Fw: Final report for soil-gas work

Scott Miller to: Debbie Jourdan 06/13/2011 11:09 AM

From: Scott Miller/R4/USEPA/US
To: Debbie Jourdan/R4/USEPA/US@EPA

Debbie,
Good morning, can you save this to SDMS for Capitol City Plume?
Thank you,

Scott Miller
Remedial Project Manager
Superfund Division
Superfund Remedial Branch
Section C
U.S. EPA Region 4
61 Forsyth Street, SW
Atlanta, GA 30303
Phone (404) 562-9120
Fax (404) 562-8896
----- Forwarded by Scott Miller/R4/USEPA/US on 06/13/2011 11:09 AM -----

From: James E Landmeyer <jlandmey@usgs.gov>
To: Scott Miller/R4/USEPA/US@EPA
Cc: Athena P Clark <athclark@usgs.gov>
Date: 06/13/2011 08:24 AM
Subject: Final report for soil-gas work

Hi Scott,

Here is the final report we received from Gore for the soil-gas work near the phyto site:

James E. Landmeyer, Ph.D.
U.S. Geological Survey

https://profile.usgs.gov/jlandmey

GORE Surveys Final Report 21040381.pdf

GORE® Surveys

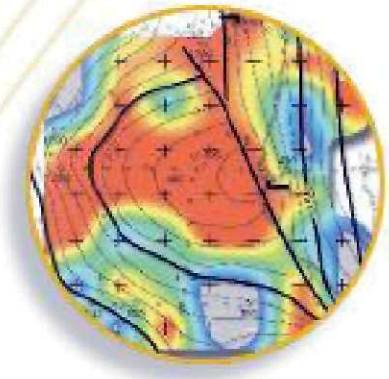
Final Report

Project:	CCP - Baseball Field Parking
Gore Order Number:	21040381
Date Prepared:	USGS-WRD
Prepared for:	720 Gracern Road Suite 200W Columbia, SC

Written/ Submitted by
James E. Whetzel
Project Manager

Written/ Submitted by
Hilary G. Trethewey
Project Manager

Analytical Data Reviewed by
Dayna M. Cobb
Chemist



W.L. Gore & Associates, Inc.
Survey Products Group

GORE® Surveys - Final Report

REPORT DATE: 05/23/2011 **AUTHOR:** JW

SITE INFORMATION

Site Reference: CCP - Baseball Field Parking
Gore Production Order Number: 21040381 **Gore Site Code:** FXI

FIELD PROCEDURES

 # Modules shipped: 13
Installation Date(s): 4/13/2011
 # Modules Installed: 13
Field work performed by: USGS-WRD

Retrieval date(s): 4/13, 18/ 2011
 # Modules Retrieved: 13
 # Modules Lost in Field: 0
 # Modules Not Returned: 0

Exposure Time: ~2 Hrs and 5 Days
 # Trip Blanks Returned: 0
 # Unused Modules Returned: 0

Date/Time Received by Gore: 4/21/2011 2:00 PM By: CW
Chain of Custody Form attached: Yes
Chain of Custody discrepancies: None
Comments:
All modules were returned with intact tamper seals.
Modules 660520 and -521 were returned in the other's vial.
No modules were identified as trip blanks.

GORE® Surveys - Final Report

QUALITY ASSURANCE STATEMENT

W.L. Gore & Associates´ Survey Products' Laboratory operates under the guidelines of ISO Standard 17025, its Quality Assurance Manual, Operating Procedures and Methods. For this project, the analytical method, reported results, and observations reported are considered screening level and do not fall within the scope of W.L. Gore's ISO 17025 accreditation.

ANALYTICAL PROCEDURES

Instrumentation consists of state of the art gas chromatographs equipped with mass selective detectors, coupled with automated thermal desorption units. Sample preparation simply involves cutting the tip off the bottom of the sample module and transferring one or more exposed sorbent containers (sorbers, each containing engineered adsorbents) to a thermal desorption tube for analysis. Sorbers remain clean and protected from dirt, soil, and ground water by the insertion/retrieval cord, and require no further sample preparation.

Analytical Method Quality Assurance:
The analytical method employed is a modified EPA method 8260/8270. Before each run sequence, two instrument blanks, a sorber containing 5µg BFB (Bromofluorobenzene), and a method blank are analyzed. The BFB mass spectra must meet the criteria set forth in the method before samples can be analyzed. A method blank and a sorber containing BFB are also analyzed after every 30 samples and/or trip blanks. Standards containing the selected target compounds at five calibration levels are analyzed at the beginning of each run. The criterion for each target compound is less than 25% RSD (relative standard deviation). If this criterion is not met for any target compound, the analyst has the option of generating second- or third-order standard curves, as appropriate. A second-source reference standard, at a level of 10µg per target compound, is analyzed after every ten samples and/or trip blanks, and at the end of the run sequence. Positive identification of target compounds is determined by 1) the presence of the target ion and at least two secondary ions; 2) retention time versus reference standard; and, 3) the analyst's judgment.

NOTE: All data have been archived. Any replicate sorbers not used in the initial analysis will be discarded fifteen (15) days from the date of analysis.

Laboratory analysis: thermal desorption, gas chromatography, mass selective detection
Instrument ID: # 5 **Chemist:** NU/ JE
Compounds/mixtures requested: A1
Deviations from Standard Method: None
Comments: Soil vapor analytes and abbreviations are tabulated in the Data Table Key (page 6).

GORE® Surveys - Final Report

DATA TABULATION

 # CONTOUR MAPS ENCLOSED: Three (3) B-sized color contour maps
LIST OF MAPS ENCLOSED:

- Tetrachloroethene (PCE)
- Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)
- Total Petroleum Hydrocarbons (TPH)

NOTE: All data values presented in Appendix A represent masses of compound(s) desorbed from the GORE® Modules received and analyzed by W.L. Gore & Associates, Inc., as identified in the Chain of Custody (Appendix A). The measurement traceability and instrument performance are reproducible and accurate for the measurement process documented. Semi-quantitation of the compound mass is based on a five-level standard calibration.

General Comments:

- This survey reports mass levels present in the vapor phase. Vapors are subject to a variety of attenuation factors during migration away from the source concentration to the module. Thus, mass levels reported from the module will often be less than concentrations reported in soil and groundwater matrix data. In most instances, the masses reported on the modules compare favorably with concentrations reported in the soil or groundwater (e.g., where soil gas levels are reported at greater levels relative to other sampled locations on the site, matrix data should reveal the same pattern, and vice versa). However, due to a variety of factors, a perfect comparison between matrix data and soil gas levels can rarely be achieved.
- Soil gas signals reported by this method cannot be identified specifically to soil adsorbed, groundwater, and/or free-product contamination. The soil gas signal reported from each module can evolve from all of these sources. Differentiation between soil and groundwater contamination can only be achieved with prior knowledge of the site history (i.e., the site is known to have groundwater contamination only).
- Mass values from modules deployed in water are due to vapors partitioning from the dissolved phase onto the sorbent material.
- Total petroleum hydrocarbon (TPH) values were calculated using the area under the peaks observed in m/z 55 and 57 selected ion chromatograms. Quantitation of the mass value was performed using the response factor a specific alkane (present in the calibration standards).
- TPH values include the entire chromatogram and provide estimates for aliphatic hydrocarbon ranges of C4 to C20.

- QA/QC trip blank modules were provided to document potential exposures that were not part of the signal of interest (i.e., impact during module shipment, installation and retrieval, and storage). The trip blanks are identically manufactured and packaged soil gas modules to those modules placed in the subsurface. However, the trip blanks remain unopened during all phases of the survey. Levels reported on the trip blanks may indicate potential impact to modules other than the contaminant source of interest.
- Unresolved peak envelopes (UPEs) are represented as a series of compound peaks clustered together around a central gas chromatograph elution time in the total ion chromatogram. Typically, UPEs are indicative of complex fluid mixtures that are present in the subsurface. UPEs observed early in the chromatogram are considered to indicate the presence of more volatile fluids, while UPEs observed later in the chromatogram may indicate the presence of less volatile fluids. Multiple UPEs may indicate the presence of multiple complex fluids.
- Stacked total ion chromatograms (TICs) are included in Appendix A. The six-digit serial number of each module is incorporated into the TIC identification (e.g.: 123456S.D represents module #123456).

Project Specific Comments:

- One module, 660512 was deployed into ground water. All other modules were installed in the vadose zone of the site. No concentration values were calculated for either matrix. Color contour maps were generated using only the analytical results from soil gas samples.
- The minimum (gray) contour level, for each mapped analyte or group of analytes, was set at the maximum blank level observed or the method detection limit, whichever was greater. When target compounds are combined (i.e., BTEX), the contour minimum is arbitrarily set at 0.02 µg or the maximum blank level, whichever is greater. The maximum contour level was set at the maximum value observed.
- Background levels of TPH were detected on the trip blanks and/or the method blanks. Thus, target analyte levels reported for the field-installed modules that exceed trip and method blank levels, and the analyte method detection limit, are more likely to have originated from on-site sources.
- A minimum curvature surface was used to interpolate the data between sampling points. A minimum curvature surface is the smoothest possible surface that will fit the given data values. In cases where values trend from low to high in the direction of the edge of the survey area, the curve will continue to rise (showing warmer colors) as no additional data exists to constrain it. Where values trend from high to low the opposite is also true.
- The mapped spatial patterns indicated partially defined contaminant plumes in the survey area.

GORE® Surveys - Final Report

KEY TO DATA TABLE

UNITS

µg	micrograms, relative mass value
MDL	method detection limit
bdl	below detection limit; compound was observed at level below the MDL
nd	non-detect, compound was not detected at any level

ANALYTES

TPH	total petroleum hydrocarbons
BTEX	combined masses of benzene, toluene, ethylbenzene and total xylenes (Gasoline Range Aromatics)
BENZ	benzene
TOL	toluene
EtBENZ	ethylbenzene
mpXYL	m-, p-xylene
oXYL	o-xylene
C11,C13&C15	combined masses of undecane, tridecane, and pentadecane (C11+C13+C15) (Diesel Range Alkanes)
UNDEC	undecane
TRIDEC	tridecane
PENTADEC	pentadecane
TMBs	combined masses of 1,3,5-trimethylbenzene and 1,2,4-trimethylbenzene
135TMB	1,3,5-trimethylbenzene
124TMB	1,2,4-trimethylbenzene
ct12DCE	cis- & trans-1,2-dichloroethene
t12DCE	trans-1,2-dichloroethene
c12DCE	cis-1,2-dichloroethene
NAPH&2-MN	combined masses of naphthalene and 2-methyl naphthalene
NAPH	naphthalene
2MeNAPH	2-methyl naphthalene
MTBE	methyl t-butyl ether
11DCA	1,1-dichloroethane
$CHC1_3$	chloroform
111TCA	1,1,1-trichloroethane
12DCA	1,2-dichloroethane
$CC1_4$	carbon tetrachloride
TCE	trichloroethene
OCT	octane
PCE	tetrachloroethene
ClBENZ	chlorobenzene
14DCB	1,4-dichlorobenzene
112TCA	1,1,2-trichloroethane
1112TetCA	1,1,1,2-tetrachloroethane
1122TetCA	1,1,2,2-tetrachloroethane
13DCB	1,3-dichlorobenzene
12DCB	1,2-dichlorobenzene

BLANKS

method blank	QA/QC module, documents analytical conditions during analysis

APPENDIX A:

1. CHAIN OF CUSTODY AND INSTALLATION/ RETRIEVAL LOG
2. DATA TABLE
3. STACKED TOTAL ION CHROMATOGRAMS
4. CONTOUR MAPS

GORE™ Screening Survey Chain of Custody

For W.L. Gore & Associates use only
Production Order # 21040381

GORE Creative Technologies Worldwide

W. L. Gore & Associates, Inc., Survey Products Group

100 Chesapeake Boulevard • Elkton, Maryland 21921 • Tel: (410) 392-7600 • Fax (410) 506-4780

Instructions: Customer must complete ALL shaded cells

Customer Name: USGS WRD	Site Name: USGS SITE
Address: 720 GRACERN ROAD SUITE 200W	Site Address: MONTGOMERY AL
COLUMBIA SC	
USA	Project Manager: JIM LANDMEYER
Phone: 803 750 7651	Customer Project No.: 12308713
FAX:	Customer P.O. #: Quote #:

Serial # of Modules Shipped				# of Modules for Installation 12	# of Trip Blanks 1	
# 660512	- # 660524	#	- #	Total Modules Shipped: 13 Pieces		
#	- #	#	- #	Total Modules Received: 13 Pieces		
#	- #	#	- #	Total Modules Installed: Pieces		
#	- #	#	- #	Serial # of Trip Blanks (*Client Decides*)		#
#	- #	#	- #	#	#	#
#	- #	#	- #	#	#	#
#	- #	#	- #	#	#	#
#	- #	#	- #	#	#	#
#	- #	#	- #	#	#	#
#	- #	#	- #	#	#	#
Prepared By: Darlene Galloway				#	#	#
Verified By: MaryAnne Meaghie				#	#	#

Installation Performed By:	Installation Method(s) (*circle those that apply*):
Name (*please print*): Jim Landmeyer/Amy Gill	Slide Hammer Hammer Drill Auger
Company/Affiliation: USGS	Other: Hand Drill
Installation Start Date and Time: 4/13/2011	13:52 AM (PM) CDT
Installation Complete Date and Time: 4/13/2011	15:15 AM (PM) CDT
Retrieval Performed By:	Total Modules Retrieved: 13 Pieces
Name (*please print*): Amy Gill	Total Modules Lost in Field: Ø Pieces
Company/Affiliation: 1 USGS	Total Unused Modules Returned: Ø Pieces
Retrieval Start Date and Time: 4/13/2011	16:00 AM (PM) CDT
Retrieval Complete Date and Time: 4/18/2011	14:08 AM (PM) CDT

	Date	Time		Date	Time
Relinquished By Darlene Galloway Affiliation: W.L. Gore & Associates, Inc.	4-6-11	2:00	Received By: Amy C. Gill Affiliation: USGS	04/18	
Relinquished By Amy C. Gill Affiliation: USGS	04/20	13:00	Received By: Affiliation:		
Relinquished By Affiliation			Received By: [signature] Affiliation: W.L. Gore & Associates, Inc.	4/21/11	14:00

SPG-FCD-0298 March 12, 2010

GORE-SORBER® Screening Survey
Installation and Retrieval Log

Page 1. of 1.

SITE NAME & LOCATION
CCP - Baseball Field Parking

LINE #	MODULE #	INSTALLATION DATE/TIME	RETRIEVAL DATE/TIME	EVIDENCE OF LIQUID HYDROCARBONS (LPH) or HYDROCARBON ODOR (Check as appropriate)			MODULE IN WATER (check one)		COMMENTS
				LPH	ODOR	NONE	YES	NO	
1.	660512	4/13/2011 @ 1352	4/13/2011 @ 1600				✓		water sample
2.	660513	4/13/2011 @ 1400	4/18/2011 @ 1415					✓	soil gas
3.	660514	4/13/2011 @ 1415	4/18/2011 @ 1334					✓	soil gas island 1
4.	660515	4/13/2011 @ 1425	4/18/2011 @ 1337					✓	soil gas island 1, sub island
5.	660516	4/13/2011 @ 1430	4/18/2011 @ 1340					✓	soil gas island 1
6.	660517	4/13/2011 @ 1435	4/18/2011 @ 1342					✓	soil gas island 1, sub island
7.	660518	4/13/2011 @ 1440	4/18/2011 @ 1344					✓	soil gas island 2, dropped
8.	660519	4/13/2011 @ 1445	4/18/2011 @ 1347					✓	soil gas island 2
9.	660520	4/13/2011 @ 1452	~~4/18/2011 @ 1348~~	4/18/2011 @ 1358		* Placed in bottle for 521		✓	soil gas island 2
10.	660521	4/13/2011 @ 1456	4/18/2011 @ 1348	* placed in bottle for 520				✓	soil gas island 2
11.	660522	4/13/2011 @ 1505	4/18/2011 @ 1402					✓	soil gas island 3
12.	660523	4/13/2011 @ 1510	4/18/2011 @ 1405					✓	soil gas island 4
13.	660524	4/13/2011 @ 1515	4/18/2011 @ 1408					✓	soil gas island 4, dropped
14.									
15.		Latitude	Longitude - Trimble Nomad						
16.	660512	32° 22' 56.14"	86° 18' 22.42"						WL Depth = 35.00 Sampler Depth = 50.00
17.	660513	"	"						soil gas ≈ 5 ft.
18.	660514	32° 22' 56.70"	86° 18" 22.63"						soil gas
19.	660515	32° 22' 57.34"	86° 18" 22.89"						soil gas
20.	660516	32° 22' 58.27"	86° 18" 22.72"						soil gas
21.	660517	32° 22' 59.14"	86° 18' 23.02"						soil gas
22.	660518	32° 22' 58.81"	86° 18' 23.93"						soil gas
23.	660519	32° 22' 58.07"	86° 18' 23.84"						soil gas
24.	660520	32° 22' 57.20"	86° 18' 23.45"						soil gas
25.	660521	32° 22' 56.55"	86° 18' 23.70"						soil gas
26.	660522	32° 22' 59.11"	86° 18' 27.31"						soil gas
27.	660523	32° 22' 58.69"	86° 18' 28.33"						soil gas
28.	660524	32° 22' 59.18"	86° 18' 31.93"						soil gas
29.									
30.									
31.									Comments 4/18/2011
32.									4 trailway buses running
33.									#18 had ants
34.									#13 had condensation
35.									
36.	Sampler 520 & 521 are in the wrong vials.								
37.	Please use module # for id rather than bottle #.								
38.	Location and sample times shown above are correct.								
39.									
40.									
41.									
42.									

GORE(TM) SURVEYS ANALYTICAL RESULTS
USGS-WRD, COLUMBIA, SC
GORE STANDARD TARGET VOCs/SVOCs (A1)
CCP-BASEBALL FIELD PARKING
SITE FXI - PRODUCTION ORDER #21040381

DATE ANALYZED	SAMPLE NAME	TPH, ug	BTEX, ug	BENZ, ug	TOL, ug	EtBENZ, ug	mpXYL, ug	oXYL, ug	C11, C13, &C15, ug	UNDEC, ug
	MDL=	0.02		0.01	0.01	0.02	0.02	0.01		0.01
05-03-2011	660512	0.24	1.63	0.04	1.59	nd	nd	nd	nd	nd
05-03-2011	660513	1.92	0.27	nd	0.27	nd	bdl	nd	0.04	0.01
05-03-2011	660514	1.00	0.05	nd	0.05	nd	nd	nd	nd	nd
05-03-2011	660515	2.30	nd	nd	nd	nd	nd	nd	nd	nd
05-03-2011	660516	1.25	0.04	nd	0.04	nd	bdl	nd	0.01	nd
05-03-2011	660517	0.10	nd	nd	nd	nd	nd	nd	nd	nd
05-03-2011	660518	0.26	0.05	nd	0.05	nd	nd	nd	nd	nd
05-03-2011	660519	0.12	0.02	nd	nd	nd	0.02	nd	nd	nd
05-03-2011	660520	1.54	nd	nd	nd	nd	nd	nd	0.01	nd
05-03-2011	660521	0.09	nd	nd	nd	nd	nd	nd	nd	nd
05-03-2011	660522	0.13	nd	nd	nd	nd	nd	nd	nd	nd
05-03-2011	660523	0.18	nd	nd	nd	nd	nd	nd	nd	nd
05-03-2011	660524	0.11	nd	nd	nd	nd	nd	nd	nd	nd
05-03-2011	method blank	0.08	nd	nd	nd	nd	nd	nd	nd	nd
	Maximum	2.30	1.63	0.04	1.59	0.00	0.02	0.00	0.04	0.01
	Standard Dev.	0.79	0.45	0.01	0.44	0.00	0.01	0.00	0.01	0.00
	Mean	0.71	0.16	0.00	0.15	0.00	0.00	0.00	0.01	0.00

No mdl is available for summed combinations of analytes. In summed columns (eg., BTEX), the reported values should be considered ESTIMATED if any of the individual compounds were reported as bdl.

GORE(TM) SURVEYS ANALYTICAL RESULTS
USGS-WRD, COLUMBIA, SC
GORE STANDARD TARGET VOCs/SVOCs (A1)
CCP-BASEBALL FIELD PARKING
SITE FXI - PRODUCTION ORDER #21040381

SAMPLE NAME	TRIDEC, ug	PENTADEC, ug	TMBs, ug	124TMB, ug	135TMB, ug	ct12DCE, ug	t12DCE, ug	c12DCE, ug	NAPH&2-MN, ug
MDL=	0.01	0.01		0.01	0.02		0.05	0.02	
660512	nd	nd	nd	nd	nd	nd	nd	nd	nd
660513	0.02	0.02	0.03	0.03	nd	nd	nd	nd	0.04
660514	nd	bdl	nd	nd	nd	nd	nd	nd	nd
660515	nd	bdl	nd	nd	nd	nd	nd	nd	nd
660516	nd	0.01	0.01	0.01	nd	nd	nd	nd	3.07
660517	nd	nd	nd	nd	nd	nd	nd	nd	nd
660518	nd	nd	0.01	0.01	bdl	nd	nd	nd	1.62
660519	nd	nd	nd	nd	nd	nd	nd	nd	0.10
660520	nd	0.01	nd	nd	nd	nd	nd	nd	nd
660521	nd	nd	nd	nd	nd	nd	nd	nd	0.04
660522	nd	nd	nd	nd	nd	nd	nd	nd	nd
660523	nd	bdl	nd	nd	nd	nd	nd	nd	nd
660524	nd	nd	nd	nd	nd	nd	nd	nd	nd
method blank	nd	nd	nd	nd	nd	nd	nd	nd	nd
Maximum	0.02	0.02	0.03	0.03	0.01	0.00	0.00	0.00	3.07
Standard Dev.	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.92
Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37

No mdl is available for summed combinations of analytes. In summed columns (eg., BTEX), the reported values should be considered ESTIMATED if any of the individual compounds were reported as bdl.

GORE(TM) SURVEYS ANALYTICAL RESULTS
USGS-WRD, COLUMBIA, SC
GORE STANDARD TARGET VOCs/SVOCs (A1)
CCP-BASEBALL FIELD PARKING
SITE FXI - PRODUCTION ORDER #21040381

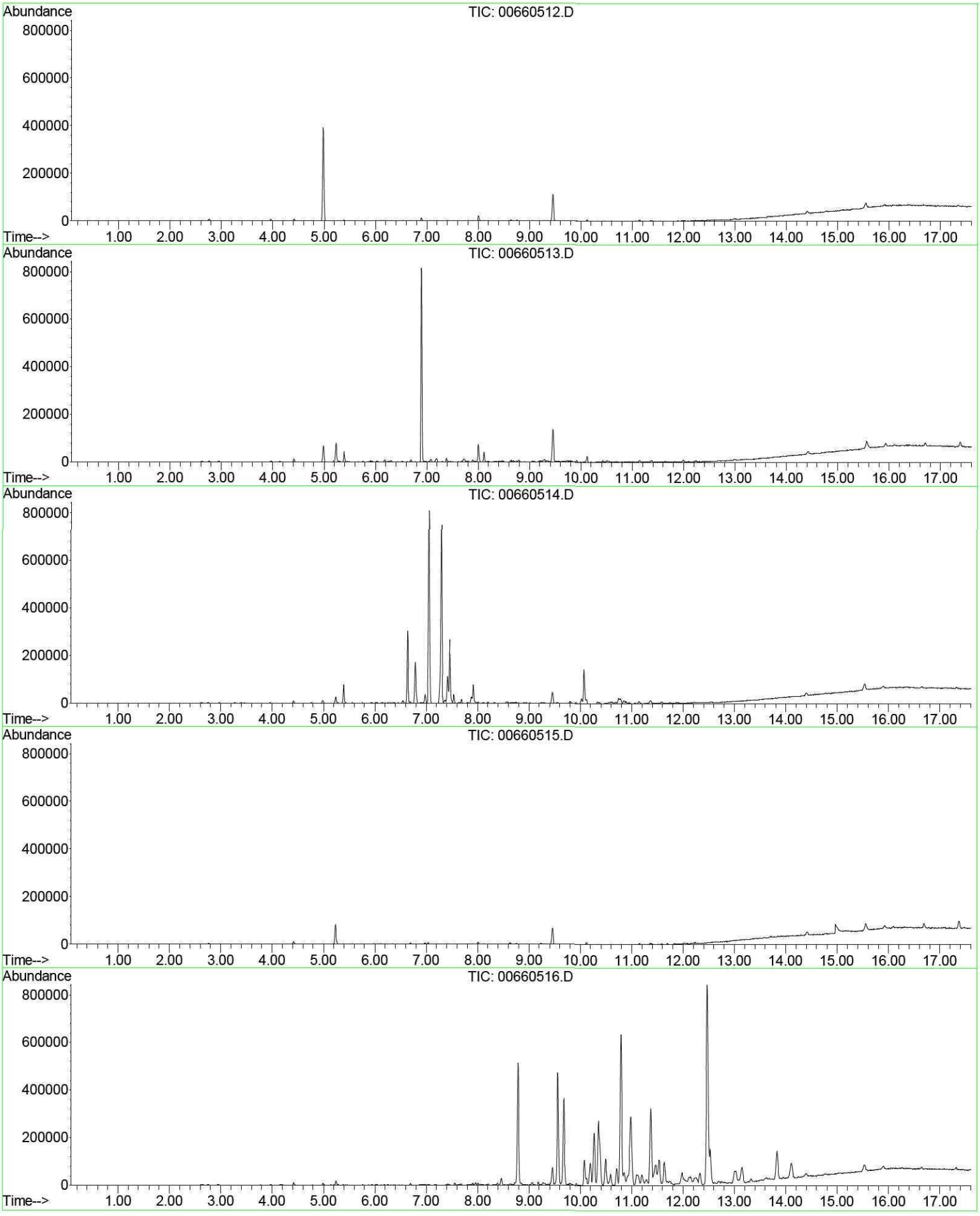
SAMPLE NAME	NAPH, ug	2MeNAPH, ug	MTBE, ug	11DCA, ug	111TCA, ug	12DCA, ug	TCE, ug	OCT, ug	PCE, ug	14DCB, ug	CHCl3, ug
MDL=	0.01	0.01	0.03	0.02	0.01	0.01	0.02	0.02	0.02	0.01	0.01
660512	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
660513	0.03	0.01	nd	nd	nd	nd	nd	nd	0.16	0.03	nd
660514	nd	nd	nd	nd	nd	nd	nd	nd	0.43	nd	nd
660515	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
660516	1.75	1.32	nd	nd	nd	nd	nd	nd	nd	nd	nd
660517	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
660518	1.37	0.25	nd	nd	nd	nd	nd	nd	nd	nd	nd
660519	0.07	0.03	nd	nd	nd	nd	nd	nd	nd	nd	nd
660520	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
660521	0.03	0.01	nd	nd	nd	nd	nd	nd	nd	nd	nd
660522	nd	nd	nd	nd	nd	nd	nd	nd	0.08	nd	nd
660523	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
660524	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
method blank	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Maximum	1.75	1.32	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.03	0.00
Standard Dev.	0.59	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.01	0.00
Mean	0.25	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00

No mdl is available for summed combinations of analytes. In summed columns (eg., BTEX), the reported values should be considered ESTIMATED if any of the individual compounds were reported as bdl.

GORE(TM) SURVEYS ANALYTICAL RESULTS
USGS-WRD, COLUMBIA, SC
GORE STANDARD TARGET VOCs/SVOCs (A1)
CCP-BASEBALL FIELD PARKING
SITE FXI - PRODUCTION ORDER #21040381

SAMPLE NAME	CCl4, ug	112TCA, ug	ClBENZ, ug	1112TetCA, ug	1122TetCA, ug	13DCB, ug	12DCB, ug
MDL=	0.03	0.02	0.03	0.02	0.01	0.01	0.01
660512	nd	nd	nd	nd	nd	nd	nd
660513	nd	nd	nd	nd	nd	nd	nd
660514	nd	nd	nd	nd	nd	nd	nd
660515	nd	nd	nd	nd	nd	nd	nd
660516	nd	nd	nd	nd	nd	nd	nd
660517	nd	nd	nd	nd	nd	nd	nd
660518	nd	nd	nd	nd	nd	nd	nd
660519	nd	nd	nd	nd	nd	nd	nd
660520	nd	nd	nd	nd	nd	nd	nd
660521	nd	nd	nd	nd	nd	nd	nd
660522	nd	nd	nd	nd	nd	nd	nd
660523	nd	nd	nd	nd	nd	nd	nd
660524	nd	nd	nd	nd	nd	nd	nd
method blank	nd	nd	nd	nd	nd	nd	nd
Maximum	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Standard Dev.	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00

No mdl is available for summed combinations of analytes. In summed columns (eg., BTEX), the reported values should be considered ESTIMATED if any of the individual compounds were reported as bdl.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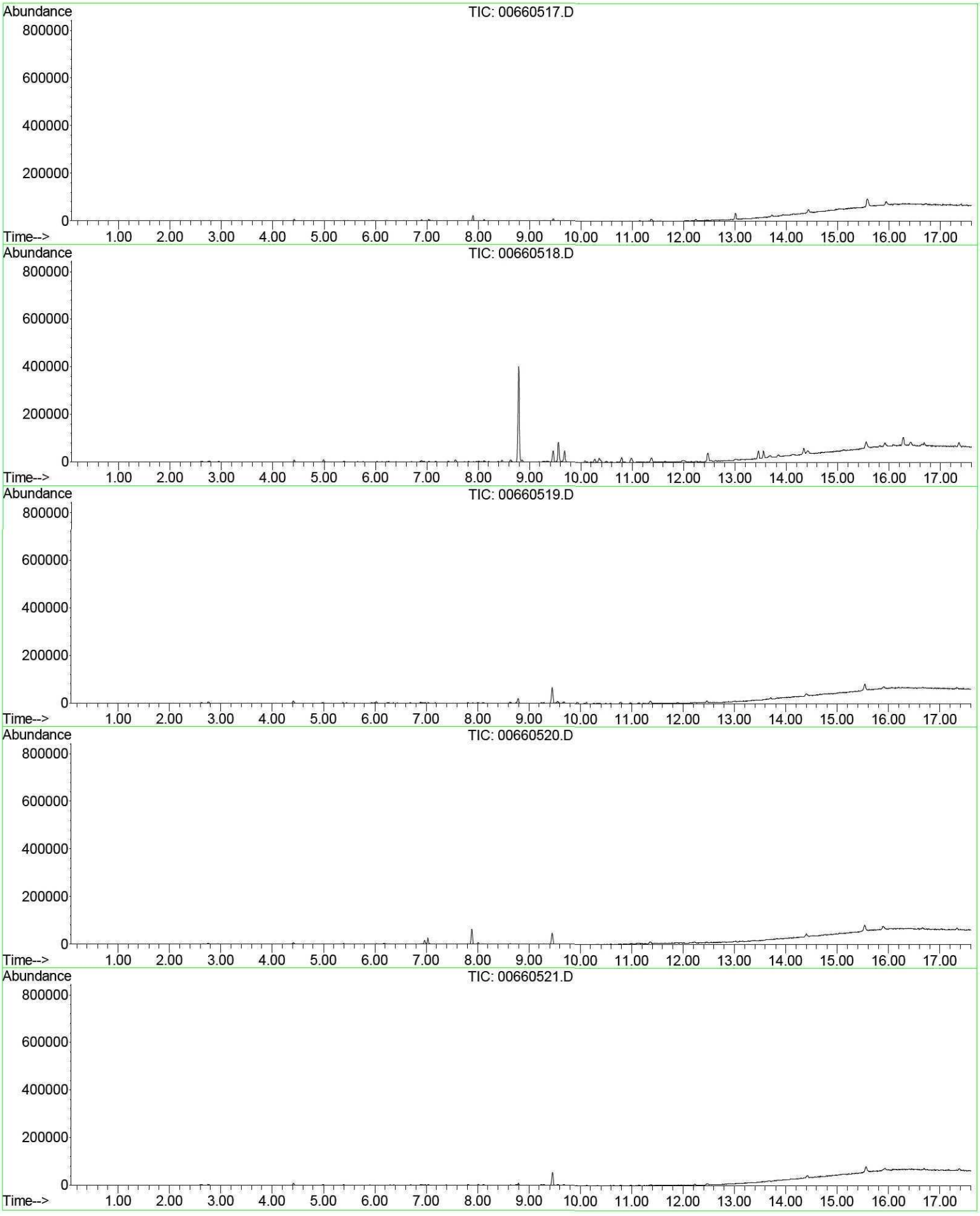
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200000
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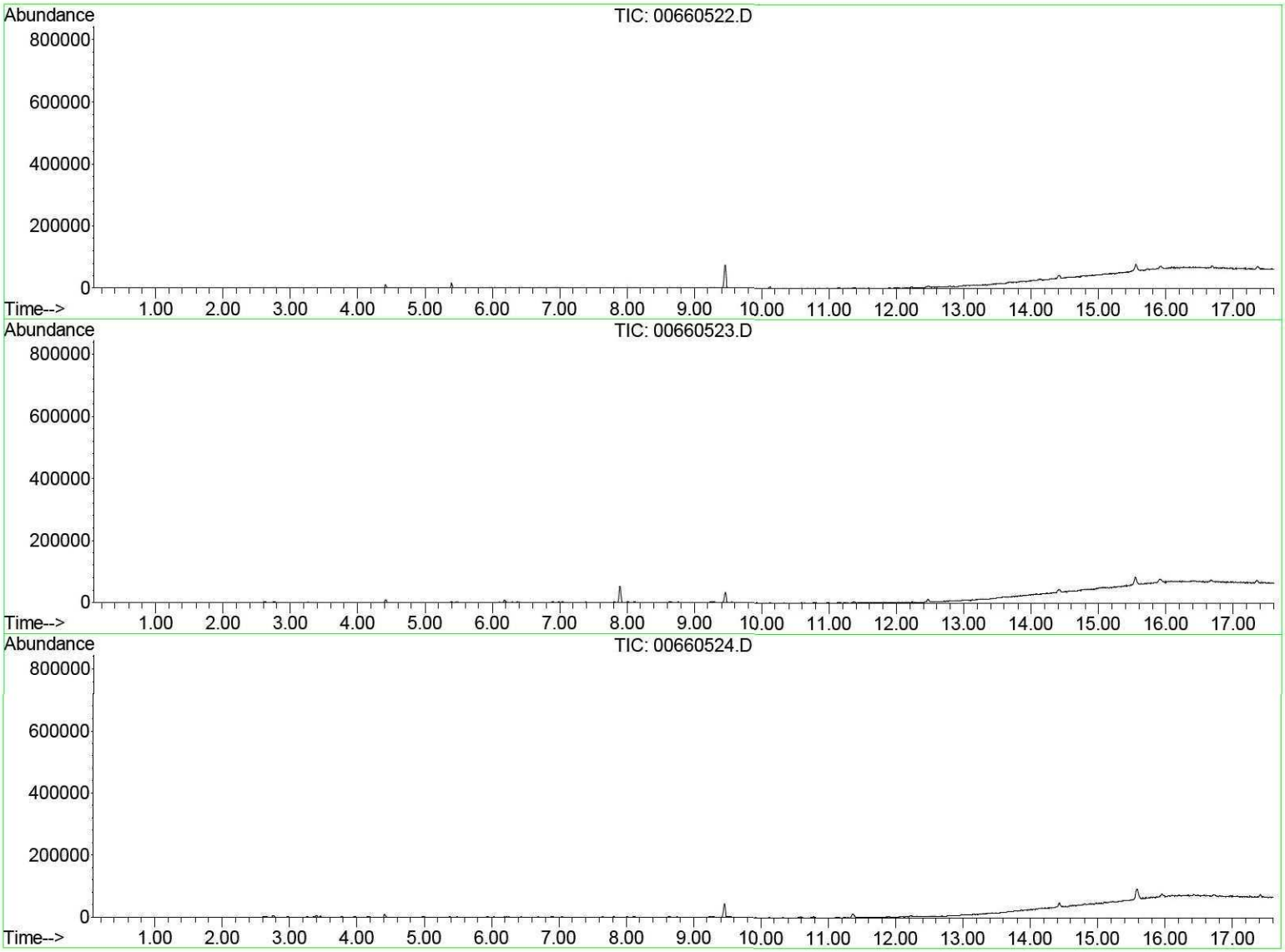
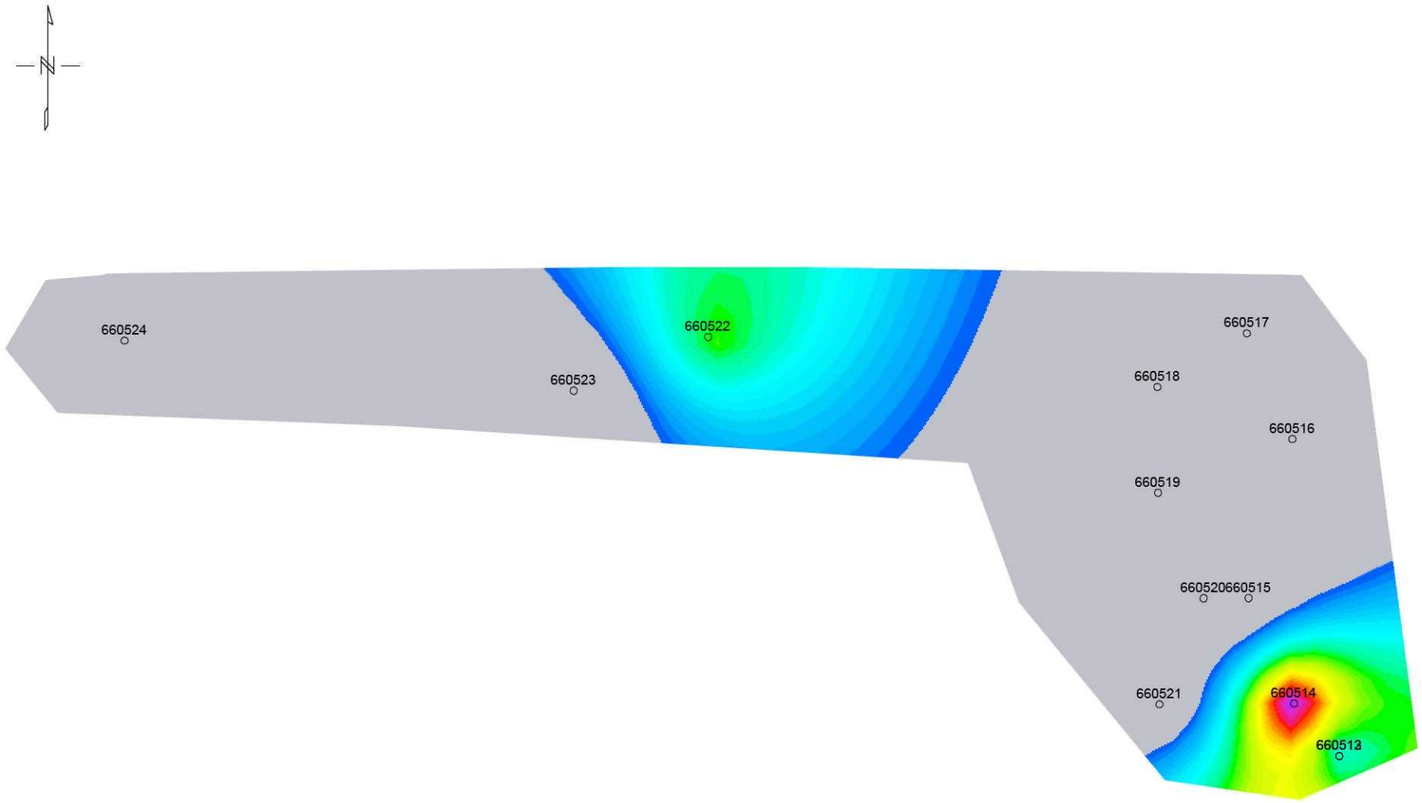
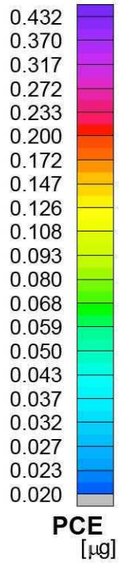
TICS - USGS-WRD - 21040381FXI
IN NUMERICAL ORDER







Scale 1:1250

25 0 25 50

(meters)

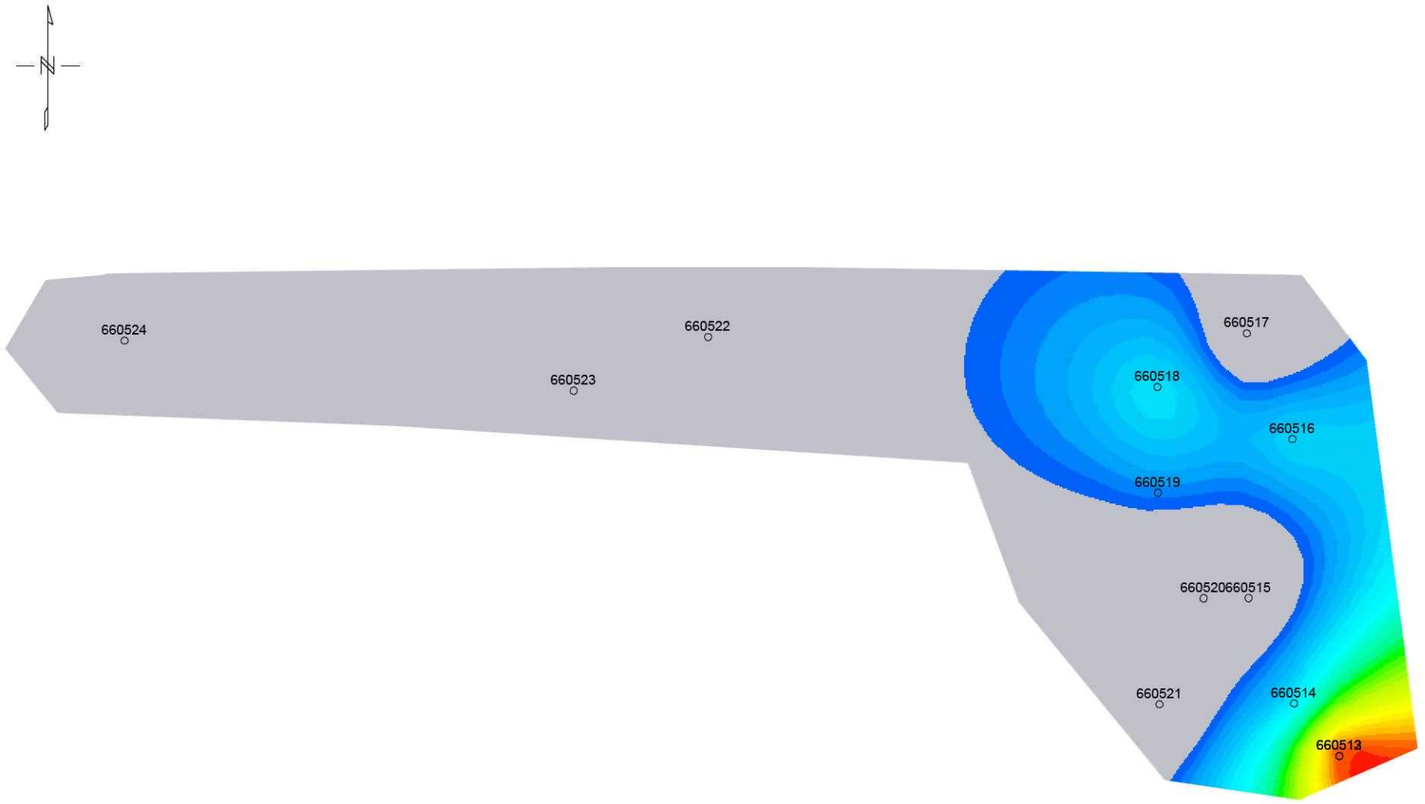
GORE ™ Surveys for Environmental Site Assessment

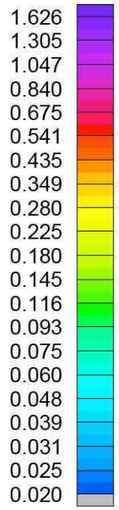
W.L. GORE & ASSOCIATES, INC.
100 CHESAPEAKE BOULEVARD
ELKTON, MD, USA 21921
USA
(410) 392-7600

Creative Technologies Worldwide

USGS, Columbia, SC
CCP Site, Montgomery, AL
Tetrachloroethene

DATE DRAWN: 19MAY2011	DRAWN BY: DMC	ORIG. CAD: CCP Site	SITE CODE: FXI
REV. DATE:	REV. #:	PROJECT NUMBER: 21040381	





Scale 1:1250

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(meters)

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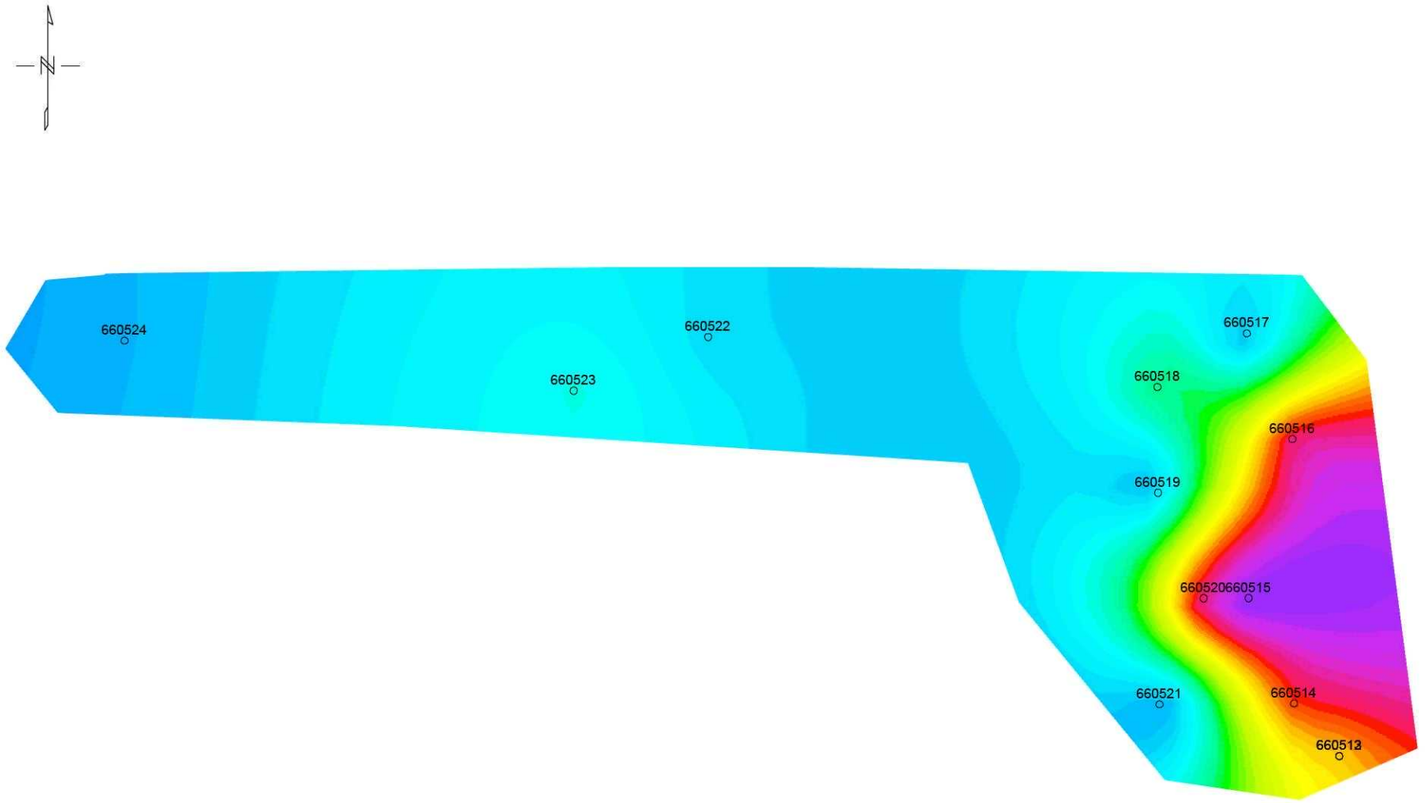
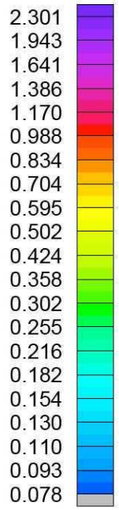
USGS, Columbia, SC
CCP Site, Montgomery, AL
BTEX

DATE DRAWN: 19MAY2011	DRAWN BY: DMC	ORIG. CAD: CCP Site	SITE CODE: FXI
REV. DATE:	REV. #:	PROJECT NUMBER: 21040381	





Scale 1:1250

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(meters)

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ELKTON, MD, USA 21921
USA
(410) 392-7600

USGS, Columbia, SC
CCP Site, Montgomery, AL
Total Petroleum Hydrocarbons

DATE DRAWN: 19MAY2011	DRAWN BY: DMC	ORIG. CAD: CCP Site	SITE CODE: FXI
REV. DATE:	REV. #:	PROJECT NUMBER: 21040381	

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