2.6J
Chlorobenzene	ug/kg dw	5.2U	5.4U	5.5U	5.3U	5.2U

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
84454-1	003SFD0201	Solid	06/13/03	06/12/03 11:25	MEM192
84454-2	003SFD0301	Solid	06/13/03	06/12/03 10:45	MEM192
84454-3	003SFD0401	Solid	06/13/03	06/12/03 10:25	MEM192
84454-4	003SFD0501	Solid	06/13/03	06/12/03 11:05	MEM192
84454-5	003SNWCQ01	Solid	06/13/03	06/12/03 12:05	MEM192

Parameter	Units	Lab Sample IDs				
		84454-1	84454-2	84454-3	84454-4	84454-5

Volatiles by GC/MS (8260)

Ethylbenzene	ug/kg dw	0.37J	0.55J	1.1J	0.34J	0.52J
Styrene	ug/kg dw	5.2U	5.4U	5.5U	5.3U	5.2U
Xylenes, Total	ug/kg dw	10U	11U	0.42J	11U	10U
Surrogate - Toluene-d8 *	%	100 %	98 %	96 %	98 %	98 %
Surrogate - 4-Bromofluorobenzene *	%	98 %	100 %	102 %	104 %	98 %
Surrogate - Dibromofluoromethane *	%	92 %	89 %	93 %	94 %	94 %
Percent Solids		84	83	82	85	85
Dilution Factor		1	1	1	1	1
Prep Date		06/23/03	06/23/03	06/25/03	06/23/03	06/23/03
Analysis Date		06/23/03	06/23/03	06/25/03	06/23/03	06/23/03
Batch ID		1M0623	1M0623	1M0625	1M0623	1M0623
Initial Volume		5.70	5.60	5.50	5.50	5.60
Final Volume		5.00	5.00	5.00	5.00	5.00

Metals (6010)

Antimony	mg/kg dw	0.81B	0.58B	0.64B	0.47B	0.61B
Arsenic	mg/kg dw	8.8	9.5	8.9	12	9.0
Barium	mg/kg dw	130	130	130	130	130
Beryllium	mg/kg dw	0.62	0.57	0.56	0.55	0.54
Cadmium	mg/kg dw	0.066U	0.068U	0.065U	0.065U	0.068U
Chromium	mg/kg dw	14	12	13	12	13
Cobalt	mg/kg dw	11	8.3	8.4	8.0	11
Copper	mg/kg dw	16	17	16	16	17
Nickel	mg/kg dw	16	19	18	18	16
Lead	mg/kg dw	15	12	12	12	23
Selenium	mg/kg dw	0.56U	0.58U	0.56U	0.55U	0.58U
Silver	mg/kg dw	0.13U	0.14U	0.13U	0.13U	0.14U
Tin	mg/kg dw	2.8B	2.5B	2.8B	2.3B	2.4B
Thallium	mg/kg dw	0.74U	0.76U	0.73U	0.72U	0.76U

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
84454-1	003SFD0201	Solid	06/13/03	06/12/03 11:25	MEM192
84454-2	003SFD0301	Solid	06/13/03	06/12/03 10:45	MEM192
84454-3	003SFD0401	Solid	06/13/03	06/12/03 10:25	MEM192
84454-4	003SFD0501	Solid	06/13/03	06/12/03 11:05	MEM192
84454-5	003SNWCQ01	Solid	06/13/03	06/12/03 12:05	MEM192

Parameter	Units	Lab Sample IDs				
		84454-1	84454-2	84454-3	84454-4	84454-5

Metals (6010)

Vanadium	mg/kg dw	28	25	25	25	25
Zinc	mg/kg dw	54	56	52	54	47
Percent Solids		84	83	82	85	85
Dilution Factor		1	1	1	1	1
Prep Date		06/17/03	06/17/03	06/17/03	06/17/03	06/17/03
Analysis Date		06/18/03	06/18/03	06/18/03	06/18/03	06/18/03
Batch ID		0617A	0617A	0617A	0617A	0617A
Initial Volume		1.08	1.06	1.12	1.09	1.04
Final Volume		100	100	100	100	100

