N00639.AR.002073
NSA MID SOUTH
5090.3a

TECHNICAL MEMORANDUM RECOMMENDATION FOR SITE CLOSURE SOLID WASTE MANAGEMENT UNIT 5 MILLINGTON SUPPACT TN
5/2/2003
ENSAFE

Technical Memorandum

To: Jim Reed, SOUTHDIV
Jennifer Herndon , USEPA Region IV
Clayton Bullington, TDEC
Rob Williamson, NSA Mid-South
Jack Carmichael, USGS

From: Ben Brantley, EnSafe Inc.

Date: May 2, 2003

Re: Recommendation for Site Closure
Aircraft Fire Fighting Training Facility — SWMU 5
NSA Mid South; (Revision 1)

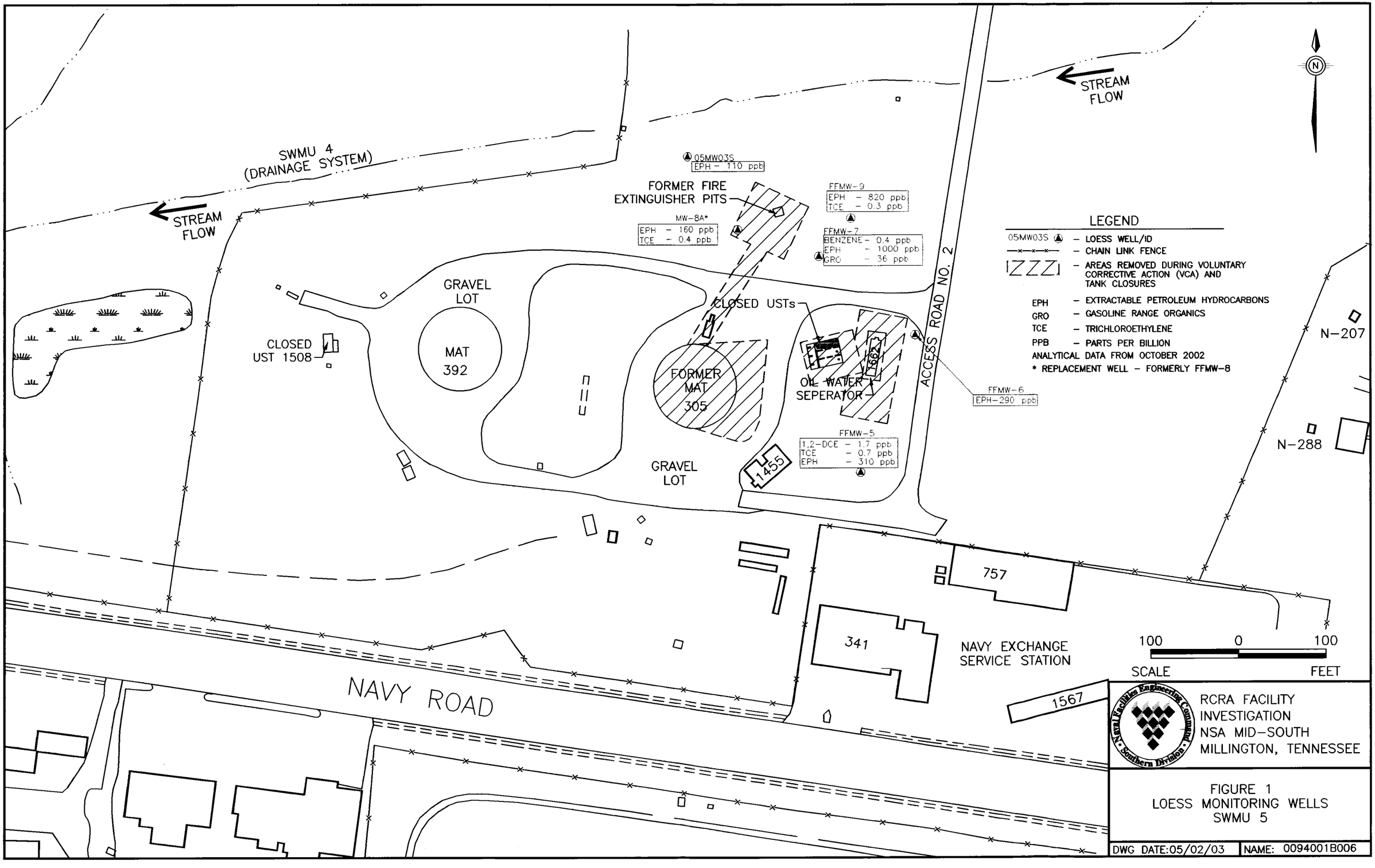
INTRODUCTION

This technical memorandum provides a basis for the "no further action" recommendation at SWMU 5, the former Aircraft Fire Fighting Training Facility (AFFTF) on the transferred portion of NSA Mid-South's Northside. SWMU 5 was used to simulate burning aircraft and fire-rescue situations from 1949 until October 1996. Underground pipes conducted JP-5 jet fuel to two double-bermed concrete mats — Mat 305 (east) and Mat 392 (west) (Figure1) — and aircraft cockpits, where students ignited the fuel, and then extinguished it with high-pressure water or foam sprays.

The AFFTF has had a history of spills, leaking tanks, and ruptured fuel lines which resulted in soil and groundwater impacts across the site. Removing soil from the impacted areas was discussed extensively in the RCRA Facility Investigation (RFI) report (EnSafe, 1999a) which is briefly discussed below along with relevant background information. The effectiveness of the soil removal action in improved groundwater quality was evaluated after the RFI was submitted. Data from the evaluation is included in this technical memorandum, which is the basis for the site closure recommendation.

BACKGROUND

At one time, four underground storage tanks (USTs 1489, 1490, 1491, and 1508) were used to supply fuel to the fire mats; three were identified as having leaked during their closure. Investigation of the leaks determined the drain line from the mats to the separator had ruptured


SWMU 4
(DRAINAGE SYSTEM)
STREAM FLOW
STREAM FLOW
N
05MW03S
EPH - 110 ppb
FORMER FIRE EXTINGUISHER PITS
FFMW-9
EPH - 820 ppb
TCE - 0.3 ppb
MW-8A*
EPH - 160 ppb
TCE - 0.4 ppb
FFMW-7
BENZENE - 0.4 ppb
EPH - 1000 ppb
GRO - 36 ppb
GRAVEL LOT
CLOSED USTs
CLOSED UST 1508
MAT 392
FORMER MAT 305
OIL WATER SEPERATOR
162
ACCESS ROAD NO. 2
FFMW-6
EPH-290 ppb
FFMW-5
1,2-DCE - 1.7 ppb
TCE - 0.7 ppb
EPH - 310 ppb
GRAVEL LOT
1455
N-207
N-288
757
341
NAVY EXCHANGE SERVICE STATION
1567
NAVY ROAD
LEGEND
05MW03S - LOESS WELL/ID
- CHAIN LINK FENCE
- AREAS REMOVED DURING VOLUNTARY CORRECTIVE ACTION (VCA) AND TANK CLOSURES
EPH - EXTRACTABLE PETROLEUM HYDROCARBONS
GRO - GASOLINE RANGE ORGANICS
TCE - TRICHLOROETHYLENE
PPB - PARTS PER BILLION
ANALYTICAL DATA FROM OCTOBER 2002
* REPLACEMENT WELL - FORMERLY FFMW-8
100 0 100
SCALE FEET
Naval Facilities Engineering Command
Southern Division
RCRA FACILITY INVESTIGATION
NSA MID-SOUTH
MILLINGTON, TENNESSEE
FIGURE 1
LOESS MONITORING WELLS
SWMU 5
DWG DATE:05/02/03
NAME: 0094001B006

in several places. The oil-water separator occasionally overflowed; onetime, it released approximately 500 gallons of water and fuel to the drainage ditches that cross the site. Other sources of contamination were three former concrete-lined pits, approximately 160 feet north of Mat 305, which were used for hand-held fire extinguisher practice.

The site has been extensively investigated in the past 10 years either as part of EnSafe's 1999 RFI or earlier UST investigations (EnSafe/Allen and Hoshall, 1992). Identified areas with soil contamination were also suspected sources of groundwater contamination and soil in these areas was therefore removed in an effort to improve the water quality in the loess groundwater.[1] Benzene was identified in the loess groundwater at former well FFMW-8[2], near the former fire extinguisher pits at 3,900 µg/L, several orders of magnitude above benzene's 5 µg/L MCL.

In all, 6,000 cubic yards of petroleum-impacted soil were excavated during two different removal actions: (1) in August 1997 during the removal of an oil-water separator by the U.S. Army Corps of Engineers (EnSafe, 1998) and (2) in November 1997 during a voluntary corrective action (VCA) conducted for the removal of the fire extinguisher pit and fire Mat 305 (EnSafe, 1999b). TDEC's cleanup criteria were met in confirmation soil samples collected from the excavations at the end of the VCA; improved groundwater quality was immediately apparent. During the single sampling event at FFMW-8's replacement well MW-8A, conducted before submitting the RFI report, benzene was not detected (EnSafe, 1999a).

