N00158.AR.000183
NAS WILLOW GROVE
5090.3a

TETRA TECH NUS

TO:	**R. TURNER**	**DATE:**	**AUGUST 10, 2004**
FROM:	**RUSSELL SLOBODA**	**COPIES:**	**FILE**

SUBJECT: **ORGANIC DATA REVIEW – POLYAROMATIC HYDROCARBONS, PH, AND TOTAL ORGANIC CARBON**
CTO 003 – NASWILLOW GROVE, PENNSYLVANIA
SDG C0508

SAMPLES: **3 / Aqueous**

05FB060104	05RB060104	05RB060204

17 / Soil

05DUP-01	05SS34	05SS39	05SS44
05DUP-02	05SS35	05SS40	05SS45
05SS31	05SS36	05SS41	
05SS32	05SS37	05SS42	
05SS33	05SS38	05SS43	

OVERVIEW

The sample set for CTO 003 NAS Willow Grove, Pennsylvania, SDG C0508 consists of 17 soil environmental samples (designated 05SS- and 05DUP-), two rinsate blanks (designated RB-), and one field blank (designated FB-). All samples were analyzed for semivolatile polyaromatic hydrocarbons (PAHs) and the soil samples were analyzed for total organic carbon (TOC) and pH. Two field duplicate pairs (05SS34/05DUP-01 and 05SS32/05DUP-02) were included in this SDG.

The samples were collected by Tetra Tech NUS on June 1 and June 2, 2004 and analyzed by Mitkem Corporation laboratory of Warwick, Rhode Island.

All analyses were conducted using EPA SW-846 Methods 8270 using selected ion monitoring (SIM) for PAHs.

SUMMARY

All analytes were successfully analyzed in all samples. The findings offered in this report are based upon a general review of all available data including data completeness, holding times until analysis, initial/continuing calibrations, laboratory and field quality control blank results, field duplicate results, compound identification, compound quantitation, and detection limits.

MINOR PROBLEMS

The field duplicate samples 05DUP-02 and 05SS32 displayed a relative percent difference (RPD) in results for benzo(k)fluoranthene that exceeded the 100 percent QC limit. Associated results for benzo(k)fluoranthene are qualified estimated (J) in these two samples.

Internal standard areas were less than the lower 50 percent quality control limit in several samples. Associated positive and non-detected results for compounds that were calculated using these internal standards are qualified estimated, (J/UJ), respectively.

The relative standard deviation (RSD) exceeded the 30 percent control limit in the initial calibration for benzo(a)pyrene and dibenz(a,h)anthracene. Associated positive results are qualified estimated (J).

The percent difference (PD) exceeded the 25 percent control limit in a continuing calibration for pyrene and benzo(b)fluoranthrene. Associated positive results are qualified estimated (J).

The 2-methylnaphthalene concentration exceeded the upper calibrated range in the undiluted analysis of sample 05SS43 but was not detected in the diluted analysis. The positive result was reported from the undiluted analysis and is qualified estimated (J).

NOTES

- No contamination was found in the laboratory or field quality control blanks.
- Most samples were analyzed twice, diluted and undiluted, because PAH concentrations exceeded the linear range of the initial calibration. The diluted analysis results were reported for these compounds where results were within calibration only in the diluted analyses.
- Surrogate recoveries were not calculated for several samples because dilutions rendered the amount of surrogate added not detectable. Matrix spike recoveries for several PAHs were not usable for assessing accuracy because the native concentration of PAHs greatly exceeded the amount of spike added to the sample. No actions were required for these problems and the soil laboratory control sample (LCS) recoveries were within acceptance limits.
- The field duplicate pair 05DUP-01 and 05SS34 exhibited relative percent differences (RPDs) within acceptance criteria.

EXECUTIVE SUMMARY

Laboratory Performance: Two compounds displayed RSDs in initial calibration response factors greater than the upper QC limits and two compounds displayed PDs in continuing calibration response factors exceeding QC limits. One compound exceeded the linear range but was diluted to levels below detection limits in the reanalysis.

Other factors affecting data quality: Field duplicate imprecision was noted for one compound. Surrogate recoveries and matrix spike recoveries were not applicable in several samples due to sample dilutions.

The data for these analyses were reviewed to evaluate usability with reference to the EPA "Functional Guidelines for Organic Data Review", as amended for use within EPA Region 3 (9/94), and the NFESC document entitled "Navy IRCDQM" (9/99).

The text of this report has been formatted to address only those problem areas affecting data quality.

"I attest that the data referenced herein were reviewed according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

Tetra Tech NUS, Inc.
Russell Sloboda
Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A

Qualified Analytical Results

SEMVOLATILE ANALYSIS RESULTS
SDG TT_C0508
CTO 003, NAS WILLOW GROVE

Sample ID:	05DUP-01			05DUP-02			05FB060104			05RB060104			05RB060204			05SS31			05SS32			05SS33			05SS34		
Laboratory ID:	C0508-04A			C0508-17A			C0508-12A			C0508-11A			C0508-20A			C0508-16A			C0508-15A			C0508-10A			C0508-05A		
Sample Date:	06/01/04			06/02/04			06/01/04			06/01/04			06/02/04			06/02/04			06/02/04			06/01/04			06/01/04		
Duplicate:	05SS34			05SS32															05DUP-02						05DUP-01		
Percent Moisture	20.0			13.0												9.0			13.0			13.0			20.0		
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES	ug/kg			ug/kg			ug/L			ug/L			ug/L			ug/kg			ug/kg			ug/kg			ug/kg		
Naphthalene	7.2			52	J	N	0.1	U		0.1	U		0.1	U		2100			20	J	N	54			8.3		
2-Methylnaphthalene	8			58	J	N	0.1	U		0.1	U		0.1	U		920			23	J	N	100			11		
Acenaphthylene	4.4			180	J	N	0.1	U		0.1	U		0.1	U		1600			130	J	N	50			5.2		
Acenaphthene	4.1	U		230	J	N	0.1	U		0.1	U		0.1	U		5600			120			24			4.1	U	
Fluorene	4.1	U		330	J	N	0.1	U		0.1	U		0.1	U		6500			170	J	N	44			4.1	U	
Anthracene	8.6			840			0.1	U		0.1	U		0.1	U		24000			340			73			17		
Benz(a)anthracene	51			2100			0.1	U		0.1	U		0.1	U		59000			880			220			150		
Fluoranthene	180			5100			0.1	U		0.1	U		0.1	U		150000			2800			580			350		
Phenanthrene	99			3100			0.1	U		0.1	U		0.1	U		76000			1600			450			92		
Pyrene	150			7400	J	C	0.1	U		0.1	U		0.1	U		100000	J	C	2600	J	C	550	J	C	250		
Benzo(a)pyrene	53	J	C	1900	J	C	0.1	U		0.1	U		0.1	U		47000	J	C,N	370	J	C	180	J	C	140	J	C
Benzo(b)fluoranthene	60			2300	J	C	0.1	U		0.1	U		0.1	U		61000	J	C,N	1400	J	C	370	J	C	190		
Benzo(k)fluoranthene	38			1300	J	G	0.1	U		0.1	U		0.1	U		20000	J	N	370	J	G	310	J	N	52		
Chrysene	79			2700			0.1	U		0.1	U		0.1	U		46000	J	N	920			250			160		
Benzo(g,h,i)perylene	50			1200	J	N	0.1	U		0.1	U		0.1	U		27000			600			170	J	N	110		
Dibenz(a,h)anthracene	13	J	C	300	J	C,N	0.1	U		0.1	U		0.1	U		8400	J	C	190	J	C,N	41	J	C,N	29	J	C
Indeno(1,2,3-cd)pyrene	43			1100	J	N	0.1	U		0.1	U		0.1	U		26000			580			180	J	N	94		

SEMVOLATILE ANALYSIS RESULTS
SDG TT_C0508
CTO 003, NAS WILLOW GROVE

Sample ID:	05SS35			05SS36			05SS37			05SS38			05SS39			05SS40			05SS41		
Laboratory ID:	C0508-03A			C0508-02A			C0508-13A			C0508-01A			C0508-06A			C0508-09A			C0508-07A		
Sample Date:	06/01/04			06/01/04			06/01/04			06/01/04			06/01/04			06/01/04			06/01/04		
Duplicate:																					
Percent Moisture	16.0			12.0			13.0			11.0			14.0			12.0			13.0		
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES	ug/kg			ug/kg			ug/kg			ug/kg			ug/kg			ug/kg			ug/kg		
Naphthalene	10	J	N	19	U		5.5			8.8			7.8			7.6			3.8	U	
2-Methylnaphthalene	15	J	N	48			3.8	U		14			6.2			6.1			3.8	U	
Acenaphthylene	75	J	N	180			11			20			56			23			7.5		
Acenaphthene	35	J	N	310			4.3			12			66			45			17		
Fluorene	73	J	N	260			4.4			15			85			73			23		
Anthracene	190	J	N	1500			15			69	J	N	360			190			110		
Benz(a)anthracene	760			13000			67			280	J	N	1200			730			320		
Fluoranthene	2000			26000			210			740			4000			2100			700		
Phenanthrene	760			7200			120			290	J	N	1200			910			340		
Pyrene	2400	J	C	25000	J	C	330			710	J	C	3000	J	C	1900	J	C	810	J	C
Benzo(a)pyrene	720	J	C	12000	J	C	150	J	C,N	400	J	C	940	J	C	530	J	C	240	J	C
Benzo(b)fluoranthene	1300	J	C	22000	J	C	310	J	N	600	J	C	1400	J	C	1100	J	C	270		
Benzo(k)fluoranthene	340			7700			120	J	N	220			720			280			120		
Chrysene	980			12000			200	J	N	340			1300			530			270		
Benzo(g,h,i)perylene	400			6200			84	J	N	170	J	N	620			270	J	N	130		
Dibenz(a,h)anthracene	200	J	C,N	1900	J	C	13	J	C,N	68	J	C,N	170	J	C,N	80	J	C,N	32	J	C
Indeno(1,2,3-cd)pyrene	440			6100			68	J	N	210	J	N	670			280	J	N	120		