Mercury (7471)

Mercury	mg/kg dw	0.031	0.030	0.033	0.031	0.074
Percent Solids		84	83	82	85	85
Dilution Factor		1	1	1	1	1
Prep Date		06/18/03	06/18/03	06/18/03	06/18/03	06/18/03
Analysis Date		06/19/03	06/19/03	06/19/03	06/19/03	06/19/03
Batch ID		0618S	0618S	0618S	0618S	0618S
Initial Volume		1.06	1.13	1.06	1.09	1.15
Final Volume		50	50	50	50	50

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
84454-6	003SSWCQ01	Solid	06/13/03	06/12/03 12:30	MEM192
84454-7	003CSWCQ01	Solid	06/13/03	06/12/03 12:30	MEM192
84454-8	003SNECQ01	Solid	06/13/03	06/12/03 12:55	MEM192
84454-9	003SSECQ01	Solid	06/13/03	06/12/03 13:10	MEM192
84454-10	003SSUMP02	Solid	06/13/03	06/12/03 13:25	MEM192

Parameter	Units	Lab Sample IDs				
		84454-6	84454-7	84454-8	84454-9	84454-10

Volatiles by GC/MS (8260)

Chloromethane	ug/kg dw	5.4U	5.1U	6.0U	5.5U	6.0U
Bromomethane (Methyl bromide)	ug/kg dw	5.4U	5.1U	6.0U	5.5U	6.0U
Vinyl chloride	ug/kg dw	5.4U	5.1U	6.0U	5.5U	6.0U
Chloroethane	ug/kg dw	5.4U	5.1U	6.0U	5.5U	6.0U
Methylene chloride (Dichloromethane)	ug/kg dw	0.85J	0.77JB	0.77J	0.99J	1.2J
Acetone	ug/kg dw	54U	51U	60U	55U	170
Carbon disulfide	ug/kg dw	5.4U	5.1U	6.0U	5.5U	6.0U
1,1-Dichloroethene	ug/kg dw	5.4U	5.1U	6.0U	5.5U	6.0U
1,1-Dichloroethane	ug/kg dw	5.4U	5.1U	6.0U	5.5U	6.0U
cis-1,2-Dichloroethene	ug/kg dw	5.4U	5.1U	6.0U	5.5U	6.0U
trans-1,2-Dichloroethene	ug/kg dw	5.4U	5.1U	6.0U	5.5U	6.0U
Chloroform	ug/kg dw	5.4U	5.1U	6.0U	5.5U	6.0U
1,2-Dichloroethane	ug/kg dw	5.4U	5.1U	6.0U	5.5U	6.0U
2-Butanone (MEK)	ug/kg dw	27U	26U	30U	28U	28J
1,1,1-Trichloroethane	ug/kg dw	5.4U	5.1U	6.0U	5.5U	6.0U
Carbon tetrachloride	ug/kg dw	5.4U	5.1U	6.0U	5.5U	6.0U
Bromodichloromethane	ug/kg dw	5.4U	5.1U	6.0U	5.5U	6.0U
1,1,2,2-Tetrachloroethane	ug/kg dw	5.4U	5.1U	6.0U	5.5U	6.0U
1,2-Dichloropropane	ug/kg dw	5.4U	5.1U	6.0U	5.5U	6.0U
trans-1,3-Dichloropropene	ug/kg dw	5.4U	5.1U	6.0U	5.5U	6.0U
Trichloroethene	ug/kg dw	5.4U	5.1U	6.0U	5.5U	6.0U
Dibromochloromethane	ug/kg dw	5.4U	5.1U	6.0U	5.5U	6.0U
1,1,2-Trichloroethane	ug/kg dw	5.4U	5.1U	6.0U	5.5U	6.0U
Benzene	ug/kg dw	5.4U	5.1U	6.0U	5.5U	6.0U
cis-1,3-Dichloropropene	ug/kg dw	5.4U	5.1U	6.0U	5.5U	6.0U
Bromoform	ug/kg dw	5.4U	5.1U	6.0U	5.5U	6.0U
2-Hexanone	ug/kg dw	27U	26U	30U	28U	30U
4-Methyl-2-pentanone (MIBK)	ug/kg dw	27U	26U	30U	28U	30U
Tetrachloroethene	ug/kg dw	1.6J	1.4J	6.0U	1.3J	6.0U
Toluene	ug/kg dw	2.9J	2.5J	1.7J	2.5J	6.0U
Chlorobenzene	ug/kg dw	5.4U	5.1U	6.0U	5.5U	6.0U