Today, there's little evidence of the former AFFTF, except for Mat 392, which remains in place. Soil sampling conducted beneath the mat indicated no impacts to the underlying soil

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[1] The SWMU 5 fluvial deposits groundwater, the confined aquifer that underies the loess groundwater, contained low concentrations (< 10 µg/L) of carbon tetrachloride. However, it is being addressed separately under the corrective measures study for *Area of Concern A — Northside Fluvial Deposits Groundwater* and is therefore not included in the "no further action" recommendation for the site.

[2] Well FFMW-8 was removed when soil from the former fire extinguisher pits was excavated during the 1997 VCA removal. Replacement well, MW-8A, was installed after the VCA and data from this well is presented in the report to verify the effectiveness of the removal.

(EnSafe, 1997); therefore, the mat was not removed. Figure 1, a site map shows former structures, existing loess monitoring wells, and areas where soil was removed.

RFI CONCLUSIONS AND RECOMMENDATIONS

In addition to benzene in the loess, the RFI evaluated other possible non-petroleum contaminants[3] and whether the deeper, fluvial deposits groundwater had been similarly affected by former site activities. The RFI concluded and recommended the following:

- Based on the human health risk assessment, no chemicals of concern remained in soil, therefore, no further action was recommended for soil.

- In addition to the petroleum contaminants, the following were identified in loess groundwater: trichloroethylene at concentrations below the MCL; and the metals arsenic, antimony, and cadmium, which exceeded their MCLs. These metals were not detected during a subsequent sampling event leading to the conclusion that the original sample results were the result of turbidity and likely false positives. Therefore, no further action was recommended for metals in loess groundwater.

- Because the FFMW-8 replacement well (MW-8a) was only sampled once before the RFI report was finalized, EnSafe recommended further evaluation of the loess groundwater and the preliminary evidence of improved groundwater quality at this location.

- Carbon tetrachloride exceeded its 5 µg/L MCL in the fluvial deposits groundwater; therefore EnSafe recommended that the fluvial deposits groundwater be included in the Area of Concern A (*Northside Fluvial Deposits Groundwater*) Corrective Measures Study.

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[3] JP-4 and waste fuels removed from aircraft were also reportedly used in training operations. The RCRA Facility Assessment (RFA) reported the common practice of mixing waste fuel with waste solvents such as naphtha, xylenes, methyl ethyl ketone, toluene, and benzene for use as fuel for the burning operations (ERC/EDGe, 1990).

POST-RFI MONITORING

In May and June of 1999, the RFI report was approved by TDEC and USEPA, respectively, and the recommended further groundwater monitoring began in July 2000. Eight post-RFI sampling events were conducted at wells MW-8a and FFMW-9, concluding in October 2002. The remaining loess wells were sampled once (005G03LS, 005G06FF, and 005G07FF) or twice (005G05FF). Groundwater samples were analyzed for total petroleum hydrocarbons and volatile organic compounds (VOCs). Table 1 provides a summary of the hits detected during the RFI and the post-RFI monitoring. Analytical data from the post-RFI monitoring are provided in Attachment 1.

Petroleum concentrations in replacement well MW-8A did not exceed the MCL (5 µg/L for benzene) and TDEC action level (1,000 µg/L for extractable petroleum hydrocarbons [EPH]) during the eight post-RFI sampling events. The lack of exceedances support the preliminary RFI conclusion that the VCA had effectively removed the petroleum source to groundwater. Well FFMW-9, in which benzene was detected at 5 µg/L benzene in April 1995, was non-detect for benzene during the eight post-RFI sampling events.

In samples from the remaining loess wells, benzene and EPH did not exceed the MCL and TDEC action levels. Table 1 shows that EPH was present at its action level of 1,000 µg/L in samples from well FFMW-7. The concentrations detected in this well are likely residual concentrations that continue to persist due to the low permeability of the loess; however, as a result of the removal and the absence of an existing source, concentrations in this well are expected to attenuate. Based on the groundwater data cited above and the VCA and RFI findings, no further action is recommended for SWMU 5.

NSA MID-SOUTH
SWMU 5 LOESS GROUNDWATER MONITORING RESULTS
VOLATILE ORGANIC and PETROLEUM COMPOUNDS (ug/L)

Sample ID (Well ID)	Parameter	MCLs (ug/L)	TDEC *	Pre-RFI Sampling Events								Post-RFI Sampling Events							
				Mar 95	Apr 95	Dec 95	Apr 96	Aug 96	Apr 97	Nov 97	Feb 99	Jul 00	Apr 01	Jul 01	Oct 01	Jan 02	Apr 02	Jul 02	Oct 02
005G03LS	EPH		1000			ND													110
(05MW-03S)																			
005G05FF	1,2-Dichloroethene (total)	70		8 J	8 J	3 J	2.5 J	1 J	ND	1.4 J		ND							1.7
(FFMW-5)	Acetone			38 J	ND	ND	ND	ND	ND	ND		ND							ND
	Chlorobenzene	100		ND	2 J	ND	ND	ND	ND	ND		ND							ND
	Trichloroethene	5		1 J	2 J	1 J	ND	ND	ND	0.7 J		ND							0.72 J
	EPH		1000	ND	ND	ND	ND	ND				ND							310 J
005G06FF	EPH		1000		ND														290
(FFMW-6)																			
005G07FF	Benzene	5	70																0.43 J
(FFMW-7)	EPH		1000																**1000**
	GRO		1000																36
MW-8A	Toluene	1000	ND	ND				ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	.4 J
(FFMW-8)	EPH		1000	ND				ND	ND		ND	ND	ND		330	270	240	ND	160
	Benzene			3,900				1,900	3,200		ND	ND	ND	ND	ND	ND	ND	ND	ND
005G09FF	Benzene	5	70		**5 J**			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
(FFMW-9)	Trichloroethene	5			ND			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.27 J
	EPH		1000		ND			ND	ND	ND	ND	ND	ND	ND	ND	ND	26 J	ND	820

Notes:
ug/L = micrograms/Liter
MCLs = EPA Maximum Contaminant Level (MCL) for Drinking Water dated July 2002.
EPH = Extractable Petroleum Hydrocarbons
GRO = Gasoline Range Organics
* = Tennessee Department of Environment and Conservation (TDEC) Division of Underground Storage Tanks Cleanup Levels for a non-drinking water aquifer (TDEC, 1996).
J = Estimated Value
A blank cell denotes that the well was not sampled.
Bold = Exceeds MCL and/or TDEC cleanup level.

REFERENCES

EnSafe/Allen & Hoshall. (1992). *Environmental Assessment Report, Tank Systems 1489 and 1508, Aircraft Fire Fighting Training Facility, Naval Air Station Memphis, Millington, Tennessee:* E/A&H, Memphis, Tennessee.

EnSafe. (1997). *Voluntary Corrective Action Work Plan - Aircraft Firefighting Training Facility — SWMU 5. Naval Support Activity Memphis, Revision 2.* EnSafe: Memphis, Tennessee.

EnSafe. (1998). *Oil-Water Separator Removal Aircraft Fire Fighting Training Facility — SWMU 5. Technical Memorandum.* EnSafe: Memphis, Tennessee.

EnSafe. (1999a). *RCRA Facility Investigation Report; Aircraft Fire Fighting Training Facility — SWMU 5. Revision 03. Naval Air Station Memphis, Millington, Tennessee.* EnSafe: Memphis, Tennessee.

EnSafe. (1999b). *Voluntary Corrective Action Report; SWMU 5 — Fire Mat 305 and Fire Extinguisher Pits (005G08LS Area); Revision 01. Naval Air Station Memphis, Millington, Tennessee.* EnSafe: Memphis, Tennessee.

ERC/EDGe. (1990). *RCRA Facility Assessment (RFA) NAS Memphis, Millington, Tennessee.* ERC/EDGe (ERC Environmental and Energy Services, Co.). Knoxville, Tennessee.

REFERENCES

EnSafe/Allen & Hoshall. (1992). *Environmental Assessment Report, Tank Systems 1489 and 1508, Aircraft Fire Fighting Training Facility, Naval Air Station Memphis, Millington, Tennessee:* E/A&H, Memphis, Tennessee.

EnSafe. (1997). *Voluntary Corrective Action Work Plan - Aircraft Firefighting Training Facility — SWMU 5. Naval Support Activity Memphis, Revision 2.* EnSafe: Memphis, Tennessee.

EnSafe. (1998). *Oil-Water Separator Removal Aircraft Fire Fighting Training Facility — SWMU 5. Technical Memorandum.* EnSafe: Memphis, Tennessee.

EnSafe. (1999a). *RCRA Facility Investigation Report; Aircraft Fire Fighting Training Facility — SWMU 5. Revision 03. Naval Air Station Memphis, Millington, Tennessee.* EnSafe: Memphis, Tennessee.

EnSafe. (1999b). *Voluntary Corrective Action Report; SWMU 5 — Fire Mat 305 and Fire Extinguisher Pits (005G08LS Area); Revision 01. Naval Air Station Memphis, Millington, Tennessee.* EnSafe: Memphis, Tennessee.

ERC/EDGe. (1990). *RCRA Facility Assessment (RFA) NAS Memphis, Millington, Tennessee.* ERC/EDGe (ERC Environmental and Energy Services, Co.). Knoxville, Tennessee.