SEMVOLATILE ANALYSIS RESULTS
SDG TT_C0508
CTO 003, NAS WILLOW GROVE

Sample ID:	05SS42			05SS43			05SS44			05SS45		
Laboratory ID:	C0508-08A			C0508-18A			C0508-19A			C0508-14A		
Sample Date:	06/01/04			06/02/04			06/02/04			06/01/04		
Duplicate:												
Percent Moisture	13.0			9.0			13.0			13.0		
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES	ug/kg			ug/kg			ug/kg			ug/kg		
Naphthalene	3.8	U		11000			12			43	J	N
2-Methylnaphthalene	3.8	U		4400	J	L	6.6			52	J	N
Acenaphthylene	4			1900			56			510	J	N
Acenaphthene	3.8	U		28000			46			270	J	N
Fluorene	3.8	U		44000			82			380		
Anthracene	6			61000			260			1200		
Benz(a)anthracene	22			82000			450			4800		
Fluoranthene	93			220000			1200			7400		
Phenanthrene	54			230000			490			2500		
Pyrene	90			200000	J	C	1200	J	C	21000	J	C
Benzo(a)pyrene	37	J	C	68000	J	C	360	J	C	4900	J	C,N
Benzo(b)fluoranthene	64			77000	J	C	680	J	C	7400	J	C,N
Benzo(k)fluoranthene	20			36000			180			2200	J	N
Chrysene	75			75000			340			3900	J	N
Benzo(g,h,i)perylene	21			43000			370	J	N	6200	J	N
Dibenz(a,h)anthracene	5.4	J	C	15000	J	C	130	J	C,N	1400	J	C,N
Indeno(1,2,3-cd)pyrene	22			48000			350	J	N	4200	J	N

SEMIVOLATILE ANALYSIS RESULTS
SDG TT_C0508
CTO 003, NAS WILLOW GROVE

Data Qualifiers:

J -- Value is considered estimated because of exceedance of quality control criteria.
U -- Value is a non-detected result as reported by the laboratory.
UJ -- Non-detected result is considered estimated because of exceedance of quality control criteria.

Database source file: C:\CTO 003 VALIDATION\WG0508_RES.DBF data retrieved on: 07/21/04

WET CHEMISTRY RESULTS
SDG TT_C0508
CTO 003, NAS WILLOW GROVE

Sample ID:		05DUP-01			05DUP-02			05SS31			05SS32			05SS33			05SS34			05SS35		
Laboratory ID:		C0508-04A			C0508-17A			C0508-16A			C0508-15A			C0508-10A			C0508-05A			C0508-03A		
Sample Date:		06/01/04			06/02/04			06/02/04			06/02/04			06/01/04			06/01/04			06/01/04		
Duplicate:																						
		RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
MISCELLANEOUS PARAMETERS																						
Organic Carbon, Total	mg/kg	2300			59000			14000			45000			21000			5900			6800		
pH	s.u.	6.6			7.2			7.6			7.2			6			6.7			7.1		

Database source file: C:\CTO 003 VALIDATION\WG0508WET_RES.DBF data retrieved on: 07/21/04

WET CHEMISTRY RESULTS
SDG TT_C0508
CTO 003, NAS WILLOW GROVE

Sample ID:	05SS36			05SS37			05SS38			05SS39			05SS40			05SS41			05SS42			05SS43			05SS44			05SS45		
Laboratory ID:	C0508-02A			C0508-13A			C0508-01A			C0508-06A			C0508-09A			C0508-07A			C0508-08A			C0508-18A			C0508-19A			C0508-14A		
Sample Date:	06/01/04			06/01/04			06/01/04			06/01/04			06/01/04			06/01/04			06/01/04			06/02/04			06/02/04			06/01/04		
Duplicate:																														
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
MISCELLANEOUS PARAMET																														
Organic Carbon, Total	7700			25000			6600			5500			6000			3700			4900			58000			10000			5400		
pH	7.4			5.5			7			6.2			6.2			5.6			6.4			7.6			7			7.4		
Database source file: C:\CTO 003 VA																														

Qualifier Codes:

a	=	Lab Blank Contamination
b	=	Field Blank Contamination
c	=	Calibration (i.e., %RSDs, %Ds, ICVs, CCVs, RPDs, RRFs, etc.) Noncompliance
d	=	MS/MSD Noncompliance
e	=	LSC/LSCD Noncompliance
f	=	Laboratory Duplicate Imprecision
g	=	Field Duplicate Imprecision
h	=	Holding Time Exceedance
i	=	ICP Serial Dilution Noncompliance
j	=	GFAA PDS – GFAA MSA's r<0.995 (correlation coefficient)
k	=	ICP Interference – include ICSAB %Rs
l	=	Instrument Calibration Range Exceedance
m	=	Sample Preservation
n	=	Internal Standard Noncompliance
o	=	Poor Instrument Performance (i.e. baseline drifting)
p	=	Uncertainty Near Detection Limit (<2 x IDL for inorganics and < CRQL for organics)
q	=	Other Problems (can encompass of number of issues)
r	=	Surrogates Recovery Noncompliance
s	=	Pesticide/PCB Resolution
t	=	% Breakdown Noncompliance for DDT and Endrin
u	=	Pesticide/PCB % Difference Between Columns for Positive Results
v	=	Non-linear Calibrations, Tuning r <0.995 (correlation coefficient)

APPENDIX B

Results as Reported by the Laboratory

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05DUP-01

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-04A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1E0334

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 20 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/07/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	7.2	
91-57-6	2-Methylnaphthalene	8.0	
208-96-8	Acenaphthylene	4.4	
83-32-9	Acenaphthene	4.1	U
86-73-7	Fluorene	4.1	U
85-01-8	Phenanthrene	99	
120-12-7	Anthracene	8.6	
206-44-0	Fluoranthene	180	
129-00-0	Pyrene	150	
56-55-3	Benzo(a)anthracene	51	
218-01-9	Chrysene	79	
205-99-2	Benzo(b)fluoranthene	60	
207-08-9	Benzo(k)fluoranthene	38	
50-32-8	Benzo(a)pyrene	53	
193-39-5	Indeno(1,2,3-cd)pyrene	43	
53-70-3	Dibenzo(a,h)anthracene	13	
191-24-2	Benzo(g,h,i)perylene	50	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05DUP-02

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-17A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: S1E0349

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 13 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/08/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	52	
91-57-6	2-Methylnaphthalene	58	
208-96-8	Acenaphthylene	180	
83-32-9	Acenaphthene	230	
86-73-7	Fluorene	330	
85-01-8	Phenanthrene	7300	E
120-12-7	Anthracene	1200	E
206-44-0	Fluoranthene	13000	E
129-00-0	Pyrene	12000	E
56-55-3	Benzo(a)anthracene	2700	E
218-01-9	Chrysene	3400	E
205-99-2	Benzo(b)fluoranthene	3700	E
207-08-9	Benzo(k)fluoranthene	1400	E
50-32-8	Benzo(a)pyrene	2900	E
193-39-5	Indeno(1,2,3-cd)pyrene	810	E
53-70-3	Dibenzo(a,h)anthracene	300	
191-24-2	Benzo(g,h,i)perylene	680	E

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05DUP-02DL

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-17ADL

Sample wt/vol: 30.1 (g/mL) G Lab File ID: S1E0372

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 13 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/08/04

Injection Volume: 1.0(uL) Dilution Factor: 50.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	190	U
91-57-6	2-Methylnaphthalene	190	U
208-96-8	Acenaphthylene	190	U
83-32-9	Acenaphthene	230	D
86-73-7	Fluorene	200	D
85-01-8	Phenanthrene	3100	D
120-12-7	Anthracene	840	D
206-44-0	Fluoranthene	5100	D
129-00-0	Pyrene	7400	D
56-55-3	Benzo(a)anthracene	2100	D
218-01-9	Chrysene	2700	D
205-99-2	Benzo(b)fluoranthene	2300	D
207-08-9	Benzo(k)fluoranthene	1300	D
50-32-8	Benzo(a)pyrene	1900	D
193-39-5	Indeno(1,2,3-cd)pyrene	1100	D
53-70-3	Dibenzo(a,h)anthracene	260	D
191-24-2	Benzo(g,h,i)perylene	1200	D

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05FB060104

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) WATER Lab Sample ID: C0508-12A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S1E0305

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/04/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.10	U
91-57-6	2-Methylnaphthalene	0.10	U
208-96-8	Acenaphthylene	0.10	U
83-32-9	Acenaphthene	0.10	U
86-73-7	Fluorene	0.10	U
85-01-8	Phenanthrene	0.10	U
120-12-7	Anthracene	0.10	U
206-44-0	Fluoranthene	0.10	U
129-00-0	Pyrene	0.10	U
56-55-3	Benzo(a)anthracene	0.10	U
218-01-9	Chrysene	0.10	U
205-99-2	Benzo(b)fluoranthene	0.10	U
207-08-9	Benzo(k)fluoranthene	0.10	U
50-32-8	Benzo(a)pyrene	0.10	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	U
53-70-3	Dibenzo(a,h)anthracene	0.10	U
191-24-2	Benzo(g,h,i)perylene	0.10	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05RB060104

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) WATER Lab Sample ID: C0508-11A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S1E0304

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/04/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.10	U
91-57-6	2-Methylnaphthalene	0.10	U
208-96-8	Acenaphthylene	0.10	U
83-32-9	Acenaphthene	0.10	U
86-73-7	Fluorene	0.10	U
85-01-8	Phenanthrene	0.10	U
120-12-7	Anthracene	0.10	U
206-44-0	Fluoranthene	0.10	U
129-00-0	Pyrene	0.10	U
56-55-3	Benzo(a)anthracene	0.10	U
218-01-9	Chrysene	0.10	U
205-99-2	Benzo(b)fluoranthene	0.10	U
207-08-9	Benzo(k)fluoranthene	0.10	U
50-32-8	Benzo(a)pyrene	0.10	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	U
53-70-3	Dibenzo(a,h)anthracene	0.10	U
191-24-2	Benzo(g,h,i)perylene	0.10	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05RB060204

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) WATER Lab Sample ID: C0508-20A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S1E0306

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/04/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.10	U
91-57-6	2-Methylnaphthalene	0.10	U
208-96-8	Acenaphthylene	0.10	U
83-32-9	Acenaphthene	0.10	U
86-73-7	Fluorene	0.10	U
85-01-8	Phenanthrene	0.10	U
120-12-7	Anthracene	0.10	U
206-44-0	Fluoranthene	0.10	U
129-00-0	Pyrene	0.10	U
56-55-3	Benzo(a)anthracene	0.10	U
218-01-9	Chrysene	0.10	U
205-99-2	Benzo(b)fluoranthene	0.10	U
207-08-9	Benzo(k)fluoranthene	0.10	U
50-32-8	Benzo(a)pyrene	0.10	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	U
53-70-3	Dibenzo(a,h)anthracene	0.10	U
191-24-2	Benzo(g,h,i)perylene	0.10	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05SS31