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
84454-6	003SSWCQ01	Solid	06/13/03	06/12/03 12:30	MEM192
84454-7	003CSWCQ01	Solid	06/13/03	06/12/03 12:30	MEM192
84454-8	003SNECQ01	Solid	06/13/03	06/12/03 12:55	MEM192
84454-9	003SSECQ01	Solid	06/13/03	06/12/03 13:10	MEM192
84454-10	003SSUMPO2	Solid	06/13/03	06/12/03 13:25	MEM192

Parameter	Units	Lab Sample IDs				
		84454-6	84454-7	84454-8	84454-9	84454-10

Volatiles by GC/MS (8260)

Ethylbenzene	ug/kg dw	0.45J	0.51J	0.36J	0.47J	6.0U
Styrene	ug/kg dw	5.4U	5.1U	6.0U	5.5U	6.0U
Xylenes, Total	ug/kg dw	11U	10U	12U	11U	12U
Surrogate - Toluene-d8 *	%	98 %	98 %	98 %	100 %	100 %
Surrogate - 4-Bromofluorobenzene *	%	100 %	104 %	97 %	96 %	97 %
Surrogate - Dibromofluoromethane *	%	89 %	86 %	88 %	94 %	92 %
Percent Solids		83	84	85	82	83
Dilution Factor		1	1	1	1	1
Prep Date		06/23/03	06/24/03	06/23/03	06/23/03	06/23/03
Analysis Date		06/23/03	06/24/03	06/23/03	06/23/03	06/23/03
Batch ID		1M0623	1M0624	1M0623	1M0623	1M0623
Initial Volume		5.60	5.80	4.90	5.50	5.00
Final Volume		5.00	5.00	5.00	5.00	5.00

Metals (6010)

Antimony	mg/kg dw	0.54B	0.83B	0.80B	0.62B	0.65B
Arsenic	mg/kg dw	8.1	5.9	9.7	8.5	7.8
Barium	mg/kg dw	120	79	130	100	54
Beryllium	mg/kg dw	0.52	0.44	0.61	0.60	0.65
Cadmium	mg/kg dw	1.9	4.2	4.2	0.070U	0.069U
Chromium	mg/kg dw	150	200	17	110	200
Cobalt	mg/kg dw	8.2	5.3	8.7	7.9	6.1
Copper	mg/kg dw	29	23	24	14	15
Nickel	mg/kg dw	21	13	27	15	17
Lead	mg/kg dw	18	21	23	110	13
Selenium	mg/kg dw	0.55U	0.55U	0.57U	0.60U	0.58U
Silver	mg/kg dw	0.30B	0.13U	0.13U	0.14U	0.14U
Tin	mg/kg dw	1.5B	2.8B	3.2B	2.5B	2.8B
Thallium	mg/kg dw	0.73U	0.72U	0.74U	0.79U	0.77U

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
84454-6	003SSWCQ01	Solid	06/13/03	06/12/03 12:30	MEM192
84454-7	003CSWCQ01	Solid	06/13/03	06/12/03 12:30	MEM192
84454-8	003SNECQ01	Solid	06/13/03	06/12/03 12:55	MEM192
84454-9	003SSECQ01	Solid	06/13/03	06/12/03 13:10	MEM192
84454-10	003SSUMPO2	Solid	06/13/03	06/12/03 13:25	MEM192

Parameter	Units	Lab Sample IDs				
		84454-6	84454-7	84454-8	84454-9	84454-10

Metals (6010)

Vanadium	mg/kg dw	23	17	25	25	31
Zinc	mg/kg dw	54	58	66	47	55
Percent Solids		83	84	85	82	83
Dilution Factor		1	1	1	1	1
Prep Date		06/17/03	06/17/03	06/17/03	06/17/03	06/17/03
Analysis Date		06/18/03	06/18/03	06/18/03	06/18/03	06/18/03
Batch ID		0617A	0617A	0617A	0617A	0617A
Initial Volume		1.11	1.1	1.06	1.04	1.05
Final Volume		100	100	100	100	100

Mercury (7471)

Mercury	mg/kg dw	0.076	0.061	0.053	0.064	0.033
Percent Solids		83	84	85	82	83
Dilution Factor		1	1	1	1	1
Prep Date		06/18/03	06/18/03	06/18/03	06/18/03	06/18/03
Analysis Date		06/19/03	06/19/03	06/19/03	06/19/03	06/19/03
Batch ID		0618S	0618S	0618S	0618S	0618S
Initial Volume		1.04	1.03	1.16	1.07	1.1
Final Volume		50	50	50	50	50

Hexavalent Chromium Results

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
85408-1	003SSUMP02	Solid	07/15/03	07/14/03 11:20	MEM194
85408-2	003SSWCQ01	Solid	07/15/03	07/14/03 11:50	MEM194
85408-3	003SSECQ01	Solid	07/15/03	07/14/03 12:20	MEM194
85408-4	003CSECQ01	Solid	07/15/03	07/14/03 12:20	MEM194

Parameter	Units	Lab Sample IDs			
		85408-1	85408-2	85408-3	85408-4

Hexavalent Chromium (7196A)

	mg/kg dw	85408-1	85408-2	85408-3	85408-4
Hexavalent Chromium		8.3	130	31	30
Dilution Factor		1	5	1	1
Prep Date		07/21/03	07/21/03	07/21/03	07/21/03
Analysis Date		07/22/03	07/22/03	07/22/03	07/22/03
Batch ID		0721A	0721A	0721A	0721A
Initial Volume		10	2.0	10	10
Final Volume		10	10	10	10

Over-Excavation Hexavalent Chromium Results

Partial Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
88307-1	003SSWCQ02	Solid	10/17/03	10/16/03 10:30	MEM197

Parameter	Units	Lab Sample IDs
		88307-1

Hexavalent Chromium (7196A)

Hexavalent Chromium	mg/kg dw	1.2U
Percent Solids		81
Dilution Factor		1
Prep Date		10/22/03
Analysis Date		10/24/03
Batch ID		1022C
Initial Volume		1.05
Final Volume		100

Attachment B
Disposal Manifest



THE TUNICA LANDFILL

A WASTE MANAGEMENT COMPANY

NON-HAZARDOUS WASTE MANIFEST

GENERATOR

Name of Generator: NSA Mid-South (SWMU 3) Waste Generation Location: Same Profile Number: WMCT 3033
 Address: 5722 Integrity Drive
Millington, TN 38054-5045
 Phone No.: (901) 874-5904
 Waste ID. Code No.: _____
 Special Handling Instructions and Additional Information: None

Trash Hunters of Tunica dba THE TUNICA LANDFILL Permit # SW-0720010459 Ticket Number: _____ Customer Number: _____