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Attachment A

Analytical Data

NSA MID-SOUTH
SWMU 5 GROUNDWATER RESULTS
POST - RFI SAMPLING EVENTS

GRO													
	SHORT ID -------->												
	SAMPLE ID ------->	005-G-03LS-14		005-G-05LS-06		005-G-09LS-06		005-G-FF05-14		005-G-FF06-14		005-G-FF07-14	
	ORIGINAL ID ----->	005G03LS14		005G05LS06		005G09LS06		005GFF0514		005GFF0614		005GFF0714	
	LAB SAMPLE ID --->	S247551*13		43570.03		43570.10		S247551*9		S247551*10		S247551*11	
	ID FROM REPORT -->	005G03LS14		005G05LS06		005G09LS06		005GFF0514		005GFF0614		005GFF0714	
	SAMPLE DATE ----->	10/17/02		07/11/00		07/11/00		10/17/02		10/17/02		10/17/02	
	DATE EXTRACTED -->	10/30/02						10/30/02		10/30/02		10/30/02	
	DATE ANALYZED --->	10/30/02		07/27/00		07/27/00		10/30/02		10/30/02		10/30/02	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	MG/L		UG/L		UG/L		MG/L		MG/L		MG/L	
CAS #	Parameter	MEM169	VAL	43570	VAL	43570	VAL	MEM169	VAL	MEM169	VAL	MEM169	VAL
9999900-02-5	Gasoline Range Organics	0.036	U	100.	U	100.	U	0.036	U	0.036	U	0.036	

*** Validation Complete ***

NSA MID-SOUTH
SWMU 5 GROUNDWATER RESULTS
POST - RFI SAMPLING EVENTS

GRO																	
	SHORT ID -------->																
	SAMPLE ID ------->	005-G-FF09-14		005-G-MW09-08		005-G-MW09-09		005-G-MW09-10		005-G-MW09-11		005-G-MW09-12	
	ORIGINAL ID ----->	005GFF0914		005GMW0908		005GMW0909		005GMW0910		005GMW0911		005GMW0912	
	LAB SAMPLE ID --->	S247551*12		46184.01		47000.01		S116506*1		S240198*8		S242382*8	
	ID FROM REPORT -->	005GFF0914		005GMW0908		005GMW0909		005GMW0910		005GMW0911		005GMW0912	
	SAMPLE DATE ----->	10/17/02		04/05/01		07/16/01		10/02/01		01/10/02		04/04/02	
	DATE EXTRACTED -->	10/30/02		04/09/01								04/10/02	
	DATE ANALYZED --->	10/30/02		04/17/01		07/19/01		10/10/01		01/15/02		04/10/02	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	MG/L		UG/L		UG/L		MG/L		MG/L		MG/L	
CAS #	Parameter	MEM169	VAL	46184	VAL	47000	VAL	MEM91	VAL	MEM97	VAL	MEM108	VAL
9999900-02-5	Gasoline Range Organics	0.036	U	100.	U	100.	U	0.036	U	0.036	U	0.036	U

*** Validation Complete ***

NSA MID-SOUTH
SWMU 5 GROUNDWATER RESULTS
POST - RFI SAMPLING EVENTS

GRO	SHORT ID -------->												
	SAMPLE ID ------->	005-G-MW09-13		005-G-MW8A-06		005-G-MW8A-08		005-G-MW8A-09		005-G-MW8A-10		005-G-MW8A-11	
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	LAB SAMPLE ID --->	S245225*4		43570.12		46184.02		47000.02		S116506*2		S240198*7	
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	SAMPLE DATE ----->	07/18/02		07/12/00		04/05/01		07/16/01		10/02/01		01/10/02	
	DATE EXTRACTED -->					04/09/01							
	DATE ANALYZED --->	07/24/02		07/27/00		04/17/01		07/19/01		10/10/01		01/15/02	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	MG/L		UG/L		UG/L		UG/L		MG/L		MG/L	
CAS #	Parameter	MEM141	VAL	43570	VAL	46184	VAL	47000	VAL	MEM91	VAL	MEM97	VAL
9999900-02-5	Gasoline Range Organics	0.036	U	100.	U	100.	U	100.	U	0.036	U	0.036	U

*** Validation Complete ***

NSA MID-SOUTH
SWMU 5 GROUNDWATER RESULTS
POST - RFI SAMPLING EVENTS

GRO							
	SHORT ID -------->						
	SAMPLE ID ------->	005-G-MW8A-12	005-G-MW8A-13	005-G-MW8A-14			
	ORIGINAL ID ----->	005GMW0812	005GMW0813	005G08LS14			
	LAB SAMPLE ID --->	S242382*7	S245225*3	S247551*7			
	ID FROM REPORT -->	005GMW0812	005GMW0813	005G08LS14			
	SAMPLE DATE ----->	04/04/02	07/18/02	10/17/02			
	DATE EXTRACTED -->	04/10/02		10/30/02			
	DATE ANALYZED --->	04/10/02	07/24/02	10/30/02			
	MATRIX ---------->	Water	Water	Water			
	UNITS ---------->	MG/L	MG/L	MG/L			
CAS #	Parameter	MEM108 VAL	MEM141 VAL	MEM169 VAL			
9999900-02-5	Gasoline Range Organics	0.036 U	0.036 U	0.036 U			

*** Validation Complete ***

NSA MID-SOUTH
SWMU 5 GROUNDWATER RESULTS
POST - RFI SAMPLING EVENTS

TN EPH													
	SHORT ID -------->												
	SAMPLE ID ------->	005-G-03LS-14		005-G-05LS-06		005-G-09LS-06		005-G-FF05-14		005-G-FF06-14		005-G-FF07-14	
	ORIGINAL ID ----->	005G03LS14		005G05LS06		005G09LS06		005GFF0514		005GFF0614		005GFF0714	
	LAB SAMPLE ID --->	S247551*13		43570.03		43570.10		S247551*9		S247551*10		S247551*11	
	ID FROM REPORT -->	005G03LS14		005G05LS06		005G09LS06		005GFF0514		005GFF0614		005GFF0714	
	SAMPLE DATE ----->	10/17/02		07/11/00		07/11/00		10/17/02		10/17/02		10/17/02	
	DATE EXTRACTED -->	10/21/02		07/14/00		07/14/00		10/21/02		10/21/02		10/21/02	
	DATE ANALYZED --->	10/25/02		07/18/00		07/18/00		10/25/02		10/25/02		10/25/02	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ----------->	MG/L		UG/L		UG/L		MG/L		MG/L		MG/L	
CAS #	Parameter	MEM169	VAL	43570	VAL	43570	VAL	MEM169	VAL	MEM169	VAL	MEM169	VAL
9999000-96-4	TN EPH (C12-C40)	0.11		100.	U	100.	U	0.31	J	0.29		1.	

*** Validation Complete ***

NSA MID-SOUTH
SWMU 5 GROUNDWATER RESULTS
POST - RFI SAMPLING EVENTS

TN EPH													
	SHORT ID -------->												
	SAMPLE ID ------->	005-G-FF09-14		005-G-MW09-08		005-G-MW09-10		005-G-MW09-11		005-G-MW09-12		005-G-MW09-13	
	ORIGINAL ID ----->	005GFF0914		005GMW0908		005GMW0910		005GMW0911		005GMW0912		005GMW0913	
	LAB SAMPLE ID --->	S247551*12		46184.01		S116506*1		S240198*8		S242382*8		S245206*3	
	ID FROM REPORT -->	005GFF0914		005GMW0908		005GMW0910		005GMW0911		005GMW0912		005GMW0913	
	SAMPLE DATE ----->	10/17/02		04/05/01		10/02/01		01/10/02		04/04/02		07/18/02	
	DATE EXTRACTED -->	10/21/02		04/09/01		10/05/01		01/14/02		04/08/02		07/25/02	
	DATE ANALYZED --->	10/25/02		04/12/01		10/11/01		01/16/02		04/10/02		07/29/02	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	MG/L		UG/L		MG/L		MG/L		MG/L		MG/L	
CAS #	Parameter	MEM169	VAL	46184	VAL	MEM91	VAL	MEM97	VAL	MEM108	VAL	MEM141	VAL
9999000-96-4	TN EPH (C12-C40)	0.82		100.	UJ	0.1	U	0.1	U	0.026	J	0.1	U

*** Validation Complete ***

NSA MID-SOUTH
SWMU 5 GROUNDWATER RESULTS
POST - RFI SAMPLING EVENTS

TN EPH													
	SHORT ID -------->												
	SAMPLE ID ------->	005-G-MW8A-06		005-G-MW8A-08		005-G-MW8A-10		005-G-MW8A-11		005-G-MW8A-12		005-G-MW8A-13	
	ORIGINAL ID ----->	005G08LS06		005GMW0808		005GMW0810		005GMW0811		005GMW0812		005GMW0813	
	LAB SAMPLE ID --->	43570.12		46184.02		S116506*2		S240198*7		S242382*7		S245206*2	
	ID FROM REPORT -->	005G08LS06		005GMW0808		005GMW0810		005GMW0811		005GMW0812		005GMW0813	
	SAMPLE DATE ----->	07/12/00		04/05/01		10/02/01		01/10/02		04/04/02		07/18/02	
	DATE EXTRACTED -->	07/14/00		04/09/01		10/05/01		01/14/02		04/08/02		07/25/02	
	DATE ANALYZED --->	07/18/00		04/12/01		10/11/01		01/16/02		04/10/02		07/29/02	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		MG/L		MG/L		MG/L		MG/L	
CAS #	Parameter	43570	VAL	46184	VAL	MEM91	VAL	MEM97	VAL	MEM108	VAL	MEM141	VAL
9999000-96-4	TN EPH (C12-C40)	100.	U	100.	UJ	0.33		0.27		0.24		0.1	U

*** Validation Complete ***

NSA MID-SOUTH
SWMU 5 GROUNDWATER RESULTS
POST - RFI SAMPLING EVENTS

TN EPH							
	SHORT ID -------->						
	SAMPLE ID ------->	005-G-MW8A-14					
	ORIGINAL ID ----->	005G08LS14					
	LAB SAMPLE ID --->	S247551*7					
	ID FROM REPORT -->	005G08LS14					
	SAMPLE DATE ----->	10/17/02					
	DATE EXTRACTED -->	10/21/02					
	DATE ANALYZED --->	10/25/02					
	MATRIX ---------->	Water					
	UNITS ---------->	MG/L					
CAS #	Parameter	MEM169	VAL				
9999000-96-4	TN EPH (C12-C40)	0.16					

*** Validation Complete ***

NSA MID-SOUTH
SWMU 5 GROUNDWATER RESULTS
POST - RFI SAMPLING EVENTS

VOA													
	SHORT ID -------->												
	SAMPLE ID ------->	005-G-03LS-14		005-G-05LS-06		005-G-09LS-06		005-G-FF05-14		005-G-FF06-14		005-G-FF07-14	
	ORIGINAL ID ----->	005G03LS14		005G05LS06		005G09LS06		005GFF0514		005GFF0614		005GFF0714	
	LAB SAMPLE ID --->	S247551*13		43570.03		43570.10		S247551*9		S247551*10		S247551*11	
	ID FROM REPORT -->	005G03LS14		005G05LS06		005G09LS06		005GFF0514		005GFF0614		005GFF0714	
	SAMPLE DATE ----->	10/17/02		07/11/00		07/11/00		10/17/02		10/17/02		10/17/02	
	DATE EXTRACTED -->	10/28/02						10/28/02		10/28/02		10/28/02	
	DATE ANALYZED --->	10/28/02		07/14/00		07/14/00		10/28/02		10/28/02		10/28/02	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	MEM169	VAL	43570	VAL	43570	VAL	MEM169	VAL	MEM169	VAL	MEM169	VAL
630-20-6	1,1,1,2-Tetrachloroethane	NR		NR		NR		NR		NR		NR	
71-55-6	1,1,1-Trichloroethane	1.	U	5.	U	5.	U	1.	U	1.	U	1.	U
79-34-5	1,1,2,2-Tetrachloroethane	1.	U	5.	U	5.	U	1.	U	1.	U	1.	U
79-00-5	1,1,2-Trichloroethane	1.	U	5.	U	5.	U	1.	U	1.	U	1.	U
75-34-3	1,1-Dichloroethane	1.	U	5.	U	5.	U	1.	U	1.	U	1.	U
75-35-4	1,1-Dichloroethene	1.	U	5.	U	5.	U	1.	U	1.	U	1.	U
563-58-6	1,1-Dichloropropene	NR		NR		NR		NR		NR		NR	
87-61-6	1,2,3-Trichlorobenzene	NR		NR		NR		NR		NR		NR	
96-18-4	1,2,3-Trichloropropane	NR		NR		NR		NR		NR		NR	
120-82-1	1,2,4-Trichlorobenzene	NR		NR		NR		NR		NR		NR	
96-12-8	1,2-Dibromo-3-Chloropropane	NR		NR		NR		NR		NR		NR	
106-93-4	1,2-Dibromoethane	NR		NR		NR		NR		NR		NR	
95-50-1	1,2-Dichlorobenzene	NR		NR		NR		NR		NR		NR	
107-06-2	1,2-Dichloroethane	1.	U	5.	U	5.	U	1.	U	1.	U	1.	U
540-59-0	1,2-Dichloroethene (total)	NR		5.	U	5.	U	NR		NR		NR	
78-87-5	1,2-Dichloropropane	1.	U	5.	U	5.	U	1.	U	1.	U	1.	U
108-67-8	Benzene, 1,3,5-trimethyl-	NR		NR		NR		NR		NR		NR	
541-73-1	1,3-Dichlorobenzene	NR		NR		NR		NR		NR		NR	
142-28-9	1,3-Dichloropropane	NR		NR		NR		NR		NR		NR	
542-75-6	1,3-Dichloropropene	NR		NR		NR		NR		NR		NR	
9999900-00-7	1,4-Dichloro-2-butane	NR		NR		NR		NR		NR		NR	
764-41-0	1,4-Dichloro-2-butene	NR		NR		NR		NR		NR		NR	
106-46-7	1,4-Dichlorobenzene	NR		NR		NR		NR		NR		NR	
594-20-7	2,2-Dichloropropane	NR		NR		NR		NR		NR		NR	
78-93-3	2-Butanone (MEK)	10.	U	5.	U	5.	U	10.	U	10.	U	10.	U
110-75-8	2-Chloroethylvinylether	NR		NR		NR		NR		NR		NR	
95-49-8	2-Chlorotoluene	NR		NR		NR		NR		NR		NR	
591-78-6	2-Hexanone	10.	U	5.	U	5.	U	10.	U	10.	U	10.	U
106-43-4	4-Chlorotoluene	NR		NR		NR		NR		NR		NR	
108-10-1	4-Methyl-2-Pentanone (MIBK)	10.	U	5.	U	5.	U	10.	U	10.	U	10.	U
67-64-1	Acetone	25.	U	5.	U	5.	U	25.	U	25.	U	25.	U
75-05-8	Acetonitrile	NR		NR		NR		NR		NR		NR	
107-02-8	Acrolein	NR		NR		NR		NR		NR		NR	
107-13-1	Acrylonitrile	NR		NR		NR		NR		NR		NR	
71-43-2	Benzene	1.	U	5.	U	5.	U	1.	U	1.	U	0.43	J

*** Validation Complete ***

NSA MID-SOUTH
SWMU 5 GROUNDWATER RESULTS
POST - RFI SAMPLING EVENTS

VOA													
	SHORT ID -------->												
	SAMPLE ID ------->	005-G-03LS-14		005-G-05LS-06		005-G-09LS-06		005-G-FF05-14		005-G-FF06-14		005-G-FF07-14	
	ORIGINAL ID ----->	005G03LS14		005G05LS06		005G09LS06		005GFF0514		005GFF0614		005GFF0714	
	LAB SAMPLE ID --->	S247551*13		43570.03		43570.10		S247551*9		S247551*10		S247551*11	
	ID FROM REPORT -->	005G03LS14		005G05LS06		005G09LS06		005GFF0514		005GFF0614		005GFF0714	
	SAMPLE DATE ----->	10/17/02		07/11/00		07/11/00		10/17/02		10/17/02		10/17/02	
	DATE EXTRACTED -->	10/28/02						10/28/02		10/28/02		10/28/02	
	DATE ANALYZED --->	10/28/02		07/14/00		07/14/00		10/28/02		10/28/02		10/28/02	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	MEM169	VAL	43570	VAL	43570	VAL	MEM169	VAL	MEM169	VAL	MEM169	VAL
95-63-6	Benzene, 1,2,4-trimethyl	NR		NR		NR		NR		NR		NR	
108-67-8	Benzene, 1,3,5-trimethyl-	NR		NR		NR		NR		NR		NR	
98-82-8	Isopropylbenzene	NR		NR		NR		NR		NR		NR	
108-86-1	Bromobenzene	NR		NR		NR		NR		NR		NR	
74-97-5	Bromochloromethane	NR		NR		NR		NR		NR		NR	
75-27-4	Bromodichloromethane	1.	U	5.	U	5.	U	1.	U	1.	U	1.	U
75-25-2	Bromoform	2.2	U	5.	U	5.	U	1.	U	1.	U	1.	U
74-83-9	Bromomethane	1.	U	5.	U	5.	U	1.	U	1.	U	1.	U
75-15-0	Carbon disulfide	1.	U	5.	U	5.	U	1.	U	1.	U	1.	U
56-23-5	Carbon tetrachloride	1.	U	5.	U	5.	U	1.	U	1.	U	1.	U
108-90-7	Chlorobenzene	1.	U	5.	U	5.	U	1.	U	1.	U	1.	U
75-00-3	Chloroethane	1.	U	5.	U	5.	U	1.	U	1.	U	1.	U
67-66-3	Chloroform	1.	U	5.	U	5.	U	1.	U	1.	U	1.	U
74-87-3	Chloromethane	1.	U	5.	U	5.	U	1.	U	1.	U	1.	U
124-48-1	Dibromochloromethane	1.	U	5.	U	5.	U	1.	U	1.	U	1.	U
74-95-3	Dibromomethane	NR		NR		NR		NR		NR		NR	
75-71-8	Dichlorodifluoromethane	NR		NR		NR		NR		NR		NR	
75-43-4	Dichlorofluoromethane	NR		NR		NR		NR		NR		NR	
64-17-5	Ethanol	NR		NR		NR		NR		NR		NR	
141-78-6	Ethyl acetate	NR		NR		NR		NR		NR		NR	
97-63-2	Ethyl methacrylate	NR		NR		NR		NR		NR		NR	
100-41-4	Ethylbenzene	1.	U	5.	U	5.	U	1.	U	1.	U	1.	U
87-68-3	Hexachlorobutadiene	NR		NR		NR		NR		NR		NR	
98-82-8	Isopropylbenzene	NR		NR		NR		NR		NR		NR	
74-88-4	Methyl iodide	NR		NR		NR		NR		NR		NR	
1634-04-4	Methyl tert-butyl ether	NR		NR		NR		NR		NR		NR	
75-09-2	Methylene chloride	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
91-20-3	Naphthalene	NR		NR		NR		NR		NR		NR	
100-42-5	Styrene	1.	U	5.	U	5.	U	1.	U	1.	U	1.	U
127-18-4	Tetrachloroethene	1.	U	5.	U	5.	U	1.	U	1.	U	1.	U
108-88-3	Toluene	1.	U	5.	U	5.	U	1.	U	1.	U	1.	U
79-01-6	Trichloroethene	1.	U	5.	U	5.	U	0.72	J	1.	U	1.	U
75-69-4	Trichlorofluoromethane	NR		NR		NR		NR		NR		NR	
108-05-4	Vinyl acetate	2.	U	NR		NR		2.	U	2.	U	2.	U
75-01-4	Vinyl chloride	1.	U	5.	U	5.	U	1.	U	1.	U	1.	U

*** Validation Complete ***

NSA MID-SOUTH
SWMU 5 GROUNDWATER RESULTS
POST - RFI SAMPLING EVENTS

VOA													
	SHORT ID -------->												
	SAMPLE ID ------->	005-G-03LS-14		005-G-05LS-06		005-G-09LS-06		005-G-FF05-14		005-G-FF06-14		005-G-FF07-14	
	ORIGINAL ID ----->	005G03LS14		005G05LS06		005G09LS06		005GFF0514		005GFF0614		005GFF0714	
	LAB SAMPLE ID --->	S247551*13		43570.03		43570.10		S247551*9		S247551*10		S247551*11	
	ID FROM REPORT -->	005G03LS14		005G05LS06		005G09LS06		005GFF0514		005GFF0614		005GFF0714	
	SAMPLE DATE ----->	10/17/02		07/11/00		07/11/00		10/17/02		10/17/02		10/17/02	
	DATE EXTRACTED -->	10/28/02						10/28/02		10/28/02		10/28/02	
	DATE ANALYZED --->	10/28/02		07/14/00		07/14/00		10/28/02		10/28/02		10/28/02	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	MEM169	VAL	43570	VAL	43570	VAL	MEM169	VAL	MEM169	VAL	MEM169	VAL
1330-20-7	Xylene (Total)	2.	U	5.	U	5.	U	2.	U	2.	U	2.	U
156-59-2	cis-1,2-Dichloroethene	1.	U	NR		NR		1.7		1.	U	1.	U
10061-01-5	cis-1,3-Dichloropropene	1.	U	5.	U	5.	U	1.	U	1.	U	1.	U
9999900-05-0	m+p Xylene	NR		NR		NR		NR		NR		NR	
108-38-3	m-Xylene	NR		NR		NR		NR		NR		NR	
104-51-8	n-Butylbenzene	NR		NR		NR		NR		NR		NR	
103-65-1	n-Propylbenzene	NR		NR		NR		NR		NR		NR	
95-47-6	o-Xylene	NR		NR		NR		NR		NR		NR	
99-87-6	p-Isopropyltoluene	NR		NR		NR		NR		NR		NR	
106-42-3	p-Xylene	NR		NR		NR		NR		NR		NR	
135-98-8	sec-Butylbenzene	NR		NR		NR		NR		NR		NR	
98-06-6	tert-Butylbenzene	NR		NR		NR		NR		NR		NR	
156-60-5	trans-1,2-Dichloroethene	1.	U	NR		NR		1.	U	1.	U	1.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U	5.	U	5.	U	1.	U	1.	U	1.	U
110-57-6	trans-1,4-Dichloro-2-butene	NR		NR		NR		NR		NR		NR	

*** Validation Complete ***

NSA MID-SOUTH
SWMU 5 GROUNDWATER RESULTS
POST - RFI SAMPLING EVENTS

VOA													
	SHORT ID -------->												
	SAMPLE ID ------->	005-G-FF09-14		005-G-MW09-08		005-G-MW09-09		005-G-MW09-10		005-G-MW09-11		005-G-MW09-12	
	ORIGINAL ID ----->	005GFF0914		005GMW0908		005GMW0909		005GMW0910		005GMW0911		005GMW0912	
	LAB SAMPLE ID --->	S247551*12		46184.01		47000.01		S116506*1		S240198*8		S242382*8	
	ID FROM REPORT -->	005GFF0914		005GMW0908		005GMW0909		005GMW0910		005GMW0911		005GMW0912	
	SAMPLE DATE ----->	10/17/02		04/05/01		07/16/01		10/02/01		01/10/02		04/04/02	
	DATE EXTRACTED -->	10/28/02		04/11/01									
	DATE ANALYZED --->	10/28/02		04/11/01		07/18/01		10/11/01		01/21/02		04/11/02	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	MEM169	VAL	46184	VAL	47000	VAL	MEM91	VAL	MEM97	VAL	MEM108	VAL
630-20-6	1,1,1,2-Tetrachloroethane	NR		NR		NR		NR		NR		NR	
71-55-6	1,1,1-Trichloroethane	1.	U	5.	U	5.	U	5.	U	5.	U	1.	U
79-34-5	1,1,2,2-Tetrachloroethane	1.	U	5.	U	5.	U	5.	U	5.	U	1.	U
79-00-5	1,1,2-Trichloroethane	1.	U	5.	U	5.	U	5.	U	5.	U	1.	U
75-34-3	1,1-Dichloroethane	1.	U	5.	U	5.	U	5.	U	5.	U	1.	U
75-35-4	1,1-Dichloroethene	1.	U	5.	U	5.	U	5.	U	5.	U	1.	U
563-58-6	1,1-Dichloropropene	NR		NR		NR		NR		NR		NR	
87-61-6	1,2,3-Trichlorobenzene	NR		NR		NR		NR		NR		NR	
96-18-4	1,2,3-Trichloropropane	NR		NR		NR		NR		NR		NR	
120-82-1	1,2,4-Trichlorobenzene	NR		NR		NR		NR		NR		NR	
96-12-8	1,2-Dibromo-3-Chloropropane	NR		NR		NR		NR		NR		NR	
106-93-4	1,2-Dibromoethane	NR		NR		NR		NR		NR		NR	
95-50-1	1,2-Dichlorobenzene	NR		NR		NR		NR		NR		NR	
107-06-2	1,2-Dichloroethane	1.	U	5.	U	5.	U	5.	U	5.	U	1.	U
540-59-0	1,2-Dichloroethene (total)	NR		5.	U	5.	U	NR		NR		NR	
78-87-5	1,2-Dichloropropane	1.	U	5.	U	5.	U	5.	U	5.	U	1.	U
108-67-8	Benzene, 1,3,5-trimethyl-	NR		NR		NR		NR		NR		NR	
541-73-1	1,3-Dichlorobenzene	NR		NR		NR		NR		NR		NR	
142-28-9	1,3-Dichloropropane	NR		NR		NR		NR		NR		NR	
542-75-6	1,3-Dichloropropene	NR		NR		NR		NR		NR		NR	
9999900-00-7	1,4-Dichloro-2-butane	NR		NR		NR		NR		NR		NR	
764-41-0	1,4-Dichloro-2-butene	NR		NR		NR		NR		NR		NR	
106-46-7	1,4-Dichlorobenzene	NR		NR		NR		NR		NR		NR	
594-20-7	2,2-Dichloropropane	NR		NR		NR		NR		NR		NR	
78-93-3	2-Butanone (MEK)	10.	U	5.	U	5.	U	25.	U	25.	U	10.	U
110-75-8	2-Chloroethylvinylether	NR		NR		NR		50.	U	50.	U	10.	U
95-49-8	2-Chlorotoluene	NR		NR		NR		NR		NR		NR	
591-78-6	2-Hexanone	10.	U	5.	U	5.	U	25.	U	25.	U	10.	U
106-43-4	4-Chlorotoluene	NR		NR		NR		NR		NR		NR	
108-10-1	4-Methyl-2-Pentanone (MIBK)	10.	U	5.	U	5.	U	25.	U	25.	U	10.	U
67-64-1	Acetone	25.	U	5.	U	5.	UJ	50.	U	50.	U	25.	UR
75-05-8	Acetonitrile	NR		NR		NR		NR		NR		NR	
107-02-8	Acrolein	NR		NR		NR		NR		NR		NR	
107-13-1	Acrylonitrile	NR		NR		NR		NR		NR		NR	
71-43-2	Benzene	1.	U	5.	U	5.	U	5.	U	5.	U	1.	U

*** Validation Complete ***

NSA MID-SOUTH
SWMU 5 GROUNDWATER RESULTS
POST - RFI SAMPLING EVENTS

VOA													
	SHORT ID -------->												
	SAMPLE ID ------->	005-G-FF09-14		005-G-MW09-08		005-G-MW09-09		005-G-MW09-10		005-G-MW09-11		005-G-MW09-12	
	ORIGINAL ID ----->	005GFF0914		005GMW0908		005GMW0909		005GMW0910		005GMW0911		005GMW0912	
	LAB SAMPLE ID --->	S247551*12		46184.01		47000.01		S116506*1		S240198*8		S242382*8	
	ID FROM REPORT -->	005GFF0914		005GMW0908		005GMW0909		005GMW0910		005GMW0911		005GMW0912	
	SAMPLE DATE ----->	10/17/02		04/05/01		07/16/01		10/02/01		01/10/02		04/04/02	
	DATE EXTRACTED -->	10/28/02		04/11/01									
	DATE ANALYZED --->	10/28/02		04/11/01		07/18/01		10/11/01		01/21/02		04/11/02	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	MEM169	VAL	46184	VAL	47000	VAL	MEM91	VAL	MEM97	VAL	MEM108	VAL
95-63-6	Benzene, 1,2,4-trimethyl	NR		NR		NR		NR		NR		NR	
108-67-8	Benzene, 1,3,5-trimethyl-	NR		NR		NR		NR		NR		NR	
98-82-8	Isopropylbenzene	NR		NR		NR		NR		NR		NR	
108-86-1	Bromobenzene	NR		NR		NR		NR		NR		NR	
74-97-5	Bromochloromethane	NR		NR		NR		NR		NR		NR	
75-27-4	Bromodichloromethane	1.	U	5.	U	5.	U	5.	U	5.	U	1.	U
75-25-2	Bromoform	1.	U	5.	U	5.	U	5.	U	5.	U	1.	U
74-83-9	Bromomethane	1.	U	5.	U	5.	U	10.	U	10.	U	1.	U
75-15-0	Carbon disulfide	1.	U	5.	UR	5.	U	5.	U	5.	U	1.	U
56-23-5	Carbon tetrachloride	1.	U	5.	U	5.	U	5.	U	5.	U	1.	U
108-90-7	Chlorobenzene	1.	U	5.	U	5.	U	5.	U	5.	U	1.	U
75-00-3	Chloroethane	1.	U	5.	U	5.	U	10.	U	10.	U	1.	U
67-66-3	Chloroform	1.	U	5.	U	5.	U	5.	U	5.	U	1.	U
74-87-3	Chloromethane	1.	U	5.	U	5.	U	10.	U	10.	U	1.	U
124-48-1	Dibromochloromethane	1.	U	5.	U	5.	U	5.	U	5.	U	1.	U
74-95-3	Dibromomethane	NR		NR		NR		NR		NR		NR	
75-71-8	Dichlorodifluoromethane	NR		NR		NR		NR		NR		NR	
75-43-4	Dichlorofluoromethane	NR		NR		NR		NR		NR		NR	
64-17-5	Ethanol	NR		NR		NR		NR		NR		NR	
141-78-6	Ethyl acetate	NR		NR		NR		NR		NR		NR	
97-63-2	Ethyl methacrylate	NR		NR		NR		NR		NR		NR	
100-41-4	Ethylbenzene	1.	U	5.	U	5.	U	5.	U	5.	U	1.	U
87-68-3	Hexachlorobutadiene	NR		NR		NR		NR		NR		NR	
98-82-8	Isopropylbenzene	NR		NR		NR		NR		NR		NR	
74-88-4	Methyl iodide	NR		NR		NR		NR		NR		NR	
1634-04-4	Methyl tert-butyl ether	NR		NR		NR		NR		NR		NR	
75-09-2	Methylene chloride	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
91-20-3	Naphthalene	NR		NR		NR		NR		NR		NR	
100-42-5	Styrene	1.	U	5.	U	5.	U	5.	U	5.	U	1.	U
127-18-4	Tetrachloroethene	1.	U	5.	U	5.	U	5.	U	5.	U	1.	U
108-88-3	Toluene	1.	U	5.	U	5.	U	5.	U	5.	U	1.	U
79-01-6	Trichloroethene	0.27	J	5.	U	5.	U	5.	U	5.	U	1.	U
75-69-4	Trichlorofluoromethane	NR		NR		NR		NR		NR		NR	
108-05-4	Vinyl acetate	2.	U	NR		NR		10.	U	10.	U	2.	U
75-01-4	Vinyl chloride	1.	U	5.	U	5.	U	10.	U	10.	U	1.	U

*** Validation Complete ***

NSA MID-SOUTH
SWMU 5 GROUNDWATER RESULTS
POST - RFI SAMPLING EVENTS

VOA													
	SHORT ID -------->												
	SAMPLE ID ------->	005-G-FF09-14		005-G-MW09-08		005-G-MW09-09		005-G-MW09-10		005-G-MW09-11		005-G-MW09-12	
	ORIGINAL ID ----->	005GFF0914		005GMW0908		005GMW0909		005GMW0910		005GMW0911		005GMW0912	
	LAB SAMPLE ID --->	S247551*12		46184.01		47000.01		S116506*1		S240198*8		S242382*8	
	ID FROM REPORT -->	005GFF0914		005GMW0908		005GMW0909		005GMW0910		005GMW0911		005GMW0912	
	SAMPLE DATE ----->	10/17/02		04/05/01		07/16/01		10/02/01		01/10/02		04/04/02	
	DATE EXTRACTED -->	10/28/02		04/11/01									
	DATE ANALYZED --->	10/28/02		04/11/01		07/18/01		10/11/01		01/21/02		04/11/02	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	MEM169	VAL	46184	VAL	47000	VAL	MEM91	VAL	MEM97	VAL	MEM108	VAL
1330-20-7	Xylene (Total)	2.	U	5.	U	5.	U	10.	U	10.	U	2.	U
156-59-2	cis-1,2-Dichloroethene	1.	U	NR		NR		5.	U	5.	U	1.	U
10061-01-5	cis-1,3-Dichloropropene	1.	U	5.	U	5.	U	5.	U	5.	U	1.	U
9999900-05-0	m+p Xylene	NR		NR		NR		NR		NR		NR	
108-38-3	m-Xylene	NR		NR		NR		NR		NR		NR	
104-51-8	n-Butylbenzene	NR		NR		NR		NR		NR		NR	
103-65-1	n-Propylbenzene	NR		NR		NR		NR		NR		NR	
95-47-6	o-Xylene	NR		NR		NR		NR		NR		NR	
99-87-6	p-Isopropyltoluene	NR		NR		NR		NR		NR		NR	
106-42-3	p-Xylene	NR		NR		NR		NR		NR		NR	
135-98-8	sec-Butylbenzene	NR		NR		NR		NR		NR		NR	
98-06-6	tert-Butylbenzene	NR		NR		NR		NR		NR		NR	
156-60-5	trans-1,2-Dichloroethene	1.	U	NR		NR		5.	U	5.	U	1.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U	5.	U	5.	U	5.	U	5.	U	1.	U
110-57-6	trans-1,4-Dichloro-2-butene	NR		NR		NR		NR		NR		NR	

*** Validation Complete ***

NSA MID-SOUTH
SWMU 5 GROUNDWATER RESULTS
POST - RFI SAMPLING EVENTS

VOA													
	SHORT ID -------->												
	SAMPLE ID ------->	005-G-MW09-13		005-G-MW8A-06		005-G-MW8A-08		005-G-MW8A-09		005-G-MW8A-10		005-G-MW8A-11	
	ORIGINAL ID ----->	005GMW0913		005G08LS06		005GMW0808		005GMW0809		005GMW0810		005GMW0811	
	LAB SAMPLE ID --->	S245225*4		43570.12		46184.02		47000.02		S116506*2		S240198*7	
	ID FROM REPORT -->	005GMW0913		005G08LS06		005GMW0808		005GMW0809		005GMW0810		005GMW0811	
	SAMPLE DATE ----->	07/18/02		07/12/00		04/05/01		07/16/01		10/02/01		01/10/02	
	DATE EXTRACTED -->	07/26/02				04/11/01							
	DATE ANALYZED --->	07/26/02		07/14/00		04/11/01		07/18/01		10/11/01		01/21/02	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	MEM141	VAL	43570	VAL	46184	VAL	47000	VAL	MEM91	VAL	MEM97	VAL
630-20-6	1,1,1,2-Tetrachloroethane	NR		NR		NR		NR		NR		NR	
71-55-6	1,1,1-Trichloroethane	1.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	1.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-00-5	1,1,2-Trichloroethane	1.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-34-3	1,1-Dichloroethane	1.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-35-4	1,1-Dichloroethene	1.	U	5.	U	5.	U	5.	U	5.	U	5.	U
563-58-6	1,1-Dichloropropene	NR		NR		NR		NR		NR		NR	
87-61-6	1,2,3-Trichlorobenzene	NR		NR		NR		NR		NR		NR	
96-18-4	1,2,3-Trichloropropane	NR		NR		NR		NR		NR		NR	
120-82-1	1,2,4-Trichlorobenzene	NR		NR		NR		NR		NR		NR	
96-12-8	1,2-Dibromo-3-Chloropropane	NR		NR		NR		NR		NR		NR	
106-93-4	1,2-Dibromoethane	NR		NR		NR		NR		NR		NR	
95-50-1	1,2-Dichlorobenzene	NR		NR		NR		NR		NR		NR	
107-06-2	1,2-Dichloroethane	1.	U	5.	U	5.	U	5.	U	5.	U	5.	U
540-59-0	1,2-Dichloroethene (total)	NR		5.	U	5.	U	5.	U	NR		NR	
78-87-5	1,2-Dichloropropane	1.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-67-8	Benzene, 1,3,5-trimethyl-	NR		NR		NR		NR		NR		NR	
541-73-1	1,3-Dichlorobenzene	NR		NR		NR		NR		NR		NR	
142-28-9	1,3-Dichloropropane	NR		NR		NR		NR		NR		NR	
542-75-6	1,3-Dichloropropene	NR		NR		NR		NR		NR		NR	
9999900-00-7	1,4-Dichloro-2-butane	NR		NR		NR		NR		NR		NR	
764-41-0	1,4-Dichloro-2-butene	NR		NR		NR		NR		NR		NR	
106-46-7	1,4-Dichlorobenzene	NR		NR		NR		NR		NR		NR	
594-20-7	2,2-Dichloropropane	NR		NR		NR		NR		NR		NR	
78-93-3	2-Butanone (MEK)	10.	U	5.	U	5.	U	5.	U	25.	U	25.	U
110-75-8	2-Chloroethylvinylether	NR		NR		NR		NR		50.	U	50.	U
95-49-8	2-Chlorotoluene	NR		NR		NR		NR		NR		NR	
591-78-6	2-Hexanone	10.	U	5.	U	5.	U	5.	U	25.	U	25.	U
106-43-4	4-Chlorotoluene	NR		NR		NR		NR		NR		NR	
108-10-1	4-Methyl-2-Pentanone (MIBK)	10.	U	5.	U	5.	U	5.	U	25.	U	25.	U
67-64-1	Acetone	25.	U	5.	U	5.	U	5.	UJ	50.	U	50.	U
75-05-8	Acetonitrile	NR		NR		NR		NR		NR		NR	
107-02-8	Acrolein	NR		NR		NR		NR		NR		NR	
107-13-1	Acrylonitrile	NR		NR		NR		NR		NR		NR	
71-43-2	Benzene	1.	U	5.	U	5.	U	5.	U	5.	U	5.	U

*** Validation Complete ***

NSA MID-SOUTH
SWMU 5 GROUNDWATER RESULTS
POST - RFI SAMPLING EVENTS

VOA													
	SHORT ID -------->												
	SAMPLE ID ------->	005-G-MW09-13		005-G-MW8A-06		005-G-MW8A-08		005-G-MW8A-09		005-G-MW8A-10		005-G-MW8A-11	
	ORIGINAL ID ----->	005GMW0913		005G08LS06		005GMW0808		005GMW0809		005GMW0810		005GMW0811	
	LAB SAMPLE ID --->	S245225*4		43570.12		46184.02		47000.02		S116506*2		S240198*7	
	ID FROM REPORT -->	005GMW0913		005G08LS06		005GMW0808		005GMW0809		005GMW0810		005GMW0811	
	SAMPLE DATE ----->	07/18/02		07/12/00		04/05/01		07/16/01		10/02/01		01/10/02	
	DATE EXTRACTED -->	07/26/02				04/11/01							
	DATE ANALYZED --->	07/26/02		07/14/00		04/11/01		07/18/01		10/11/01		01/21/02	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	MEM141	VAL	43570	VAL	46184	VAL	47000	VAL	MEM91	VAL	MEM97	VAL
95-63-6	Benzene, 1,2,4-trimethyl	NR		NR		NR		NR		NR		NR	
108-67-8	Benzene, 1,3,5-trimethyl-	NR		NR		NR		NR		NR		NR	
98-82-8	Isopropylbenzene	NR		NR		NR		NR		NR		NR	
108-86-1	Bromobenzene	NR		NR		NR		NR		NR		NR	
74-97-5	Bromochloromethane	NR		NR		NR		NR		NR		NR	
75-27-4	Bromodichloromethane	1.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-25-2	Bromoform	1.	U	5.	U	5.	U	5.	U	5.	U	5.	U
74-83-9	Bromomethane	1.	U	5.	U	5.	U	5.	U	10.	U	10.	U
75-15-0	Carbon disulfide	1.	U	5.	U	5.	UR	5.	U	5.	U	5.	U
56-23-5	Carbon tetrachloride	1.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-90-7	Chlorobenzene	1.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-00-3	Chloroethane	1.	U	5.	U	5.	U	5.	U	10.	U	10.	U
67-66-3	Chloroform	1.	U	5.	U	5.	U	5.	U	5.	U	5.	U
74-87-3	Chloromethane	1.	U	5.	U	5.	U	5.	U	10.	U	10.	U
124-48-1	Dibromochloromethane	1.	U	5.	U	5.	U	5.	U	5.	U	5.	U
74-95-3	Dibromomethane	NR		NR		NR		NR		NR		NR	
75-71-8	Dichlorodifluoromethane	NR		NR		NR		NR		NR		NR	
75-43-4	Dichlorofluoromethane	NR		NR		NR		NR		NR		NR	
64-17-5	Ethanol	NR		NR		NR		NR		NR		NR	
141-78-6	Ethyl acetate	NR		NR		NR		NR		NR		NR	
97-63-2	Ethyl methacrylate	NR		NR		NR		NR		NR		NR	
100-41-4	Ethylbenzene	1.	U	5.	U	5.	U	5.	U	5.	U	5.	U
87-68-3	Hexachlorobutadiene	NR		NR		NR		NR		NR		NR	
98-82-8	Isopropylbenzene	NR		NR		NR		NR		NR		NR	
74-88-4	Methyl iodide	NR		NR		NR		NR		NR		NR	
1634-04-4	Methyl tert-butyl ether	NR		NR		NR		NR		NR		NR	
75-09-2	Methylene chloride	5.	U	5.	U	5.	U	5.	U	5.	U	5.	U
91-20-3	Naphthalene	NR		NR		NR		NR		NR		NR	
100-42-5	Styrene	1.	U	5.	U	5.	U	5.	U	5.	U	5.	U
127-18-4	Tetrachloroethene	1.	U	5.	U	5.	U	5.	U	5.	U	5.	U
108-88-3	Toluene	1.	U	5.	U	5.	U	5.	U	5.	U	5.	U
79-01-6	Trichloroethene	1.	U	5.	U	5.	U	5.	U	5.	U	5.	U
75-69-4	Trichlorofluoromethane	NR		NR		NR		NR		NR		NR	
108-05-4	Vinyl acetate	2.	U	NR		NR		NR		10.	U	10.	U
75-01-4	Vinyl chloride	1.	U	5.	U	5.	U	5.	U	10.	U	10.	U

*** Validation Complete ***

NSA MID-SOUTH
SWMU 5 GROUNDWATER RESULTS
POST - RFI SAMPLING EVENTS

VOA													
	SHORT ID -------->												
	SAMPLE ID ------->	005-G-MW09-13		005-G-MW8A-06		005-G-MW8A-08		005-G-MW8A-09		005-G-MW8A-10		005-G-MW8A-11	
	ORIGINAL ID ----->	005GMW0913		005G08LS06		005GMW0808		005GMW0809		005GMW0810		005GMW0811	
	LAB SAMPLE ID --->	S245225*4		43570.12		46184.02		47000.02		S116506*2		S240198*7	
	ID FROM REPORT -->	005GMW0913		005G08LS06		005GMW0808		005GMW0809		005GMW0810		005GMW0811	
	SAMPLE DATE ----->	07/18/02		07/12/00		04/05/01		07/16/01		10/02/01		01/10/02	
	DATE EXTRACTED -->	07/26/02				04/11/01							
	DATE ANALYZED --->	07/26/02		07/14/00		04/11/01		07/18/01		10/11/01		01/21/02	
	MATRIX ---------->	Water		Water		Water		Water		Water		Water	
	UNITS ---------->	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
CAS #	Parameter	MEM141	VAL	43570	VAL	46184	VAL	47000	VAL	MEM91	VAL	MEM97	VAL
1330-20-7	Xylene (Total)	2.	U	5.	U	5.	U	5.	U	10.	U	10.	U
156-59-2	cis-1,2-Dichloroethene	1.	U	NR		NR		NR		5.	U	5.	U
10061-01-5	cis-1,3-Dichloropropene	1.	U	5.	U	5.	U	5.	U	5.	U	5.	U
9999900-05-0	m+p Xylene	NR		NR		NR		NR		NR		NR	
108-38-3	m-Xylene	NR		NR		NR		NR		NR		NR	
104-51-8	n-Butylbenzene	NR		NR		NR		NR		NR		NR	
103-65-1	n-Propylbenzene	NR		NR		NR		NR		NR		NR	
95-47-6	o-Xylene	NR		NR		NR		NR		NR		NR	
99-87-6	p-Isopropyltoluene	NR		NR		NR		NR		NR		NR	
106-42-3	p-Xylene	NR		NR		NR		NR		NR		NR	
135-98-8	sec-Butylbenzene	NR		NR		NR		NR		NR		NR	
98-06-6	tert-Butylbenzene	NR		NR		NR		NR		NR		NR	
156-60-5	trans-1,2-Dichloroethene	1.	U	NR		NR		NR		5.	U	5.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U	5.	U	5.	U	5.	U	5.	U	5.	U
110-57-6	trans-1,4-Dichloro-2-butene	NR		NR		NR		NR		NR		NR	

*** Validation Complete ***

NSA MID-SOUTH
SWMU 5 GROUNDWATER RESULTS
POST - RFI SAMPLING EVENTS

VOA										
	SHORT ID -------->									
	SAMPLE ID ------->	005-G-MW8A-12		005-G-MW8A-13		005-G-MW8A-14				
	ORIGINAL ID ----->	005GMW0812		005GMW0813		005G08LS14				
	LAB SAMPLE ID --->	S242382*7		S245225*3		S247551*7				
	ID FROM REPORT -->	005GMW0812		005GMW0813		005G08LS14				
	SAMPLE DATE ----->	04/04/02		07/18/02		10/17/02				
	DATE EXTRACTED -->			07/26/02		10/28/02				
	DATE ANALYZED --->	04/12/02		07/26/02		10/28/02				
	MATRIX ---------->	Water		Water		Water				
	UNITS ---------->	UG/L		UG/L		UG/L				
CAS #	Parameter	MEM108	VAL	MEM141	VAL	MEM169	VAL			
630-20-6	1,1,1,2-Tetrachloroethane	NR		NR		NR				
71-55-6	1,1,1-Trichloroethane	1.	U	1.	U	1.	U			
79-34-5	1,1,2,2-Tetrachloroethane	1.	U	1.	U	1.	U			
79-00-5	1,1,2-Trichloroethane	1.	U	1.	U	1.	U			
75-34-3	1,1-Dichloroethane	1.	U	1.	U	1.	U			
75-35-4	1,1-Dichloroethene	1.	U	1.	U	1.	U			
563-58-6	1,1-Dichloropropene	NR		NR		NR				
87-61-6	1,2,3-Trichlorobenzene	NR		NR		NR				
96-18-4	1,2,3-Trichloropropane	NR		NR		NR				
120-82-1	1,2,4-Trichlorobenzene	NR		NR		NR				
96-12-8	1,2-Dibromo-3-Chloropropane	NR		NR		NR				
106-93-4	1,2-Dibromoethane	NR		NR		NR				
95-50-1	1,2-Dichlorobenzene	NR		NR		NR				
107-06-2	1,2-Dichloroethane	1.	U	1.	U	1.	U			
540-59-0	1,2-Dichloroethene (total)	NR		NR		NR				
78-87-5	1,2-Dichloropropane	1.	U	1.	U	1.	U			
108-67-8	Benzene, 1,3,5-trimethyl-	NR		NR		NR				
541-73-1	1,3-Dichlorobenzene	NR		NR		NR				
142-28-9	1,3-Dichloropropane	NR		NR		NR				
542-75-6	1,3-Dichloropropene	NR		NR		NR				
9999900-00-7	1,4-Dichloro-2-butane	NR		NR		NR				
764-41-0	1,4-Dichloro-2-butene	NR		NR		NR				
106-46-7	1,4-Dichlorobenzene	NR		NR		NR				
594-20-7	2,2-Dichloropropane	NR		NR		NR				
78-93-3	2-Butanone (MEK)	10.	U	10.	U	10.	U			
110-75-8	2-Chloroethylvinylether	10.	U	NR		NR				
95-49-8	2-Chlorotoluene	NR		NR		NR				
591-78-6	2-Hexanone	10.	U	10.	U	10.	U			
106-43-4	4-Chlorotoluene	NR		NR		NR				
108-10-1	4-Methyl-2-Pentanone (MIBK)	10.	U	10.	U	10.	U			
67-64-1	Acetone	25.	UR	25.	U	25.	U			
75-05-8	Acetonitrile	NR		NR		NR				
107-02-8	Acrolein	NR		NR		NR				
107-13-1	Acrylonitrile	NR		NR		NR				
71-43-2	Benzene	1.	U	1.	U	1.	U			

*** Validation Complete ***

NSA MID-SOUTH
SWMU 5 GROUNDWATER RESULTS
POST - RFI SAMPLING EVENTS

VOA											
	SHORT ID -------->										
	SAMPLE ID ------->	005-G-MW8A-12		005-G-MW8A-13		005-G-MW8A-14					
	ORIGINAL ID ----->	005GMW0812		005GMW0813		005G08LS14					
	LAB SAMPLE ID --->	S242382*7		S245225*3		S247551*7					
	ID FROM REPORT -->	005GMW0812		005GMW0813		005G08LS14					
	SAMPLE DATE ----->	04/04/02		07/18/02		10/17/02					
	DATE EXTRACTED -->			07/26/02		10/28/02					
	DATE ANALYZED --->	04/12/02		07/26/02		10/28/02					
	MATRIX ---------->	Water		Water		Water					
	UNITS ---------->	UG/L		UG/L		UG/L					
CAS #	Parameter	MEM108	VAL	MEM141	VAL	MEM169	VAL				
95-63-6	Benzene, 1,2,4-trimethyl	NR		NR		NR					
108-67-8	Benzene, 1,3,5-trimethyl-	NR		NR		NR					
98-82-8	Isopropylbenzene	NR		NR		NR					
108-86-1	Bromobenzene	NR		NR		NR					
74-97-5	Bromochloromethane	NR		NR		NR					
75-27-4	Bromodichloromethane	1.	U	1.	U	1.	U				
75-25-2	Bromoform	1.	U	1.	U	1.	U				
74-83-9	Bromomethane	1.	U	1.	U	1.	U				
75-15-0	Carbon disulfide	1.	U	1.	U	1.	U				
56-23-5	Carbon tetrachloride	1.	U	1.	U	1.	U				
108-90-7	Chlorobenzene	1.	U	1.	U	1.	U				
75-00-3	Chloroethane	1.	U	1.	U	1.	U				
67-66-3	Chloroform	1.	U	1.	U	1.	U				
74-87-3	Chloromethane	1.	U	1.	U	1.	U				
124-48-1	Dibromochloromethane	1.	U	1.	U	1.	U				
74-95-3	Dibromomethane	NR		NR		NR					
75-71-8	Dichlorodifluoromethane	NR		NR		NR					
75-43-4	Dichlorofluoromethane	NR		NR		NR					
64-17-5	Ethanol	NR		NR		NR					
141-78-6	Ethyl acetate	NR		NR		NR					
97-63-2	Ethyl methacrylate	NR		NR		NR					
100-41-4	Ethylbenzene	1.	U	1.	U	1.	U				
87-68-3	Hexachlorobutadiene	NR		NR		NR					
98-82-8	Isopropylbenzene	NR		NR		NR					
74-88-4	Methyl iodide	NR		NR		NR					
1634-04-4	Methyl tert-butyl ether	NR		NR		NR					
75-09-2	Methylene chloride	5.	U	5.	U	5.	U				
91-20-3	Naphthalene	NR		NR		NR					
100-42-5	Styrene	1.	U	1.	U	1.	U				
127-18-4	Tetrachloroethene	1.	U	1.	U	1.	U				
108-88-3	Toluene	1.	U	1.	U	0.4	J				
79-01-6	Trichloroethene	1.	U	1.	U	1.	U				
75-69-4	Trichlorofluoromethane	NR		NR		NR					
108-05-4	Vinyl acetate	2.	U	2.	U	2.	U				
75-01-4	Vinyl chloride	1.	U	1.	U	1.	U				

*** Validation Complete ***

NSA MID-SOUTH
SWMU 5 GROUNDWATER RESULTS
POST - RFI SAMPLING EVENTS

VOA											
	SHORT ID -------->										
	SAMPLE ID ------->	005-G-MW8A-12		005-G-MW8A-13		005-G-MW8A-14					
	ORIGINAL ID ----->	005GMW0812		005GMW0813		005G08LS14					
	LAB SAMPLE ID --->	S242382*7		S245225*3		S247551*7					
	ID FROM REPORT -->	005GMW0812		005GMW0813		005G08LS14					
	SAMPLE DATE ----->	04/04/02		07/18/02		10/17/02					
	DATE EXTRACTED -->			07/26/02		10/28/02					
	DATE ANALYZED --->	04/12/02		07/26/02		10/28/02					
	MATRIX ---------->	Water		Water		Water					
	UNITS ---------->	UG/L		UG/L		UG/L					
CAS #	Parameter	MEM108	VAL	MEM141	VAL	MEM169	VAL				
1330-20-7	Xylene (Total)	2.	U	2.	U	2.	U				
156-59-2	cis-1,2-Dichloroethene	1.	U	1.	U	1.	U				
10061-01-5	cis-1,3-Dichloropropene	1.	U	1.	U	1.	U				
9999900-05-0	m+p Xylene	NR		NR		NR					
108-38-3	m-Xylene	NR		NR		NR					
104-51-8	n-Butylbenzene	NR		NR		NR					
103-65-1	n-Propylbenzene	NR		NR		NR					
95-47-6	o-Xylene	NR		NR		NR					
99-87-6	p-Isopropyltoluene	NR		NR		NR					
106-42-3	p-Xylene	NR		NR		NR					
135-98-8	sec-Butylbenzene	NR		NR		NR					
98-06-6	tert-Butylbenzene	NR		NR		NR					
156-60-5	trans-1,2-Dichloroethene	1.	U	1.	U	1.	U				
10061-02-6	trans-1,3-Dichloropropene	1.	U	1.	U	1.	U				
110-57-6	trans-1,4-Dichloro-2-butene	NR		NR		NR					

*** Validation Complete ***