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-16A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1E0341

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 9 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/07/04

Injection Volume: 1.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	2100	
91-57-6	2-Methylnaphthalene	920	
208-96-8	Acenaphthylene	1600	
83-32-9	Acenaphthene	6400	E
86-73-7	Fluorene	7400	E
85-01-8	Phenanthrene	160000	E
120-12-7	Anthracene	58000	E
206-44-0	Fluoranthene	180000	E
129-00-0	Pyrene	89000	E
56-55-3	Benzo(a)anthracene	73000	E
218-01-9	Chrysene	60000	E
205-99-2	Benzo(b)fluoranthene	150000	E
207-08-9	Benzo(k)fluoranthene	120000	E
50-32-8	Benzo(a)pyrene	75000	E
193-39-5	Indeno(1,2,3-cd)pyrene	18000	E
53-70-3	Dibenzo(a,h)anthracene	7200	E
191-24-2	Benzo(g,h,i)perylene	13000	E

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05SS31DL

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-16ADL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1E0366

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 9 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/08/04

Injection Volume: 1.0(uL) Dilution Factor: 1000.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	3600	U
91-57-6	2-Methylnaphthalene	3600	U
208-96-8	Acenaphthylene	3600	U
83-32-9	Acenaphthene	5600	D
86-73-7	Fluorene	6500	D
85-01-8	Phenanthrene	76000	D
120-12-7	Anthracene	24000	D
206-44-0	Fluoranthene	150000	D
129-00-0	Pyrene	100000	D
56-55-3	Benzo(a)anthracene	59000	D
218-01-9	Chrysene	46000	D
205-99-2	Benzo(b)fluoranthene	61000	D
207-08-9	Benzo(k)fluoranthene	20000	D
50-32-8	Benzo(a)pyrene	47000	D
193-39-5	Indeno(1,2,3-cd)pyrene	26000	D
53-70-3	Dibenzo(a,h)anthracene	8400	D
191-24-2	Benzo(g,h,i)perylene	27000	D

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05SS32

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-15A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: S1E0348

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 13 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/08/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	20	
91-57-6	2-Methylnaphthalene	23	
208-96-8	Acenaphthylene	130	
83-32-9	Acenaphthene	120	
86-73-7	Fluorene	170	
85-01-8	Phenanthrene	4400	E
120-12-7	Anthracene	650	E
206-44-0	Fluoranthene	7800	E
129-00-0	Pyrene	8100	E
56-55-3	Benzo(a)anthracene	2000	E
218-01-9	Chrysene	2200	E
205-99-2	Benzo(b)fluoranthene	2800	E
207-08-9	Benzo(k)fluoranthene	760	E
50-32-8	Benzo(a)pyrene	1700	E
193-39-5	Indeno(1,2,3-cd)pyrene	460	E
53-70-3	Dibenzo(a,h)anthracene	190	
191-24-2	Benzo(g,h,i)perylene	430	E

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05SS32DL

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-15ADL

Sample wt/vol: 30.1 (g/mL) G Lab File ID: S1E0371

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 13 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/08/04

Injection Volume: 1.0(uL) Dilution Factor: 50.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	190	U
91-57-6	2-Methylnaphthalene	190	U
208-96-8	Acenaphthylene	190	U
83-32-9	Acenaphthene	190	U
86-73-7	Fluorene	190	U
85-01-8	Phenanthrene	1600	D
120-12-7	Anthracene	340	D
206-44-0	Fluoranthene	2800	D
129-00-0	Pyrene	2600	D
56-55-3	Benzo(a)anthracene	880	D
218-01-9	Chrysene	920	D
205-99-2	Benzo(b)fluoranthene	1400	D
207-08-9	Benzo(k)fluoranthene	370	D
50-32-8	Benzo(a)pyrene	370	D
193-39-5	Indeno(1,2,3-cd)pyrene	580	D
53-70-3	Dibenzo(a,h)anthracene	190	U
191-24-2	Benzo(g,h,i)perylene	600	D

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05SS33

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-10A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1E0346

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 13 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/07/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	54	
91-57-6	2-Methylnaphthalene	100	
208-96-8	Acenaphthylene	50	
83-32-9	Acenaphthene	24	
86-73-7	Fluorene	44	
85-01-8	Phenanthrene	1000	E
120-12-7	Anthracene	73	
206-44-0	Fluoranthene	1300	E
129-00-0	Pyrene	1100	E
56-55-3	Benzo(a)anthracene	220	
218-01-9	Chrysene	520	E
205-99-2	Benzo(b)fluoranthene	660	E
207-08-9	Benzo(k)fluoranthene	310	
50-32-8	Benzo(a)pyrene	420	E
193-39-5	Indeno(1,2,3-cd)pyrene	180	
53-70-3	Dibenzo(a,h)anthracene	41	
191-24-2	Benzo(g,h,i)perylene	170	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05SS33DL

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-10ADL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1E0369

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 13 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/08/04

Injection Volume: 1.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	40	D
91-57-6	2-Methylnaphthalene	110	D
208-96-8	Acenaphthylene	31	D
83-32-9	Acenaphthene	19	U
86-73-7	Fluorene	26	D
85-01-8	Phenanthrene	450	D
120-12-7	Anthracene	33	D
206-44-0	Fluoranthene	580	D
129-00-0	Pyrene	550	D
56-55-3	Benzo(a)anthracene	140	D
218-01-9	Chrysene	250	D
205-99-2	Benzo(b)fluoranthene	370	D
207-08-9	Benzo(k)fluoranthene	110	D
50-32-8	Benzo(a)pyrene	180	D
193-39-5	Indeno(1,2,3-cd)pyrene	110	D
53-70-3	Dibenzo(a,h)anthracene	28	D
191-24-2	Benzo(g,h,i)perylene	110	D

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05SS34

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-05A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1E0335

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 20 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/07/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	8.3	
91-57-6	2-Methylnaphthalene	11	
208-96-8	Acenaphthylene	5.2	
83-32-9	Acenaphthene	4.1	U
86-73-7	Fluorene	4.1	U
85-01-8	Phenanthrene	92	
120-12-7	Anthracene	17	
206-44-0	Fluoranthene	350	
129-00-0	Pyrene	250	
56-55-3	Benzo(a)anthracene	150	
218-01-9	Chrysene	160	
205-99-2	Benzo(b)fluoranthene	190	
207-08-9	Benzo(k)fluoranthene	52	
50-32-8	Benzo(a)pyrene	140	
193-39-5	Indeno(1,2,3-cd)pyrene	94	
53-70-3	Dibenzo(a,h)anthracene	29	
191-24-2	Benzo(g,h,i)perylene	110	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05SS35

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-03A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: S1E0350

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 16 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/08/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	10	
91-57-6	2-Methylnaphthalene	15	
208-96-8	Acenaphthylene	75	
83-32-9	Acenaphthene	35	
86-73-7	Fluorene	73	
85-01-8	Phenanthrene	1200	E
120-12-7	Anthracene	190	
206-44-0	Fluoranthene	4100	E
129-00-0	Pyrene	5400	E
56-55-3	Benzo(a)anthracene	1200	E
218-01-9	Chrysene	1100	E
205-99-2	Benzo(b)fluoranthene	2000	E
207-08-9	Benzo(k)fluoranthene	720	E
50-32-8	Benzo(a)pyrene	1200	E
193-39-5	Indeno(1,2,3-cd)pyrene	560	E
53-70-3	Dibenzo(a,h)anthracene	200	
191-24-2	Benzo(g,h,i)perylene	540	E

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05SS35DL

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-03ADL

Sample wt/vol: 30.1 (g/mL) G Lab File ID: S1E0373

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 16 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/08/04

Injection Volume: 1.0(uL) Dilution Factor: 20.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	78	U
91-57-6	2-Methylnaphthalene	78	U
208-96-8	Acenaphthylene	78	U
83-32-9	Acenaphthene	78	U
86-73-7	Fluorene	78	U
85-01-8	Phenanthrene	760	D
120-12-7	Anthracene	120	D
206-44-0	Fluoranthene	2000	D
129-00-0	Pyrene	2400	D
56-55-3	Benzo(a)anthracene	760	D
218-01-9	Chrysene	980	D
205-99-2	Benzo(b)fluoranthene	1300	D
207-08-9	Benzo(k)fluoranthene	340	D
50-32-8	Benzo(a)pyrene	720	D
193-39-5	Indeno(1,2,3-cd)pyrene	440	D
53-70-3	Dibenzo(a,h)anthracene	130	D
191-24-2	Benzo(g,h,i)perylene	400	D

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05SS36

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-02A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: S1E0374

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 12 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/08/04

Injection Volume: 1.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	19	U
91-57-6	2-Methylnaphthalene	48	
208-96-8	Acenaphthylene	180	
83-32-9	Acenaphthene	310	
86-73-7	Fluorene	260	
85-01-8	Phenanthrene	8800	E
120-12-7	Anthracene	1500	
206-44-0	Fluoranthene	66000	E
129-00-0	Pyrene	32000	E
56-55-3	Benzo(a)anthracene	11000	E
218-01-9	Chrysene	11000	E
205-99-2	Benzo(b)fluoranthene	37000	E
207-08-9	Benzo(k)fluoranthene	12000	E
50-32-8	Benzo(a)pyrene	16000	E
193-39-5	Indeno(1,2,3-cd)pyrene	5400	E
53-70-3	Dibenzo(a,h)anthracene	2200	E
191-24-2	Benzo(g,h,i)perylene	4400	E

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05SS36DL

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-02ADL

Sample wt/vol: 30.1 (g/mL) G Lab File ID: S1E0375

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 12 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/08/04

Injection Volume: 1.0(uL) Dilution Factor: 500.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	1900	U
91-57-6	2-Methylnaphthalene	1900	U
208-96-8	Acenaphthylene	1900	U
83-32-9	Acenaphthene	1900	U
86-73-7	Fluorene	1900	U
85-01-8	Phenanthrene	7200	D
120-12-7	Anthracene	2000	D
206-44-0	Fluoranthene	26000	D
129-00-0	Pyrene	25000	D
56-55-3	Benzo(a)anthracene	13000	D
218-01-9	Chrysene	12000	D
205-99-2	Benzo(b)fluoranthene	22000	D
207-08-9	Benzo(k)fluoranthene	7700	D
50-32-8	Benzo(a)pyrene	12000	D
193-39-5	Indeno(1,2,3-cd)pyrene	6100	D
53-70-3	Dibenzo(a,h)anthracene	1900	U
191-24-2	Benzo(g,h,i)perylene	6200	D

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05SS37

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-13A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1E0338

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 13 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/07/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	5.5	
91-57-6	2-Methylnaphthalene	3.8	U
208-96-8	Acenaphthylene	11	
83-32-9	Acenaphthene	4.3	
86-73-7	Fluorene	4.4	
85-01-8	Phenanthrene	120	
120-12-7	Anthracene	15	
206-44-0	Fluoranthene	210	
129-00-0	Pyrene	330	
56-55-3	Benzo(a)anthracene	67	
218-01-9	Chrysene	200	
205-99-2	Benzo(b)fluoranthene	310	
207-08-9	Benzo(k)fluoranthene	120	
50-32-8	Benzo(a)pyrene	150	
193-39-5	Indeno(1,2,3-cd)pyrene	68	
53-70-3	Dibenzo(a,h)anthracene	13	
191-24-2	Benzo(g,h,i)perylene	84	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05SS38

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-01A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1E0376

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 11 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/08/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	8.8	
91-57-6	2-Methylnaphthalene	14	
208-96-8	Acenaphthylene	20	
83-32-9	Acenaphthene	12	
86-73-7	Fluorene	15	
85-01-8	Phenanthrene	290	
120-12-7	Anthracene	69	
206-44-0	Fluoranthene	780	E
129-00-0	Pyrene	1000	E
56-55-3	Benzo(a)anthracene	280	
218-01-9	Chrysene	340	
205-99-2	Benzo(b)fluoranthene	780	E
207-08-9	Benzo(k)fluoranthene	220	
50-32-8	Benzo(a)pyrene	440	E
193-39-5	Indeno(1,2,3-cd)pyrene	210	
53-70-3	Dibenzo(a,h)anthracene	68	
191-24-2	Benzo(g,h,i)perylene	170	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05SS38DL

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-01ADL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1E0414

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 11 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/10/04

Injection Volume: 1.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	18	U
91-57-6	2-Methylnaphthalene	18	U
208-96-8	Acenaphthylene	22	D
83-32-9	Acenaphthene	18	U
86-73-7	Fluorene	21	D
85-01-8	Phenanthrene	320	D
120-12-7	Anthracene	64	D
206-44-0	Fluoranthene	740	D
129-00-0	Pyrene	710	D
56-55-3	Benzo(a)anthracene	340	D
218-01-9	Chrysene	400	D
205-99-2	Benzo(b)fluoranthene	600	D
207-08-9	Benzo(k)fluoranthene	240	D
50-32-8	Benzo(a)pyrene	400	D
193-39-5	Indeno(1,2,3-cd)pyrene	210	D
53-70-3	Dibenzo(a,h)anthracene	63	D
191-24-2	Benzo(g,h,i)perylene	230	D

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05SS39

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-06A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1E0343

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 14 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/07/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	7.8	
91-57-6	2-Methylnaphthalene	6.2	
208-96-8	Acenaphthylene	56	
83-32-9	Acenaphthene	66	
86-73-7	Fluorene	85	
85-01-8	Phenanthrene	1800	E
120-12-7	Anthracene	360	
206-44-0	Fluoranthene	6200	E
129-00-0	Pyrene	5100	E
56-55-3	Benzo(a)anthracene	1600	E
218-01-9	Chrysene	1500	E
205-99-2	Benzo(b)fluoranthene	2500	E
207-08-9	Benzo(k)fluoranthene	900	E
50-32-8	Benzo(a)pyrene	1700	E
193-39-5	Indeno(1,2,3-cd)pyrene	500	E
53-70-3	Dibenzo(a,h)anthracene	170	
191-24-2	Benzo(g,h,i)perylene	450	E

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05SS39DL

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-06ADL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1E0368

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 14 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/08/04

Injection Volume: 1.0(uL) Dilution Factor: 20.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	77	U
91-57-6	2-Methylnaphthalene	77	U
208-96-8	Acenaphthylene	77	U
83-32-9	Acenaphthene	77	U
86-73-7	Fluorene	77	U
85-01-8	Phenanthrene	1200	D
120-12-7	Anthracene	280	D
206-44-0	Fluoranthene	4000	D
129-00-0	Pyrene	3000	D
56-55-3	Benzo(a)anthracene	1200	D
218-01-9	Chrysene	1300	D
205-99-2	Benzo(b)fluoranthene	1400	D
207-08-9	Benzo(k)fluoranthene	720	D
50-32-8	Benzo(a)pyrene	940	D
193-39-5	Indeno(1,2,3-cd)pyrene	670	D
53-70-3	Dibenzo(a,h)anthracene	210	D
191-24-2	Benzo(g,h,i)perylene	620	D

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05SS39MS

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-06AMS

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1E0344

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 14 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/07/04

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	66	
91-57-6	2-Methylnaphthalene	52	
208-96-8	Acenaphthylene	120	
83-32-9	Acenaphthene	110	
86-73-7	Fluorene	140	
85-01-8	Phenanthrene	940	E
120-12-7	Anthracene	300	
206-44-0	Fluoranthene	2900	E
129-00-0	Pyrene	3400	E
56-55-3	Benzo(a)anthracene	1100	E
218-01-9	Chrysene	1000	E
205-99-2	Benzo(b)fluoranthene	1900	E
207-08-9	Benzo(k)fluoranthene	640	E
50-32-8	Benzo(a)pyrene	1200	E
193-39-5	Indeno(1,2,3-cd)pyrene	420	E
53-70-3	Dibenzo(a,h)anthracene	190	
191-24-2	Benzo(g,h,i)perylene	370	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05SS39MSD

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-06AMSD

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1E0345

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 14 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/07/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	88	
91-57-6	2-Methylnaphthalene	77	
208-96-8	Acenaphthylene	130	
83-32-9	Acenaphthene	300	
86-73-7	Fluorene	330	
85-01-8	Phenanthrene	8400	E
120-12-7	Anthracene	1500	E
206-44-0	Fluoranthene	12000	E
129-00-0	Pyrene	9900	E
56-55-3	Benzo(a)anthracene	3300	E
218-01-9	Chrysene	2900	E
205-99-2	Benzo(b)fluoranthene	5600	E
207-08-9	Benzo(k)fluoranthene	2600	E
50-32-8	Benzo(a)pyrene	3600	E
193-39-5	Indeno(1,2,3-cd)pyrene	950	E
53-70-3	Dibenzo(a,h)anthracene	350	
191-24-2	Benzo(g,h,i)perylene	730	E

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05SS40

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-09A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: S1E0340

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 12 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/07/04

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	7.6	
91-57-6	2-Methylnaphthalene	6.1	
208-96-8	Acenaphthylene	23	
83-32-9	Acenaphthene	45	
86-73-7	Fluorene	73	
85-01-8	Phenanthrene	1100	E
120-12-7	Anthracene	190	
206-44-0	Fluoranthene	2400	E
129-00-0	Pyrene	2600	E
56-55-3	Benzo(a)anthracene	830	E
218-01-9	Chrysene	800	E
205-99-2	Benzo(b)fluoranthene	1000	E
207-08-9	Benzo(k)fluoranthene	460	E
50-32-8	Benzo(a)pyrene	670	E
193-39-5	Indeno(1,2,3-cd)pyrene	280	
53-70-3	Dibenzo(a,h)anthracene	80	
191-24-2	Benzo(g,h,i)perylene	270	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05SS40DL

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-09ADL

Sample wt/vol: 30.1 (g/mL) G Lab File ID: S1E0365

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 12 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/08/04

Injection Volume: 1.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	37	U
91-57-6	2-Methylnaphthalene	37	U
208-96-8	Acenaphthylene	37	U
83-32-9	Acenaphthene	37	U
86-73-7	Fluorene	37	U
85-01-8	Phenanthrene	910	D
120-12-7	Anthracene	190	D
206-44-0	Fluoranthene	2100	D
129-00-0	Pyrene	1900	D
56-55-3	Benzo(a)anthracene	730	D
218-01-9	Chrysene	530	D
205-99-2	Benzo(b)fluoranthene	1100	D
207-08-9	Benzo(k)fluoranthene	280	D
50-32-8	Benzo(a)pyrene	530	D
193-39-5	Indeno(1,2,3-cd)pyrene	320	D
53-70-3	Dibenzo(a,h)anthracene	100	D
191-24-2	Benzo(g,h,i)perylene	260	D

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05SS41

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-07A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1E0337

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 13 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/07/04

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	3.8	U
91-57-6	2-Methylnaphthalene	3.8	U
208-96-8	Acenaphthylene	7.5	
83-32-9	Acenaphthene	17	
86-73-7	Fluorene	23	
85-01-8	Phenanthrene	390	E
120-12-7	Anthracene	110	
206-44-0	Fluoranthene	930	E
129-00-0	Pyrene	520	E
56-55-3	Benzo(a)anthracene	320	
218-01-9	Chrysene	270	
205-99-2	Benzo(b)fluoranthene	270	
207-08-9	Benzo(k)fluoranthene	120	
50-32-8	Benzo(a)pyrene	240	
193-39-5	Indeno(1,2,3-cd)pyrene	120	
53-70-3	Dibenzo(a,h)anthracene	32	
191-24-2	Benzo(g,h,i)perylene	130	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05SS41DL

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-07ADL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1E0378

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 13 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/08/04

Injection Volume: 1.0(uL) Dilution Factor: 3.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	11	U
91-57-6	2-Methylnaphthalene	11	U
208-96-8	Acenaphthylene	11	U
83-32-9	Acenaphthene	13	D
86-73-7	Fluorene	11	U
85-01-8	Phenanthrene	340	D
120-12-7	Anthracene	79	D
206-44-0	Fluoranthene	700	D
129-00-0	Pyrene	810	D
56-55-3	Benzo(a)anthracene	200	D
218-01-9	Chrysene	250	D
205-99-2	Benzo(b)fluoranthene	110	D
207-08-9	Benzo(k)fluoranthene	270	D
50-32-8	Benzo(a)pyrene	180	D
193-39-5	Indeno(1,2,3-cd)pyrene	98	D
53-70-3	Dibenzo(a,h)anthracene	27	D
191-24-2	Benzo(g,h,i)perylene	86	D

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05SS42

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-08A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1E0336

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 13 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/07/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	3.8	U
91-57-6	2-Methylnaphthalene	3.8	U
208-96-8	Acenaphthylene	4.0	
83-32-9	Acenaphthene	3.8	U
86-73-7	Fluorene	3.8	U
85-01-8	Phenanthrene	54	
120-12-7	Anthracene	6.0	
206-44-0	Fluoranthene	93	
129-00-0	Pyrene	90	
56-55-3	Benzo(a)anthracene	22	
218-01-9	Chrysene	75	
205-99-2	Benzo(b)fluoranthene	64	
207-08-9	Benzo(k)fluoranthene	20	
50-32-8	Benzo(a)pyrene	37	
193-39-5	Indeno(1,2,3-cd)pyrene	22	
53-70-3	Dibenzo(a,h)anthracene	5.4	
191-24-2	Benzo(g,h,i)perylene	21	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05SS43

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-18A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1E0342

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 9 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/07/04

Injection Volume: 1.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	14000	E
91-57-6	2-Methylnaphthalene	4400	E
208-96-8	Acenaphthylene	1900	
83-32-9	Acenaphthene	43000	E
86-73-7	Fluorene	81000	E
85-01-8	Phenanthrene	220000	E
120-12-7	Anthracene	81000	E
206-44-0	Fluoranthene	160000	E
129-00-0	Pyrene	130000	E
56-55-3	Benzo(a)anthracene	98000	E
218-01-9	Chrysene	82000	E
205-99-2	Benzo(b)fluoranthene	230000	E
207-08-9	Benzo(k)fluoranthene	150000	E
50-32-8	Benzo(a)pyrene	170000	E
193-39-5	Indeno(1,2,3-cd)pyrene	31000	E
53-70-3	Dibenzo(a,h)anthracene	12000	E
191-24-2	Benzo(g,h,i)perylene	26000	E

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05SS43DL

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-18ADL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1E0367

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 9 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/08/04

Injection Volume: 1.0(uL) Dilution Factor: 1000.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	11000	D
91-57-6	2-Methylnaphthalene	3600	U
208-96-8	Acenaphthylene	3600	U
83-32-9	Acenaphthene	28000	D
86-73-7	Fluorene	44000	D
85-01-8	Phenanthrene	230000	D
120-12-7	Anthracene	61000	D
206-44-0	Fluoranthene	220000	D
129-00-0	Pyrene	200000	D
56-55-3	Benzo(a)anthracene	82000	D
218-01-9	Chrysene	75000	D
205-99-2	Benzo(b)fluoranthene	77000	D
207-08-9	Benzo(k)fluoranthene	36000	D
50-32-8	Benzo(a)pyrene	68000	D
193-39-5	Indeno(1,2,3-cd)pyrene	48000	D
53-70-3	Dibenzo(a,h)anthracene	15000	D
191-24-2	Benzo(g,h,i)perylene	43000	D

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05SS44

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-19A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1E0339

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 13 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/07/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	12	
91-57-6	2-Methylnaphthalene	6.6	
208-96-8	Acenaphthylene	56	
83-32-9	Acenaphthene	46	
86-73-7	Fluorene	82	
85-01-8	Phenanthrene	1000	E
120-12-7	Anthracene	260	
206-44-0	Fluoranthene	2900	E
129-00-0	Pyrene	2100	E
56-55-3	Benzo(a)anthracene	900	E
218-01-9	Chrysene	730	E
205-99-2	Benzo(b)fluoranthene	1500	E
207-08-9	Benzo(k)fluoranthene	610	E
50-32-8	Benzo(a)pyrene	1000	E
193-39-5	Indeno(1,2,3-cd)pyrene	350	
53-70-3	Dibenzo(a,h)anthracene	130	
191-24-2	Benzo(g,h,i)perylene	370	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05SS44DL

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-19ADL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1E0379

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 13 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/08/04

Injection Volume: 1.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	38	U
91-57-6	2-Methylnaphthalene	38	U
208-96-8	Acenaphthylene	38	U
83-32-9	Acenaphthene	38	U
86-73-7	Fluorene	41	D
85-01-8	Phenanthrene	490	D
120-12-7	Anthracene	120	D
206-44-0	Fluoranthene	1200	D
129-00-0	Pyrene	1200	D
56-55-3	Benzo(a)anthracene	450	D
218-01-9	Chrysene	340	D
205-99-2	Benzo(b)fluoranthene	680	D
207-08-9	Benzo(k)fluoranthene	180	D
50-32-8	Benzo(a)pyrene	360	D
193-39-5	Indeno(1,2,3-cd)pyrene	180	D
53-70-3	Dibenzo(a,h)anthracene	50	D
191-24-2	Benzo(g,h,i)perylene	180	D

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05SS45

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-14A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: S1E0347

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 13 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/08/04

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	43	
91-57-6	2-Methylnaphthalene	52	
208-96-8	Acenaphthylene	580	E
83-32-9	Acenaphthene	270	
86-73-7	Fluorene	560	E
85-01-8	Phenanthrene	5700	E
120-12-7	Anthracene	1800	E
206-44-0	Fluoranthene	18000	E
129-00-0	Pyrene	11000	E
56-55-3	Benzo(a)anthracene	5500	E
218-01-9	Chrysene	5200	E
205-99-2	Benzo(b)fluoranthene	18000	E
207-08-9	Benzo(k)fluoranthene	8600	E
50-32-8	Benzo(a)pyrene	9300	E
193-39-5	Indeno(1,2,3-cd)pyrene	2600	E
53-70-3	Dibenzo(a,h)anthracene	940	E
191-24-2	Benzo(g,h,i)perylene	2900	E

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

05SS45DL

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix: (soil/water) SOIL Lab Sample ID: C0508-14ADL

Sample wt/vol: 30.1 (g/mL) G Lab File ID: S1E0370

Level: (low/med) LOW Date Received: 06/03/04

% Moisture: 13 decanted: (Y/N) N Date Extracted: 06/04/04

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/08/04

Injection Volume: 1.0(uL) Dilution Factor: 100.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	380	U
91-57-6	2-Methylnaphthalene	380	U
208-96-8	Acenaphthylene	510	D
83-32-9	Acenaphthene	380	U
86-73-7	Fluorene	380	U
85-01-8	Phenanthrene	2500	D
120-12-7	Anthracene	1200	D
206-44-0	Fluoranthene	7400	D
129-00-0	Pyrene	21000	D
56-55-3	Benzo(a)anthracene	4800	D
218-01-9	Chrysene	3900	D
205-99-2	Benzo(b)fluoranthene	7400	D
207-08-9	Benzo(k)fluoranthene	2200	D
50-32-8	Benzo(a)pyrene	4900	D
193-39-5	Indeno(1,2,3-cd)pyrene	4200	D
53-70-3	Dibenzo(a,h)anthracene	1400	D
191-24-2	Benzo(g,h,i)perylene	6200	D

Mitkem Corporation

Date: *21-Jun-04*

Client: Tetra Tech NUS, Inc.
Client Sample ID: 05SS38
Lab ID: C0508-01

Project: CTO-003_0005 Willow Grove, PA
Collection Date: 06/01/04 9:28

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
TOTAL ORGANIC CARBON BY COMBUSTION				**E415_LK_TOC_S**			
Organic Carbon, Total	6600		100	mg/Kg	1	06/09/2004 12:00	13071
SOIL AND WASTE PH				**SW9045C_S**			
pH	7.0		1.0	S.U.	1	06/04/2004 12:00	R6695

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Mitkem Corporation

Date: *21-Jun-04*

Client: Tetra Tech NUS, Inc.
Client Sample ID: 05SS36
Lab ID: C0508-02

Project: CTO-003_0005 Willow Grove, PA
Collection Date: 06/01/04 10:15

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
TOTAL ORGANIC CARBON BY COMBUSTION				**E415_LK_TOC_S**			
Organic Carbon, Total	7700		100	mg/Kg	1	06/09/2004 12:00	13071
SOIL AND WASTE PH				**SW9045C_S**			
pH	7.4		1.0	S.U.	1	06/04/2004 12:00	R6695

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Mitkem Corporation

Date: *21-Jun-04*

Client: Tetra Tech NUS, Inc.
Client Sample ID: 05SS35
Lab ID: C0508-03

Project: CTO-003_0005 Willow Grove, PA
Collection Date: 06/01/04 10:58

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
TOTAL ORGANIC CARBON BY COMBUSTION				**E415_LK_TOC_S**			
Organic Carbon, Total	6800		100	mg/Kg	1	06/09/2004 12:00	13071
SOIL AND WASTE PH				**SW9045C_S**			
pH	7.1		1.0	S.U.	1	06/04/2004 12:00	R6695

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Mitkem Corporation

Date: *21-Jun-04*

Client: Tetra Tech NUS, Inc.
Client Sample ID: 05DUP-01
Lab ID: C0508-04

Project: CTO-003_0005 Willow Grove, PA
Collection Date: 06/01/04 0:00

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
TOTAL ORGANIC CARBON BY COMBUSTION				**E415_LK_TOC_S**			
Organic Carbon, Total	2300		100	mg/Kg	1	06/09/2004 12:00	13071
SOIL AND WASTE PH				**SW9045C_S**			
pH	6.6		1.0	S.U.	1	06/04/2004 12:00	R6695

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Mitkem Corporation

Date: *21-Jun-04*

Client: Tetra Tech NUS, Inc.
Client Sample ID: 05SS34
Lab ID: C0508-05

Project: CTO-003_0005 Willow Grove, PA
Collection Date: 06/01/04 11:33

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
TOTAL ORGANIC CARBON BY COMBUSTION				**E415_LK_TOC_S**			
Organic Carbon, Total	5900		100	mg/Kg	1	06/09/2004 12:00	13071
SOIL AND WASTE PH				**SW9045C_S**			
pH	6.7		1.0	S.U.	1	06/04/2004 12:00	R6695

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Mitkem Corporation

Date: *21-Jun-04*

Client: Tetra Tech NUS, Inc.
Client Sample ID: 05SS39
Lab ID: C0508-06

Project: CTO-003_0005 Willow Grove, PA
Collection Date: 06/01/04 12:09

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
TOTAL ORGANIC CARBON BY COMBUSTION				**E415_LK_TOC_S**			
Organic Carbon, Total	5500		100	mg/Kg	1	06/09/2004 12:00	13071
SOIL AND WASTE PH				**SW9045C_S**			
pH	6.2		1.0	S.U.	1	06/04/2004 12:00	R6695

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Mitkem Corporation

Date: *21-Jun-04*

Client: Tetra Tech NUS, Inc.
Client Sample ID: 05SS41
Lab ID: C0508-07

Project: CTO-003_0005 Willow Grove, PA
Collection Date: 06/01/04 12:42

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
TOTAL ORGANIC CARBON BY COMBUSTION				**E415_LK_TOC_S**			
Organic Carbon, Total	3700		100	mg/Kg	1	06/09/2004 12:00	13071
SOIL AND WASTE PH				**SW9045C_S**			
pH	5.6		1.0	S.U.	1	06/04/2004 12:00	R6695

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Mitkem Corporation

Date: *21-Jun-04*

Client: Tetra Tech NUS, Inc.
Client Sample ID: 05SS42
Lab ID: C0508-08

Project: CTO-003_0005 Willow Grove, PA
Collection Date: 06/01/04 13:18

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
TOTAL ORGANIC CARBON BY COMBUSTION				**E415_LK_TOC_S**			
Organic Carbon, Total	4900		100	mg/Kg	1	06/09/2004 12:00	13071
SOIL AND WASTE PH				**SW9045C_S**			
pH	6.4		1.0	S.U.	1	06/04/2004 12:00	R6695

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Mitkem Corporation

Date: *21-Jun-04*

Client: Tetra Tech NUS, Inc.
Client Sample ID: 05SS40
Lab ID: C0508-09

Project: CTO-003_0005 Willow Grove, PA
Collection Date: 06/01/04 13:51

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
TOTAL ORGANIC CARBON BY COMBUSTION				**E415_LK_TOC_S**			
Organic Carbon, Total	6000		100	mg/Kg	1	06/09/2004 12:00	13071
SOIL AND WASTE PH				**SW9045C_S**			
pH	6.2		1.0	S.U.	1	06/04/2004 12:00	R6695

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Mitkem Corporation

Date: *21-Jun-04*

Client: Tetra Tech NUS, Inc.
Client Sample ID: 05SS33
Lab ID: C0508-10

Project: CTO-003_0005 Willow Grove, PA
Collection Date: 06/01/04 14:23

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
TOTAL ORGANIC CARBON BY COMBUSTION				**E415_LK_TOC_S**			
Organic Carbon, Total	21000		100	mg/Kg	1	06/09/2004 12:00	13071
SOIL AND WASTE PH				**SW9045C_S**			
pH	6.0		1.0	S.U.	1	06/04/2004 12:00	R6695

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Mitkem Corporation

Date: *21-Jun-04*

Client: Tetra Tech NUS, Inc.
Client Sample ID: 05SS37
Lab ID: C0508-13

Project: CTO-003_0005 Willow Grove, PA
Collection Date: 06/01/04 15:27

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
TOTAL ORGANIC CARBON BY COMBUSTION				**E415_LK_TOC_S**			
Organic Carbon, Total	25000		100	mg/Kg	1	06/09/2004 12:00	13071
SOIL AND WASTE PH				**SW9045C_S**			
pH	5.5		1.0	S.U.	1	06/04/2004 12:00	R6695

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Mitkem Corporation

Date: *21-Jun-04*

Client: Tetra Tech NUS, Inc.
Client Sample ID: 05SS45
Lab ID: C0508-14

Project: CTO-003_0005 Willow Grove, PA
Collection Date: 06/01/04 16:03

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
TOTAL ORGANIC CARBON BY COMBUSTION				**E415_LK_TOC_S**			
Organic Carbon, Total	5400		100	mg/Kg	1	06/09/2004 12:00	13071
SOIL AND WASTE PH				**SW9045C_S**			
pH	7.4		1.0	S.U.	1	06/04/2004 12:00	R6695

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Mitkem Corporation

Date: *21-Jun-04*

Client: Tetra Tech NUS, Inc.
Client Sample ID: 05SS32
Lab ID: C0508-15

Project: CTO-003_0005 Willow Grove, PA
Collection Date: 06/02/04 8:54

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
TOTAL ORGANIC CARBON BY COMBUSTION				**E415_LK_TOC_S**			
Organic Carbon, Total	45000.		100	mg/Kg	1	06/09/2004 12:00	13071
SOIL AND WASTE PH				**SW9045C_S**			
pH	7.2		1.0	S.U.	1	06/04/2004 12:00	R6695

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Mitkem Corporation

Date: *21-Jun-04*

Client: Tetra Tech NUS, Inc.
Client Sample ID: 05SS31
Lab ID: C0508-16

Project: CTO-003_0005 Willow Grove, PA
Collection Date: 06/02/04 9:29

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
TOTAL ORGANIC CARBON BY COMBUSTION				**E415_LK_TOC_S**			
Organic Carbon, Total	14000		100	mg/Kg	1	06/09/2004 12:00	13071
SOIL AND WASTE PH				**SW9045C_S**			
pH	7.6		1.0	S.U.	1	06/04/2004 12:00	R6695

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Mitkem Corporation

Date: *21-Jun-04*

Client: Tetra Tech NUS, Inc.
Client Sample ID: 05DUP-02
Lab ID: C0508-17

Project: CTO-003_0005 Willow Grove, PA
Collection Date: 06/02/04 0:00

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
TOTAL ORGANIC CARBON BY COMBUSTION				**E415_LK_TOC_S**			
Organic Carbon, Total	59000		100	mg/Kg	1	06/09/2004 12:00	13071
SOIL AND WASTE PH				**SW9045C_S**			
pH	7.2		1.0	S.U.	1	06/04/2004 12:00	R6695

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Mitkem Corporation

Date: *21-Jun-04*

Client: Tetra Tech NUS, Inc.
Client Sample ID: 05SS43
Lab ID: C0508-18

Project: CTO-003_0005 Willow Grove, PA
Collection Date: 06/02/04 10:18

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
TOTAL ORGANIC CARBON BY COMBUSTION				**E415_LK_TOC_S**			
Organic Carbon, Total	58000		100	mg/Kg	1	06/09/2004 12:00	13071
SOIL AND WASTE PH				**SW9045C_S**			
pH	7.6		1.0	S.U.	1	06/04/2004 12:00	R6695

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Mitkem Corporation

Date: *21-Jun-04*

Client: Tetra Tech NUS, Inc.
Client Sample ID: 05SS44
Lab ID: C0508-19

Project: CTO-003_0005 Willow Grove, PA
Collection Date: 06/02/04 11:06

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
TOTAL ORGANIC CARBON BY COMBUSTION				**E415_LK_TOC_S**			
Organic Carbon, Total	10000		100	mg/Kg	1	06/09/2004 12:00	13071
SOIL AND WASTE PH				**SW9045C_S**			
pH	7.0		1.0	S.U.	1	06/04/2004 12:00	R6695

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

APPENDIX C

Support Documentation

SDG Narrative

Mitkem Corporation submits the enclosed data package in response to Tetra Tech NUS Inc.'s CTO-003, NAS Willow Grove, PA project. Under this deliverable, analysis results are presented for twenty samples that were received at Mitkem on June 3, 2004 and logged in under Mitkem Work Order Number C0508. Analyses were performed per specifications in the project's contract and the chain of custody forms, following discussion with the client regarding the analysis request for the aqueous samples. Following this narrative is the Mitkem Work Order for cross-referencing client sample ID with laboratory sample ID.

The analyses were performed according to EPA SW-846 and Lloyd Kahn TOC protocols and reported in a CLP-type format for Level 4 deliverable.

The following observation and/or deviations are observed for the following analyses:

1. Overall Observation:

Where needed, manual integrations were performed to improve data quality. The corrections were reviewed and associated hardcopies generated and reported as required. Manual integrations are coded to provide the data reviewer justification for such action. The codes are labeled on the ion chromatogram signal (GC/MS signal) and chromatogram for GC based analysis as follows:

- M1 peak tailing or fronting.
- M2 peak co-elution.
- M3 rising or falling baseline.
- M4 retention time shift.
- M5 miscellaneous - under this category, the justification is explained.

The enclosed report includes the originals of all data with the exception of logbook pages and certain initial calibrations. Photocopies of logbook pages are included, with the originals maintained on file at the laboratory. The originals of initial calibrations that are shared among several cases are maintained on file at the laboratory, with photocopies included in the data package.

2. Semivolatile Analysis:

Samples were analyzed by Method 8270 using selected ion monitoring (SIM) for the polynuclear aromatic hydrocarbon (PAH) compounds. This is a procedure optimized for low level analyses. Due to the relatively higher concentration of PAH compounds, many of these samples required analysis at dilution.

Surrogate recovery: recoveries were within the QC limits with the exception of elevated recovery of one surrogate in sample 05SS43 due to coeluting interferences. Please note that this analysis was performed at a dilution.

Lab control sample/lab control sample duplicate: spike recoveries were within the QC limits.

Matrix spike/matrix spike duplicate: duplicate matrix spikes were performed on sample 05SS39. Spike recoveries were within the QC limits for those compounds with concentrations in the native unspiked sample within the same range as the spike amount. Many compounds were at concentrations in the native unspiked sample several times greater than the spike amount, which obscured the spike recovery.

Sample analysis: due to high concentration of target analytes, the following samples were initially analyzed at dilution: 05SS31 (10X), 05SS36 (5X) and 0505SS43 (10X). Most of the samples were reanalyzed at dilution. These reanalyses have the suffix "DL" appended to the sample ID. No other unusual observation was made for the analysis.

3. Wet Chemistry Analyses:

Samples were analyzed for total organic carbon (TOC) by the Lloyd Kahn modifications to Method 415.1, and for pH by Method 9045. Results are presented in Mitkem format followed by raw analysis data.

There were no unusual occurrences noted during TOC or pH analyses.

All pages in this report have been numbered consecutively, starting with the title page and ending with a page saying only "Last Page of Data Report".

I certify that this data package is in compliance, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Edward A. Lawler
Laboratory Operations Manager
7/2/04

MITKEM CORPORATION
175 Metro Center Boulevard
Warwick, Rhode Island 02886-1755
(401) 732-3400 • Fax (401) 732-3499
email: mitkem@mitkem.com

CHAIN-OF-CUSTODY RECORD

REPORT TO		INVOICE TO		
COMPANY: Tetra Tech NUS	PHONE: (610) 491-9688	COMPANY: Tetra Tech NUS	PHONE:	LAB PROJECT #: C0508
NAME: Russ Turner	FAX: (610) 491-9645	NAME:	FAX:	
ADDRESS: 600 Clarke Ave.		ADDRESS:		TURNAROUND TIME:
CITY/ST/ZIP: King of Prussia PA 19406		CITY/ST/ZIP:		

CLIENT PROJECT NAME: NASJRB Willow Grove
CLIENT PROJECT #: N2192
CLIENT P.O.#:

REQUESTED ANALYSES: 8 ounce Amber PAH, TOC, pH; 1 Liter Amber PAH, TOC, pH

SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	8 ounce Amber PAH, TOC, pH	1 Liter Amber PAH, TOC, pH	COMMENTS
05SS38	6-1-04/0928	X			X		-01	1	1		
05SS36	6-1-04/1015	X			X		-02	1	1		
05SS35	6-1-04/1058	X			X		-03	1	1		
05DUP-01	6-1-04/0000	X			X		-04	1	1		
05SS34	6-1-04/1133	X			X		-05	1	1		
05SS39	6-1-04/1209	X			X		-06	2	2		Do MS/MSD
05SS41	6-1-04/1242	X			X		-07	1	1		
05SS42	6-1-04/1318	X			X		-08	1	1		
05SS40	6-1-04/1351	X			X		-09	1	1		
05SS33	6-1-04/1423	X			X		-10	1	1		
05RB060104	6-1-04/1445		X	X			-11	1		1	
05FB060104	6-1-04/1505		X	X			-12	1		1	

TSF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY	DATE/TIME	ADDITIONAL REMARKS:	COOLER TEMP:
	[signature]	6-2-04/1700	[signature]	6/3/04/945	Shipped by FED EX	3°C
		/		/	Airbill #8389 5045 3374	
		/		/		

WHITE: LABORATORY COPY YELLOW: REPORT COPY PINK: CLIENT'S COPY

0010

MITKEM CORPORATION
175 Metro Center Boulevard
Warwick, Rhode Island 02886-1755
(401) 732-3400 • Fax (401) 732-3499
email: mitkem@mitkem.com

CHAIN-OF-CUSTODY RECORD

REPORT TO		INVOICE TO		
COMPANY Tetra Tech NUS	PHONE (610) 491-9688	COMPANY Tetra Tech NUS	PHONE	LAB PROJECT #: C0508
NAME Russ Turner	FAX (610) 491-9645	NAME	FAX	
ADDRESS 600 Clarke Ave		ADDRESS		TURNAROUND TIME:
CITY/ST/ZIP King of Prussia PA 19406		CITY/ST/ZIP		

CLIENT PROJECT NAME:	CLIENT PROJECT #:	CLIENT P.O.#:
NASJRB Willow Grove	N2192	

REQUESTED ANALYSES

SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	8 ounce Amber PAH, TOC, pH	Liter Amber PAH, TOC, pH	COMMENTS
05SS37	6-1-04/1527	X			X		-13	1	1		
05SS45	6-1-04/1603	X			X		-14	1	1		
05SS32	6-2-04/0854	X			X		-15	1	1		
05SS31	6-2-04/0929	X			X		-16	1	1		
05DUP-02	6-2-04/0000	X			X		-17	1	1		
05SS43	6-2-04/1018	X			X		-18	1	1		PID reading - 20ppm
05SS44	6-2-04/1106	X			X		-19	1	1		
05RB060204	6-2-04/1130		X	X			-20	1		1	
	/										
	/										
	/										
	/										

TSF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY	DATE/TIME	ADDITIONAL REMARKS:	COOLER TEMP:
	[signature]	6-2-04/1700	[signature]	6/3/04/9:45	Shipped by FED EX	3°C
		/		/	Airbill # 8389 5045 3374	
		/		/		

WHITE: LABORATORY COPY YELLOW: REPORT COPY PINK: CLIENT'S COPY

0011

DUPLICATE ANALYSIS RESULTS
SDG TT_C0508
CTO 003, NAS WILLOW GROVE

Sample ID:	05DUP-01		05SS34		
Laboratory ID:	C0508-04A		C0508-05A		
Sample Date:	06/01/04		06/01/04		Relative
Duplicate:	05SS34		05DUP-01		Percent
Percent Moisture	20.0		20.0		Difference
	RESULT	QUAL CODE	RESULT	QUAL CODE	
SEMIVOLATILES	ug/kg		ug/kg		
2-Methylnaphthalene	8		11		32
Acenaphthene	4.1	U	4.1	U	NA
Acenaphthylene	4.4		5.2		17
Anthracene	8.6		17		66
Benz(a)anthracene	51		150		99
Benzo(a)pyrene	53		140		90
Benzo(b)fluoranthene	60		190		104
Benzo(g,h,i)perylene	50		110		75
Benzo(k)fluoranthene	38		52		31
Chrysene	79		160		68
Dibenz(a,h)anthracene	13		29		76
Fluoranthene	180		350		64
Fluorene	4.1	U	4.1	U	NA
Indeno(1,2,3-cd)pyrene	43		94		74
Naphthalene	7.2		8.3		14
Phenanthrene	99		92		7
Pyrene	150		250		50

05DUP-02		05SS32		
C0508-17A		C0508-15A		
06/02/04		06/02/04		Relative
05SS32		05DUP-02		Percent
13.0		13.0		Difference
RESULT	QUAL CODE	RESULT	QUAL CODE	
ug/kg		ug/kg		
58		23		86
230		120		63
180		130		32
840		340		85
2100		880		82
1900		370		135
2300		1400		49
1200		600		67
1300	J G	370	J	111 J
2700		920		98
300		190		45
5100		2800		58
330		170		64
1100		580		62
52		20		89
3100		1600		64
7400		2600		96

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Lab File ID (Standard): S1E0327 Date Analyzed: 06/07/04

Instrument ID: S1 Time Analyzed: 1600

		IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
	12 HOUR STD	78909	6.31	213554	7.48	78473	8.97
	UPPER LIMIT	157818	6.81	427108	7.98	156946	9.47
	LOWER LIMIT	39455	5.81	106777	6.98	39237	8.47
	EPA SAMPLE NO.						
01	SBLK1E	58778	6.31	179464	7.47	78656	8.97
02	S1ELCS	62254	6.32	172955	7.47	74445	8.97
03	05DUP-01	53803	6.31	174428	7.47	57116	8.97
04	05SS34	53911	6.31	131614	7.48	58650	8.97
05	05SS42	66887	6.31	185707	7.48	77595	8.97
06	05SS41	48386	6.31	136686	7.47	54182	8.97
07	05SS37	51679	6.32	170887	7.48	60849	8.97
08	05SS44	44449	6.31	143473	7.48	59222	8.97
09	05SS40	49576	6.31	143139	7.48	64265	8.97
10	05SS31	63538	6.32	195398	7.48	94560	8.97
11	05SS43	52026	6.31	158495	7.48	79949	8.97
12	05SS39	41561	6.32	137515	7.48	60730	8.97
13	05SS39MS	44190	6.31	149448	7.48	52087	8.97
14	05SS39MSD	45975	6.31	146111	7.48	54412	8.97
15	05SS33	40871	6.31	144052	7.48	43771	8.97
16	05SS45	36329*	6.32	61763*	7.48	35295*	8.97
17	05SS32	42226	6.31	59775*	7.48	43338	8.97
18	05DUP-02	36584*	6.32	54061*	7.48	35660*	8.98
19	05SS35	36941*	6.32	64862*	7.48	36740*	8.98
20							
21							
22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Lab File ID (Standard): S1E0327 Date Analyzed: 06/07/04

Instrument ID: S1 Time Analyzed: 1600

		IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
	12 HOUR STD	152680	10.20	112160	12.39	202155	13.60
	UPPER LIMIT	305360	10.70	224320	12.89	404310	14.10
	LOWER LIMIT	76340	9.70	56080	11.89	101078	13.10
	EPA SAMPLE NO.						
01	SBLK1E	132518	10.20	92758	12.39	163928	13.60
02	S1ELCS	145553	10.20	105241	12.39	192026	13.60
03	05DUP-01	93832	10.20	68564	12.39	113717	13.60
04	05SS34	106090	10.20	67923	12.39	104250	13.60
05	05SS42	130947	10.20	79372	12.39	83239*	13.61
06	05SS41	101376	10.20	95384	12.39	102062	13.60
07	05SS37	117920	10.20	47530*	12.40	41292*	13.62
08	05SS44	86151	10.20	55550*	12.39	42597*	13.61
09	05SS40	135681	10.20	72058	12.39	59383*	13.61
10	05SS31	125913	10.21	153501	12.41	59382*	13.63
11	05SS43	157356	10.23	121949	12.42	39214*	13.64
12	05SS39	97386	10.21	64359	12.40	41447*	13.62
13	05SS39MS	112990	10.21	54954*	12.40	41187*	13.62
14	05SS39MSD	102688	10.21	79381	12.40	36609*	13.63
15	05SS33	77085	10.21	49155*	12.40	36885*	13.64
16	05SS45	81998	10.21	96802	12.42	37145*	13.65
17	05SS32	72592*	10.21	41753*	12.41	36161*	13.65
18	05DUP-02	70433*	10.21	38045*	12.42	25216*	13.65
19	05SS35	64280*	10.21	24652*	12.40	17319*	13.63
20							
21							
22							

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Lab File ID (Standard): S1E0354A Date Analyzed: 06/08/04