RESPONSIBLE AGENCY: Mississippi Dept. of Environmental Quality (601) 961-5171

Waste Description	Actual Quantity	Units	Container Type
Chromium Contaminated Soil	20	<input type="checkbox"/> Pounds <input type="checkbox"/> Tons <input checked="" type="checkbox"/> Cu. Yd. <input type="checkbox"/> Cu. Ft.	<input type="checkbox"/> Drum <input checked="" type="checkbox"/> Truck <input type="checkbox"/> Carton <input type="checkbox"/> Box <input type="checkbox"/> Bag <input type="checkbox"/> Other: _____ Volume: _____

With my signature, I certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law or regulation, is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Danny Chumney, EPS Generator Authorized Agent
[Signature] Signature
10/16/03 Shipment Date

TRANSPORTER

Truck No.: Box 41 Transporter Phone No.: (662) 560-2516
 Transporter Name: Matthews Trucking Driver Name (print): DANNY L. WILLARD
 Address: Saraha, Miss Vehicle License No./State: A-101723
 Vehicle Certification: DOT 490217

With my signature, I certify that the above material was picked up at the Generator site listed above.
Danny J. Willard Signature
10/16/03 Pickup Date
 With my signature, I certify that the above named material was delivered without incident to the destination listed below.
Danny J. Willard Signature
10/16/03 Delivery Date

DESTINATION

Site Name: Trash Hunters of Tunica, Ins dba The Tunica Landfill Phone No.: 1-877-989-2783
 Site Address: 6035 Bowdre Road Robinsonville, MS 38664 Time: _____

Discrepancies: _____

I hereby certify that the above named material has been accepted and to the best of my knowledge, the foregoing is true and accurate.

Name (print) _____ Signature _____ Receipt Date _____

009874

TOTAL TO DATE: _____



THE TUNICA LANDFILL

A WASTE MANAGEMENT COMPANY

NON-HAZARDOUS WASTE MANIFEST

GENERATOR

Profile Number: WMACT3033

Name of Generator: NSA Mid-South (SWMU 3)

Waste Generation Location: Same

Address: 5722 Integrity Drive
Millington, TN 38054-5045

Address: _____

Phone No.: (901) 874-5904

Phone No.: (____) _____

Waste ID. Code No.: _____

Special Handling Instructions and Additional Information: None

Trash Hunters of Tunica dba THE TUNICA LANDFILL Permit # SW-0728010459 Ticket Number: _____

Customer Number: _____

RESPONSIBLE AGENCY: Mississippi Dept. of Environmental Quality (601) 961-5171

Waste Description	Actual Quantity	Units	Container Type
Chromium Contaminated Soil	20	<input type="checkbox"/> Pounds <input type="checkbox"/> Tons <input checked="" type="checkbox"/> Cu. Yd. <input type="checkbox"/> Cu. Ft.	<input type="checkbox"/> Drum <input checked="" type="checkbox"/> Truck <input type="checkbox"/> Carton <input type="checkbox"/> Box <input type="checkbox"/> Bag <input type="checkbox"/> Other: _____ Volume: _____

With my signature, I certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law or regulation, is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Danny Chumney, EPS
Generator Authorized Agent

Signature

10/16/03
Shipment Date

TRANSPORTER

Truck No.: A-M-2

Transporter Phone No.: (662) 562-2016

Transporter Name: Matthews Trucking

Driver Name (print): Bill Matthews

Address: 1250 Matthews Dr
Greenwood

Vehicle License No./State: 4

Vehicle Certification: 172077

With my signature, I certify that the above material was picked up at the Generator site listed above.

With my signature, I certify that the above named material was delivered without incident to the destination listed below.

Danny Chumney
Signature 10/16/03
Pickup Date

Bill Matthews
Signature 10/16/03
Delivery Date

DESTINATION

Site Name: Trash Hunters of Tunica, Ins dba The Tunica Landfill

Phone No.: 1-877-989-2783

Site Address: 6035 Bowdre Road Robinsonville, MS 38664

Time: _____

Discrepancies: _____

I hereby certify that the above named material has been accepted and to the best of my knowledge, the foregoing is true and accurate.

Name (print)
009875

Signature

Receipt Date

TOTAL TO DATE: