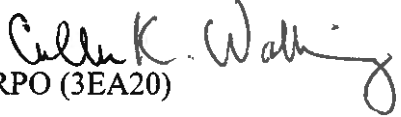




UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
Environmental Sciences Center
701 Mapes Road
Fort Meade, Maryland 20755-5350

DATE : August 31, 2011

SUBJECT: Region III Data QA Review

FROM: Colleen Walling 
Region III ESAT RPO (3EA20)

TO: Ruth Scharr
On Scene Coordinator (3HS31)

Attached is the organic data validation report for the TCE Havertown site (Case #: 41543; SDG#:C0AA0) completed by the Region III Environmental Services Assistance Team (ESAT) contractor under the direction of Region III EAID.

If you have any questions regarding this review, please call me at (410) 305-2763.

Attachment

cc: Charles Rapone (Weston)

TO: #0037 TDF: #08072

OFFICE OF ANALYTICAL SERVICES AND QUALITY ASSURANCE

Lockheed Martin IS&GS –Civil
Energy & Environment
ESAT Region 3
US EPA Environmental Science Center
701 Mapes Road Ft. Meade, MD 20755-5350
Telephone 410-305-3037 Facsimile 410-305-3597



DATE: August 30, 2011

SUBJECT: Organic Data Validation (Level M2)
Site: TCE Havertown
Case: 41543 SDG: C0AA0

FROM: Kenneth W. Curry *KWC*
Senior Data Reviewer

Mahboobeh Mecanic *MM*
Senior Oversight Chemist

TO: Colleen Walling
ESAT Region 3 Project Officer

OVERVIEW

Case 41543, Sample Delivery Group (SDG) C0AA0, from the TCE Havertown site consisted of six (6) aqueous samples and one (1) rinsate blank analyzed for volatile and semivolatile compounds in addition to one (1) aqueous sample, one (1) field blank and one (1) trip blank analyzed for volatile compounds only. All samples were analyzed by KAP Technologies Incorporated (KAP). The sample set included no additional field Quality Control (QC) samples. Samples were analyzed according to Contract Laboratory Program (CLP) Statement of Work (SOW) SOM01.2 through the Routine Analysis Services (RAS) program.

SUMMARY

Validation of data was performed according to Innovative Approaches to Data Validation, Level M2 and is assigned the Superfund Data Validation Label S3VM (Stage_3_Validation_Manual). This level of review includes assessment of all Quality Assurance/Quality Control (QA/QC) data and review of chromatograms, but excludes review of spectra and raw data.

It should be noted that in SOM01.2, 1,4-dioxane is no longer a target analyte by Trace VOA and Trace VOA SIM analyses. Using SOM01.2 for the detection and reporting of 1,4-dioxane at low and medium levels has not consistently generated data of sufficiently known quality. This is due to poor purge efficiency. Results for 1,4-dioxane using this method should be considered advisory.

MINOR PROBLEMS

- Several compounds failed precision criteria [Percent Difference (%D)] in the volatile and semivolatile initial continuing calibrations. The “J” qualifier for positive results for these compounds in associated samples has been superseded by “B” on the Data Summary Forms (DSFs). No precisions were greater than fifty percent (>50%). Therefore, no quantitation limits were qualified based on these outliers.
- Trans-1,2-dichloroethene was reported as a Tentatively Identified Compound (TIC) in the volatile analysis of sample C0AA5. The spectra and retention time provided for this TIC was evidence that compound was present in the sample. Therefore, the positive result for this compound was reported on the DSF and qualified “J” by the reviewer.

NOTES

- Compounds detected below Contract Required Quantitation Limits (CRQLs) were qualified “J” on the DSFs unless superseded by “B”.
- Concentrations of target compounds found in the analysis of samples’ associated trip, field, rinsate, storage and method blanks are listed below. Only compounds used to qualify data are listed. Samples with concentrations of common laboratory contaminants* less than ten times (<10X) the blank concentration or concentration of other compounds less than five times (<5X) the blank concentration have been qualified “B” on the DSFs.

<u>Blank</u>	<u>Compound</u>	<u>Concentration</u>	<u>Affected Samples</u>
Method (VBLK9N)	methylene chloride*	9.7 µg/L	All Samples Except C0AA4, C0AA5
	Toluene	1.5 J µg/L	C0AA7, C0AA8, C0AA9
	1,2,4-trichlorobenzene	1.8 J µg/L	C0AA9
	1,2,3-trichlorobenzene	2.1 J µg/L	C0AA9
Method (VBLK9Q)	Bromomethane	2.7 J µg/L	C0AA4, C0AA5
	methylene chloride*	7.3 µg/L	C0AA4, C0AA5
Field (C0AA7)	Toluene	1.7 J µg/L	C0AA4, C0AA5
Rinsate (C0AA9)	diethylphthalate*	12 µg/L	C0AA1, C0AA4, C0AA5

- Tentatively Identified Compounds (TICs) were reviewed during data validation. TICs identified as blank contaminants or target compounds from another sample fraction were crossed off the TIC Form Is by the reviewer. The TIC Form Is for samples in which TICs were detected are included in Appendix E.

- Volatile sample C0AA5 was re-analyzed at a ten fold (10X) dilution because the detected concentrations of cis-1,2-dichloroethene and trichloroethene exceeded the linear calibration range in the initial analysis. The positive result for these compounds in this sample were reported from the dilution by the reviewer and annotated with a "+" on the DSF.
- The laboratory received semivolatile sample C0AA0 with one (1) bottle broken and one (1) bottle that was leaking. Per Region 3, the semivolatile analysis of this sample was canceled due to the breakage and leakage that may have comprised the samples integrity.

ATTACHMENTS

- 1) Appendix A - Glossary of Data Qualifiers
- 2) Appendix B - Data Summary Forms
- 3) Appendix C - Chain of Custody (COC) Records
- 4) Appendix D - Laboratory Case Narrative
- 5) Appendix E - Tentatively Identified Compounds (TICs)

DCN: 41543M2

Appendix A

Glossary of Data Qualifiers

GLOSSARY OF DATA QUALIFIER CODES (ORGANIC)

CODES RELATED TO IDENTIFICATION

(confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

NO CODE = Confirmed identification.

B = Not detected substantially above the level reported in laboratory or field blanks.

R = Unusable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.

N = Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION

(can be used for both positive results and sample quantitation limits):

J = Analyte present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

UL = Not detected, quantitation limit is probably higher.

OTHER CODES

NJ = Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.

Q = No analytical result.

Appendix B

Data Summary Forms

Case #: 41543

SDG : C0AA0

Site :

TCE Havertown

Lab. :

KAP

Sample Number :	C0AA0	C0AA1	C0AA2	C0AA3	C0AA4						
Sampling Location :	MW1S-080211-01	MW1I-080211-01	MW1I-080211002	MW2S-080211-01	MW2I-080211-01						
Field QC :											
Matrix :	Water	Water	Water	Water	Water						
Units :	ug/L	ug/L	ug/L	ug/L	ug/L						
Date Sampled :	8/02/2011	8/02/2011	8/02/2011	8/02/2011	8/02/2011						
Time Sampled :	09:50	10:55	10:55	12:10	13:00						
pH :	< 2	< 2	< 2	< 2	< 2						
Dilution Factor :	1.0	1.0	1.0	1.0	1.0						
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
1,1,2-Trichloroethane	5.0										
*Tetrachloroethene	5.0										
2-Hexanone	10										
Dibromochloromethane	5.0										
1,2-Dibromoethane	5.0										
*Chlorobenzene	5.0										
*Ethylbenzene	5.0										
o-Xylene	5.0										
m,p-Xylene	5.0										
*Styrene	5.0										
Bromoform	5.0										
Isopropylbenzene	5.0										
1,1,2,2-Tetrachloroethane	5.0										
*1,3-Dichlorobenzene	5.0										
*1,4-Dichlorobenzene	5.0										
1,2-Dichlorobenzene	5.0										
1,2-Dibromo-3-chloropropane	5.0										
1,2,4-Trichlorobenzene	5.0										
1,2,3-Trichlorobenzene	5.0										

CRQL = Contract Required Quantitation Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor)

Revised 09/99

Case #: 41543

SDG : C0AA0

Site :

TCE Havertown

Lab. :

KAP

Sample Number :	C0AA5	C0AA6	C0AA7	C0AA8	C0AA9						
Sampling Location :	CW1S-080211-01	CW1I-080211-01	FB-080211	TB-080211	EB-080211						
Field QC :			Field Blank	Trip Blank	Rinsate Blank						
Matrix :	Water	Water	Water	Water	Water						
Units :	ug/L	ug/L	ug/L	ug/L	ug/L						
Date Sampled :	8/02/2011	8/02/2011	8/02/2011	8/02/2011	8/02/2011						
Time Sampled :	15:45	15:20	09:00	09:05	14:00						
pH :	< 2	< 2	< 2	< 2	< 2						
Dilution Factor :	1.0/10.0	1.0	1.0	1.0	1.0						
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	5.0										
Chloromethane	5.0										
*Vinyl chloride	5.0										
Bromomethane	5.0	1.3	B								
Chloroethane	5.0										
Trichlorofluoromethane	5.0										
*1,1-Dichloroethene	5.0										
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0										
Acetone	10										
Carbon disulfide	5.0										
Methyl acetate	5.0										
*Methylene chloride	5.0	6.2	B	3.9	B	4.9	B	4.9	B	4.6	B
trans-1,2-Dichloroethene	5.0	5.8	J	1.6	J						
Methyl tert-butyl ether	5.0	1.2	J								
1,1-Dichloroethane	5.0										
cis-1,2-Dichloroethene	5.0	350+		72							
*2-Butanone	10										
Bromochloromethane	5.0										
Chloroform	5.0										
*1,1,1-Trichloroethane	5.0										
Cyclohexane	5.0										
*Carbon tetrachloride	5.0										
*Benzene	5.0										
*1,2-Dichloroethane	5.0										
1,4-Dioxane	100										
Trichloroethene	5.0	440+		58							
Methylcyclohexane	5.0										
*1,2-Dichloropropane	5.0										
Bromodichloromethane	5.0										
cis-1,3-Dichloropropene	5.0										
4-Methyl-2-pentanone	10										
*Toluene	5.0	1.6	B			1.7	B	1.5	B	1.5	B
trans-1,3-Dichloropropene	5.0										

+ = Result reported from the diluted analysis.

Case #: 41543

SDG : C0AA0

Site :

TCE Havertown

Lab. :

KAP

Sample Number :	C0AA5	C0AA6	C0AA7	C0AA8	C0AA9						
Sampling Location :	CW1S-080211-01	CW1I-080211-01	FB-080211	TB-080211	EB-080211						
Field QC :			Field Blank	Trip Blank	Rinsate Blank						
Matrix :	Water	Water	Water	Water	Water						
Units :	ug/L	ug/L	ug/L	ug/L	ug/L						
Date Sampled :	8/02/2011	8/02/2011	8/02/2011	8/02/2011	8/02/2011						
Time Sampled :	15:45	15:20	09:00	09:05	14:00						
pH :	< 2	< 2	< 2	< 2	< 2						
Dilution Factor :	1.0/10.0	1.0	1.0	1.0	1.0						
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
1,1,2-Trichloroethane	5.0										
*Tetrachloroethene	5.0										
2-Hexanone	10										
Dibromochloromethane	5.0										
1,2-Dibromoethane	5.0										
*Chlorobenzene	5.0										
*Ethylbenzene	5.0										
o-Xylene	5.0										
m,p-Xylene	5.0										
*Styrene	5.0										
Bromoform	5.0										
Isopropylbenzene	5.0										
1,1,2,2-Tetrachloroethane	5.0										
*1,3-Dichlorobenzene	5.0										
*1,4-Dichlorobenzene	5.0										
1,2-Dichlorobenzene	5.0										
1,2-Dibromo-3-chloropropane	5.0										
1,2,4-Trichlorobenzene	5.0									1.4	B
1,2,3-Trichlorobenzene	5.0									1.8	B

CRQL = Contract Required Quantitation Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor)

Revised 09/99

Case #: 41543

SDG : C0AA0

Site :

TCE Havertown

Lab. :

KAP

Sample Number :	C0AA1	C0AA2	C0AA3	C0AA4	C0AA5				
Sampling Location :	MW11-080211-01	MW11-080211002	MW2S-080211-01	MW2I-080211-01	CW1S-080211-01				
Field QC :									
Matrix :	Water	Water	Water	Water	Water				
Units :	ug/L	ug/L	ug/L	ug/L	ug/L				
Date Sampled :	8/02/2011	8/02/2011	8/02/2011	8/02/2011	8/02/2011				
Time Sampled :	10:55	10:55	12:10	13:00	15:45				
Dilution Factor :	1.0	1.0	1.0	1.0	1.0				
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-Dinitrophenol	10								
4-Nitrophenol	10								
Dibenzofuran	5.0								
2,4-Dinitrotoluene	5.0								
Diethylphthalate	5.0	2.3	B			2.2	B	2.1	B
Fluorene	5.0								
4-Chlorophenyl-phenylether	5.0								
4-Nitroaniline	10								
4,6-Dinitro-2-methylphenol	10								
N-Nitrosodiphenylamine	5.0								
1,2,4,5-Tetrachlorobenzene	5.0								
4-Bromophenyl-phenylether	5.0								
*Hexachlorobenzene	5.0								
Atrazine	5.0								
*Pentachlorophenol	10					23		73	
Phenanthrene	5.0								
Anthracene	5.0								
Carbazole	5.0								
Di-n-butylphthalate	5.0								
Fluoranthene	5.0								
Pyrene	5.0								
Butylbenzylphthalate	5.0								
3,3'-Dichlorobenzidine	5.0								
Benzo(a)anthracene	5.0								
Chrysene	5.0								
Bis(2-ethylhexyl)phthalate	5.0	3.4	J						
Di-n-octylphthalate	5.0								
Benzo(b)fluoranthene	5.0								
Benzo(k)fluoranthene	5.0								
Benzo(a)pyrene	5.0								
Indeno(1,2,3-cd)pyrene	5.0								
Dibenzo(a,h)anthracene	5.0								
Benzo(g,h,i)perylene	5.0								
2,3,4,6-Tetrachlorophenol	5.0							3.6	J

CRQL = Contract Required Quantitation Limit *Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor)

Revised 09/99

Case #: 41543

SDG : C0AA0

Site :

TCE Havertown

Lab. :

KAP

Sample Number :		C0AA6	C0AA9								
Sampling Location :		CW11-080211-01	EB-080211								
Field QC :			Rinsate Blank								
Matrix :		Water	Water								
Units :		ug/L	ug/L								
Date Sampled :		8/02/2011	8/02/2011								
Time Sampled :		15:20	14:00								
Dilution Factor :		1.0	1.0								
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-Dinitrophenol	10										
4-Nitrophenol	10										
Dibenzofuran	5.0										
2,4-Dinitrotoluene	5.0										
Diethylphthalate	5.0			12							
Fluorene	5.0										
4-Chlorophenyl-phenylether	5.0										
4-Nitroaniline	10										
4,6-Dinitro-2-methylphenol	10										
N-Nitrosodiphenylamine	5.0										
1,2,4,5-Tetrachlorobenzene	5.0										
4-Bromophenyl-phenylether	5.0										
*Hexachlorobenzene	5.0										
Atrazine	5.0										
*Pentachlorophenol	10	6.7	J								
Phenanthrene	5.0										
Anthracene	5.0										
Carbazole	5.0										
Di-n-butylphthalate	5.0										
Fluoranthene	5.0										
Pyrene	5.0										
Butylbenzylphthalate	5.0										
3,3'-Dichlorobenzidine	5.0										
Benzo(a)anthracene	5.0										
Chrysene	5.0										
Bis(2-ethylhexyl)phthalate	5.0										
Di-n-octylphthalate	5.0										
Benzo(b)fluoranthene	5.0										
Benzo(k)fluoranthene	5.0										
Benzo(a)pyrene	5.0										
Indeno(1,2,3-cd)pyrene	5.0										
Dibenzo(a,h)anthracene	5.0										
Benzo(g,h,i)perylene	5.0										
2,3,4,6-Tetrachlorophenol	5.0										

CRQL = Contract Required Quantitation Limit *Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor)

Revised 09/99

Appendix C

Chain of Custody (COC) Records

U.S EPA Region III Analytical Request Form

JS

41543

OASQA USE ONLY			
Control #	CT5585	RAS #	41543
DAS#		NSF #	
PES #		Analytical TAT	21 DAYS

Date: 28 June 2011		Site Activity: Removal Site Evaluations	
Site Name: TCE Havertown		Street Address: Lawrence and Eagle Roads	
City: Havertown	State: PA	Latitude:	Longitude:
Program: SUPERFUND	Acct. #: 2011-T-03-N-302D72-A3LU-RS-00	CERCLIS #: PAN000306625	
Site ID: 0306625	Spill ID: A3LU <i>2011T03N302DC6CA3LUR500</i>	Operable Unit: 00	
Site Specific QA Plan Submitted: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (on file)	Title: <i>Abbreviated Sampling Plan - Groundwater Sampling for the TCE Havertown Site</i>		Date Approved: 27 June 2011
EPA Project Leader: Ruth Scharr	Phone#: 215-814-3191	Cell Phone #: 215-756-7897	E-mail: Scharr.Ruth@epa.gov
Request Preparer: Christina Schauss	Phone#: 910-420-2729	Cell Phone #: 443-564-6609	E-mail: Christina.Schauss@westonsolutions.com
Site Leader: Charles Rapone	Phone#: 610-324-2117	Cell Phone #: 610-324-2117	E-mail: Charles.Rapone@westonsolutions.com
Contractor: Weston Solutions, Inc.		EPA CO/PO: John Robb/Karen Esposito (Wodarczyk)	
#Samples: 12	Matrix: Groundwater	Parameter: TCL VOC	Method: SOM01.2
#Samples: 10	Matrix: Groundwater	Parameter: TCL SVOC	Method: SOM01.2
Ship Date From: 4 Aug 2011	Ship Date To: 5 Aug 2011	Org. Validation Level	Org. Validation Level M-2
Unvalidated Data Requested: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes If Yes, TAT Needed: <input type="checkbox"/> 14days <input type="checkbox"/> 7days <input type="checkbox"/> 72hrs <input type="checkbox"/> 48hrs <input type="checkbox"/> 24hrs <input checked="" type="checkbox"/> Other (Specify) 21 days			
Validated Data Package Due: <input type="checkbox"/> 42 days <input type="checkbox"/> 30 days <input type="checkbox"/> 21days <input type="checkbox"/> 14 days <input checked="" type="checkbox"/> Other (Specify) (EDDs will be provided in Region 3 EDD Format) 28 days			
Electronic Data Deliverables Required: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (EDDs will be provided in Region 3 EDD Format)			
Special Instructions:			
Please see attached CRQLs.			

KAP
↓

34249
34250

CRQLs for TCL VOCs

<u>TCL Volatiles</u>	<u>Low Water (µg/L)</u>
Dichlorodifluoromethane	5
Chloromethane	5
Vinyl Chloride	5
Bromomethane	5
Chloroethane	5
Trichlorofluoromethane	5
1,1-Dichloroethene	5
1,1,2-Trichloro-1,2,2-trifluoroethane	5
Acetone	10
Carbon Disulfide	5
Methyl acetate	5
Methylene chloride	5
trans-1,2-Dichloroethene	5
Methyl tert-butyl ether	5
1,1-Dichloroethane	5
cis-1,2-Dichloroethene	5
2-Butanone	10
Bromochloromethane	5
Chloroform	5
1,1,1-Trichloroethane	5
Cyclohexane	5
Carbon tetrachloride	5
Benzene	5
1,2-Dichloroethane	5
1,4-Dioxane	100
Trichloroethene	5

<u>TCL Volatiles</u>	<u>Low Water (µg/L)</u>
Methylcyclohexane	5
1,2-Dichloropropane	5
Bromodichloromethane	5
cis-1,3-Dichloropropene	5
4-Methyl-2-pentanone	10
Toluene	5
trans-1,3-Dichloropropene	5
1,1,2-Trichloroethane	5
Tetrachloroethene	5
2-Hexanone	10
Dibromochloromethane	5
1,2-Dibromoethane	5
Chlorobenzene	5
Ethylbenzene	5
o-Xylene	5
m, p-Xylene	5
Styrene	5
Bromoform	5
Isopropylbenzene	5
1,1,2,2-Tetrachloroethane	5
1,3-Dichlorobenzene	5
1,4-Dichlorobenzene	5
1,2-Dichlorobenzene	5
1,2-Dibromo-3-chloropropane	5
1,2,4-Trichlorobenzene	5
1,2,3-Trichlorobenzene	5

CRQLs for TCL SVOCs

<u>SEMIVOLATILES</u>	<u>Low Water (µg/L)</u>
Benzaldehyde	5
Phenol	5
bis-(2-chloroethyl) ether	5
2-Chlorophenol	5
2-Methylphenol	5
2,2'-Oxybis (1-chloropropane)	5
Acetophenone	5
4-Methylphenol	5
N-Nitroso-di-n propylamine	5
Hexachloroethane	5
Nitrobenzene	5
Isophorone	5
2-Nitrophenol	5
2,4-Dimethylphenol	5
Bis (2-chloroethoxy) methane	5
2,4-Dichlorophenol	5
Napthalene	5
4-Chloroaniline	5
Hexachlorobutadiene	5
Caprolactam	5
4-Chloro-3-methylphenol	5
2-Methylnapthalene	5
Hexachlorocyclo-pentadiene	5
2,4,6-Trichlorophenol	5
2,4,5-Trichlorophenol	5
1,1'-Biphenyl	5
2-Chloronapthalene	5
2-Nitroaniline	10
Dimethylphthalate	5
2,6-Dinitrotoluene	5
Acenaphthylene	5
3-Nitroaniline	10
Acenaphthene	5
2,4-Dinitrophenol	10

<u>SEMIVOLATILES</u>	<u>Low Water (µg/L)</u>
4-Nitrophenol	10
Dibenzofuran	5
2,4-Dinitrotoluene	5
Diethylphthalate	5
Fluorene	5
4-Chlorophenyl-phenyl ether	5
4-Nitroaniline	10
4,6-Dinitro-2-methylphenol	10
N-Nitrosodiphenylamine	5
1,2,4,5-Tetrachlorobenzene	5
4-Bromophenyl-phenylether	5
Hexachlorobenzene	5
Atrazine	5
Pentachlorophenol	10
Phenanthrene	5
Anthracene	5
Carbazole	5
Di-n-butylphthalate	5
Fluoranthene	5
Pyrene	5
Butylbenzylphthalate	5
3,3'-Dichlorobenzidine	5
Benzo (a) anthracene	5
Chrysene	5
Bis (2-ethylhexyl) phthalate	5
Di-n-octylphthalate	5
Benzo (b) fluoroanthene	5
Benzo (k) fluoroanthene	5
Benzo (a) pyrene	5
Indeno (1,2,3-cd)-pyrene	5
Dibenzo (a,h)-anthracene	5
Benzo (g,h,i) perylene	5
2,3,4,6-Tetrachlorophenol	5



To: "Schauss (Altimari), Christina" <Christina.Schauss@WestonSolutions.com>, charles.rapone@westonsolutions.com, Colleen Walling/ESC/R3/USEPA/US, Dan Slizys/ESC/R3/USEPA/US,
Cc: Victor Yastrop/ESC/R3/USEPA/US, Ruth Scharr/R3/USEPA/US, John Robb/R3/USEPA/US, Karen Esposito/R3/USEPA/US, Carroll Harris/ESC/R3/USEPA/US,
Bcc:
Subject: case 41543, SDG C0AA0, TCE Havertown: memo to file needed

INFORMATION CONTAINED BELOW DOES NOT CONSTITUTE TECHNICAL DIRECTION: THE SAMPLER/FIELD CONTRACTOR SHALL CONTACT HIS EPA CONTRACTING OFFICER FOR TECHNICAL DIRECTION.

Site: TCE Havertown, SDG C0AA0
Lab: KAP
SDG: C0AA0
EPA Lead: Ruth Scharr
Site Lead: Charles Rapone, Weston

1. The sampler failed to list the tag numbers for each sample on the chains of custody. A memo to file is required to correct this error.
2. The sampler made multiple copies of each tag the tags were identical. There were 3 tags numbered 1000 for C0AA0, 3 tag numbered 1003 for C0AA1, then 2 numbered 1002 for C00A1, and so on for every tag except number 1017 for sample C00A9. There were 8 tags numbered 1008 for sample C0AA4. The Region requires that there be only one unique tag with one unique tag number for each aliquot of sample volume.
3. The air bill numbers listed on the chains of custody are not Fed Ex numbers as indicated on the chain of custody. The air bill numbers do not match the air bills which the laboratory is required to include in the data package. The sampler will correct the air bill numbers on the chains of custody via memo to file

Judy Snyder
ESAT Auditor, Region 3
Lockheed Martin IS&GS - Civil
Energy & Environment
701 Mapes Road
Ft. Meade, MD 20755-5350
Phone 410-305-3015
Fax 410-305-3095

Memorandum

41543

To: Snyder.Judy@epamail.epa.gov
From: Charles Rapone (Charlers.Rapone@WestonSolutions.com)
CC: Slizys.Dan@epamail.epa.gov; Walling.Colleen@epamail.epa.gov;
 Harris.Carroll@epamail.epa.gov; Scharr.Ruth@epamail.epa.gov;
 Yastrop.Victor@epamail.epa.gov; Robb.John@epamail.epa.gov;
 Esposito.Karen@epamail.epa.gov; Christina.Schauss@WestonSolutions.com
Sent via: Electronic Mail
Date: 31 August 2011
Re: Resolution for Case 41543 –Sent 08/25/2011

1. The sampler failed to list the tag numbers for each sample on the chains of custody. A memo to file is required to correct this error.

This discrepancy was resolved by assigning sample tag numbers to TR# 3-080111-133924-0001. Please see the below cross-reference. The sample tag numbers will need to be added on the associated TR.

Original Sample No.	SMO Assigned Sample No.	Sample tag numbers	TR # 3-080111
MW1S-080211-01	C0AA0	1000, 1000, 1000	-133924-0001
MW1S-080211-01	C0AA0	1001, 1001	-133924-0001
MW1I-080211-01	C0AA1	1002, 1002, 1002	-133924-0001
MW1I-080211-01	C0AA1	1003, 1003	-133924-0001
MW1I-080211-02	C0AA2	1004, 1004, 1004	-133924-0001
MW1I-080211-02	C0AA2	1005, 1005	-133924-0001
MW2S-080211-01	C0AA3	1006, 1006, 1006	-133924-0001
MW2S-080211-01	C0AA3	1007, 1007	-133924-0001
MW2I-080211-01	C0AA4	1008, 1008, 1008, 1008, 1008, 1008, 1008, 1008, 1008	-133924-0001
MW2I-080211-01	C0AA4	1009, 1009, 1009, 1009	-133924-0001
CW1S-080211-01	C0AA5	1010, 1010, 1010	-133924-0001
CW1S-080211-01	C0AA5	1011, 1011	-133924-0001
CW1I-080211-01	C0AA6	1012, 1012, 1012	-133924-0001
CW1I-080211-01	C0AA6	1013, 1013	-133924-0001
FB-080211	C0AA7	1014, 1014, 1014	-133924-0001
TB-080211	C0AA8	1015, 1015, 1015	-133924-0001
EB-080211	C0AA9	1016, 1016, 1016	-133924-0001

2. The sampler made multiple copies of each tag the tags were identical. There were 3 tags numbered 1000 for C0AA0, 3 tag numbered 1003 for C0AA1, then 2 numbered 1002 for C00A1, and so on for every tag except number 1017 for sample C00A9. There were 8 tags numbered 1008 for sample C0AA4. The Region requires that there be only one unique tag with one unique tag number for each aliquot of sample volume.

In the future, the CLP TR template will be selected in the SCRIBE software. This step will automatically provide one unique tag with one unique tag number for each aliquot of sample volume.

3. The air bill numbers listed on the chains of custody are not Fed Ex numbers as indicated on the chain of custody. The air bill numbers do not match the air bills which the laboratory is required to include in the data package. The sampler will correct the air bill numbers on the chains of custody via memo to file.

Fed Ex air bill number J11201104290225 listed on TR # 3-080111-133924-0001 does not match the Fed Ex air bill numbers present in the data package for samples shipped under the referenced TR. The correct Fed Ex air bills are 795032305027, 795032304947 and 795032305120.

Appendix D

Laboratory Case Narrative

Contract No. EPW11031	Case No. 41543	SDG No. C0AA0
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SDG NARRATIVE

SAMPLE RECEIPT:

On 08/04/11 @ 10:10 A.M. - Received three coolers via FedEx with shipment numbers 795032304947, 795032305120, and 795032305027. The cooler temperatures were 2.9⁰C, 2.5⁰C, and 2.4⁰C.

The package contained the following samples for VOA and SVOA analyses.
 The custody seals were intact.

EPA SAMPLE ID	pH	EPA SAMPLE ID	pH
C0AA0	<2	C0AA5DL	<2
C0AA1	<2	C0AA6	<2
C0AA2	<2	C0AA7	<2
C0AA3	<2	C0AA8	<2
C0AA4	<2	C0AA9	<2
C0AA5	<2		

Issue: The Lab received Sample C0AA0 with 1-1L Amber broken and 1-1L Amber that was leaking for the SVOA analysis. Lab is left with only 400mL of sample. There is sufficient sample for reduced volume analysis for sample C0AA0. Please note that all sample will be used for analyses and if re extraction is needed there will not be any remaining sample. The lab could not guarantee that the sample's integrity or representativeness has not been compromised due to the breakage. The containers for the VOA sample remained intact and were not affected.

Resolution: Per Region 3, the SVOA analysis for sample C0AA0 is canceled due to breakage/spillage that may have compromised the sample's integrity and representativeness. The lab will proceed with the VOA analysis. Please note the issue and proceed.

No other problems were encountered during sample receiving and login.

VOLATILES WATER:

The VOA samples were analyzed on instruments G-5973 GC/MS using a 30 meters long RTX-VMS column having a 0.25mm ID and 3µm film thickness. The trap used was OV-1/Tenax/Silica Gel (Tekmar #6 CAT #14-1755-003).

A 5 mL purge volume was used for water sample analyses, blanks and calibration standards. The concentrations of the standards and spikes were maintained at the levels required by the Statement of Work (SOW).

Contract No. EPW11031	Case No. 41543	SDG No. C0AA0
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SDG NARRATIVE

During the VOA analyses the samples C0AA5 had high target compound concentrations above the calibration range and were analyzed using dilutions in order to bring the concentrations within the above the calibration range. Both the analyses were reported and are billable.

No other problems were encountered during the analysis of this sample.

The formula used to calculate the Sample concentration:

$$\text{Concentration in ug/L} = \frac{(A_x) (I_s) (DF)}{(A_{is}) (RRF) (V_o)}$$

Where,

A_x = Area of the characteristic ion (EICP) for the compound to be measured.

A_{is} = Area of the characteristic ion (EICP) for the internal standard.

I_s = Amount of internal standard added in ng.

RRF = Mean relative Response Factor from the initial calibration standard.

V_o = Total Volume of water purged, in ml.

DF = Dilution Factor.

Manual Integrations:

The software did not pick-up the following compounds and these compounds were manually integrated and the EICP is enclosed in the data package.

- | | |
|----------------------------|----------------------------|
| C0AA0 – 1,4-Dioxane-d8 | VSTD0109L – 1,4-Dioxane |
| C0AA1 – 1,4-Dioxane-d8 | VSTD0059L – 1,4-Dioxane-d8 |
| C0AA2 – 1,4-Dioxane-d8 | VSTD0059L – 1,4-Dioxane |
| C0AA4 – 1,4-Dioxane-d8 | VSTD0059L – Bromoform |
| C0AA5 – 1,4-Dioxane-d8 | VSTD0509N – 1,4-Dioxane-d8 |
| C0AA5DL – 1,4-Dioxane-d8 | VSTD0509N – 1,4-Dioxane |
| C0AA9 – 1,4-Dioxane-d8 | VSTD0509P – 1,4-Dioxane-d8 |
| VSTD2009L – 1,4-Dioxane-d8 | VSTD0509P – 1,4-Dioxane |
| VSTD1009L – 1,4-Dioxane-d8 | VSTD0509Q – 1,4-Dioxane-d8 |
| VSTD1009L – 1,4-Dioxane | VSTD0509Q – 1,4-Dioxane |
| VSTD0509L – 1,4-Dioxane-d8 | VSTD0509R – 1,4-Dioxane |
| VSTD0509L – 1,4-Dioxane | VBLK9Q – 1,4-Dioxane-d8 |
| VSTD0109L – 1,4-Dioxane-d8 | VIBLK19 – 1,4-Dioxane-d8 |

Contract No. EPW11031	Case No. 41543	SDG No. C0AA0
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SDG NARRATIVE

SEMIVOLATILES- WATER:

The water samples were extracted on 08/07/2011 using continuous Liquid/Liquid Extraction as per statement of work SOM 1.2. No problems were encountered during extraction and analysis.

The samples were analyzed on instrument D-5973 GC/MS using a 30 meters long RTX-5MS column having a 0.25mm ID and 0.25µm film thickness.

No problems were encountered during the sample analyses.

The formula used to calculate the Sample concentration:

WATER SAMPLES:

$$\text{Concentration ug/L} = \frac{(Ax)(Is)(Vt)(DF)}{(Ais)(RRF)(Vo)(Vi)}$$

Where,

- Ax = Area of the characteristic ion for the compound to be measured.
- Ais = Area of the characteristic ion for the internal standard.
- Is = Amount of internal standard injected in ng
- Vo = Volume of water extracted in mL.
- Vi = Volume of extract injected in uL.
- RRF = Mean Relative Response Factor determined from the initial calibration Standard.
- DF = Dilution Factor.

Manual Integrations:

The software did not pick-up the following compounds and these compounds were manually integrated and the EICP is enclosed in the data package.

- | | |
|----------------------------------|----------------------------------|
| C0AA4 – 4-Nitrophenol-d4 | SSTD0058Y – Pentachlorophenol |
| SSTD0808Y – Caprolactam | SSTD0058Y – Benzo(b)fluoranthene |
| SSTD0208Y – 2,4-Dinitrophenol | SSTD0208Y – 2,4-Dinitrophenol |
| SSTD0208Y – Benzo(b)fluoranthene | SSTD0208Y – Benzo(b)fluoranthene |
| SSTD0108Y – Benzo(b)fluoranthene | SSTD0201U – 4-Nitroaniline |
| SSTD0058Y – Caprolactam | |

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy sample data package and in the electronic data deliverable has been authorized by the laboratory manager or the manager's designee, as verified by the following signature:

Nicole Hoque
 Signature/Title

8/23/11
 Date of Signature



Kap Technologies <kaptechnologies@gmail.com>

**Region 03 | Case 41543 | Lab KAP | SDG C0AA0 | Issue
Broken samples | FINAL**

1 message

Mr, Matthew <mbarr3@fedcsc.com>

Tue, Aug 16, 2011 at 12:13 PM

1 kaptechnologies@gmail.com, "Rao Alsakani (Primary)" <raalsakani@sbcglobal.net>

1 Carroll Harris <harris.carroll@epa.gov>, John Kwedar <kwedar.john@epa.gov>, penix.lisa@epa.gov,

Sys.Dan@epamail.epa.gov, Snyder.Judy@epamail.epa.gov

Record of Communication Update-

This ROC is being updated with additional information provided by the lab and a revised resolution.

Vishnu,

****Summary Start****

Issue: The Lab received Sample C0AA0 with 1-1L Amber broken and 1-1L Amber that was leaking for the SVOA analysis. Lab is left with only 400mL of sample. There is sufficient sample for reduced volume analysis for sample C0AA0. Please note that all sample will be used for analyses and if re extraction is needed there will not be any remaining sample. The lab could not guarantee that the sample's integrity or representativeness has not been compromised due to the breakage. The containers for the VOA sample remained intact and were not affected.

Resolution: Per Region 3, the SVOA analysis for sample C0AA0 is canceled due to breakage/spillage that may have compromised the sample's integrity and representativeness. The lab will proceed with the VOA analysis. Please note the issue and proceed.

*****Summary End*****

Please let me know if you have any questions. To waive any defect(s) associated with this issue, please contact your PO.

Thanks,

Matt Barr

0587

Appendix E

TIC Form Is

1J - FORM I VOA-TIC
 VOLATILE ORGANICS ANALYSIS DATA SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

COAA5

Lab Name: KAP TECHNOLOGIES, INC.

Contract: EPW11031

Lab Code: KAP

Case No.: 41543

Mod. Ref No.: _____

SDG No.: COAA0

Matrix: (SOIL/SED/WATER) WATER

Lab Sample ID: S-4263.06

Sample wt/vol: 5.000 (g/mL) ML

Lab File ID: G15296

Level: (TRACE or LOW/MED) LOW

Date Received: 08/04/2011

% Moisture: not dec. _____

Date Analyzed: 08/12/2011

GC Column: RTX-VMS

ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

Purge Volume: 5.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	001825-61-2	Silane, methoxytrimethyl-	4.28	8.3	NJ
02	000156-59-2	Ethene, 1,2-dichloro-, (Z)-	4.33	5.8	NJ
03		Unknown-01	6.65	8.7	J
04		Unknown-02	10.01	53	56
05	000556-67-2	Cyclotetrasiloxane, octamethy	14.50	6.2	NJ
06	017059-48-2	1H-Indene, 2,3-dihydro-1,6-di	17.64	12	NJ
07					
08					
09					
10					
11					
12					
13					
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15					
16					
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19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 ¹	Total Alkanes	N/A		

¹ EPA-designated Registry Number.

SOM01.2 (6/2007)

Handwritten signature/initials

Library Search Compound Report

Data Path : C:\MSDCHEM\1\DATA\
 Data File : G15296.D
 Acq On : 08/12/11 11:33
 Sample : C0AA5
 Misc : S-4263 06 5ML
 ALS Vial : 5 Sample Multiplier: 1

Operator: AR
 Inst : G-5973

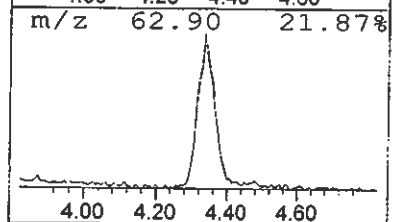
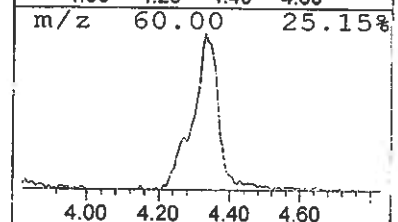
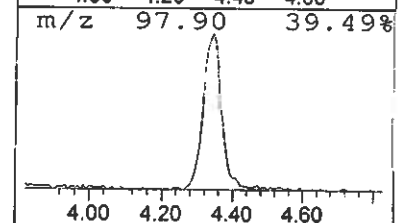
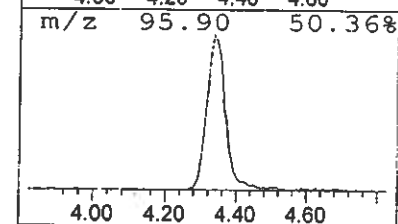
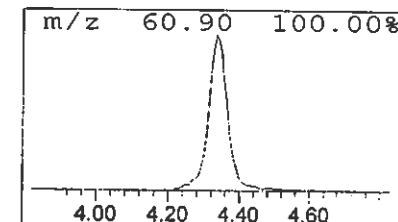
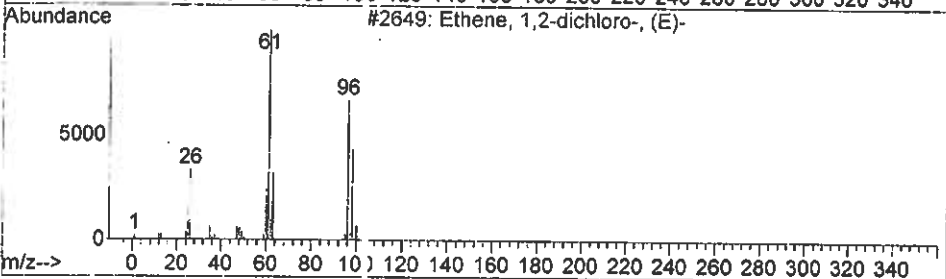
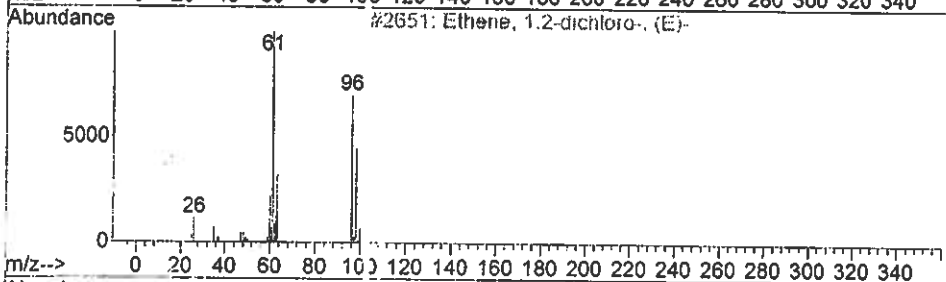
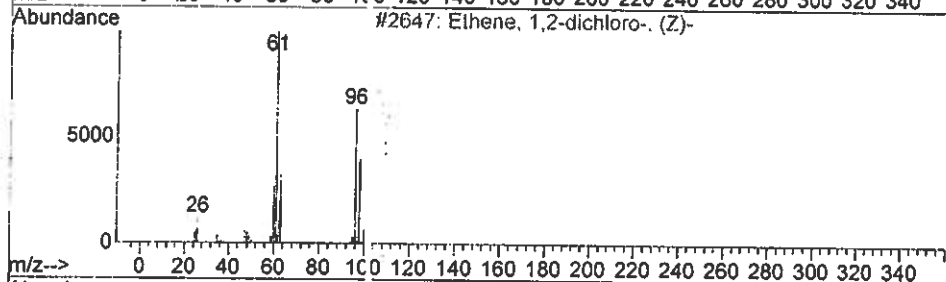
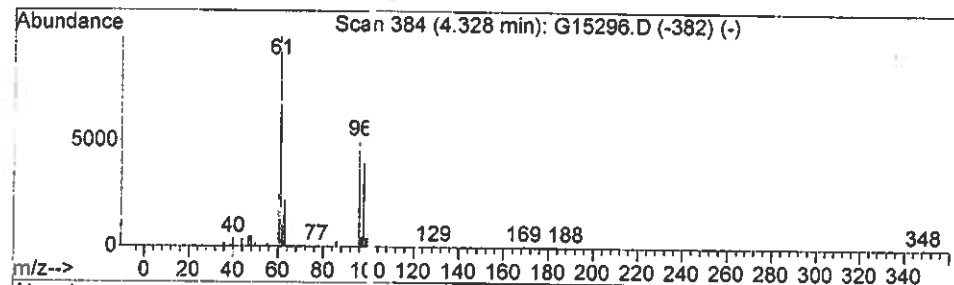
Quant Method : C:\MSDCHEM\1\METHODS\CLPM15258-2167.M
 Quant Title : LOW SOIL- VOLATILES ANALYSIS BY SOM01.2

TIC Library : C:\DATABASE\NIST02.L
 TIC Integration Parameters: LSCINT.e

 Peak Number 2 Ethene, 1,2-dichloro-, (Z)- Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.33	5.79 ug/L	8049160	1,4-Difluorobenzene	8.26

Hit#	of	Tentative ID	MW	MolForm	CAS#	Qual
1	5	Ethene, 1,2-dichloro-, (Z)-	96	C2H2Cl2	000156-59-2	94 ✓
2		Ethene, 1,2-dichloro-, (E)-	96	C2H2Cl2	000156-60-5	91
3		Ethene, 1,2-dichloro-, (E)-	96	C2H2Cl2	000156-60-5	91
4		Ethene, 1,2-dichloro-, (E)-	96	C2H2Cl2	000156-60-5	91
5		Ethene, 1,2-dichloro-, (Z)-	96	C2H2Cl2	000156-59-2	91



1K - FORM I SV-TIC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
C0AA3

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031
 Lab Code: KAP Case No.: 41543 Mod. Ref No.: _____ SDG No.: C0AA0
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: S-4263.04
 Sample wt/vol: 1000 (g/mL) ML Lab File ID: D04128
 Level: (LOW/MED) LOW Extraction: (Type) CONT
 % Moisture: _____ Decanted: (Y/N) N Date Received: 08/04/2011
 Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/07/2011
 Injection Volume: 1.0 (uL) Date Analyzed: 08/22/2011
 GPC Cleanup: (Y/N) N pH: 4.6 Dilution Factor: 1.0
 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	005989-27-5	D-Limonene	5.82	6.1	NB
02		Unknown-01	14.59	5.2	J
03	000057-10-3	n-Hexadecanoic acid	14.95	5.0	NJ
04		Unknown-02	18.98	6.9	J
05					
06					
07					
08					
09					
10					
11					
12					
13					
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18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 ²	Total Alkanes	N/A		

² EPA-designated Registry Number.

JL
8/22/11
SOM01.2 (6/2007)

1K - FORM I SV-TIC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
C0AA4

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031
Lab Code: KAP Case No.: 41543 Mod. Ref No.: _____ SDG No.: C0AA0
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: S-4263.05
Sample wt/vol: 1000 (g/mL) ML Lab File ID: D04129
Level: (LOW/MED) LOW Extraction: (Type) CONT
% Moisture: _____ Decanted: (Y/N) N Date Received: 08/04/2011
Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/07/2011
Injection Volume: 1.0 (uL) Date Analyzed: 08/22/2011
GPC Cleanup: (Y/N) N pH: 6.2 Dilution Factor: 1.0
CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	003760-14-3 ()	1,5-Cyclooctadiene, 1,5-dimet	5.82	6.5	0 <i>MSB</i>
02		Unknown-01	9.96	10	J
03		Unknown-02	11.46	5.2	J
04					
05					
06					
07					
08					
09					
10					
11					
12					
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22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 ²	Total Alkanes	N/A		

² EPA-designated Registry Number.

DJ
8/24/11

1K - FORM I SV-TIC
 SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
 C0AA5

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031
 Lab Code: KAP Case No.: 41543 Mod. Ref No.: _____ SDG No.: C0AA0
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: S-4263.06
 Sample wt/vol: 1000 (g/mL) ML Lab File ID: D04130
 Level: (LOW/MED) LOW Extraction: (Type) CONT
 % Moisture: _____ Decanted: (Y/N) N Date Received: 08/04/2011
 Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/07/2011
 Injection Volume: 1.0 (uL) Date Analyzed: 08/22/2011
 GPC Cleanup: (Y/N) N pH: 5.8 Dilution Factor: 1.0
 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	005989-54-8 (uL)	Cyclohexene, 1-methyl-4-(1-methyl-2-propenyl)-	5.82	5.9	1163
02		Unknown-01	14.40	5.8	J
03		Unknown-02	14.59	5.5	J
04	000057-10-3	n-Hexadecanoic acid	14.96	8.2	NJ
05		Unknown-03	17.21	7.0	J
06					
07					
08					
09					
10					
11					
12					
13					
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18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 ²	Total Alkanes	N/A		

² EPA-designated Registry Number.

DV
8/19/11
 SOM01.2 (6/2007)

RB

1K - FORM I SV-TIC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
C0AA9

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031
Lab Code: KAP Case No.: 41543 Mod. Ref No.: _____ SDG No.: C0AA0
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: S-4263.10
Sample wt/vol: 1000 (g/mL) ML Lab File ID: D04132
Level: (LOW/MED) LOW Extraction: (Type) CONT
% Moisture: _____ Decanted: (Y/N) N Date Received: 08/04/2011
Concentrated Extract Volume: 1000 (uL) Date Extracted: 08/07/2011
Injection Volume: 1.0 (uL) Date Analyzed: 08/22/2011
GPC Cleanup: (Y/N) N pH: 5.5 Dilution Factor: 1.0
CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown-01	5.82	5.2	J
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
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18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796 ²	Total Alkanes	N/A		

² EPA-designated Registry Number.