Instrument ID: S1 Time Analyzed: 1306

		IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
	12 HOUR STD	41324	6.31	60374	7.47	45806	8.96
	UPPER LIMIT	82648	6.81	120748	7.97	91612	9.46
	LOWER LIMIT	20662	5.81	30187	6.97	22903	8.46
	EPA SAMPLE NO.						
01	S1DLCSD	42469	6.30	125438*	7.47	48080	8.96
02	05SS40DL	30336	6.31	99485	7.47	42673	8.96
03	05SS31DL	29109	6.30	37192	7.47	32026	8.96
04	05SS43DL	38786	6.31	107550	7.47	26262	8.96
05	05SS39DL	33046	6.31	33917	7.46	37726	8.96
06	05SS33DL	47235	6.30	46642	7.47	20682*	8.96
07	05SS45DL	27285	6.31	27424*	7.48	23241	8.96
08	05SS32DL	41759	6.30	45431	7.47	47295	8.96
09	05DUP-02DL	29069	6.30	26297*	7.47	23874	8.96
10	05SS35DL	31992	6.30	31131	7.47	27886	8.96
11	05SS36	34636	6.30	34352	7.47	23718	8.96
12	05SS36DL	32239	6.30	37667	7.47	25134	8.96
13	05SS38	30445	6.30	30207	7.47	25948	8.96
14	05SS41DL	26664	6.30	21385*	7.47	27402	8.96
15	05SS44DL	46786	6.30	47311	7.47	37094	8.96
16							
17							
18							
19							
20							
21							
22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Lab File ID (Standard): S1E0354A Date Analyzed: 06/08/04

Instrument ID: S1 Time Analyzed: 1306

		IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
	12 HOUR STD	71488	10.19	26118	12.40	37842	13.64
	UPPER LIMIT	142976	10.69	52236	12.90	75684	14.14
	LOWER LIMIT	35744	9.69	13059	11.90	18921	13.14
	EPA SAMPLE NO.						
01	S1DLCSD	84111	10.20	67793*	12.44	55126	13.71
02	05SS40DL	61622	10.19	41966	12.39	53788	13.63
03	05SS31DL	70595	10.19	58148*	12.39	70303	13.63
04	05SS43DL	63095	10.19	35399	12.39	35167	13.61
05	05SS39DL	73440	10.19	43753	12.39	62080	13.60
06	05SS33DL	65652	10.19	35592	12.39	47628	13.61
07	05SS45DL	56150	10.20	12093*	12.39	14318*	13.61
08	05SS32DL	62214	10.20	30571	12.39	28514	13.59
09	05DUP-02DL	45547	10.20	15025	12.39	18418*	13.60
10	05SS35DL	55620	10.19	31869	12.39	28799	13.60
11	05SS36	39526	10.20	47387	12.40	31225	13.61
12	05SS36DL	54627	10.19	38033	12.39	34121	13.62
13	05SS38	31803*	10.20	13089	12.39	8239*	13.61
14	05SS41DL	51393	10.19	20937	12.39	18238*	13.62
15	05SS44DL	68756	10.20	35046	12.39	28826	13.61
16							
17							
18							
19							
20							
21							
22							

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Instrument ID: S1 Calibration Date(s): 06/07/04 06/07/04

Calibration Time(s): 1411 1600

LAB FILE ID: RRF0.1=S1E0325 RRF0.5=S1E0327
RRF1 =S1E0323 RRF5 =S1E0326 RRF10 =S1E0324

COMPOUND		RRF0.1	RRF0.5	RRF1	RRF5	RRF10	$\overline{RRF}$	% RSD
Naphthalene	*	0.949	1.057	1.019	1.039	1.210	1.055	9.1*
2-Methylnaphthalene	*	0.519	0.452	0.496	0.492	0.680	0.528	16.8*
Acenaphthylene	*	1.679	2.287	1.643	2.067	1.826	1.900	14.4*
Acenaphthene	*	1.110	1.174	0.973	1.053	1.299	1.122	11.0*
Fluorene	*	0.938	1.208	1.136	1.437	1.601	1.264	20.5*
Phenanthrene	*	1.087	1.062	0.959	1.097	1.337	1.108	12.5*
Anthracene	*	0.785	0.980	1.036	1.036	1.159	0.999	13.7*
Fluoranthene	*	0.917	1.142	1.031	1.207	1.250	1.109	12.2*
Pyrene	*	1.241	2.027	1.654	1.570	1.942	1.687	18.6*
Benzo(a)anthracene	*	1.268	1.594	1.232	1.380	1.598	1.414	12.4*
Chrysene	*	1.335	1.524	1.210	1.248	1.610	1.385	12.6*
Benzo(b)fluoranthene	*	2.408	1.488	1.242	2.068	1.763	1.794	25.7*
Benzo(k)fluoranthene	*	2.408	1.671	1.571	1.846	2.902	2.080	27.0*
Benzo(a)pyrene	*	0.882	1.295	1.039	1.631	1.913	1.352	31.3*
Indeno(1,2,3-cd)pyrene	*	0.549	0.606	0.547	0.779	0.997	0.696	27.8*
Dibenzo(a,h)anthracene	*	0.312	0.394	0.361	0.569	0.750	0.477	37.9*
Benzo(g,h,i)perylene	*	0.532	0.548	0.579	0.761	0.912	0.666	24.8*
Benzo(e)pyrene-d12	*	1.009	1.131	0.932	1.169	1.454	1.139	17.6*

* Compounds with required minimum RRF and maximim %RSD values.
All other compounds must meet a minimim RRF of 0.010.

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Instrument ID: S1 Calibration Date: 06/08/04 Time: 1306

Lab File ID: S1E0354A Init. Calib. Date(s): 06/07/04 06/07/04

Init. Calib. Times: 1411 1600

COMPOUND	$\overline{RRF}$	RRF1	MIN RRF	%D	MAX %D
Naphthalene	1.055	0.982	0.050	-6.9	100
2-Methylnaphthalene	0.528	0.506	0.050	-4.2	100
Acenaphthylene	1.900	1.689	0.050	-11.1	100
Acenaphthene	1.122	1.117	0.050	-0.4	20.0
Fluorene	1.264	1.302	0.050	3.0	100
Phenanthrene	1.108	1.181	0.050	6.6	100
Anthracene	0.999	1.099	0.050	10.0	100
Fluoranthene	1.109	1.046	0.050	-5.7	20.0
Pyrene	1.687	2.328	0.050	38.0	100
Benzo(a)anthracene	1.414	1.184	0.050	-16.3	100
Chrysene	1.385	1.184	0.050	-14.5	100
Benzo(b)fluoranthene	1.534	2.038	0.050	32.8	100
Benzo(k)fluoranthene	1.956	1.458	0.050	-25.5	100
Benzo(a)pyrene	1.352	1.268	0.050	-6.2	20.0
Indeno(1,2,3-cd)pyrene	0.696	0.767	0.050	10.2	100
Dibenzo(a,h)anthracene	0.477	0.577	0.050	21.0	100
Benzo(g,h,i)perylene	0.666	0.712	0.050	6.9	100
Benzo(e)pyrene-d12	1.139	1.212	0.050	6.4	100

All other compounds must meet a minimum RRF of 0.010.

2D
SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Level: (low/med) LOW

	EPA SAMPLE NO.	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	S7 #	S8 #	TOT OUT
01	SBLK1E	117								0
02	S1ELCS	92								0
03	05DUP-01	77								0
04	05SS34	84								0
05	05SS42	96								0
06	05SS41	83								0
07	05SS37	84								0
08	05SS44	96								0
09	05SS40	84								0
10	05SS31	131								0
11	05SS43	301D								0
12	05SS39	90								0
13	05SS39MS	86								0
14	05SS39MSD	117								0
15	05SS33	94								0
16	05SS45	105								0
17	05SS32	93								0
18	05DUP-02	109								0
19	05SS35	103								0
20	05SS40DL	74								0
21	05SS31DL	0D								0
22	05SS43DL	0D								0
23	05SS39DL	82								0
24	05SS33DL	43D								0
25	05SS45DL	0D								0
26	05SS32DL	0D								0
27	05DUP-02DL	0D								0
28	05SS35DL	95								0
29	05SS36	72								0
30	05SS36DL	0D								0

S1 = Benzo(e)pyrene-d12 QC LIMITS (45-135)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix Spike - EPA Sample No.: 05SS39 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Naphthalene	97	7.8	66	60	45-145
2-Methylnaphthalene	97	6.2	52	47	45-145
Acenaphthylene	97	56	120	66	45-145
Acenaphthene	97	66	110	45	45-145
Fluorene	97	85	140	57	45-145
Phenanthrene	97	1800	940	-886*	45-145
Anthracene	97	360	300	-62*	45-145
Fluoranthene	97	6200	2900	-3402*	45-145
Pyrene	97	5100	3400	-1752*	45-145
Benzo(a)anthracene	97	1600	1100	-515*	45-145
Chrysene	97	1500	1000	-515*	45-145
Benzo(b)fluoranthene	97	2500	1900	-618*	45-145
Benzo(k)fluoranthene	97	900	640	-268*	45-145
Benzo(a)pyrene	97	1700	1200	-515*	45-145
Indeno(1,2,3-cd)pyrene	97	500	420	-82*	45-145
Dibenzo(a,h)anthracene	97	170	190	21*	45-145
Benzo(g,h,i)perylene	97	450	370	-82*	45-145

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

COMMENTS: _____

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: C0508

Matrix Spike - EPA Sample No.: 05SS39 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Naphthalene	97	88	83	32	60	45-145
2-Methylnaphthalene	97	77	73	43	60	45-145
Acenaphthylene	97	130	76	14	60	45-145
Acenaphthene	97	300	241*	137*	60	45-145
Fluorene	97	330	252*	126*	60	45-145
Phenanthrene	97	8400	6804*	260*	60	45-145
Anthracene	97	1500	1175*	222*	60	45-145
Fluoranthene	97	12000	5979*	728*	60	45-145
Pyrene	97	9900	4948*	419*	60	45-145
Benzo(a)anthracene	97	3300	1752*	366*	60	45-145
Chrysene	97	2900	1443*	422*	60	45-145
Benzo(b)fluoranthene	97	5600	3196*	296*	60	45-145
Benzo(k)fluoranthene	97	2600	1752*	272*	60	45-145
Benzo(a)pyrene	97	3600	1959*	343*	60	45-145
Indeno(1,2,3-cd)pyrene	97	950	464*	286*	60	45-145
Dibenzo(a,h)anthracene	97	350	186*	159*	60	45-145
Benzo(g,h,i)perylene	97	730	289*	358*	60	45-145

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 14 out of 17 outside limits
Spike Recovery: 26 out of 34 outside limits

COMMENTS: