

2455 South Road Poughkeepsie, NY 12601

July 18, 2013

Mr. Alex Czuhanich Division of Environmental Remediation Remedial Bureau E New York State Dept. of Environmental Conservation 625 Broadway, 12<sup>th</sup> Floor Albany, New York 12233-7017

#### Re: Newly Discovered Area of Concern F: B052 NW Parking Lot & Roadway Transmittal of Assessment Results IBM-Poughkeepsie, Part 373 Permit Number 3-1346-00035/00123 EPA ID Number NYD 080480734

Dear Mr. Czuhanich:

This correspondence is being sent regarding the completion of field activities associated with the above listed unit. The status of the unit was briefly discussed with you on July 3, 2013 and IBM provided formal written notice regarding this newly discovered Area of Concern (AOC) to NYSDEC on July 8, 2013. In addition, and in accordance with the Facilities' Part 373 Permit Requirements, IBM is providing additional information to the NYSDEC regarding AOC F, the B052 NW Parking Lot and Roadway at the IBM-Poughkeepsie facility.

This unit was identified during the course of field investigations in support of the construction and renovations of an above-ground utility service. The surrounding land use is parking lots and roadways and access to the area is limited by steep slopes, site utilities and roadways. The current zoned site use is Industrial.

In two of the ten soil borings installed, soils were recovered where monitoring with the handheld photo-ionization detector showed readings above background. Samples were collected from those split spoon intervals and submitted for analysis for VOCs, SVOCs and TCLP metals. In addition, non-native materials believed to be associated with railroad ties (cinders, wood) were observed in several other split spoons. Samples were collected from two of these intervals and were also submitted for analysis of VOCs, SVOCs and TCLP metals.

Results of this assessment indicate that subsurface impacts were localized and consistent with railroad debris containing materials. Historically, a railroad spur serviced nearby manufacturing buildings and several split spoon samples, including those associated with PID readings above background, contained fragments of wood believed to be associated with railroad materials and railroad ties.

If during the course of the anticipated future excavations in this area encounter impacted soils where an assay of excavated materials by hand-held photo-ionization detector yields readings above background, following the Site's Solid Management Protocol, these materials will be segregated and any removed and impacted soils will be managed and disposed of in accordance with all applicable regulations.

IBM respectfully requests NYSDEC concurrence that the investigation described above satisfies the requirement for an RFA for this AOC and that no further action is necessary or appropriate.

If you have any questions or need additional information, please do not hesitate to contact Steve Brannen at (845) 433-1509.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,

International Business Machines Corporation

Michael Phelan Manager Environmental, Planning and Site Support Services

cc: Denise Radtke, NYSDEC Albany Martin Brand, NYSDEC, Region III w/o attachment Carol Stein, USEPA Region II w/ attachment



# IBM POUGHKEEPSIE B052 NW PARKING LOT & ROADWAY (Area of Concern F) MAIN PLANT SITE

Part 373 Hazardous Waste Permit 3-1346-00035/00123 EPA ID Number NYD 080480734

**Prepared for:** 

IBM Poughkeepsie Poughkeepsie, New York

July 18, 2013

## **Prepared by:**

**Groundwater Sciences Corporation** 

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- Appendix B Sampling Results Summary Tables
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## **1 INTRODUCTION**

Groundwater Sciences Corporation (GSC) has prepared this report at the request of the International Business Machines Corporation (IBM) for its Poughkeepsie, New York Main Plant site operations. This report was prepared to document the field activities associated with Area of Concern F (AOC F), the Building 052 Northwest Parking Lot and Roadway Area. IBM provided formal written notice regarding this newly discovered Area of Concern (AOC) to New York State Department of Environmental Conservation (NYSDEC) on July 8, 2013.

In accordance with the Facilities' Part 373 Permit Requirements, IBM is providing additional information to the NYSDEC regarding AOC F, the B052 NW Parking Lot and Roadway Area at the IBM Poughkeepsie facility.

Figure 1 shows the location of the IBM Poughkeepsie Main Plant site; Building 052 lies in the north western portion of the manufacturing area. As shown on Figure 2, the newly identified area of concern lies just north and west of Building 052. The current zoned site use is Industrial.

This unit was identified during the course of field investigations in support of the construction and renovations of an above-ground utility service that lies along the western edge of Perimeter Road. On June 25 and June 26, 2013, subsurface borings were installed to collect samples for physical characteristics in support of the construction efforts and anticipated excavations in this area of the site. As part of these efforts, the subsurface soils were assayed using a hand-held photo-ionization detector and the recovered soils from two borings yielded readings above background. The soils associated with the other eight borings did not yield readings above background.

The surrounding land use is parking lots and roadways and access to the area is limited by steep slopes, site utilities and roadways.

#### 2 ASSESSMENT ACTIVITIES

At the time of discovery, IBM was conducting field investigations in support of the construction efforts and anticipated excavations associated with the renovations of an above-ground utility service that lies along the western edge of Perimeter Road.

#### 2.1 Field Activities

On June 25 and June 26, 2013, a total of ten (10) subsurface borings were installed to a target depth of eight (8) feet below ground surface to collect samples for physical characteristics. The location of the ten subsurface borings are shown on Figure 2.

As part of these efforts, the subsurface soils recovered from each split spoon were assayed using a hand-held photo-ionization detector. Following field screening of the recovered soils, an assessment was conducted of each split spoon including notation of any visible staining, inclusions or fragments of non-native materials.

Soils associated with the four foot depth below ground surface at Boring B3 and at the eight foot depth below ground surface at Boring 2A yielded readings above background. Other depths associated with these two borings did not yield results above background. The soils associated with the other eight borings did not yield readings above background.

Several split spoon samples, including those associated with PID readings above background, contained fragments of wood believed to be associated with railroad materials and railroad ties. Historically a railroad spur serviced nearby manufacturing buildings in this area of the Site. As noted previously, the soils where readings were above background were discovered in an area of limited access, containing steep slopes, site utilities and roadways.

Following the Site's Solids Management Protocol, the borings have been have backfilled to prevent any potential contact with these materials and the recovered soils have been segregated into a drum to be managed and disposed of in accordance with all applicable regulations.

Appendix A contains the boring installation and recovered soils assessment summary including boring logs, prepared by SoilTesting Inc. of Oxford, Connecticut.

## 2.2 Analytical Methodologies

Samples were collected of the recovered soils from four split spoons and submitted for analysis by United States Environmental Protection Agency (USEPA) semi-volatile organic compounds (SVOCs) USEPA SW-846 Method 8270C; volatile organic compounds (VOCs) by USEPA Method 8260B; and for Total Concentrate Leachate Procedures (TCLP) metals by USEPA SW-846 methodologies.

A sample was collected of the visibly stained soils discovered at a depth of 4 feet bgs from Boring B3 and also from Boring B2A at a depth of 8 feet bgs. Samples were also collected from a depth of 7 feet bgs at B3 and also at a depth of 6 to 8 feet bgs at Boring B3A where fragments of wood and other materials believed to be associated with railroad materials and railroad ties were observed. All samples were submitted for analysis of VOCs, SVOCs and TCLP Metals to EnviroTest Laboratories of Newburgh, New York.

#### **3 SAMPLING RESULTS**

This section reports on the sampling results of the visibly stained soils discovered in Boring B3 at 4 feet bgs and also of Boring B2A at 8 feet bgs. In addition, results of the recovered soils with associated railroad materials and railroad ties from Boring B3 and Boring B3A are also discussed.

All samples were analyzed for VOCs, SVOCs and TCLP metals by SW846 methodologies.

#### **3.1 Boring B2A (7 to 8 foot bgs)**

Analytical results of the recovered soil from the 7 to 8 foot bgs sample indicate presence of several VOCs and SVOCs. A summary of the results of this sampling is presented in Appendix B, Table B-1. The sample was collected from the depth at which the hand-held photo-ionization detector readings were above background and the spoon showed the presence of what appeared to be a portion of railroad tie (wood). The laboratory analytical data report is presented in Appendix C.

Sample results were compared with the soil cleanup objective values for Part 375 (Table 375-6.8) and the supplemental soil cleanup objective values presented in CP-51. Based on this comparison, with the exception of one parameter, benzo(a) pyrene, these soils meet current or exceed the current industrial land use standard.

The TCLP metals results were compared with *Table 1, Maximum Concentration of Contaminants for the Toxicity Characteristic* as defined in the 40CFR 261.24. The results of this comparison is presented in Table B-5 of Appendix B. As shown in Table B-5, the TCLP metals results for the soil sample collected from Boring B2A (7 to 8 ft bgs) does not exceed the regulatory limits for TCLP.

#### 3.2 Boring B3

Samples were collected at two depths from Boring B3: the 4 foot depth bgs and; the 7 foot bgs depth.

#### **3.2.1** Boring B3 (4 foot bgs)

Analytical results of the recovered soil from the 4 foot bgs sample of Boring B3 indicate presence of several VOCs and SVOCs. A summary of the results of this sampling is presented in Appendix B, Table B-2. The sample was collected from the depth at which the hand-held photo-ionization detector readings were above background and the split spoon recovered the presence of what appeared to be a two-inch thick layer of a semi-fluid tar-like material with some gravel inclusions. The laboratory analytical data report is presented in Appendix C.

Sample results were compared with the soil cleanup objective values for Part 375 (Table 375-6.8) and the supplemental soil cleanup objective values presented in CP-51. Based on this comparison, three parameters, benzo(a)anthracene, benzo(a)pyrene and chrysene exceed the current industrial use standard. For all other VOC and SVOCs, these soils meet current or exceed the current industrial land use standard.

The TCLP metals results were compared with *Table 1, Maximum Concentration of Contaminants for the Toxicity Characteristic* as defined in the 40CFR 261.24. The results of this comparison is presented in Table B-5 of Appendix B. As shown in Table B-5, the TCLP metals results for the soil sample collected from Boring B3 (4 foot bgs) does not exceed the regulatory limits for TCLP.

### **3.2.2** Boring B3 (7 foot bgs)

Analytical results of the recovered soil from the 7 foot bgs sample of Boring B3 indicate presence of several VOCs and SVOCs. A summary of the results of this sampling is presented in Appendix B, Table B-3. The sample was collected from the depth at which the hand-held photo-ionization detector readings were below background and the split spoon recovered the presence of what appeared to be materials associated with railroad debris (cinders). The laboratory analytical data report is presented in Appendix C.

Sample results were compared with the soil cleanup objective values for Part 375 (Table 375-6.8) and the supplemental soil cleanup objective values presented in CP-51. Based on this comparison, with the exception of one parameter, benzo(a)pyrene, these soils meet current or exceed the current industrial land use standard. It should be noted that the result for benzo(a)pyrene is roughly equivalent to the industrial use standard.

The TCLP metals results were compared with *Table 1, Maximum Concentration of Contaminants for the Toxicity Characteristic* as defined in the 40CFR 261.24. The results of this comparison is presented in Table B-5 of Appendix B. As shown in Table B-5, the TCLP metals results for the soil sample collected from Boring B3 (7 foot bgs) does not exceed the regulatory limits for TCLP.

#### **3.3** Boring B3A (6 to 8 foot bgs)

Analytical results of the recovered soil from the 6 to 8 foot bgs sample of Boring B3A indicate presence of several VOCs and SVOCs. A summary of the results of this sampling is presented in Appendix B, Table B-4. The sample was collected from the depth at which the hand-held photo-ionization detector readings were below background but the split spoon recovered the presence of what appeared to be materials associated with railroad debris (cinders, wood chips). The laboratory analytical data report is presented in Appendix C.

Sample results were compared with the soil cleanup objective values for Part 375 (Table 375-6.8) and the supplemental soil cleanup objective values presented in CP-51. Based on this comparison, with the exception of one parameter, benzo(a)pyrene, these soils meet current or exceed the current industrial land use standard. It should be noted that the result for benzo(a)pyrene is roughly equivalent to the industrial use standard.

The TCLP metals results were compared with *Table 1, Maximum Concentration of Contaminants for the Toxicity Characteristic* as defined in the 40CFR 261.24. The results of this comparison is presented in Table B-5 of Appendix B. As shown in Table B-5, the TCLP metals results for the soil sample collected from Boring B3A (6 to 8 foot bgs) does not exceed the regulatory limits for TCLP.

### 4 SUMMARY

During the course of routine construction activities, soil borings were installed to ascertain certain physical characteristics of soils in anticipation of future excavations in this area of the site associated with utility renovations. The recovered split spoon samples were field assayed with a hand-held photo-ionization detector as per the Site's Solid Management Protocol and assessed for content. In total, ten soil borings were installed to the target depth of eight feet below ground surface as shown on Figure 2.

In two of these borings, soils were recovered where monitoring with the hand-held photo-ionization detector showed readings above background. Samples were collected from those split spoon intervals and submitted for analysis for VOCs, SVOCs and TCLP metals. In addition, non-native materials believed to be associated with railroad ties (cinders, wood) were observed in several other split spoons. Samples were collected from two of these intervals and were also submitted for analysis of VOCs, SVOCs and TCLP metals.

The soils where readings were above background were discovered in an area of limited access, containing steep slopes, site utilities and roadways. The surrounding land use is parking lots and roadways.

Results of this assessment indicate that historic subsurface impacts were localized and consistent with railroad debris containing materials.

During the course of the anticipated future excavations in this area, if impacted soils or debris are encountered, the Site's Solid Management Protocol will be applied and these materials will be removed, segregated, and will be managed and dispose of in accordance with all applicable regulations.

## **5 RECOMMENDATIONS**

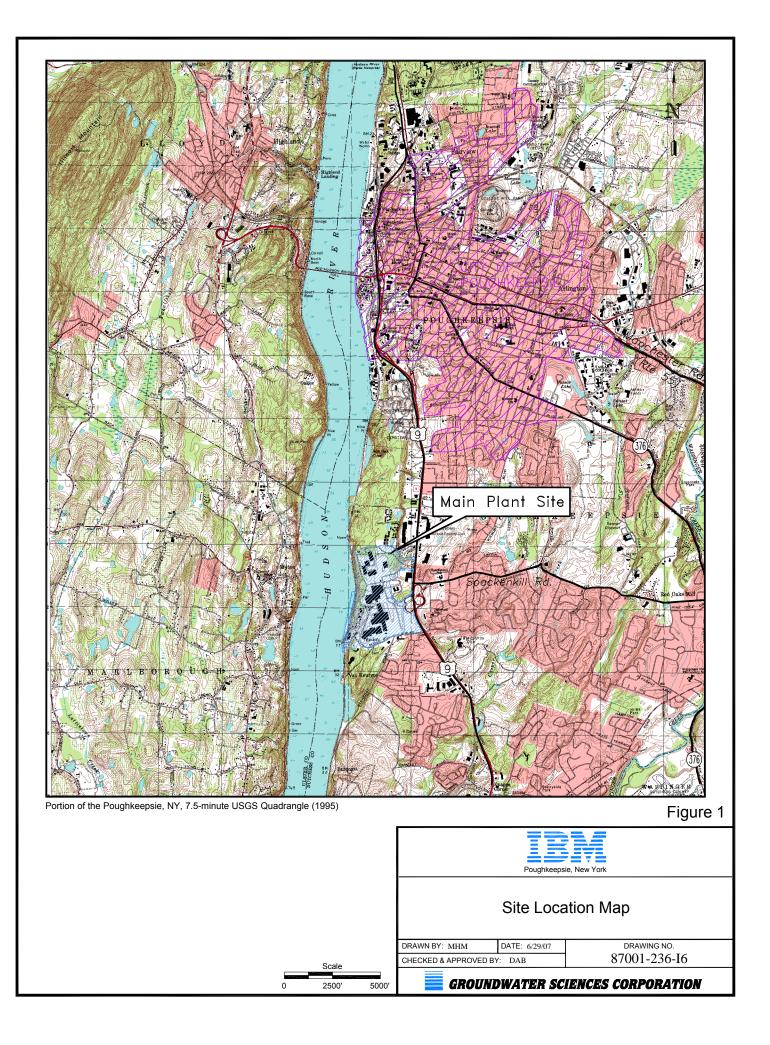
This investigation satisfies the technical requirements of a RCRA Facility Assessment (RFA).

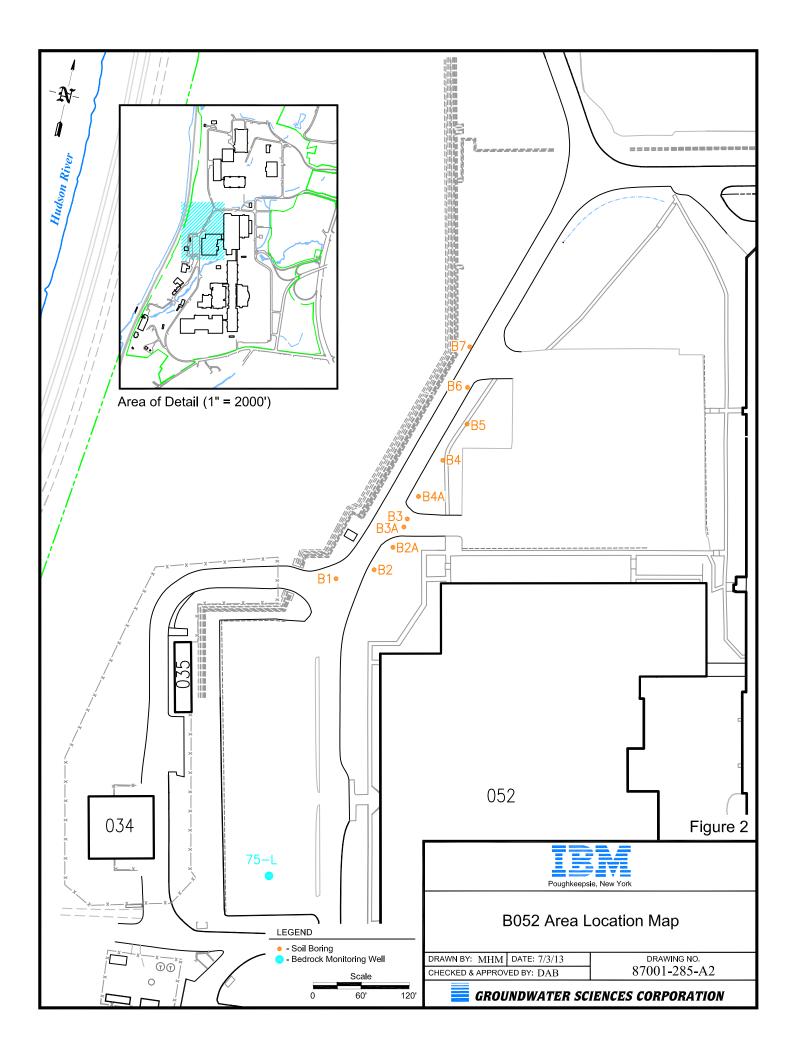
This RFA indicates that subsurface impacts were localized and consistent with railroad debris containing materials. Historically a railroad spur serviced nearby manufacturing buildings in this area of the Site. As noted previously, the soils where readings were above background were discovered in an area of limited access, containing steep slopes, site utilities and roadways.

The results of the two samples collected that were associated with the general debris and did not yield hand-held photo-ionization detector readings above background exceed the industrial use standard on only one parameter, benzo(a)pyrene. A comparison of these results however, show that results are only slightly elevated above industrial use standard.

If during the course of the anticipated future infrastructure repair excavations in this area encounter impacted soils where an assay of excavated materials by hand-held photo-ionization detector yields readings above background, following the Site's Solid Management Protocol, these materials will be segregated and any removed and impacted soils will be managed and disposed of in accordance with all applicable regulations.

Based on this RFA and the resultant data that demonstrates characteristics similar to the current land use and zoning (Industrial), IBM is requesting that the Agency provide an assessment of this AOC F as completed and that no further actions are required.





# APPENDIX A

# Boring Installation and Recovered Soils Assessment Summary

## Notes:

- PID: Photo-ionization Detector
- ND: Not detect, No reading above background

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AT	FT_AF	TER_	но	URS				HAMM	1ER FA	LL		30"		GROUND WATER ELEV.
				SAM	PLE									
DEPTH	CASING BLOWS PER		Туре	PEN	REC	DEPTH	ON (FOR	WS PEI SAMP CE ON 6 - 12	ler Tube)	CORE TIME PER FT	DENSITY OR CONSIST	STRATA CHANGE DEPTH		ENTIFICATION OF SOIL REMARKS OLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
	FOOT			0.4	4.01	@ BOT			T	(MIN)	MOIST	ELEV	1000	
		1	SS	24"	10"	2'0"	- 22	<u>32</u> 14			moist v dense	6"	ASPHALT	D, sm silt, tr FC gravel
		2	SS	24"	19"	4'0"	12	14			moist			AND & SILT, tr FG gravel, (odor), asphalt,
				0.47	0.01	0101	22	34			dense	4'0"	cobbles	
5		3	SS	_24"	20"	6'0"	15 22	15 26			l moist dense		ary SILT & EM	
	4 ss 24" 16" 8'0" 22 20 moist													
	10     7     dense     8'0"     gry SILT & FMC SAND, tr F gravel, clay, tile, asphalt													
10														
														E.O.B. 80
15	· · · · · · · · · · · · · · · · · · ·													
20														
25														
30														
											ļ			
0.5														
35														
													Bo	oring grouted on completion
40														
	DTE: Sub	osoil	con	ditic	ons r	eveale	d by t	his in	vestig	ation	represent	t		
	cor	nditio	ons a	at sp	ecifi	c locat	ions a	and m	ay nō					
GR	COR OUND SU					ocation	1s or 1 SED	imes.		CASING	G THEN	CA	SING TO	FT. HOLE NO. B-3
A =	AUGER	UP =	UNDI	STUR	RBED	PISTON		T = TH	INWAL	Ľ	V = VANE T			
	R = WEIG = SPLIT TI					WOH = \ H.S.A. =					05			C = COARSE M = MEDIUM
											20-35% A	ND =35 - 50		= FINE

	SOI					).	CLIEN	IT:	FLU	OR c/c	BM Pou	ghkeeps	sie	SHEET 1_OF_	
			NOV						~	0404	0447.40			HOLE NO.	B-3A
			RD, C					ECT NO		G124	-9447-13				
		•	3) 26 4) 94				PROJ	ECT N/	AME.	IBM				BORING LOCATIONS 10' Offset South	
FO	REMAN -		-		000		LOCA	TION			South Ro	oad			<b>****</b>
	PD/rw/										hkeepsie		ork		
INS	SPECTOR										CASING	SAMPLER	CORE BAR	OFFSET 10' South	
								TYPE			HSA	SS			6/25/13
						S		SIZE			4 1⁄4"	1 3/8"			6/25/13
1	none_FT				URS				AER WI			<u>140#</u> 30"	BIT	SURFACE ELEV. GROUND WATER ELEV.	
	FTAF						<u> </u>	HAMIN	1ER FA					GROUND WATER ELEV.	
			1	SAM		· · · · ·	-				DENSITY	STRATA		ENTIFICATION OF SOIL R	
L L	CASING BLOWS PER	NO	Туре	PEN	REC	DEPTH	ON	WS PE SAMP CE ON	LER	CORE TIME PER	OR CONSIST	CHANGE		OLOR, LOSS OF WASH V SEAMS IN ROCK, ETC.	
	FOOT					@ BOT	0-6	6 - 12	12- 18	FT (MIN)	MOIST	ELEV			
		1	SS	24"	10"	2'0"	-	12			moist	1'6"		0"-12" ROAD MIX	
		2		24"	18"	4'0"	15 23	10 57			compact		brn FM SAND,	& SILT, tr C sand, F gravel	
		4	SS	24	10	40	35	31	<u> </u>	<u> </u>	moist v dense	4'0"	brn gry FMC S	AND & SILT, tr FC gravel	
5	5 3 ss 24" 16" 6'0" 20 19 I moist														
	olive SIL													MC SAND, tr wood	1. 1
														MC SAND, tr F gravel, wood, coal, c	inders,
10			<u> </u>		ļ									E.O.B. 8'0"	
4.5															
15															
20													-		
20															
25															
30															
35															
													Re	oring grouted on completion	,
														ning groutoù on oomplotion	
40	TE. Out			d!4!		ave al a	d by f	hic in	Vosti	otien	roproce				
	con	ditio	ons a	at sp	ecifi	eveale c locat ocatio	ions a	and m	iay nō	t repro					
	DUND SUI	RFAC	E TO		F	FT. υ	SED			CASING	-		SING TO	FT. HOLE NO.	B-3A
	AUGER R = WEIG					PISTON WOH = \			INWALI AMMEF		V = VANE T S	C01	(	C = COARSE	
SS :	= SPLIT TI	JBE 8	SAMP	LER		H.S.A. =	HOLLO	OW ST	EM AUG	GER				M = MEDIUM	
PRO	OPORTION	NS US	SED:	TRAC	CE = 0	- 10%	LITTLE	= 10 - 2	20% S	OME = 2	20-35% A	ND =35 - 50	)% I	= = FINE	

	SOI		STI NOV			<b>)</b> .	CLIEN	IT:	FLU	OR c/c	BM Pou	Ighkeeps	ie	SHEET <u>1</u> OF <u>1</u> HOLE NO. B-4
			NOV RD, C					ECT N	<u> </u>	G124	-9447-13			HOLE NO. B-4
			3) 26				L			0124	-3447-13			BORING LOCATIONS
			4) 94				1100			IBM				per Plan
FC	REMAN -						LOCA	TION	-	2285	South Ro	bad		
	PD/rw/									Poug	hkeepsie			
INS	SPECTOR										CASING	SAMPLER	CORE BAR	OFFSET
						~	-	TYPE			HSA	SS		DATE START 6/25/13
	OUND W					5		SIZE	.D. IER W	F	4 1⁄4"	<u>1 3/8"</u> 140#	BIT	DATE FINISH 6/25/13 SURFACE ELEV.
	FTAF				5/10				IER VV			30"		GROUND WATER ELEV.
_				SAM						 T	I			
		<u> </u>				Γ	1			CORE	DENSITY	STRATA	FIELD ID	ENTIFICATION OF SOIL REMARKS
E	CASING							NS PE		TIME	OR	CHANGE	INCL. C	OLOR, LOSS OF WASH WATER,
DEPTH	BLOWS PER	NO	Туре	PEN	REC	DEPTH	(FOR	CE ON	TUBE)	PER FT	CONSIST	DEPTH		SEAMS IN ROCK, ETC.
	FOOT					@ BOT	0-6	6 - 12	12- 18	(MIN)	MOIST	ELEV		
		1	SS	24"	12"	2'0"	3	9			l moist	6"	TOPSOIL	
		2	SS	24"	12"	4'0"	14 9	14 10			compact moist		brn FMC SAN	D, sm silt, tr F gravel, clay
		<u> </u>	- 55	24	12	40	27	29			dense		gry brn FM SA	ND & SILT, lit c sand, tr FC gravel, wood
5		3	SS	24"	16"	6'0"	12	19			moist			-
				0.41	00"	0101	21	19			dense		gry FMC SAN	D, sm silt, tr F gravel, clay
	4         ss         24"         20"         8'0"         10         6         v moist													sm silt. tr C sand. clav
10	10 E.O.B. 8'0"													
										<u> </u>				
								[						
15														
20														
20														
25														
30														
1														
35		_												
													Br	pring grouted on completion
40				14:1			d by 4	hie in		untion -	roprocor	+		
INC	Cor	osol Iditio	ons :	at sr	ons r ecifi	eveale	u by t tions :	and m	vestig	t repr	represen <sup>:</sup> esent	L		
L	cor	nditi	ons a	at ot	her l	ocatio	ns or t	times						FT HOLE NO. B-4
	OUND SU AUGER						SED	T = T⊢	IINWAL	_CASIN	G THEN V = VANE T		ASING TO	FT. HOLE NO. B-4
wc	R = WEIG	HT C	F RO	DS		WOH =	WEIGH	T OF H	IAMMEI	R & ROI				C = COARSE
SS  PR	= SPLIT T	UBE : NS LI	SAMP SED <sup>,</sup>	LER	CE = 0	H.S.A. = ) - 10%					20-35% A	ND =35 - 5		M = MEDIUM F = FINE

	SOI					).	CLIEN	T:	FLU	OR c/c	BM Pou	ighkeeps	ie	SHEET 1_OF_1	
			NOV							0101				HOLE NO. B-44	4
			RD, C					ECT NO		G124	-9447-13				
		•	3) 26 4) 94				PROJI	ECT NA	ME	IBM				BORING LOCATIONS per Plan	
FO	REMAN -			+0-40	550		LOCA	TION	· · ·,		South Ro	oad			
ľ	PD/rw/						2001				hkeepsie		ork	· · · · · · · · · · · · · · · · · · ·	
INS	PECTOR										CASING	SAMPLER		OFFSET	
								TYPE			HSA	SS		DATE START 6/25/13	3
	OUND W					S		SIZE I	.D.		4 1⁄4"	1 3/8"	·····	DATE FINISH 6/25/13	3
	none_FT				JRS				IER WI			140#	BIT	SURFACE ELEV.	
	FTAF	IER_						HAMIN	IER FA	LL		30"		GROUND WATER ELEV.	
			<u>ڊ</u>	SAM	PLE	<u> </u>	-				DENSITY	STRATA		ENTIFICATION OF SOIL REMARK	<u> </u>
PT	CASING BLOWS PER	NO	Туре	PEN	REC	DEPTH	ON (FOR	NS PEI SAMPI CE ON	ler Tube)	CORE TIME PER FT	OR CONSIST	CHANGE DEPTH		OLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.	
	FOOT		ļ		1.00	@ BOT		6 - 12	12~ 10	(MIN)	MOIST	ELEV			
		1	SS	24"		2'0"	5 24	17 27			dry dense	6"	TOPSOIL brn FMC SAN	D, sm silt, tr F gravel, tile	
-		2	SS	24"	14"	4'0"	17 52	105 43		 	dry v dense		olv FM SAND	& SILT, lit C sand, tr FC gravel, cinders	
5		3	SS	24"	14" 11"	6'0" 8'0"	20 63 17	31 34 14			l moist v dense moist		SAME; tile		
		_4	SS	24"		80	17	14			moist dense	8'0"	gry olv FMC SA	ND & SILT, lit cinders, tr F gravel, tile, wood	
10															
10														2.0.2.00	
													:		
15															
20		_													
25															
30															
35				<u> </u>											
													_		
													Bo	pring grouted on completion	
40															
NO	cor	nditio	ons a	at sp	ecifi	ic locat	tions a	and m	ay no	ation t repr	represen esent	t			
CP	cor DUND SU	nditio	ons a	at ot	her l	ocatio	n <mark>s or</mark> 1 SED	times.	·	CASIN	G THEN	C4	ASING TO	FT. HOLE NO. B-4A	$\neg$
	AUGER						·	T = TH	INWAL		V = VANE T				-
wo	R = WEIG	HT O	F RO	DS		WOH = V	WEIGH				DS			C = COARSE M = MEDIUM	
PR	= SPLIT T OPORTIOI	NS USE \$	SAIVIP SED:	TRAC	CE = 0	H.S.A. = ) - 10%					20 - 35% A	ND =35 - 50		F = FINE	

	SOI					<b>)</b> .	CLIEN	IT:	FLU	OR c/c	BM Pou	ighkeeps	sie	SHEET_1_OF	
			NOV RD, C					COTNO		C124	-9447-13			HOLE NO.	B-5
			•							G124	-9447-13				
		•	3) 26 4) 94				PROJ	ECT NA	NVIE	IBM				BORING LOCATIONS per Plan	
FO	REMAN -						LOCA	TION			South Ro	ad		porrian	
	PD/rw/	bd								Poug	hkeepsie	, New Yo	ork		
INS	PECTOR										CASING	SAMPLER	CORE BAR	OFFSET	<u></u>
								TYPE			HSA	SS		DATE START	6/25/13
						S		SIZE I		r	4 1⁄4"	<u>1 3/8"</u> 140#	BIT	DATE FINISH SURFACE ELEV.	6/25/13
	<u>none_</u> FT FT_AF				JKS				1ER W 1ER FA		<u> </u>	30"	DII	GROUND WATER ELEV.	
Ë	<u></u>	· <u>-</u> :、_		SAM			<b></b>	1 17 (1913)		1			1		······································
						r –					DENSITY	STRATA		ENTIFICATION OF SOIL	REMARKS
王	CASING BLOWS PER							NS PEI SAMP		CORE TIME	OR	CHANGE		OLOR, LOSS OF WASH	
E	BLOWS	NO	Туре	PEN	REC	DEPTH		CEON		PER	CONSIST	DEPTH		SEAMS IN ROCK, ETC.	
	FOOT					@ BOT	0-6	6 - 12	12- 18	FT (MIN)	MOIST	ELEV			
		1	SS	24"	18"	2'0"	5	12			dry	6"	TOPSOIL		
					4.01	4101	10	15		ļ	compact		brn FMC SAN	D, sm silt, tr F gravel	
		2	SS	24"	16"	4'0"	15 17	18 22			dry dense		It hrn EM SANI	D, sm silt, lit C sand, tr F grave	
5		3	SS	24"	12"	6'0"	20	27			dry			b, on one, in o oand, in r grave	
							27	20		v dense			ND, sm silt, tr F gravel, clay		
-	4 ss 24" 0" 8'0" 12 12 moist 8'0" No Recovery														
	10         13         compact           E.O.B. 8'0"         E.O.B. 8'0"														
10															
15															
20															
0.5															
25															
30			<u> </u>												
35															
													Bo	pring grouted on completion	on
										<u> </u>			1		
40					1				<u> </u>						
	TE: Sul	osoi	con	ditic	ons r	eveale	d by t	his in	vestig	gation	represen	t			
	cor	nditio	ons a	at sp	ecifi	ic locat	tions a	and m	iay no	ot repr	esent				
GR	COR CUND SU					ocation	ns or 1 SED	umes	•	CASIN	G THEN	CA	ASING TO	FT. HOLE NO.	B-5
A =	AUGER	UP =	UNDI	STUF	RBED	PISTON		T = TH		– L	V = VANE T				
	R = WEIG = SPLIT T					WOH = \ H.S.A. =					25			C = COARSE M = MEDIUM	
											20 - 35% A	ND =35 - 50		F = FINE	

	SOI					).	CLIEN	T:	FLU	OR c/c	BM Pou	ıghkeeps	ie	SHEET 1 OF	
										0404	0447 40			HOLE NO.	B-6
			RD, C				L			G124	-9447-13				
		•	3) 26 4) 94				PROJI	ECT NA		IBM				BORING LOCATIONS per Plan	
FO	REMAN -						LOCA	TION			South Ro	ad			<u></u>
	PD/rw/	bd								Poug	hkeepsie	, New Yo	ork		
INS	PECTOR										CASING	SAMPLER	CORE BAR	OFFSET	
								TYPE			HSA	SS		DATE START	6/25/13
	OUND W					S		SIZE I		-	4 1⁄4"	1 3/8"	BIT	DATE FINISH SURFACE ELEV.	6/25/13
	<u>none_</u> FT FT_AF				JKO				IER WI IER FA			<u>140#</u> 30"	DII	GROUND WATER ELEV.	
<u> </u>		·		SAM				1 17 00110			1		1		
			<u> </u>							0000	DENSITY	STRATA	FIELD ID	ENTIFICATION OF SOIL	REMARKS
논	CASING							NS PEI SAMP		CORE TIME	OR	CHANGE		OLOR, LOSS OF WASH	
DEPTH	BLOWS PER	NO	Туре	PEN	REC	DEPTH	(FOR	CE ON	TUBE)	PER FT	CONSIST	DEPTH		SEAMS IN ROCK, ETC.	
	FOOT					@ BOT	0-6	6 - 12	12- 18	(MIN)	MOIST	ELEV			
		1	SS	24"	18"	2'0"	38	38			dry	1'3"		1'0" Road Process	
		2	ss	24"	16"	4'0"	19 38	25 32	ļ		v dense		It brn FMC SA	ND, sm silt, tr F gravel, asphalt	
			55	24	10	40	22	21			dry v dense		brn FMC SAN	D, sm silt, lit F gravel, tr cobbles	s, clay
5		3	SS	24"	14"	6'0"	15	14			moist			-	
	4         ss         24"         10"         8'0"         12         12         compact moist         It brn FN													ND, lit silt, tr F gravel	
			SS	24		00	9	7			compact	8'0"	It brn FM SAN	D, lit silt, tr C sand, F gravel	
10	E.O.B. 8'0"														
4															
15															
20															
25															
30															
															l
35															
													В	oring grouted on completic	n
														-	
40 NO	TE: Sul	soil	con	ditic	ons r	eveale	d by f	his in	vestin	ation	represen	l			
0	con	ditio	ons a	at sp	ecifi	ic locat	tions a	and m	ay no			-			
CD	CON DUND SU				her I	ocatio	n <mark>s or f</mark> SED	times	•	CASIN	G THEN	C4	SING TO	FT. HOLE NO.	B-6
	AUGER				RBED	PISTON	-		INWAL	Ĺ	V = VANE T				
1	R = WEIG					WOH =					DS			C = COARSE M = MEDIUM	
	= SPLIT TI OPORTIO										20 - 35% A	ND =35 - 50		F = FINE	

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90 DONOVAN RD. OXFCORD, CT 0473 CT (203) 262-9328         PROJECT NO.         G124-947-13         HOLE NO.         B.7           CT (203) 262-9328         PROJECT NO.         G124-947-13         DORING LOCATIONS per Plan         per Plan           FOREMAL-DRILLER         LOCATION         2285 South Road         per Plan         doring to the per Plan           RSHECTOR         CASING SMARLER CORE CAN OFFSET         CASING SMARLER CORE CAN OFFSET         doring to the per Plan           RSHECTOR         TYPE         SAMPLE         DATE FINISH         doring to the per Plan           TYPE         SAMPLE         13.93"         DATE FINISH         doring to the per Plan           TYPE         SAMPLE         HAMMER FALL         30"         BTE UPACATION MARKER (TRUE         doring to the per Plan           AT_FT ATTER_HOUSE         BLOWS PER 6 IN FORCE ON IN DRUE (TRUE         BLOWS PER 6 IN FORCE ON IN DRUE (TRUE		SOI			•		).	CLIEN	IT:	FLU	OR c/c	BM Pou	ighkeeps	ie	SHEET <u>1</u> OF <u>1</u> HOLE NO. B-7	
CT (203) 262-3928         PROJECT NAME         BORING LOCATIONS           FOREMANL CRULER         LOCATION         2285 South Road         per Plan           PD/rwibd         POUNDAD         POUNDAD         POUNDAD         POUNDAD           NSPECTOR         TYPE         CANING SAMFLER CORE BAR         OFFSET           GROUND WATER OBSERVATIONS         RIZELID.         TYPE         DATE START         Ø/26/13           ATLEST LOURS         HARMER WT.         13/8*         DUTE START         Ø/26/13           ATLEST LOURS         HARMER WT.         14/0#         BUT START         Ø/26/13           BLOWS NO TOTER DEPENDENT FOR DEPENDENT FOR THE PLANARE FALL         30"         ORTHON WATER, COLOR WASH WASH WASH WATER, COLOR WASH WASH WASH WASH WASH WASH WASH WASH									ECT NO	<u> </u>	G124	-9447-13			HOLE NO. B-/	
NY (9:4) 948-9450         IBM         per Plan           OPDIAVIbd         POUghKeopsio, New York				•							0124	-3447-13			BORING LOCATIONS	
FOREMAN - DRULER         LOCATION         2285 South Road           PD/PV/Vbd         POughkoepis, New York								11001			IBM					
INSPECTOR         CASING         SAMPLER         CORE           IROUND WATER GBSERVATIONS AT goog_FT AFFER_D_HOURS         TYPE         SS         DATE START         6/26/13           AT goog_FT AFFER_D_HOURS         HAMMER WIT.         14/06         BIT         SUP CELLS         DATE START         6/26/13           AT goog_FT AFFER_D_HOURS         HAMMER WIT.         14/06         BIT         SUP CELLS         DATE START         6/26/13           AT goog_FT AFFER_D_HOURS         HAMMER WIT.         14/06         BIT         SUP CELLS         SUP CELLS         DATE START         6/26/13           BLOWS NO         Type PEN REC         DEFTING         CORE         DENSITY ON SAMPLER         STRATA OR SAME DEFTING         STRATA SUP CELLS         FIELD IDENTIFICATION OF SOIL REMARKS           FOOT         1 95         24 12         20"         3         4         4         HO         HO         SAME         ELEV         SAME E         SAME         SAME E	FC	REMAN -	DRILI	ER				LOCA	TION		2285	South Ro	bad			
State         State <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Poug</td><td></td><td></td><td></td><td></td></th<>											Poug					
GRUNDUWTER OBSERVATIONS AT_DOME_FT_AFTER_DUPOURS         SIZE LD. HAMMER WIT.         1/3/2" 140# BIT SURFACE ELEV.         OATE FINSH SURFACE ELEV.         6/26/13 SURFACE ELEV.           T_TATEL_HOURS         HAMMER WIT.         140# BIT SURFACE ELEV.         SURFACE ELEV.         GRUND WATER ELEV.	IN	SPECTOR										CASING		CORE BAR		
AT_DBDE_PT       ATTER_UHOURS       HAMMER WT.       140#       BIT       SURFACE ELEV.         ATFT AFTER_HOURS       HAMMER WT.       30"       GROUND VERTER ELEV.         E       SAMPLE       BLOWS PER 6IN       CONSING       GROUND OF SOIL REMARKS         DPER       BLOWS PER 6IN       CONSING       CONSING       CLOURS, LOCADR, LOSS OF WASH WATER, DEPTH         0       1       SS       24' 12' 20' 2       2       12' 13' 14' 14' 14' 14' 14' 14' 14' 14' 14' 14				000		TON		-							3	
AT_FT         ATTER_HOURS         HAMMER FALL         30"         GROUND WATER ELEV.           Image: CASING WATER NO         Type PEN REC DEPTH (FORCE ON TUBE) PROT         Image: CASING WATER NO         SAMPLE         Image: CASING WATER NO         FILL IDENTIFICATION OF SOLL REMARKS ON SAMPLER         CONSIST         FILL IDENTIFICATION OF SOLL REMARKS ON SAMPLER           Image: Protein for the second water of the second wat							5				r			BIT		
SAMPLE         BLOWS PER IN (CORE ON SMPLER (PERCING)         DENSITY (CORE ON SMPLER (PCRCE ON TUBE) PERCING         DENSITY (CHARE (PCRCE ON TUBE) (PCRCE	1					5110								511		
Edge         CASING         Type         FIELD DENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, DEPTH           0 - 6 - 12         1 - 82 / 42         20' - 5         7         -	=		1								1		1	1		
E         CASING BLOWS         Type         PEIN RED         CON SAMPLER (DEPTH)         CON SAMPLER (DEPTH)         CON SAMPLER (DOS)         CON SIG         CHANGE CONSIT         NOL COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.           1         1         1         1         24         12         12         13         06         17         Home         CONSIT         TOP80IL         SAMPLER         SAMPLER           5         3         1         1         1         24         28         24         10         4 <td></td> <td></td> <td></td> <td></td> <td>1</td> <td></td> <td> </td> <td></td> <td></td> <td></td> <td>CORE</td> <td>DENSITY</td> <td>STRATA</td> <td>FIELD ID</td> <td>ENTIFICATION OF SOIL REMARKS</td>					1						CORE	DENSITY	STRATA	FIELD ID	ENTIFICATION OF SOIL REMARKS	
POOT         I         I         ISB         24'         12'         20'         2         3         Mity         MOIST         ELEV           1	E	CASING									TIME			INCL. C		
POOT         I         I         ISB         24'         12'         20'         2         3         Mity         MOIST         ELEV           1	DEP	IBLOWS	NO	Туре	PEN	REC	DEPTH	(FOR	CE ON	TUBE)		CONSIST	DEPTH		SEAMS IN ROCK, ETC.	
Image: constraint of the second sec								0-6	6 - 12	12- 18		MOIST				
2         ss         24'         10'         3         2         dry         loss         SAME           3         ss         24'         6'         60'         3         3         modt         loss         bodt			1	SS	24"	12"	2'0"					-	6"			
S         3         SS         24"         6"         60"         3         3         Iosse model			2		24"	10"	<u>4'0"</u>					-		Drn FMC SAN	D, sm silt, tr ⊢ gravel	
Image: constraint of the second sec		· · ·	<u> </u>	33	27	<sup> 0</sup>								SAME		
4       ss       24"       0"       80"       6       6       compact       80"       SAME         10	5	;	3	SS	24"	6"	6'0"									
10         7         6         compact         80"         SAME           10         6	1	4 ss 24" 0" 8'0" 6 6 moist														
10       E.O.B. 80"         15       E.O.B. 80"         20       E.O.B. 80"         21       E.O.B. 80"         22       E.O.B. 80"         23       E.O.B. 80"         34       E.O.B. 80"         35       E.O.B. 80"         36       E.O.B. 80"         37       E.O.B. 80"         38       E.O.B. 80"         39       E.O.B. 80"         30       E.O.B. 80"         31       E.O.B. 80"         32       E.O.B. 80"         33       E.O.B. 80"         34       E.O.B. 80"         35       E.O.B. 80"         36       E.O.B. 80"         37       E.O.B. 80"         38       E.O.B. 80"         39       E.O.B. 80"         30       E.O.B. 80"         31       E.O.B. 80"         32       E.O.B. 80"         33       E.O.B. 80"         40       E.O.B. 80"         40       E.O.B. 80"         50       E.O.B. 80"         60       E.O.B. 80"         7       USE0         7       USE0         80																
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40       Boring grouted on completion         40       Boring grouted on completion         NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.         GROUND SURFACE TOFT.       USEDCASING THENCASING TOFT.         A = AUGER UP = UNDISTURBED PISTON       T = THINWALL       V = VANE TEST         WOR = WEIGHT OF RODS       WOH = WEIGHT OF HAMMER & RODS       C = COARSE         SS = SPLIT TUBE SAMPLER       H.S.A. = HOLLOW STEM AUGER       M = MEDIUM																
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conditions at specific locations and may not represent         conditions at other locations or times.         GROUND SURFACE TOFT.       USEDCASING THENCASING TOFT.       HOLE NO.       B-7         A = AUGER       UP = UNDISTURBED PISTON       T = THINWALL       V = VANE TEST       C = COARSE         WOR = WEIGHT OF RODS       WOH = WEIGHT OF HAMMER & RODS       C = COARSE       S = SPLIT TUBE SAMPLER       H.S.A. = HOLLOW STEM AUGER       M = MEDIUM	1					ļ							4			
conditions at other locations or times.         GROUND SURFACE TOFT.       USEDCASING       THENCASING TOFT.       HOLE NO.       B-7         A = AUGER       UP = UNDISTURBED PISTON       T = THINWALL       V = VANE TEST       C = COARSE         WOR = WEIGHT OF RODS       WOH = WEIGHT OF HAMMER & RODS       C = COARSE         SS = SPLIT TUBE SAMPLER       H.S.A. = HOLLOW STEM AUGER       M = MEDIUM		100	nditi	ons a	at sp	becifi	ic locat	tions a	and m	nay no	ation t repr	represen esent	τ			
A = AUGER       UP = UNDISTURBED PISTON       T = THINWALL       V = VANE TEST         WOR = WEIGHT OF RODS       WOH = WEIGHT OF HAMMER & RODS       C = COARSE         SS = SPLIT TUBE SAMPLER       H.S.A. = HOLLOW STEM AUGER       M = MEDIUM		cor	nditio	ons a	at ot	her l	ocatio	ns or t	times	<u> </u>						
WOR = WEIGHT OF RODSWOH = WEIGHT OF HAMMER & RODSC = COARSESS = SPLIT TUBE SAMPLERH.S.A. = HOLLOW STEM AUGERM = MEDIUM									T = TH	INWAL	-	-				
	w	DR = WEIG	SHT C	F RO	DS		WOH =	WEIGH	T OF H	AMME	R & ROI	DS .				
												20 - 35% A	ND =35 - 5			

	SOILTESTING, INC. 90 DONOVAN RD.			CLIENT: FLUOR c/o IBM Poughkeepsie					SHEET <u>1</u> OF <u>1</u> HOLE NO. P-1/ P-2						
		FOR					PROJE	ECT NC	)	G124	-9447-13				
		Г (20						ECT NA		<u> </u>		4V		BORING LOCATIONS	
		Y (91	•				IBM				per Plan				
FO	REMAN -		-				LOCATION 2285 South Road								
	PD/rw/	bd								Poug	hkeepsie	, New Yo	rk		
INS	PECTOR										CASING	SAMPLER	CORE BAR	OFFSET	
								TYPE			HSA	SS		DATE START	6/25/13
	OUND W					5	SIZE I.D.				4 1⁄4"	1 3/8"		DATE FINISH	6/25/13
-	AT <u>_none_</u> FT_AFTER <u>_0_</u> HOURS ATFT_AFTERHOURS							IER WI			140#	BIT	SURFACE ELEV.		
AT_	FT_AF	TER_						HAMM	IER FA			30"		GROUND WATER ELEV.	
			5	SAM	PLE										
DEPTH	CASING BLOWS PER	NO	Туре	PEN	REC.	DEPTH	ON (FOR	VS PEF SAMPI CE ON 6 - 12	LER TUBE)	CORE TIME PER FT	DENSITY OR CONSIST	STRATA CHANGE DEPTH		ENTIFICATION OF SOIL F DR, LOSS OF WASH WAT IN ROCK, ETC.	
	FOOT					@ BOT		l	-	(MIN)	MOIST	ELEV			
	P-1											<u>2"</u> 1'0"	ASPHALT ROAD MIX. (pr	rocessed STONE)	
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5		<u> </u>			ļ										
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		heni		ditic	ne r	evealer	hv f	his inv	vestin	ation	represen		L		
140	COI	nditio	ons a	at sp	ecifi	c locat	ions a	ind m	ay no	t repre	esent	-			
	OUND SU	RFAC	E TO		F	-Τ. U	SED _			CASIN			ASING TO	FT. HOLE NO.	P-1/ P-2
						PISTON		T = TH			V = VANE	FEST		C = COARSE	
	R = WEIC	∋HIC URF	r⊢ RO Sam¤	US PLFR		WOH = H.S.A. =					00			M = MEDIUM	
PR	OPORTIO	NSU	SED:	TRAC	CE = 0	S = SPLIT TUBE SAMPLERH.S.A. = HOLLOW STEM AUGERM = MEDIUMROPORTIONS USED: TRACE = 0 - 10%LITTLE = 10 - 20%SOME = 20 - 35%AND = 35 - 50%F = FINE									

## B052 NW Parking Lot Soil Borings FIELD NOTES

# 6/25/13

<b>B-2:</b> 0830 Start	<b>B-4: 0911 Start</b>
0-2': (7, 11, 75, 80) – blow counts	0-2': (3, 9, 14, 14) – blow counts
PID=ND, no visual contamination	PID=ND, no visual contamination
2-4': (89, 98, 51, 62) – blow counts	2-4': $(9, 10, 27, 29) - blow counts$
PID=ND, no visual contamination	PID=ND, no visual contamination
4-6': (12, 33, 24, 25) – blow counts	4-6': (6, 12, 19, 21) – blow counts
PID=ND, no visual contamination	PID=ND, no visual contamination
,	,
6-8': (13, 14, 16, 17) – blow counts	6-8': (8, 6, 5, 6) – blow counts
PID=ND, no visual contamination	PID=ND, no visual contamination
Damp at base	
$\frac{B-5: 0935 \text{ Start}}{(5, 12, 10, 15)}  \text{blow counts}$	<b><u>B-6: 1005 Start</u></b> $0.2^{2}$ : (28, 28, 10, 25) blow counts
0-2': (5, 12, 10, 15) – blow counts PID=ND, no visual contamination	0-2': (38, 38, 19, 25) – blow counts PID=ND, no visual contamination
2-4': (15, 18, 17, 22) – blow counts	2-4': (15, 18, 17, 22) – blow counts
PID=ND, no visual contamination	PID=ND, no visual contamination
4-6': (20, 27, 27, 20) – blow counts	4-6': (20, 27, 27, 20) – blow counts
PID=ND, no visual contamination	PID=ND, no visual contamination
	( 0 <sup>2</sup> , (12, 12, 10, 12), 11
6-8': (12, 12, 10, 13) – blow counts	6-8': (12, 12, 10, 13) – blow counts
No recovery B-3: 1035 Start	No recovery B-3A (B-3 Offset): 1345 Start
<u>B-3: 1055 Start</u>	<u><b>B-3A (B-3 Offset)</b></u> . 1343 Start
0-2': (Asphalt 0-6", 32, 22, 14) – blow counts	0-2': (Asphalt 0-6", 12, 15, 10) – blow counts
PID=ND, no visual contamination	PID=ND, no visual contamination
2-4': (12, 14, 22, 34) – blow counts	2-4': (23, 57, 35, 31) – blow counts
Note: Driller on $\approx$ 12-degree angle	PID=ND, no visual contamination
2" black tar w/ creosote odor, semi-fluid, some	
gravel at 4', sample collected at 1120, PID = $2.8 \text{ mm}$ (D. 2.4')	4-6': $(11, 6, 7, 6)$ – blow counts
3.8ppm (B-3,4')	PID=ND, wood chunk at 5.9' (RR tie?) collected in ziploc bag at 1355
4-6': (15, 15, 22, 26) – blow counts	concercu in zipioc bag at 1555
PID=ND, no visual contamination	6-8': (62, 30, 21, 23) – blow counts
	PID=ND, black coal-like material, cinders,
6-8': (22, 20, 10, 7) – blow counts	wood, brick. sample collected from entire
Silt and clay with black organic material,	interval at 1400 (B-3A, 6-8')
PID=ND, sample collected at 1123 (B-3, 7')	

<b>B-1: 1411 Start</b> 0-2': (Asphalt 0-6", 20, 9, 12) – blow counts PID=ND, no visual contamination	
2-4': (12, 9, 11, 9) – blow counts PID=ND, no visual contamination	
4-6': (11, 6, 7, 6) – blow counts PID=ND, no visual contamination	
6-8': (5, 4, 4, 4) – blow counts No recovery	

## B052 NW Parking Lot Soil Borings FIELD NOTES (continued)

# 6/26/13

<b>B-7: 0830 Start</b>	<b>B-4A: 0900 Start</b>
$\frac{D}{0-2}$ : (2, 3, 5, 7) – blow counts	
PID=ND, no visual contamination 2-4': $(3, 2, 4, 4)$ – blow counts	0-2': (5, 17, 24, 27) – blow counts PID=ND, no visual contamination, brick at base
PID=ND, no visual contamination	0050
4-6': (3, 3, 6, 7) – blow counts PID=ND, no visual contamination	2-4': $(17, 105, 52, 43)$ – blow counts Driller angled at $\approx$ 12-degree angle PID=ND, no visible contamination, cobble in middle, possible cinders at base
6-8': (6, 6, 7, 6) – blow counts	
No recovery, 2 attempts	4-6': (20, 31, 63, 34)* – blow counts PID=ND, trace cinders, some yellow bricks/tile (collected), trace small gravel sized red brick
	6-8': (17, 14, 17, 17)* – blow counts PID=ND, higher cinder and brick/tile content, splintered/shredded wood at base, no odor
<u>B-2A: 0928 Start</u>	
0-2': (3, 5, 7, 23) – blow counts PID=ND, light brown silt, little sand, no visible contamination	
2-4': (27, 65, 89, 66) – blow counts PID=ND, brown silt, sand, clay and gravel, no bricks, cinders, etc.	
4-6': (27, 45, 323, 31) – blow counts PID=ND, gray-brown sand and silt, no visible contamination, no bricks, cinders, etc.	
6-8': (20, 30, 35, 30) – blow counts Sand, silt and cinders with wood core ( $\approx$ 3") at base. PID=ND at $\approx$ 6', 0.5 ppm at $\approx$ 7', 3.2 ppm at $\approx$ 7.5', wood at base, had creosote type odor and PID = 13.4 ppm. Sample collected, B-2A, 7-8ft	

# APPENDIX B

# Sampling Results Summary Tables

Notes:

U: Not detected at or above the stated limit

## Table B-1. Boring B2A, 7 to 8ft below ground surface Chilled Water Line Replacement / B052 NW Parking Lot and Roadway Split Spoon Sampling Results Comparison to Part 375-6.8 Soil Cleanup Objectives & Supplemental Soil Cleanup Objectives (CP-51)

					Part 375-6.8(b)	CP-51 Suppl SCO	CP-51 Suppl SCO
Sampling Location	Parameter Group	Parameter	Reported Value	Units	Industrial SCO	Protection of Ecological Resources	Protection of Groundwater
Chilled Water Line Repl	VOCs (total)	1,2,4-Trimethylbenzene	630	ug/kg	380,000	None	None
Boring B2A		1,3,5-Trimethylbenzene	140	ug/kg	380,000	None	None
_		Benzene	1.3	ug/kg	89,000	None	None
Depth: 7 to 8 ft bgs		Ethylbenzene	1.9	ug/kg	780,000	None	None
Sample Type: Soil		Isopropylbenzene	2.0	ug/kg	None	None	2,300
		Naphthalene	5200	ug/kg	1,000,000	None	None
Date Sampled: 6/26/2013		n-Butylbenzene	3.6	ug/kg	1,000,000	None	None
Time Sampled: 0955		n-Propylbenzene	1.4	ug/kg	1,000,000	None	None
		p-Isopropyltoluene	5.8	ug/kg	None	None	10,000
LabId: 420-67423-4		sec-Butylbenzene	4.3	ug/kg	1,000,000	None	None
		Toluene	2.2	ug/kg	1,000,000	None	None
		Xylenes, total	340	ug/kg	1,000,000	None	None
		Carbon disulfide	1.1 U	ug/kg	None	None	2,700
		cis-1,2-Dichloroethene	2.9	ug/kg	1,000,000	None	None
		Acetone	46	ug/kg	1,000,000	None	None
		m-Xylene & p-Xylene	4.2	ug/kg	1,000,000	None	None
		o-Xylene	3.9	ug/kg	1,000,000	None	None
		1,2-Dichloroethene, Total	3.3	ug/kg	1,000,000	None	None
	SVOCs (total)	2-Methylnapthalene	3900 U	ug/kg	None	None	None
		3 & 4 Methylphenol	3900 U	ug/kg	None	None	None
		Acenapthene	4,000	ug/kg	1,000,000	None	None
		Acenapthylene	3900 U	ug/kg	1,000,000	None	None
		Anthracene	4,700	ug/kg	1,000,000	None	None
		Benzo(a)anthracene	7,100	ug/kg	11,000	None	None
		Benzo(a)pyrene	6,100	ug/kg	1,100		None
		Benzo(b)fluoranthrene	5,500	ug/kg	11,000	None	None
		Benzo(ghi)perylene	3900 U	ug/kg	1,000,000	None	None
		Benzo(k)fluroanthrene	5,800	ug/kg	110,000	None	None
		Bis(2-ethylhexyl) phalate	3900 U	ug/kg	None	239,000	435,000
		Carbazole	4,100	ug/kg	None	None	None
		Chrysene	7,900	ug/kg	110,000	None	None
		Dibenzofuran	3900 U	ug/kg	None	None	None
		Fluoranthrene	17,000		1,000,000	None	None
		Fluorene	3900 U	ug/kg	1,000,000		None
		Indeno(1,2,3-cd)Pyrene	3900 U	ug/kg	11,000		None
		Napthalene	7,500		1,000,000	None	None
		Phenanthrene	19,000	5	1,000,000	None	
		Pyrene	14,000		1,000,000	None	None

# Table B-2. Boring B3, 4ft below ground surface Chilled Water Line Replacement / B052 NW Parking Lot and Roadway Split Spoon Sampling Results Comparison to Part 375-6.8 Soil Cleanup Objectives & Supplemental Soil Cleanup Objectives (CP-51)

					Part 375-6.8(b)	CP-51 Suppl SCO	CP-51 Suppl SCO
Sampling Location	Parameter Group	Parameter	Reported Value	Units	Industrial SCO	Protection of Ecological Resources	Protection of Groundwater
Chilled Water Line Repl	VOCs (total)	1,2,4-Trimethylbenzene	3400	ug/kg	380,000	None	None
Boring B3		1,3,5-Trimethylbenzene	2700 U	ug/kg	380,000	None	None
		Benzene	2700 U	ug/kg	89,000	None	None
Depth: 4 ft bgs		Ethylbenzene	2700 U	ug/kg	780,000	None	None
Sample Type: Soil		Isopropylbenzene	2700 U	ug/kg	None	None	2,300
		Naphthalene	110000	ug/kg	1,000,000	None	None
Date Sampled: 6/25/2013		n-Butylbenzene	2700 U	ug/kg	1,000,000	None	None
Time Sampled: 1120		n-Propylbenzene	2700 U	ug/kg	1,000,000	None	None
		p-Isopropyltoluene	2700 U	ug/kg	None	None	10,000
LabId: 420-67423-3		sec-Butylbenzene	2700 U	ug/kg	1,000,000	None	None
		Toluene	2700 U	ug/kg	1,000,000	None	None
		Xylenes, total	5400 U	ug/kg	1,000,000	None	None
		Carbon disulfide	2700 U	ug/kg	None	None	2,700
		cis-1,2-Dichloroethene	2700 U	ug/kg	1,000,000	None	None
		Acetone	14000 U	ug/kg	1,000,000	None	None
		m-Xylene & p-Xylene	5400 U	ug/kg	1,000,000	None	None
		o-Xylene	5400 U	ug/kg	1,000,000	None	None
		1,2-Dichloroethene, Total	2700 U	ug/kg	1,000,000	None	None
	SVOCs (total)	2-Methylnapthalene	350,000	ug/kg	None	None	None
	, <i>,</i>	3 & 4 Methylphenol	59000 U	ug/kg	None	None	None
		Acenapthene	59000 U	ug/kg	1,000,000	None	None
		Acenapthylene	76,000	ug/kg	1,000,000	None	None
		Anthracene	110,000	ug/kg	1,000,000		None
		Benzo(a)anthracene	120,000	ug/kg	11,000		None
		Benzo(a)pyrene	92,000	ug/kg	1,100		None
		Benzo(b)fluoranthrene	59000 U	ug/kg	11,000		None
		Benzo(ghi)perylene	59000 U	ug/kg	1,000,000		None
		Benzo(k)fluroanthrene	61,000	ug/kg	110,000		None
		Bis(2-ethylhexyl) phalate	59000 U	ug/kg	None	239,000	435,000
		Carbazole	59000 U	ug/kg	None	None	None
		Chrysene	130,000	ug/kg	110,000		None
		Dibenzofuran	59000 U	ug/kg	None	None	None
		Fluoranthrene	230,000	ug/kg	1,000,000		None
		Fluorene	160,000	ug/kg	1,000,000		None
		Indeno(1,2,3-cd)Pyrene	59000 U	ug/kg	11,000		None
		Napthalene	360,000	ug/kg	1,000,000	1	None
		Phenanthrene	600,000	ug/kg	1,000,000		None
		Pyrene	330,000	ug/kg	1,000,000		None

# Table B-3. Boring B3, 7ft below ground surface Chilled Water Line Replacement / B052 NW Parking Lot and Roadway Split Spoon Sampling Results Comparison to Part 375-6.8 Soil Cleanup Objectives & Supplemental Soil Cleanup Objectives (CP-51)

					Part 375-6.8(b)	CP-51 Suppl SCO	CP-51 Suppl SCO
Sampling Location	Parameter Group	Parameter	Reported	Units	Industrial	Protection of	Protection of
			Value		SCO	Ecological Resources	Groundwater
Chilled Water Line Repl	VOCs (total)	1,2,4-Trimethylbenzene	2.9	ug/kg	380,000	None	None
Boring B3		1,3,5-Trimethylbenzene	2.7	ug/kg	380,000	None	None
		Benzene	1.4 U	ug/kg	89,000	None	None
Depth: 7 ft bgs		Ethylbenzene	1.4 U	ug/kg	780,000	None	None
Sample Type: Soil		Isopropylbenzene	1.4 U	ug/kg	None	None	2,300
		Naphthalene	23	ug/kg	1,000,000	None	None
Date Sampled: 6/25/2013		n-Butylbenzene	1.4 U	ug/kg	1,000,000	None	None
Time Sampled: 1123		n-Propylbenzene	1.4 U	ug/kg	1,000,000	None	None
		p-Isopropyltoluene	4.4	ug/kg	None	None	10,000
Labld: 420-67423-2		sec-Butylbenzene	3.0	ug/kg	1,000,000	None	None
		Toluene	1.4 U	ug/kg	1,000,000	None	None
		Xylenes, total	2.9 U	ug/kg	1,000,000	None	None
		Carbon disulfide	1.4 U	ug/kg	None	None	2,700
		cis-1,2-Dichloroethene	1.4 U	ug/kg	1,000,000	None	None
		Acetone	71	ug/kg	1,000,000	None	None
		m-Xylene & p-Xylene	2.9 U	ug/kg	1,000,000	None	None
		o-Xylene	2.9 U	ug/kg	1,000,000	None	None
		1,2-Dichloroethene, Total	1.4 U	ug/kg	1,000,000	None	None
	SVOCs (total)	2-Methylnapthalene	390	ug/kg	None	None	None
		3 & 4 Methylphenol	1,000	ug/kg	None	None	None
		Acenapthene	480	ug/kg	1,000,000	None	None
		Acenapthylene	380 U	ug/kg	1,000,000	None	None
		Anthracene	1,300	ug/kg	1,000,000	None	None
		Benzo(a)anthracene	1,700	ug/kg	11,000	None	None
		Benzo(a)pyrene	1,400	ug/kg	1,100	None	None
		Benzo(b)fluoranthrene	1,600	ug/kg	11,000	None	None
		Benzo(ghi)perylene	710	ug/kg	1,000,000	None	None
		Benzo(k)fluroanthrene	1,000	ug/kg	110,000	None	None
		Bis(2-ethylhexyl) phalate	1,400	ug/kg	None	239,000	435,000
		Carbazole	640	ug/kg	None	None	None
		Chrysene	1,700	ug/kg	110,000	None	None
		Dibenzofuran	410	ug/kg	None	None	None
		Fluoranthrene	4,700	ug/kg	1,000,000		None
		Fluorene	680	ug/kg	1,000,000		None
		Indeno(1,2,3-cd)Pyrene	680	ug/kg	11,000		None
		Napthalene	610	ug/kg	1,000,000	None	None
		Phenanthrene	5,000	ug/kg	1,000,000	None	None
		Pyrene	4,000	ug/kg	1,000,000		None

## Table B-4. Boring B3A, 6 to 8ft below ground surface Chilled Water Line Replacement / B052 NW Parking Lot and Roadway Split Spoon Sampling Results Comparison to Part 375-6.8 Soil Cleanup Objectives & Supplemental Soil Cleanup Objectives (CP-51)

					Part 375-6.8(b)	CP-51 Suppl SCO	CP-51 Suppl SCO
Sampling Location	Parameter Group	Parameter	Reported	Units	Industrial	Protection of	Protection of
			Value		SCO	Ecological Resources	Groundwater
Chilled Water Line Repl	VOCs (total)	1,2,4-Trimethylbenzene	5.7	ug/kg	380,000	None	None
Boring B3A		1,3,5-Trimethylbenzene	6.7	ug/kg	380,000	None	None
-		Benzene	1.1 U	ug/kg	89,000	None	None
Depth: 6 to 8 ft bgs		Ethylbenzene	1.1 U	ug/kg	780,000	None	None
Sample Type: Soil		Isopropylbenzene	1.1 U	ug/kg	None	None	2,300
		Naphthalene	13	ug/kg	1,000,000	None	None
Date Sampled: 6/25/2013		n-Butylbenzene	2.8	ug/kg	1,000,000	None	Non
Time Sampled: 1400		n-Propylbenzene	1.1 U	ug/kg	1,000,000	None	Non
		p-Isopropyltoluene	4.9	ug/kg	None	None	10,00
LabId: 420-67423-1		sec-Butylbenzene	3.1	ug/kg	1,000,000	None	Non
		Toluene	1.2	ug/kg	1,000,000	None	Non
		Xylenes, total	4.5	ug/kg	1,000,000	None	Non
		Carbon disulfide	1.3	ug/kg	None	None	2,70
		cis-1,2-Dichloroethene	1.1 U	ug/kg	1,000,000	None	Non
		Acetone	43	ug/kg	1,000,000	None	Non
		m-Xylene & p-Xylene	2.4	ug/kg	1,000,000	None	Nor
		o-Xylene	2.2 U	ug/kg	1,000,000	None	Non
		1,2-Dichloroethene, Total	1.1 U	ug/kg	1,000,000	None	Non
	SVOCs (total)	2-Methylnapthalene	1,600	ug/kg	None	None	Non
		3 & 4 Methylphenol	460	ug/kg	None	None	Non
		Acenapthene	590	ug/kg	1,000,000	None	Nor
		Acenapthylene	370 U	ug/kg	1,000,000	None	Nor
		Anthracene	970	ug/kg	1,000,000	None	Nor
		Benzo(a)anthracene	1,500	ug/kg	11,000	None	Nor
		Benzo(a)pyrene	1,200	ug/kg	1,100	None	Non
		Benzo(b)fluoranthrene	990	ug/kg	11,000	None	Non
		Benzo(ghi)perylene	600	ug/kg	1,000,000	None	Nor
		Benzo(k)fluroanthrene	1,100	ug/kg	110,000	None	Non
		Bis(2-ethylhexyl) phalate	370 U	ug/kg	None	239,000	435,00
		Carbazole	510	ug/kg	None	None	Non
		Chrysene	1,700	ug/kg	110,000	None	Non
		Dibenzofuran	500	ug/kg	None	None	Non
		Fluoranthrene	3,300	ug/kg	1,000,000	None	Non
		Fluorene	680	ug/kg	1,000,000	None	Non
		Indeno(1,2,3-cd)Pyrene	540	ug/kg	11,000	None	Non
		Napthalene	2,000	ug/kg	1,000,000	None	Non
		Phenanthrene	4,000	ug/kg	1,000,000	None	Non
		Pyrene	3,300	ug/kg	1,000,000	None	Non

# Table B-5. TCLP MetalsChilled Water Line Replacement / B052 NW Parking Lot and RoadwaySplit Spoon Sampling Results

TCLP Metal	Maximum Concentration of Contaminant for Toxicity Characteristic	units	Boring B2A 7 to 8 ft bgs	Boring B3 4ft bgs	Boring B3 7ft bgs	Boring B3A 6 to 8 ft bgs
Arsenic	5.0	mg/l	0.200 U	0.200 U	0.200 U	0.200 U
Barium	100.0	mg/l	0.450	0.400 U	1.300	0.610
Cadmium	1.0	mg/l	0.020 U	0.020 U	0.020 U	0.020 U
Chromium	5.0	mg/l	0.020 U	0.020 U	0.020 U	0.020 U
Lead	5.0	mg/l	0.100 U	0.100 U	0.100 U	0.100 U
Selenium	1.0	mg/l	0.050 U	0.050 U	0.050 U	0.050 U
Silver	5.0	mg/l	0.020 U	0.020 U	0.020 U	0.020 U
Mercury	0.2	mg/l	0.00050 U	0.00050 U	0.00050 U	0.00050 U

# APPENDIX C

Laboratory Analytical Data Packages (CD)

# EnviroTest 🔛 Laboratories Inc.

# ANALYTICAL REPORT

Job Number: 420-67423-1

Job Description: Perimeter Road Chilled Water Line

For: Fluor Industrial Services, Inc. PO BOX 1769 Poughkeepsie, NY 12601

Attention: Mr. Ed Axtmann

Meredith Ruthven

Meredith W Ruthven Customer Service Manager mruthven@envirotestlaboratories.com 07/10/2013 Revision: 1

cc: Ms. Dorothy Bergmann Mr. Steve Brannen Mr. Pat Griffin Mr. George Lopuch

The test results in this report meet all NELAP requirements unless specified within the case narrative Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. EnviroTest Laboratories Inc. certifies that the analytical results contained herein apply only to the samples tested as received by our laboratory. All questions regarding this report should be directed to the EnviroTest Customer Service Representative.

EnviroTest Laboratories, Inc. Certifications and Approvals: NELAP Accredited, NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554, EPA NY00049.

Envirotest Laboratories, Inc. 315 Fullerton Avenue, Newburgh, NY 12550 Tel (845) 562-0890 Fax (845) 562-0841 www.envirotestlaboratories.com



#### Job Narrative 420-J67423-1

Comments No additional comments.

Receipt All samples were received in good condition within temperature requirements.

GC/MS VOA No analytical or quality issues were noted.

#### GC/MS Semi VOA

Method 8270D: Due to the sample matrix and high level of target compounds requiring a 10x dilution, several compounds in the matrix spike are outside of the acceptable control limits. The associated laboratory control standard (LCS) met acceptance criteria for all compounds except for benzoic acid.

Method 8270D: Due to the matrix of the following samples and expected high level of target compounds the amount of sample analyzed was modified from the typical 15 grams:

67423-3 (8.59 grams)

Due to expected high level of target compounds the following sample were diluted as indicated, resulting in an elevated reporting limit:

67423-3: 100X 67423-4: 10 X

Several compounds in the following sample exceeded the upper control limit and was subsequently diluted as indicated and re-analyzed:

67423-2: 2X

No other analytical or quality issues were noted.

Metais No analytical or quality issues were noted.

General Chemistry No analytical or quality issues were noted.

Organic Prep No analytical or quality issues were noted.

VOA Prep

No analytical or quality issues were noted.

Client: Fluor Industrial Services, Inc.

Job Number: 420-67423-1

Lab Sample ID Client Sample Analyte	Result / Qualifier	Reporting Limit	Units	Method
420-67423-1 PERIMETER	ROAD CHILLED WATER B3A, 6-8'			
1,2,4-Trimethylbenzene	5.7	1.1	ug/Kg Dry	8260C
1,3,5-Trimethylbenzene	6.7	1.1		8260C
Naphthalene	13	1.1	ug/Kg Dry	8260C
n-Butylbenzene	2.8	1.1	ug/Kg Dry	8260C 8260C
p-isopropyltoluene	4.9	1.1	ug/Kg Dry	
sec-Butylbenzene	4. <del>9</del> 3.1	1.1	ug/Kg Dry	8260C 8260C
Toluene	1.2		ug/Kg Dry	
Xylenes, Total	4.5	1.1 2.2	ug/Kg Dry	8260C
Carbon disulfide	4.5	2.2 1.1	ug/Kg Dry	8260C
Acetone	43		ug/Kg Dry	8260C
m-Xylene & p-Xylene	43 2.4	5.5	ug/Kg Dry	8260C
2-Methylnaphthalene	2. <del>4</del> 1 <del>6</del> 00	2.2	ug/Kg Dry	8260C
3 & 4 Methylphenol	460	370	ug/Kg Dry	8270D
Acenaphthene	590	370	ug/Kg Dry	8270D
Anthracene		370	ug/Kg Dry	8270D
	970	370	ug/Kg Dry	8270D
Benzo[a]anthracene	1500	370	ug/Kg Dry	8270D
Benzo[a]pyrene	1200	370	ug/Kg Dry	8270D
Benzo(b)fluoranthene	990	370	ug/Kg Dry	8270D
Benzo[g,h,i]perylene	600	370	ug/Kg Dry	8270D
Benzo[k]fluoranthene	1100	370	ug/Kg Dry	8270D
Carbazole	510	370	ug/Kg Dry	8270D
Chrysene	1700	370	ug/Kg Dry	8270D
Dibenzofuran	500	370	ug/Kg Dry	8270D
-luoranthene 	3300	370	ug/Kg Dry	8270D
Fluorene	680	370	ug/Kg Dry	8270D
ndeno[1,2,3-cd]pyrene	540	370	ug/Kg Dry	8270D
Naphthalene	2000	370	ug/Kg Dry	8270D
Phenanthrene	4000	370	ug/Kg Dry	8270D
Pyrene	3300	370	ug/Kg Dry	8270D
Percent Solids	89	0.10	%	PercentMoisture
TCLP				
Ва	610	400	ug/L	6010B

# Client: Fluor Industrial Services, Inc.

Job Number: 420-67423-1

Lab Sample ID Client Samp Analyte	le ID Result / Qualifie	Reporting r Limit	Units	Method
420-67423-2 PERIMET	ER ROAD CHILLED WATER B3, 7'			
1,2,4-Trimethylbenzene	2.9	1.4	ug/Kg Dry	8260C
1,3,5-Trimethylbenzene	2.7	1.4	ug/Kg Dry	8260C
Naphthalene	23	1.4	ug/Kg Dry	82600
p-Isopropyltoluene	4.4	1.4	ug/Kg Dry	8260C
sec-Butylbenzene	3.0	1.4	ug/Kg Dry	8260C
Acetone	71	7.2	ug/Kg Dry	8260C
2-Methylnaphthalene	390	380	ug/Kg Dry	8270D
3 & 4 Methylphenol	1000	380	ug/Kg Dry	8270D
Acenaphthene	480	380	ug/Kg Dry	8270D
Anthracene	1300	380	ug/Kg Dry	8270D
Benzo[a]anthracene	1700	380	ug/Kg Dry	8270D
Benzo[a]pyrene	1400	380	ug/Kg Dry	8270D
Benzo[b]fluoranthene	1600	380	ug/Kg Dry	8270D
Benzo[g,h,i]perylene	710	380	ug/Kg Dry	8270D
Benzo[k]fluoranthene	1000	380	ug/Kg Dry	8270D
Bis(2-ethylhexyl) phthalate	1400	380	ug/Kg Dry	8270D
Carbazole	640	380	ug/Kg Dry	8270D
Chrysene	1700	380	ug/Kg Dry	8270D
Dibenzofuran	410	380	ug/Kg Dry	8270D
Fluoranthene	4600 D	760	ug/Kg Dry	8270D
Fluorene	680	380	ug/Kg Dry	8270D
Indeno[1,2,3-cd]pyrene	680	380	ug/Kg Dry	8270D
Naphthalene	610	380	ug/Kg Dry	8270D
Phenanthrene	5000 D	760	ug/Kg Dry	8270D
Pyrene	4000 🗅	760	ug/Kg Dry	8270D
Percent Solids	90	0.10	%	PercentMoisture
TCLP				
Ва	1300	400	ug/L	6010B

Client: Fluor Industrial Services, Inc.

Job Number: 420-67423-1

Lab Sample ID Client Sample ID Analyte	Result / Qualifier	Reporting Limit	Units	Method
420-67423-3 PERIMETER RO	AD CHILLED WATER 8-3, 4'			
1,2,4-Trimethylbenzene	3400	2700	ug/Kg Dry	8260C
Naphthalene	110000	2700	ug/Kg Dry	8260C
2-Methylnaphthalene	350000	59000	ug/Kg Dry	8270D
Acenaphthylene	76000	59000	ug/Kg Dry	8270D
Anthracene	110000	59000	ug/Kg Dry	8270D
Benzo[a]anthracene	120000	59000	ug/Kg Dry	8270D
Benzo[a]pyrene	92000	59000	ug/Kg Dry	8270D
Benzo[k]fluoranthene	61000	59000	ug/Kg Dry	8270D
Chrysene	130000	59000	ug/Kg Dry	8270D
Fluoranthene	230000	59000	ug/Kg Dry	8270D
Fluorene	160000	59000	ug/Kg Dry	8270D
Naphthalene	360000	59000	ug/Kg Dry	8270D
Phenanthrene	600000	59000	ug/Kg Dry	8270D
Pyrene	330000	59000	ug/Kg Dry	8270D
Percent Solids	98	0.10	%	PercentMoisture

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## Client: Fluor Industrial Services, Inc.

Job Number: 420-67423-1

Lab Sample ID Client Sample II Analyte	D Result / Qualifier	Reporting Limit	Units	Method
420-67423-4 PERIMETER F	ROAD CHILLED WATER B2A, 7-8'			
1,2,4-Trimethylbenzene	27	1.1	ug/Kg Dry	8260C
1,2,4-Trimethylbenzene	630	120	ug/Kg Dry	8260C
1,3,5-Trimethylbenzene	7.2	1.1	ug/Kg Dry	8260C
1,3,5-Trimethylbenzene	140	120	ug/Kg Dry	8260C
Benzene	1.3	1.1	ug/Kg Dry	8260C
Ethylbenzene	1.9	1.1	ug/Kg Dry	8260C
lsopropylbenzene	2.0	1.1	ug/Kg Dry	8260C
Naphthalene	180 E	1.1	ug/Kg Dry	8260C
Naphthalene	5200	120	ug/Kg Dry	8260C
n-Butylbenzene	3.6	1.1	ug/Kg Dry	8260C
N-Propylbenzene	1.4	1.1	ug/Kg Dry	8260C
p-Isopropyitoluene	5.8	1.1	ug/Kg Dry	8260C
p-Isopropyltoluene	160	120	ug/Kg Dry	8260C
sec-Butylbenzene	4.3	1.1	ug/Kg Dry	8260C
Toluene	2.2	1.1	ug/Kg Dry	8260C
Xylenes, Total	8.1	2.2	ug/Kg Dry	8260C
Xylenes, Total	340	230	ug/Kg Dry	8260C
cis-1,2-Dichloroethene	2.9	1.1	ug/Kg Dry	8260C
Acetone	46	5.6	ug/Kg Dry	8260C
m-Xylene & p-Xylene	4.2	2.2	ug/Kg Dry	8260C
o-Xylene	3.9	2.2	ug/Kg Dry	8260C
1,2-Dichloroethene, Total	3.3	1.1	ug/Kg Dry	8260C
Acenaphthene	4000	3900	ug/Kg Dry	8270D
Anthracene	4700	3900	ug/Kg Dry	8270D
Benzo[a]anthracene	7100	3900	ug/Kg Dry	8270D
Benzo[a]pyrene	6100	3900	ug/Kg Dry	8270D
Benzo[b]fluoranthene	5500	3900	ug/Kg Dry	8270D
Benzo[k]fluoranthene	5800	3900	ug/Kg Dry	8270D
Carbazole	4100	3900	ug/Kg Dry	8270D
Chrysene	7900	3900	ug/Kg Dry	8270D
Fluoranthene	17000	3900	ug/Kg Dry	8270D
Naphthalene	7500	3900	ug/Kg Dry	8270D
Phenanthrene	19000	3900	ug/Kg Dry	8270D
Pyrene	14000	3900	ug/Kg Dry	8270D
Percent Solids	87	0.10	%	PercentMoisture
TCLP				
Ba	450	400	ug/L	6010B

## **METHOD SUMMARY**

Client: Fluor Industrial Services, Inc.

Job Number: 420-67423-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Inductively Coupled Plasma - Atomic Emission Spectrometry	EnvTest	SW846 6010B	
Toxicity Characteristic Leaching Procedure	EnvTest		SW846 1311
Acid Digestion of Aqueous Samples and Extracts for	EnvTest		SW846 3010A
Mercury in Liquid Waste (Manual Cold Vapor Technique)	EnvTest	SW846 7470A	
Toxicity Characteristic Leaching Procedure (Hg Only)	EnvTest		SW846 1311
Mercury in Liquid Waste (Manual Cold Vapor	EnvTest		SW846 7470A
/olatile Organic Compounds by GC/MS	EnvTest	SW846 8260C	
Closed System Purge&Trap High Level	EnvTest		EPA 5035-H
Closed System Purge & Trap Low Level	EnvTest		EPA 5035-L
Semivolatile Compounds by GC/MS	EnvTest	SW846 8270D	
Microwave Extraction	EnvTest		SW846 3546

#### Lab References:

EnvTest = EnviroTest

#### Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

# METHOD / ANALYST SUMMARY

# Client: Fluor Industrial Services, Inc.

Job Number: 420-67423-1

Method	Analyst	<u>Analyst ID</u>
SW846 8260C	Andersen, Eric C	ECA
SW846 8270D	Labare, Alicia M	AML
SW846 6010B	Palentino, Gus J	GJP
SW846 7470A	McPhillips, Julie	JM
EPA PercentMoisture	Mawe, lan	IM

# SAMPLE SUMMARY

# Client: Fluor Industrial Services, Inc.

Job Number: 420-67423-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
420-67423-1	Perimeter Road Chilled Water B3A, 6-8'	Solid	06/25/2013 1400	06/26/2013 1110
420-67423-2	Perimeter Road Chilled Water B3, 7'	Solid	06/25/2013 1123	06/26/2013 1110
420-67423-3	Perimeter Road Chilled Water B-3, 4'	Solid	06/25/2013 1120	06/26/2013 1110
420-67423-4	Perimeter Road Chilled Water B2A, 7-8'	Solid	06/26/2013 0955	06/26/2013 1110

# SAMPLE RESULTS

EnviroTest Laboratories, Inc.

Client Sample ID:	Perimeter Road Chilled	Project:	General Testing
Lab Name:	EnviroTest Laboratories,	Job No.:	420-67423-1
SDG No.:			
Matrix:	Solid	Lab Sample ID:	420-67423-1
Analysis Method:	8260C	Lab File ID:	X062606.D
Sample wt/vol:	5.15 (g)	Date Received:	06/26/2013 11:10
Level: (low/med)	Low	Date Analyzed:	06/26/2013 13:13
% Moisture:	11.1	Dilution Factor:	1
GC Column/ID:	DB-VRX 0.18 (um)	Soil Aliquot:	5.15 (g)
Soil Extract Vol.:	M. T	Units:	ug/Kg Dry
Analy. Batch No.:	66977		

CAS No.	Compound Name	Result	Q	RL	RL
107-02-8	Acrolein	1.1	U	1.1	1.1
107-13-1	Acrylonitrile	5.5	U	5.5	5.5
97-63-2	Ethyl methacrylate	1.1	U	1,1	1.1
80-62-6	Methyl methacrylate	11	U	11	11
120-82-1	1,2,4-Trichlorobenzene	1.1	U	1.1	1.1
95-63-6	1,2,4-Trimethylbenzene	5.7		1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.1	U	1.1	1.1
107-06-2	1,2-Dichloroethane	1.1	U	1.1	1.1
78-87-5	1,2-Dichloropropane	1.1	υ	1.1	1.1
96-12-8	1,2-Dibromo-3-Chloropropane	1.1	U	1.1	1.1
108-67-8	1,3,5-Trimethylbenzene	6.7		1.1	1.1
541-73-1	1,3-Dichlorobenzene	1.1	U	1.1	1.1
142-28-9	1,3-Dichloropropane	1.1	U	1.1	1.1
106-46-7	1,4-Dichlorobenzene	1.1	U	1.1	1.1
123-91-1	1,4-Dioxane	1.1	U	1.1	1.1
95-49-8	2-Chlorotoluene	1.1	U	1.1	1.1
110-75-8	2-Chloroethyl vinyl ether	1.1	U	1.1	1.1
106-43-4	4-Chlorotoluene	1.1	U	1.1	1.1
71-43-2	Benzene	1.1	U	1.1	1.1
108-86-1	Bromobenzene	1.1	U	1.1	1.1
75-25-2	Bromoform	1.1	U	1.1	1.1
74-83-9	Bromomethane	1.1	U	1.1	1.1
108-90-7	Chlorobenzene	1.1	U	1.1	1.1
67-66-3	Chloroform	1.1	U	1.1	1.1
74-87-3	Chloromethane	1.1	U	1.1	1.1
75-00-3	Chloroethane	1.1	U	1.1	1.1
124-48-1	Chlorodibromomethane	1.1	U	1.1	1.1
74-97-5	Chlorobromomethane	1.1	U	1.1	1.1
100-41-4	Ethylbenzene	1.1	U	1.1	1.1
98-82-8	Isopropylbenzene	1.1	U	1.1	1.1
91-20-3	Naphthalene	13		1,1	1.1
104-51-8	n-Butylbenzene	2.8		1.1	1.1

Client Sample ID:	Perimeter Road Chilled	Project:	General Testing
Lab Name:	EnviroTest Laboratories,	Job No.:	420-67423-1
SDG No.:			
Matrix:	Solid	Lab Sample ID:	420-67423-1
Analysis Method:	8260C	Lab File ID:	X062606.D
Sample wt/vol:	5.15 (g)	Date Received:	06/26/2013 11:10
Level: (low/med)	Low	Date Analyzed:	06/26/2013 13:13
<pre>% Moisture:</pre>	11.1	Dilution Factor:	1
GC Column/ID:	DB-VRX 0.18 (um)	Soil Aliquot:	5.15 (g)
Soil Extract Vol.:	,	Units:	ug/Kg Dry
Analy. Batch No.:	66977		

CAS No.	Compound Name	Result	Q	RL	RL
103-65-1	N-Propylbenzene	1.1	U	1,1	1.1
99-87-6	p-Isopropyltoluene	4.9		1.1	1.1
135-98-8	sec-Butylbenzene	3.1		1.1	1.1
100-42-5	Styrene	1.1	U	1.1	1.1
98-06-6	tert-Butylbenzene	1.1	U	1.1	1.1
108-88-3	Toluene	1.2		1.1	1.1
1330-20-7	Xylenes, Total	4.5		2.2	2.2
100-44-7	Benzyl chloride	1.1	Ū	1.1	1.1
630-20-6	1,1,1,2-Tetrachloroethane	1.1	ΰ	1.1	1.1
71-55-6	1,1,1-Trichloroethane	1.1	U	1,1	1.1
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.1	U	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.1	U	1.1	1.1
75-34-3	1,1-Dichloroethane	1.1	U	1.1	1.1
75-35-4	1,1-Dichloroethene	1.1	U	1.1	1.1
563-58-6	1,1-Dichloropropene	1.1	U	1,1	1.1
594-20-7	2,2-Dichloropropane	1.1	U	1.1	1.1
591-78-6	2-Hexanone	1.1	U	1.1	1.1
107-05-1	3-Chloropropene	1.1	U	1.1	1.1
75-27-4	Bromodichloromethane	1.1	U	1.1	1.1
75-71-8	Dichlorodifluoromethane	1.1	U	1.1	1.1
56-23-5	Carbon tetrachloride	1.1	Ū	1.1	1.1
75-15-0	Carbon disulfide	1.3		1.1	1.1
156-59-2	cis-1,2-Dichloroethene	1.1	U	1.1	1.1
10061-01-5	cis-1,3-Dichloropropene	1.1	U	1.1	1.1
87-68-3	Hexachlorobutadiene	1.1	U	1.1	1.1
74-95-3	Dibromomethane	1.1	Ū	1.1	1.1
75-09-2	Methylene Chloride	1.1	U	1.1	1.1
127-18-4	Tetrachloroethene	1.1	U	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.1	U	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	1.1	U	1.1	1.1
110-57-6	trans-1,4-Dichloro-2-butene	1.1	U	1.1	1.1
79-01-6	Trichloroethene	1.1	U	1.1	1.1

Client Sample ID:	Perimeter Road Chilled	Project:	General Testing
Lab Name:	EnviroTest Laboratories,	Job No.:	420-67423-1
SDG No.:			
Matrix:	Solid	Lab Sample ID:	420-67423-1
Analysis Method:	8260C	Lab File ID:	X062606.D
Sample wt/vol:	5.15 (g)	Date Received:	06/26/2013 11:10
Level: (low/med)	Low	Date Analyzed:	06/26/2013 13:13
% Moisture:	11.1	Dilution Factor:	1
GC Column/ID:	DB-VRX 0.18 (um)	Soil Aliquot:	5.15 (g)
Soil Extract Vol.:		Units:	ug/Kg Dry
Analy. Batch No.:	66977		

CAS No.	Compound Name	Result	Q	RL	RL
75-69-4	Trichlorofluoromethane	1.1	U	1.1	1.1
75-01-4	Vinyl chloride	1,1	U	1.1	1.1
108-05-4	Vinyl acetate	1.1	σ	1.1	1.1
78-93-3	2-Butanone (MEK)	1.1	U	1.1	1.1
108-10-1	4-Methyl-2-pentanone (MIBK)	1.1	U	1.1	1.1
1634-04-4	Methyl tert-butyl ether	1.1	U	1.1	1.1
67-64-1	Acetone	43		5.5	5.5
75-05-8	Acetonitrile	2.2	U	2.2	2.2
136777-61-2	m-Xylene & p-Xylene	2.4		2.2	2.2
95-47-6	o-Xylene	2.2	U	2.2	2.2
106-93-4	1,2-Dibromoethane	1.1	U	1.1	1.1
540-59-0	1,2-Dichloroethene, Total	1.1	U -	1.1	1.1

Client Sample ID: Perimeter Road Chilled		Project:	General Testing
Lab Name:	EnviroTest Laboratories,	Job No.:	420-67423-1
SDG No.:			
Matrix:	Solid	Lab Sample ID:	420-67423-1
Analysis Method:	8270D	Lab File ID:	06271305.D
Sample wt/vol:	15.10 (g)	Date Received:	06/26/2013 11:10
Level: (low/med)	Low	Date Extracted:	06/27/2013 09:30
% Moisture:	11.1	Date Analyzed:	06/27/2013 16:52
Con. Extract Vol.:	1 (mL)	Dilution Factor:	1
Injection Volume:		Extract. Method:	3546
GPC Cleanup:(Y/N)	N	Units:	ug/Kg Dry
Analy. Batch No.:	67055		

CAS No.	Compound Name	Result	Q	RL	MDL
120-82-1	1,2,4-Trichlorobenzene	370	U	370	180
95-95-4	2,4,5-Trichlorophenol	370	υ	370	110
88-06-2	2,4,6-Trichlorophenol	370	U	370	110
120-83-2	2,4-Dichlorophenol	370	U	370	190
105-67-9	2,4-Dimethylphenol	370	U	370	180
51-28-5	2,4-Dinitrophenol	370	U	370	99
121-14-2	2,4-Dinitrotoluene	370	U	370	97
606-20-2	2,6-Dinitrotoluene	370	U	370	90
91-58-7	2-Chloronaphthalene	370	Ũ	370	160
95-57-8	2-Chlorophenol	370	U	370	170
91-57-6	2-Methylnaphthalene	1600		370	190
95-48-7	2-Methylphenol	370	U	370	180
88-74-4	2-Nitroaniline	370	U	370	100
88-75-5	2-Nitrophenol	370	Ū	370	200
91-94-1	3,3'-Dichlorobenzidine	370	U	370	240
15831-10-4	3 & 4 Methylphenol	460		370	190
99-09-2	3-Nitroaniline	370	U	370	180
534-52-1	4,6-Dinitro-2-methylphenol	370	U	370	170
101-55-3	4-Bromophenyl phenyl ether	370	U	370	100
106-47-8	4-Chloroaniline	370	U	370	210
7005-72-3	4-Chlorophenyl phenyl ether	370	U	370	110
100-02-7	4-Nitrophenol	370	U	370	300
83-32-9	Acenaphthene	590		370	110
208-96-8	Acenaphthylene	370	U	370	140
62-53-3	Aniline	370	U	370	250
120-12-7	Anthracene	970		370	110
92-87-5	Benzidine	2800	U	2800	310
56-55-3	Benzo[a]anthracene	1500		370	110
50-32-8	Benzo[a]pyrene	1200		370	97
205-99-2	Benzo[b]fluoranthene	990		370	110

Client Sample ID:	Perimeter Road Chilled	Project:	General Testing
Lab Name:	EnviroTest Laboratories,	Job No.:	420-67423-1
SDG No.:			
Matrix:	Solid	Lab Sample ID:	420-67423-1
Analysis Method:	8270D	Lab File ID:	06271305.D
Sample wt/vol:	15.10 (g)	Date Received:	06/26/2013 11:10
Level: (low/med)	Low	Date Extracted:	06/27/2013 09:30
% Moisture:	11.1	Date Analyzed:	06/27/2013 16:52
Con. Extract Vol.:	1 (mL)	Dilution Factor:	1
Injection Volume:		Extract. Method:	3546
GPC Cleanup:(Y/N)	N	Units:	ug/Kg Dry
Analy. Batch No.:	67055		

CAS No.	Compound Name	Result	Q	RL	MDL
191-24-2	Benzo[g,h,i]perylene	600		370	11(
207-08-9	Benzo[k]fluoranthene	1100		370	100
100-51-6	Benzyl alcohol	370	U	370	220
111-91-1	Bis(2-chloroethoxy)methane	370	Ŭ	370	260
111-44-4	Bis(2-chloroethyl)ether	370	U	370	210
117-81-7	Bis(2-ethylhexyl) phthalate	370	υ	370	120
108-60-1	bis(chloroisopropyl) ether	370	U	370	190
85-68-7	Butyl benzyl phthalate	370	U	370	120
86-74-8	Carbazole	510		370	130
218-01-9	Chrysene	1700		370	100
53-70-3	Dibenz(a,h)anthracene	370	υ	370	
132-64-9	Dibenzofuran	500		370	11(
84-66-2	Diethyl phthalate	370	U	370	91
131-11-3	Dimethyl phthalate	370	U	370	
84-74-2	Di-n-butyl phthalate	370	U	370	9.
117-84-0	Di-n-octyl phthalate	370	U	370	130
206-44-0	Fluoranthene	3300		370	9,
86-73-7	Fluorene	680		370	11(
118-74-1	Hexachlorobenzene	370	U	370	11(
87-68-3	Hexachlorobutadiene	370	Ū	370	160
77-47-4	Hexachlorocyclopentadiene	370	Ū	370	180
67-72-1	Hexachloroethane	370	U	370	16
193-39-5	Indeno[1,2,3-cd]pyrene	540		370	30(
78-59-1	Isophorone	370	U	370	180
91-20-3	Naphthalene	2000		370	200
621-64-7	N-Nitrosodi-n-propylamine	370	U	370	190
98-95-3	Nitrobenzene	370	U	370	190
62-75-9	N-Nitrosodimethylamine	370	U	370	240
86-30-6	N-Nitrosodiphenylamine	370	U	370	110
87-86-5	Pentachlorophenol	2800	υ	2800	130

Client Sample ID:	Client Sample ID: Perimeter Road Chilled		General Testing
Lab Name:	EnviroTest Laboratories,	Job No.:	420-67423-1
SDG No.:			
Matrix:	Solid	Lab Sample ID:	420-67423-1
Analysis Method:	8270D	Lab File ID:	06271305.D
Sample wt/vol:	15.10 (g)	Date Received:	06/26/2013 11:10
Level: (low/med)	Low	Date Extracted:	06/27/2013 09:30
<pre>% Moisture:</pre>	11.1	Date Analyzed:	06/27/2013 16:52
Con. Extract Vol.;	1 (mL)	Dilution Factor:	1
Injection Volume:		Extract. Method:	3546
GPC Cleanup:(Y/N)	N	Units:	ug/Kg Dry
Analy. Batch No.:	67055		······

CAS No.	Compound Name	Result	Q	RL	MDL
108-95-2	Phenol	370	U	370	140
85-01-8	Phenanthrene	4000	·	370	100
129-00-0	Pyrene	3300		370	110
110-86-1	Pyridine	1100	U	1100	180
59-50-7	4-Chloro-3-methylphenol	370	U	370	120
99-65-0	1,3-Dinitrobenzene	370	U	370	92
92-52-4	1,1'-Biphenyl	370	U	370	170
109-06-8	2-Picoline	370	U	370	200
98-86-2	Acetophenone	370	U	370	210
65-85-0	Benzoic acid	1100	U *	1100	32
55-18-5	N-Nitrosodiethylamine	370	υ	370	230
930-55-2	N-Nitrosopyrrolidine	370	U	370	270
95-94-3	1,2,4,5-Tetrachlorobenzene	370	U	370	180

#### 1A-IN INORGANIC ANALYSIS DATA SHEET METALS - TCLP

Client Sample ID:	Perimeter Road Chilled Water B3A,	Lab Sample ID:	420-67423-1
Lab Name:	EnviroTest Laboratories, Inc.	Job No.:	420-67423-1
SDG ID.:		_	
Matrix:	Solid	Date Sampled:	06/25/2013 14:00
Reporting Basis:	WET	— Date Received:	06/26/2013 11:10
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CAS No.	Analyte	Conc.	RL	Units	с	Q	DIL	Method
7440-22-4	Ag	20	20	ug/L	<u> </u>	· · · · · · · · · · · · · · · · · · ·	2	6010B
7440-38-2	As	200	200	ug/L	U		2	6010B
7440-39-3	Ва	610	400	ug/L			2	6010B
7440-43-9	Cd	20	20	ug/L	U		2	6010B
7440-47-3	Cr	20	20	ug/L	- U		2	6010B
7439-92-1	Pb	100	100	ug/L	U		2	6010B
7782-49-2	Se	50	50	uq/L	υ		2	6010B
7439-97-6	Hg	0.50	0.50	ug/L	U	-	1	7470A

Client Sample ID:	Perimeter Road Chilled	Project:	General Testing
Lab Name:	EnviroTest Laboratories,	Job No.:	420-67423-1
SDG No.:			
Matrix:	Solid	Lab Sample ID:	420-67423-2
Analysis Method:	8260C	Lab File ID:	X062607.D
Sample wt/vol:	5.21 (g)	Date Received:	06/26/2013 11:10
Level: (low/med)	Low	Date Analyzed:	06/26/2013 13:42
% Moisture:	33.6	Dilution Factor:	1
GC Column/ID:	DB-VRX 0.18 (um)	Soil Aliquot:	
Soil Extract Vol.:		Units:	ug/Kg Dry
Analy. Batch No.:	66977		

CAS No.	Compound Name	Result	Q	RL	RL
107-02-8	Acrolein	1.4	υ	1.4	1.4
107-13-1	Acrylonitrile	7.2	υ	7.2	7.2
97-63-2	Ethyl methacrylate	1.4	υ	1.4	1.4
80-62-6	Methyl methacrylate	14	υ	1.4	14
120-82-1	1,2,4-Trichlorobenzene	1.4	υ	1.4	1.4
95-63-6	1,2,4-Trimethylbenzene	2.9		1.4	1.4
95-50-1	1,2-Dichlorobenzene	1.4	U	1.4	1.4
107-06-2	1,2-Dichloroethane	1.4	U	1.4	1.4
78-87-5	1,2-Dichloropropane	1.4	υ	1.4	1.4
96-12-8	1,2-Dibromo-3-Chloropropane	1.4	U	1.4	1.4
108-67-8	1,3,5-Trimethylbenzene	2.7		1.4	1.4
541-73-1	1,3-Dichlorobenzene	1.4	U	1.4	1.4
142-28-9	1,3-Dichloropropane	1.4	U	1.4	1.4
106-46-7	1,4-Dichlorobenzene	1.4	U	1.4	1.4
123-91-1	1,4-Dioxane	1.4	Ū	1.4	1.4
95-49-8	2-Chlorotoluene	1,4	U	1.4	1.4
110-75-8	2-Chloroethyl vinyl ether	1.4	U	1.4	1.4
106-43-4	4-Chlorotoluene	1.4	U	1.4	1.4
71-43-2	Benzene	1.4	U	1.4	1.4
108-86-1	Bromobenzene	1.4	U	1.4	1.4
75-25-2	Bromoform	1.4	U	1.4	1.4
74-83-9	Bromomethane	1.4	U	1.4	1.4
108-90-7	Chlorobenzene	1.4	U	1,4	1.4
67-66-3	Chloroform	1.4	υ	1.4	1.4
74-87-3	Chloromethane	1.4	U	1.4	1.4
75-00-3	Chloroethane	1.4	U	1.4	1.4
124-48-1	Chlorodibromomethane	1.4	U	1.4	1.4
74-97-5	Chlorobromomethane	1.4	Ũ	1.4	1.4
100-41-4	Ethylbenzene	1.4	U	1.4	1.4
98-82-8	Isopropylbenzene	1.4	U	1.4	1.4
91-20-3	Naphthalene	23		1.4	1.4
104-51-8	n-Butylbenzene	1.4	U	1.4	1.4

Client Sample ID:	Perimeter Road Chilled	Project:	General Testing
Lab Name:	EnviroTest Laboratories,	Job No.:	420-67423-1
SDG No.:			
Matrix:	Solid	Lab Sample ID:	420-67423-2
Analysis Method:	8260C	Lab File ID:	X062607.D
Sample wt/vol:	5.21 (g)	Date Received:	06/26/2013 11:10
Level: (low/med)	Low	Date Analyzed:	06/26/2013 13:42
% Moisture:	33.6	Dilution Factor:	1
GC Column/ID:	DB-VRX 0.18 (um)	Soil Aliquot:	, , , , , , , , , , , , , , , , ,
Soil Extract Vol.:		Units:	ug/Kg Dry
Analy. Batch No.:	66977		

CAS No.	Compound Name	Result	Q	RL	RL
103-65-1	N-Propylbenzene	1.4	U	1.4	1.4
99-87-6	p-Isopropyltoluene	4.4		1.4	1.4
135-98-8	sec-Butylbenzene	3.0		1.4	1.4
100-42-5	Styrene	1.4	U	1.4	1.4
98-06-6	tert-Butylbenzene	1.4	U	1.4	1.4
108-88-3	Toluene	1.4	U	1.4	1.4
1330-20-7	Xylenes, Total	2.9	U	2.9	2.9
100-44-7	Benzyl chloride	1.4	U	1.4	1.4
630-20-6	1,1,1,2-Tetrachloroethane	1.4	U	1.4	1.4
71-55-6	1,1,1-Trichloroethane	1.4	U	1.4	1.4
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1,4	U	1.4	1.4
79-00-5	1,1,2-Trichloroethane	1.4	U	1.4	1.4
75-34-3	1,1-Dichloroethane	1,4	U	1.4	1.4
75-35-4	1,1-Dichloroethene	1.4	U	1.4	1.4
563-58-6	1,1-Dichloropropene	1.4	U	1.4	1.4
594-20-7	2,2-Dichloropropane	1.4	U	1.4	1.4
591-78-6	2-Hexanone	1.4	U	1.4	1.4
107-05-1	3-Chloropropene	1.4	U	1.4	1.4
75-27-4	Bromodichloromethane	1.4	U	1.4	1.4
75-71-8	Dichlorodifluoromethane	1.4	U	1.4	1.4
56-23-5	Carbon tetrachloride	1.4	U	1.4	1.4
75-15-0	Carbon disulfide	1.4	U	1.4	1.4
156-59-2	cis-1,2-Dichloroethene	1.4	U	1.4	1.4
10061-01-5	cis-1,3-Dichloropropene	1.4	U	1.4	1.4
87-68-3	Hexachlorobutadiene	1.4	Ų	1.4	1.4
74-95-3	Dibromomethane	1.4	U	1.4	1.4
75-09-2	Methylene Chloride	1.4	U	1.4	1.4
127~18-4	Tetrachloroethene	1.4	U	1.4	1.4
156-60-5	trans-1,2-Dichloroethene	1.4	U	1.4	1.4
10061-02-6	trans-1,3-Dichloropropene	1.4	U	1.4	1.4
110-57-6	trans-1,4-Dichloro-2-butene	1.4	U	1.4	1.4
79-01-6	Trichloroethene	1.4	U	1.4	1.4

Client Sample ID:	Perimeter Road Chilled	Project:	General Testing
Lab Name:	EnviroTest Laboratories,	Job No.:	420-67423-1
SDG No.:			
Matrix:	Solid	Lab Sample ID:	420-67423-2
Analysis Method:	8260C	Lab File ID:	X062607.D
Sample wt/vol:	5.21 (g)	Date Received:	06/26/2013 11:10
Level: (low/med)	Low	Date Analyzed:	06/26/2013 13:42
% Moisture:	33.6	Dilution Factor:	1
GC Column/ID:	DB-VRX 0.18 (um)	Soil Aliquot:	
Soil Extract Vol.:		Units:	ug/Kg Dry
Analy. Batch No.:	66977		

CAS No.	Compound Name	Result	Q	RL	RL
75-69-4	Trichlorofluoromethane	1.4	U	1.4	1.4
75-01-4	Vinyl chloride	1.4	U	1.4	1.4
108-05-4	Vinyl acetate	1.4	U	1.4	1.4
78-93-3	2-Butanone (MEK)	1.4	U	1.4	1.4
108-10-1	4-Methyl-2-pentanone (MIBK)	1.4	U	1.4	1.4
1634-04-4	Methyl tert-butyl ether	1.4	U	1.4	1.4
67-64-1	Acetone	71		7.2	7.2
75-05-8	Acetonitrile	2.9	U	2.9	2.9
136777-61-2	m-Xylene & p-Xylene	2.9	U	2.9	2.9
95-47-6	o-Xylene	2.9	U	2.9	2.9
106-93-4	1,2-Dibromoethane	1.4	U	1.4	1.4
540-59-0	1,2-Dichloroethene, Total	1.4	U	1.4	1.4

Client Sample ID:	Perimeter Road Chilled	Project:	General Testing
Lab Name:	EnviroTest Laboratories,	Job No.:	420-67423-1
SDG No.:			
Matrix:	Solid	Lab Sample ID:	420-67423-2
Analysis Method:	8270D	Lab File ID:	06271306.D
Sample wt/vol:	14.65 (g)	Date Received:	06/26/2013 11:10
Level: (low/med)	Low	Date Extracted:	06/27/2013 09:30
<pre>% Moisture:</pre>	10.1	Date Analyzed:	06/27/2013 17:22
Con. Extract Vol.:	1 (mL)	Dilution Factor:	1
Injection Volume:		Extract. Method:	3546
GPC Cleanup:(Y/N)	N	Units:	ug/Kg Dry
Analy. Batch No.:	67055		

CAS No.	Compound Name	Result	Q	RL	MDL
120-82-1	1,2,4-Trichlorobenzene	380	U	380	180
95-95-4	2,4,5-Trichlorophenol	380	U	380	120
88-06-2	2,4,6-Trichlorophenol	380	Ŭ	380	120
120-83-2	2,4-Dichlorophenol	380	Ü	380	190
105-67-9	2,4-Dimethylphenol	380	U	380	180
51-28-5	2,4-Dinitrophenol	380	U	380	100
121-14-2	2,4-Dinitrotoluene	380	U	380	99
606-20-2	2,6-Dinitrotoluene	380	U	380	92
91-58-7	2-Chloronaphthalene	380	Ū	380	160
95-57-8	2-Chlorophenol	380	U	380	180
91-57-6	2-Methylnaphthalene	390		380	1.90
95-48-7	2-Methylphenol	380	U	380	190
88-74-4	2-Nitroaniline	380	U	380	100
88-75-5	2-Nitrophenol	380	U	380	200
91-94-1	3,3'-Dichlorobenzidine	380	U	380	240
15831-10-4	3 & 4 Methylphenol	1000		380	190
99-09-2	3-Nitroaniline	380	U	380	180
534-52-1	4,6-Dinitro-2-methylphenol	380	υ	380	170
101-55-3	4-Bromophenyl phenyl ether	380	υ	380	110
106-47-8	4-Chloroaniline	380	U	380	220
7005-72-3	4-Chlorophenyl phenyl ether	380	U	380	110
100-02-7	4-Nitrophenol	380	υ	380	300
83-32-9	Acenaphthene	480		380	1.20
208-96-8	Acenaphthylene	380	υ	380	140
62-53-3	Aniline	380	U	380	260
120-12-7	Anthracene	1300		380	110
92-87-5	Benzidine	2800	U	2800	310
56-55-3	Benzo[a]anthracene	1700		380	110
50-32-8	Benzo[a]pyrene	1400	·· · · · ·	380	
205-99-2	Benzo[b] fluoranthene	1600		380	110

Client Sample ID:	Perimeter Road Chilled	Project:	General Testing
Lab Name:	EnviroTest Laboratories,	Job No.:	420-67423-1
SDG No.:			
Matrix:	Solid	Lab Sample ID:	420-67423-2
Analysis Method:	8270D	Lab File ID:	06271306.D
Sample wt/vol:	14.65 (g)	Date Received:	06/26/2013 11:10
Level: (low/med)	Low	Date Extracted:	06/27/2013 09:30
<pre>% Moisture;</pre>	10.1	Date Analyzed:	06/27/2013 17:22
Con. Extract Vol.:	1 (mL)	Dilution Factor:	1
Injection Volume:		Extract. Method:	3546
GPC Cleanup:(Y/N)	N	Units:	ug/Kg Dry
Analy. Batch No.:	67055		

CAS No.	Compound Name	Result	Q	RL	MDL
191-24-2	Benzo[g,h,i]perylene	710		380	110
207-08-9	Benzo[k]fluoranthene	1000		380	110
100-51-6	Benzyl alcohol	380	U	380	230
111-91-1	Bis(2-chloroethoxy)methane	380	υ	380	260
111-44-4	Bis(2-chloroethyl)ether	380	U	380	220
117-81-7	Bis(2-ethylhexyl) phthalate	1400		380	120
108-60-1	bis(chloroisopropyl) ether	380	U	380	190
85-68-7	Butyl benzyl phthalate	380	U	380	120
86-74-8	Carbazole	640		380	140
218-01-9	Chrysene	1700		380	100
53-70-3	Dibenz(a,h)anthracene	380	U	380	110
132-64-9	Dibenzofuran	410		380	110
84-66-2	Diethyl phthalate	380	U	380	98
131-11-3	Dimethyl phthalate	380	U	380	93
84-74-2	Di-n-butyl phthalate	380	U	380	99
117-84-0	Di-n-octyl phthalate	380	U	380	130
86-73-7	Fluorene	680		380	110
118-74-1	Hexachlorobenzene	380	U	380	110
87-68-3	Hexachlorobutadiene	380	U	380	170
77-47-4	Hexachlorocyclopentadiene	380	U	380	180
67-72-1	Hexachloroethane	380	U	380	160
193-39-5	Indeno[1,2,3-cd]pyrene	680		380	300
78-59-1	Isophorone	380	U	380	180
91-20-3	Naphthalene	610		380	200
621-64-7	N-Nitrosodi-n-propylamine	380	U	380	200
98-95-3	Nitrobenzene	380	υ	380	190
62-75-9	N-Nitrosodimethylamine	380	U	380	250
86-30-6	N-Nitrosodiphenylamine	380	U	380	110
87-86-5	Pentachlorophenol	2800	Ŭ	2800	130
108-95-2	Phenol	380	U	380	140

Client Sample ID:	Perimeter Road Chilled	Project:	General Testing
Lab Name:	EnviroTest Laboratories,	Job No.:	420-67423-1
SDG No.:			
Matrix:	Solid	Lab Sample ID:	420-67423-2
Analysis Method:	8270D	Lab File ID:	06271306.D
Sample wt/vol:	14.65 (g)	Date Received:	06/26/2013 11:10
Level: (low/med)	Low	Date Extracted:	06/27/2013 09:30
<pre>% Moisture:</pre>	10.1	Date Analyzed:	06/27/2013 17:22
Con. Extract Vol.:	1 (mL)	Dilution Factor:	1.
Injection Volume:		Extract. Method:	3546
GPC Cleanup:(Y/N)	N	Units:	ug/Kg Dry
Analy. Batch No.:	67055		

Compound Name	Result	Q	RL	MDL
	1100	υ	1100	180
-methylphenol	380	U	380	120
obenzene	380	U	380	94
nyl	380	υ	380	180
•	380	υ	380	200
ne	380	U	380	210
id	1100	U * U	1100	32
liethylamine	380	U	380	230
yrrolidine	380	U	380	280
trachlorobenzene	380	U	380	180
	ne id iethylamine yrrolidine	380           ne         380           id         1100           iethylamine         380           yrrolidine         380	380         U           ne         380         U           id         1100         U *           iethylamine         380         U           yrrolidine         380         U	380         U         380           ae         380         U         380           id         1100         U *         1100           iethylamine         380         U         380           yrrolidine         380         U         380

Client Sample ID:	Perimeter Road Chilled	Project:	General Testing
Lab Name:	EnviroTest Laboratories,	Job No.:	420-67423-1
SDG No.:			
Matrix:	Solid	Lab Sample ID:	420-67423-2
Analysis Method:	8270D	Lab File ID:	06281304.D
Sample wt/vol:	14.65 (g)	Date Received:	06/26/2013 11:10
Level: (low/med)	Low	Date Extracted:	06/27/2013 09:30
<pre>% Moisture:</pre>	10.1	Date Analyzed:	06/28/2013 14:24
Con. Extract Vol.:	1 (mL)	Dilution Factor:	2
Injection Volume:		Extract. Method:	3546
GPC Cleanup:(Y/N)	N	Units:	ug/Kg Dry
Analy. Batch No.:	67056		

CAS No.	Compound Name	Result	Q	RL	MDL
206-44-0	Fluoranthene	4600	D	760	190
85-01-8	Phenanthrene	5000	D	760	210
129-00-0	Pyrene	4000	D	760	220

#### 1A-IN INORGANIC ANALYSIS DATA SHEET METALS - TCLP

Client Sample ID:	Perimeter Road Chilled Water B3, 7'	Lab Sample ID:	420-67423-2
Lab Name:	EnviroTest Laboratories, Inc.	Job No.:	420-67423-1
SDG ID.:			
Matrix:	Solid	Date Sampled:	06/25/2013 11:23
Reporting Basis:	WET	Date Received:	06/26/2013 11:10
% Moisture:			

CAS No.	Analyte	Conc.	RL .	Units	с	Q	DIL	Method
7440-22-4	Ag	20	20	ug/L	U		2	6010B
7440-38-2	As	200	200	ug/L	U		2	6010B
7440-39-3	Ва	1300	400	ug/L			2	6010B
7440-43-9	Cd	20	20	ug/L	U		2	6010B
7440-47-3	Cr	20	20	ug/L	υ	· · · · · · · · · · · · · · · · · · ·	2	6010B
7439-92-1	Pb	100	100	ug/L	U		2	6010B
7782-49-2	Se	50	50	ug/L	U		2	6010B
7439-97-6	Hg	0.50	0.50	ug/L	U		1	7470A

Client Sample ID:	Perimeter Road Chilled	Project:	General Testing
Lab Name:	EnviroTest Laboratories,	Job No.:	420-67423-1
SDG No.:			
Matrix:	Solid	Lab Sample ID:	420-67423-3
Analysis Method:	8260C	Lab File ID:	V062616.D
Sample wt/vol:	1.88 (g)	Date Received:	06/26/2013 11:10
Level: (low/med)	Low	Date Analyzed:	06/26/2013 18:15
<pre>% Moisture:</pre>	2.0	Dilution Factor:	1000
GC Column/ID:	DB-624 0.53 (um)	Soil Aliquot:	5 (mL)
Soil Extract Vol.:		Units:	ug/Kg Dry
Analy. Batch No.:	66976		

CAS No.	Compound Name	Result	Q	RL	RL
107-02-8	Acrolein	2700	υ	2700	2700
107-13-1	Acrylonitrile	14000	U	14000	14000
97-63-2	Ethyl methacrylate	2700	U	2700	2700
80-62-6	Methyl methacrylate	27000	U	27000	27000
120-82-1	1,2,4-Trichlorobenzene	2700	U	2700	2700
95-63-6	1,2,4-Trimethylbenzene	3400		2700	2700
95-50-1	1,2-Dichlorobenzene	2700	U	2700	2700
107-06-2	1,2-Dichloroethane	2700	U	2700	2700
78-87-5	1,2-Dichloropropane	2700	U	2700	2700
96-12-8	1,2-Dibromo-3-Chloropropane	2700	U	2700	2700
108-67-8	1,3,5-Trimethylbenzene	2700	U	2700	2700
541-73-1	1,3-Dichlorobenzene	2700	U	2700	2700
142-28-9	1,3-Dichloropropane	2700	U	2700	2700
106-46-7	1,4-Dichlorobenzene	2700	υ	2700	2700
123-91-1	1,4-Dioxane	2700	U	2700	2700
95-49-8	2-Chlorotoluene	2700	U	2700	2700
110-75-8	2-Chloroethyl vinyl ether	2700	U	2700	2700
106-43-4	4-Chlorotoluene	2700	U	2700	2700
71-43-2	Benzene	2700	U	2700	2700
108-86-1	Bromobenzene	2700	υ	2700	2700
75-25-2	Bromoform	2700	U	2700	2700
74-83-9	Bromomethane	2700	U	2700	2700
108-90-7	Chlorobenzene	2700	U	2700	2700
67-66-3	Chloroform	2700	ΰ	2700	2700
74-87-3	Chloromethane	2700	U	2700	2700
75-00-3	Chloroethane	2700	U	2700	2700
124-48-1	Chlorodibromomethane	2700	U	2700	2700
74-97-5	Chlorobromomethane	2700	U	2700	2700
100-41-4	Ethylbenzene	2700	U	2700	2700
98-82-8	Isopropylbenzene	2700	U	2700	2700
91-20-3	Naphthalene	110000		2700	2700
104-51-8	n-Butylbenzene	2700	U	2700	2700

Client Sample ID:	Perimeter Road Chilled	Project:	General Testing
Lab Name:	EnviroTest Laboratories,	Job No.:	420-67423-1
SDG No.:	·····		
Matrix:	Solid	Lab Sample ID:	420-67423-3
Analysis Method:	8260C	Lab File ID:	V062616.D
Sample wt/vol:	1.88 (g)	Date Received:	06/26/2013 11:10
Level: (low/med)	Low	Date Analyzed:	06/26/2013 18:15
% Moisture:	2.0	Dilution Factor:	1000
GC Column/ID:	DB-624 0.53 (um)	Soil Aliquot:	5 (mL)
Soil Extract Vol.:		Units:	ug/Kg Dry
Analy. Batch No.:	66976		

CAS No.	Compound Name	Result	Q	RL	RL
103-65-1	N-Propylbenzene	2700	U	2700	2700
99-87-6	p-Isopropyltoluene	2700	U	2700	2700
135-98-8	sec-Butylbenzene	2700	U	2700	2700
100-42-5	Styrene	2700	U	2700	2700
98-06-6	tert-Butylbenzene	2700	U	2700	2700
108-88-3	Toluene	2700	U	2700	2700
1330-20-7	Xylenes, Total	5400	Ŭ	5400	5400
100-44-7	Benzyl chloride	2700	U	2700	2700
630-20-6	1,1,1,2-Tetrachloroethane	2700	U	2700	2700
71-55-6	1,1,1-Trichloroethane	2700	U	2700	2700
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2700	U	2700	2700
79-00-5	1,1,2-Trichloroethane	2700	U	2700	2700
75-34-3	1,1-Dichloroethane	2700	U	2700	2700
75-35-4	1,1-Dichloroethene	2700	U	2700	2700
563-58-6	1,1-Dichloropropene	2700	U	2700	2700
594-20-7	2,2-Dichloropropane	2700	U	2700	2700
591-78-6	2-Hexanone	2700	U	2700	2700
107-05-1	3-Chloropropene	2700	U	2700	2700
75-27-4	Bromodichloromethane	2700	U	2700	2700
75-71-8	Dichlorodifluoromethane	2700	U	2700	2700
56-23-5	Carbon tetrachloride	2700	U	2700	2700
75-15-0	Carbon disulfide	2700	U	2700	2700
156-59-2	cis-1,2-Dichloroethene	2700	U	2700	2700
10061-01-5	cis-1,3-Dichloropropene	2700	U	2700	2700
87-68-3	Hexachlorobutadiene	2700	U	2700	2700
74-95-3	Dibromomethane	2700	U	2700	2700
75-09-2	Methylene Chloride	2700	U	2700	2700
127-18-4	Tetrachloroethene	2700	U	2700	2700
156-60-5	trans-1,2-Dichloroethene	2700	υ	2700	2700
10061-02-6	trans-1,3-Dichloropropene	2700	U	2700	2700
110-57-6	trans-1,4-Dichloro-2-butene	2700	U	2700	2700
79-01-6	Trichloroethene	2700	U	2700	2700

Client Sample ID:	Perimeter Road Chilled	Project:	General Testing
Lab Name:	EnviroTest Laboratories,	Job No.:	420-67423-1
SDG No.:			
Matrix:	Solid	Lab Sample ID:	420-67423-3
Analysis Method:	8260C	Lab File ID:	V062616.D
Sample wt/vol:	1.88 (g)	Date Received:	06/26/2013 11:10
Level: (low/med)	Low	Date Analyzed:	06/26/2013 18:15
<pre>% Moisture:</pre>	2.0	Dilution Factor:	1000
GC Column/ID:	DB-624 0.53 (um)	Soil Aliquot:	5 (mL)
Soil Extract Vol.:		Units:	ug/Kg Dry
Analy. Batch No.:	66976		

CAS No.	Compound Name	Result	Q	RL	RL
75-69-4	Trichlorofluoromethane	2700	U	2700	2700
75-01-4	Vinyl chloride	2700	U	2700	2700
108-05-4	Vinyl acetate	2700	U	2700	2700
78-93-3	2-Butanone (MEK)	2700	U	2700	2700
108-10-1	4-Methyl-2-pentanone (MIBK)	2700	U	2700	2700
1634-04-4	Methyl tert-butyl ether	2700	U	2700	2700
67-64-1	Acetone	14000	υ	14000	14000
75-05-8	Acetonitrile	5400	U	5400	5400
136777-61-2	m-Xylene & p-Xylene	5400	U	5400	5400
95-47-6	o-Xylene	5400	υ	5400	5400
106-93-4	1,2-Dibromoethane	2700	U	2700	2700
540-59-0	1,2-Dichloroethene, Total	2700	U	2700	2700

Client Sample ID;	Perimeter Road Chilled	Project:	General Testing
Lab Name:	EnviroTest Laboratories,	Job No.:	420-67423-1
SDG No.:			
Matrix:	Solid	Lab Sample ID:	420-67423-3
Analysis Method:	8270D	Lab File ID:	06281305.D
Sample wt/vol:	8.59 (g)	Date Received:	06/26/2013 11:10
Level: (low/med)	Low	Date Extracted:	06/27/2013 09:30
<pre>% Moisture:</pre>	2.0	Date Analyzed:	06/28/2013 14:54
Con. Extract Vol.:	10 (mL)	Dilution Factor:	10
Injection Volume:		Extract. Method:	3546
GPC Cleanup:(Y/N)	<u>N</u>	Units;	ug/Kg Dry
Analy. Batch No.:	67056		

CAS No.	Compound Name	Result	Q	RL	MDL
120-82-1	1,2,4-Trichlorobenzene	59000	U	59000	29000
95-95-4	2,4,5-Trichlorophenol	59000	U	59000	18000
88-06-2	2,4,6-Trichlorophenol	59000	U	59000	18000
120-83-2	2,4-Dichlorophenol	59000	U	59000	30000
105-67-9	2,4-Dimethylphenol	59000	U	59000	29000
51-28-5	2,4-Dinitrophenol	59000	U	59000	16000
121-14-2	2,4-Dinitrotoluene	59000	U	59000	16000
606-20-2	2,6-Dinitrotoluene	59000	U	59000	14000
91-58-7	2-Chloronaphthalene	59000	U	59000	25000
95-57-8	2-Chlorophenol	59000	U	59000	28000
91-57-6	2-Methylnaphthalene	350000		59000	30000
95-48-7	2-Methylphenol	59000	U	59000	29000
88-74-4	2-Nitroaniline	59000	U	59000	16000
88-75-5	2-Nitrophenol	59000	U	59000	32000
91-94-1	3,3'-Dichlorobenzidine	59000	υ.	59000	38000
15831-10-4	3 & 4 Methylphenol	59000	U	59000	30000
99-09-2	3-Nitroaniline	59000	U	59000	29000
534-52-1	4,6-Dinitro-2-methylphenol	59000	U	59000	27000
101-55-3	4-Bromophenyl phenyl ether	59000	U	59000	17000
106-47-8	4-Chloroaniline	59000	U	59000	34000
7005-72-3	4-Chlorophenyl phenyl ether	59000	Ü	59000	17000
100-02-7	4-Nitrophenol	59000	U	59000	47000
83-32-9	Acenaphthene	59000	U	59000	18000
208-96-8	Acenaphthylene	76000		59000	22000
62-53-3	Aniline	59000	U	59000	40000
120-12-7	Anthracene	110000		59000	17000
92-87-5	Benzidine	450000	U	450000	49000
56-55 <b>-</b> 3	Benzo[a]anthracene	120000		59000	18000
50-32-8	Benzo[a]pyrene	92000		59000	16000
205-99-2	Benzo[b]fluoranthene	59000	U	59000	17000

Client Sample ID:	Perimeter Road Chilled	Project:	General Testing
Lab Name:	EnviroTest Laboratories,	Job No.:	420-67423-1
SDG No.:	· · · · · · · · · · · · · · · · · · ·		
Matrix:	Solid	Lab Sample ID:	420-67423-3
Analysis Method:	8270D	Lab File ID:	06281305.D
Sample wt/vol:	8.59 (g)	Date Received:	06/26/2013 11:10
Level: (low/med)	Low	Date Extracted:	06/27/2013 09:30
<pre>% Moisture:</pre>	2.0	Date Analyzed:	06/28/2013 14:54
Con. Extract Vol.:	10 (mL)	Dilution Factor:	10
Injection Volume:		Extract. Method:	3546
GPC Cleanup:(Y/N)	N	Units:	ug/Kg Dry
Analy. Batch No.:	67056		•

CAS No.	Compound Name	Result	Q	RL	MDL
191-24-2	Benzo[g,h,i]perylene	59000	U	59000	17000
207-08-9	Benzo[k]fluoranthene	61000		59000	17000
100-51-6	Benzyl alcohol	59000	U	59000	35000
111-91-1	Bis(2-chloroethoxy)methane	59000	U	59000	41000
111-44-4	Bis(2-chloroethyl)ether	59000	U	59000	34000
117-81-7	Bis(2-ethylhexyl) phthalate	59000	U	59000	19000
108-60-1	bis(chloroisopropyl) ether	59000	U	59000	30000
85-68-7	Butyl benzyl phthalate	59000	Ū	59000	18000
86-74-8	Carbazole	59000	U	59000	21000
218-01-9	Chrysene	130000		59000	16000
53-70-3	Dibenz(a,h)anthracene	59000	U	59000	17000
132-64-9	Dibenzofuran	59000	U	59000	18000
84-66-2	Diethyl phthalate	59000	U	59000	15000
131-11-3	Dimethyl phthalate	59000	U	59000	15000
84-74-2	Di-n-butyl phthalate	59000	U	59000	16000
117-84-0	Di-n-octyl phthalate	59000	υ	59000	20000
206-44-0	Fluoranthene	230000		59000	15000
86-73-7	Fluorene	160000		59000	17000
118-74-1	Hexachlorobenzene	59000	U	59000	17000
87-68-3	Hexachlorobutadiene	59000	U	59000	26000
77-47-4	Hexachlorocyclopentadiene	59000	U	59000	28000
67-72-1	Hexachloroethane	59000	U	59000	26000
193-39-5	Indeno[1,2,3-cd]pyrene	59000	U	59000	47000
78-59-1	Isophorone	59000	Ŭ	59000	29000
91-20-3	Naphthalene	360000		59000	32000
621-64-7	N-Nitrosodi-n-propylamine	59000	U	59000	31000
98-95-3	Nitrobenzene	59000	U	59000	30000
62-75-9	N-Nitrosodimethylamine	59000	U	59000	39000
86-30-6	N-Nitrosodiphenylamine	59000	U	59000	17000
87-86-5	Pentachlorophenol	450000	U	450000	20000

Client Sample ID:	Perimeter Road Chilled	Project:	General Testing
Lab Name:	EnviroTest Laboratories,	Job No.:	420-67423-1
SDG No.:			
Matrix:	Solid	Lab Sample ID:	420-67423-3
Analysis Method:	8270D	Lab File ID:	06281305.D
Sample wt/vol:	8.59 (g)	Date Received:	06/26/2013 11:10
Level: (low/med)	Low	Date Extracted:	06/27/2013 09:30
<pre>% Moisture:</pre>	2.0	Date Analyzed:	06/28/2013 14:54
Con. Extract Vol.:	10 (mL)	Dilution Factor:	10
Injection Volume:		Extract. Method:	3546
GPC Cleanup:(Y/N)	N	Units:	ug/Kg Dry
Analy. Batch No.:	67056		

CAS No.	Compound Name	Result	Q	RL	MDL
108-95-2	Phenol	59000	U	59000	22000
85-01-8	Phenanthrene	600000		59000	16000
129-00-0	Pyrene	330000		59000	17000
110-86-1	Pyridine	180000	U	180000	28000
59-50-7	4-Chloro-3-methylphenol	59000	U	59000	19000
99-65-0	1,3-Dinitrobenzene	59000	U	59000	15000
92-52-4	1,1'-Biphenyl	59000	U	59000	27000
109-06-8	2-Picoline	59000	U	59000	32000
98-86-2	Acetophenone	59000	U	59000	33000
65-85-0	Benzoic acid	180000	U *	180000	5000
55-18-5	N-Nitrosodiethylamine	59000	U	59000	36000
930-55-2	N-Nitrosopyrrolidine	59000	υ	59000	44000
95-94-3	1,2,4,5-Tetrachlorobenzene	59000	U	59000	28000

#### 1A-IN INORGANIC ANALYSIS DATA SHEET METALS - TCLP

Perimeter Road Chilled Water B-3, 4'	Lab Sample ID:	420-67423-3	
EnviroTest Laboratories, Inc.	Job No.:	420-67423-1	
Solid	Date Sampled:	06/25/2013 11:20	
WET	Date Received:	06/26/2013 11:10	
	EnviroTest Laboratories, Inc.	EnviroTest Laboratories, Inc. Job No.: Solid Date Sampled:	EnviroTest Laboratories, Inc.         Job No.:         420-67423-1           Solid         Date Sampled:         06/25/2013         11:20

% Moisture:

CAS No.	Analyte	Conc.	RL	Units	с	Q	DIL	Method
7440-22-4	Ag	20	20	ug/L	U		2	6010B
7440-38-2	As	200	200	ug/L	U		2	6010B
7440-39-3	Ba	400	400	ug/L	U		2	6010B
7440-43-9	Cd	20	20	ug/L	U		2	6010B
7440-47-3	Cr	20	20	ug/L	U		2	6010B
7439-92-1	Pb	100	100	ug/L	U		2	6010B
7782-49-2	Se	50	50	ug/L	U		2	6010B
7439-97-6	Нд	0,50	0.50	ug/L	U		1	7470A

.

Client Sample ID:	Perimeter Road Chilled	Project:	General Testing
Lab Name:	EnviroTest Laboratories,	Job No.:	420-67423-1
SDG No.:			
Matrix:	Solid	Lab Sample ID:	420-67423-4
Analysis Method:	8260C	Lab File ID:	X062608.D
Sample wt/vol:	5.12 (g)	Date Received:	06/26/2013 11:10
Level: (low/med)	Low	Date Analyzed:	06/26/2013 14:10
<pre>% Moisture:</pre>	12.7	Dilution Factor:	1
GC Column/ID:	DB-VRX 0.18 (um)	Soil Aliquot:	
Soil Extract Vol.:	·	Units:	ug/Kg Dry
Analy. Batch No.:	66977		

CAS No.	Compound Name	Result	Q	RL	RL
107-02-8	Acrolein	1.1	U	1.1	1.1
107-13-1	Acrylonitrile	5.6	U	5.6	5.6
97-63-2	Ethyl methacrylate	1.1	U	1.1	1.1
80-62-6	Methyl methacrylate	11	U	11	11
120-82-1	1,2,4-Trichlorobenzene	1.1	U	1.1	1.1
95-63-6	1,2,4-Trimethylbenzene	27		1.1	1.1
95-50-1	1,2-Dichlorobenzene	1.1	U	1.1	1.1
107-06-2	1,2-Dichloroethane	1.1	U	1.1	1.1
78-87-5	1,2-Dichloropropane	1.1	U	1.1	- 1.1
96-12-8	1,2-Dibromo-3-Chloropropane	1.1	υ	1.1	1.1
108-67-8	1,3,5-Trimethylbenzene	7.2		1.1	1.1
541-73-1	1,3-Dichlorobenzene	1.1	U	1.1	1.1
142-28-9	1,3-Dichloropropane	1.1	U	1.1	1.1
106-46-7	1,4-Dichlorobenzene	1.1	U	1,1	1.1
123-91-1	1,4-Dioxane	1.1	U	1.1	1.1
95-49-8	2-Chlorotoluene	1.1	U	1.1	1.1
110-75-8	2-Chloroethyl vinyl ether	1.1	U	1.1	1.1
106-43-4	4-Chlorotoluene	1.1	U	1.1	1.1
71-43-2	Benzene	1.3		1.1	1.1
108-86-1	Bromobenzene	1.1	U	1.1	1.1
75-25-2	Bromoform	1.1	U	1.1	1.1
74-83-9	Bromomethane	1.1	U	1.1	1.1
108-90-7	Chlorobenzene	1.1	U	1.1	1.1
67-66-3	Chloroform	1.1	U	1.1	1.1
74-87-3	Chloromethane	1.1	U	1.1	1.1
75-00-3	Chloroethane	1.1	U	1.1	1.1
124-48-1	Chlorodibromomethane	1.1	U	1.1	1.1
74-97-5	Chlorobromomethane	1.1	U	1.1	1.1
100-41-4	Ethylbenzene	1.9		1.1	1.1
98-82-8	Isopropylbenzene	2.0		1.1	1.1
91-20-3	Naphthalene	180	Ε	1.1	1.1
104-51-8	n-Butylbenzene	3.6		1,1	1.1

Client Sample ID:	Perimeter Road Chilled	Project:	General Testing
Lab Name:	EnviroTest Laboratories,	Job No.:	420-67423-1
SDG No.:			
Matrix:	Solid	Lab Sample ID:	420-67423-4
Analysis Method:	8260C	Lab File ID:	X062608.D
Sample wt/vol:	5.12 (g)	Date Received:	06/26/2013 11:10
Level: (low/med)	Low	Date Analyzed:	06/26/2013 14:10
<pre>% Moisture:</pre>	12.7	Dilution Factor:	1
GC Column/ID:	DB-VRX 0.18 (um)	Soil Aliquot:	
Soil Extract Vol.:		Units:	ug/Kg Dry
Analy. Batch No.:	66977		

CAS No.	Compound Name	Result	Q	RL	RL
103-65-1	N-Propylbenzene	1.4		1.1	1.1
99-87-6	p-Isopropyltoluene	5.8		1,1	1.1
135-98-8	sec-Butylbenzene	4.3		1.1	1.1
100-42-5	Styrene	1.1	U	1.1	1.1
98-06-6	tert-Butylbenzene	1.1	U	1.1	1.1
108-88-3	Toluene	2.2		1.1	1.1
1330-20-7	Xylenes, Total	8.1		2.2	2.2
100-44-7	Benzyl chloride	1.1	U	1.1	1.1
630-20-6	1,1,1,2-Tetrachloroethane	1.1	U	1.1	1.1
71-55-6	1,1,1-Trichloroethane	1.1	U	1.1	1.1
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.1	U	1.1	1.1
79-00-5	1,1,2-Trichloroethane	1.1	υ	1,1	1.1
75-34-3	1,1-Dichloroethane	1.1	U	1.1	1.1
75-35-4	1,1-Dichloroethene	1.1	U	1.1	1.1
563-58-6	1,1-Dichloropropene	1.1	U	1.1	1,1
594-20-7	2,2-Dichloropropane	1.1	U	1.1	1.1
591-78-6	2-Hexanone	1.1	U	1.1	1.1
107-05-1	3-Chloropropene	1.1	U	1.1	1.1
75-27-4	Bromodichloromethane	1.1	U	1.1	1.1
75-71-8	Dichlorodifluoromethane	1.1	U	1.1	1.1
56-23-5	Carbon tetrachloride	1.1	U	1.1	1.1
75-15-0	Carbon disulfide	1.1	U	1.1	1.1
156-59-2	cis-1,2-Dichloroethene	2.9		1.1	1.1
10061-01-5	cis-1,3-Dichloropropene	1.1	U	1.1	1.1
87-68-3	Hexachlorobutadiene	1.1	U	1.1	1.1
74-95-3	Dibromomethane	1.1	U	1.1	1.1
75-09-2	Methylene Chloride	1.1	U	1,1	1.1
127-18-4	Tetrachloroethene	1.1	U	1.1	1.1
156-60-5	trans-1,2-Dichloroethene	1.1	U	1.1	1.1
10061-02-6	trans-1,3-Dichloropropene	1.1	U	1,1	1.1
110-57-6	trans-1,4-Dichloro-2-butene	1.1	Ŭ	1.1	1.1
79-01-6	Trichloroethene	1.1	U	1.1	1.1

Client Sample ID:	Perimeter Road Chilled	Project:	General Testing
Lab Name:	EnviroTest Laboratories,	Job No.:	420-67423-1
SDG No.:			
Matrix:	Solid	Lab Sample ID:	420-67423-4
Analysis Method:	8260C	Lab File ID:	X062608.D
Sample wt/vol:	5.12 (g)	Date Received:	06/26/2013 11:10
Level: (low/med)	Low	Date Analyzed:	06/26/2013 14:10
% Moisture:	12.7	Dilution Factor:	1
GC Column/ID:	DB-VRX 0.18 (um)	Soil Aliquot:	
Soil Extract Vol.:		Units:	ug/Kg Dry
Analy. Batch No.:	66977		

CAS No.	Compound Name	Result	Q	RL	RL
75-69-4	Trichlorofluoromethane	1.1	U	1.1	1.1
75-01-4	Vinyl chloride	1.1	U	1.1	1.1
108-05-4	Vinyl acetate	1.1	U	1.1	1.1
78-93-3	2-Butanone (MEK)	1.1	U	1.1	1.1
108-10-1	4-Methyl-2-pentanone (MIBK)	1.1	U	1.1	1.1
1634-04-4	Methyl tert-butyl ether	1.1	U	1.1	1.1
67-64-1	Acetone	46		5.6	5.6
75-05-8	Acetonitrile	2.2	U	2.2	2.2
136777-61-2	m-Xylene & p-Xylene	4.2		2.2	2.2
95-47-6	o-Xylene	3.9		2.2	2,2
106-93-4	1,2-Dibromoethane	1.1	Ŭ	1.1	1.1
540-59-0	1,2-Dichloroethene, Total	3.3		1.1	1.1

Client Sample ID:	Perimeter Road Chilled	Project:	General Testing
Lab Name:	EnviroTest Laboratories,	Job No.:	420-67423-1
SDG No.:			
Matrix:	Solid	Lab Sample ID:	420-67423-4
Analysis Method:	8270D	Lab File ID:	06281306.D
Sample wt/vol:	14.79 (g)	Date Received:	06/26/2013 11:10
Level: (low/med)	Low	Date Extracted:	06/27/2013 09:30
% Moisture:	12.7	Date Analyzed:	06/28/2013 15:24
Con. Extract Vol.:	1 (mL)	Dilution Factor:	10
Injection Volume:		Extract. Method:	3546
GPC Cleanup:(Y/N)	N	Units:	ug/Kg Dry
Analy. Batch No.:	67056		

CAS No.	Compound Name	Result	Q	RL	MDL
120-82-1	1,2,4-Trichlorobenzene	3900	U	3900	1900
95-95-4	2,4,5-Trichlorophenol	3900	U	3900	1200
88-06-2	2,4,6-Trichlorophenol	3900	U	3900	1200
120-83-2	2,4-Dichlorophenol	3900	U	3900	2000
105-67-9	2,4-Dimethylphenol	3900	U	3900	1900
51-28-5	2,4-Dinitrophenol	3900	υ	3900	1000
121-14-2	2,4-Dinitrotoluene	3900	U	3900	1000
606-20-2	2,6-Dinitrotoluene	3900	U	3900	940
91-58-7	2-Chloronaphthalene	3900	υ	3900	1600
95-57-8	2-Chlorophenol	3900	U	3900	1800
91-57-6	2-Methylnaphthalene	3900	υ	3900	1900
95-48-7	2-Methylphenol	3900	σ	3900	1900
88-74-4	2-Nitroaniline	3900	U	3900	1100
88-75-5	2-Nitrophenol	3900	U	3900	2100
91-94-1	3,3'-Dichlorobenzidine	3900	U	3900	2500
15831-10-4	3 & 4 Methylphenol	3900	U	3900	2000
99-09-2	3-Nitroaniline	3900	U	3900	1900
534-52-1	4,6-Dinitro-2-methylphenol	3900	U	3900	1800
101-55-3	4-Bromophenyl phenyl ether	3900	U	3900	1100
106-47-8	4-Chloroaniline	3900	U	3900	2200
7005-72-3	4-Chlorophenyl phenyl ether	3900	U	3900	1100
100-02-7	4-Nitrophenol	3900	U	3900	3100
83-32-9	Acenaphthene	4000		3900	1200
208-96-8	Acenaphthylene	3900	U	3900	1400
62-53-3	Aniline	3900	U	3900	2600
120-12-7	Anthracene	4700		3900	1100
92-87-5	Benzidine	29000	U	29000	3200
56-55-3	Benzo[a]anthracene	7100		3900	1200
50-32-8	Benzo[a]pyrene	6100		3900	1000
205-99-2	Benzo[b]fluoranthene	5500		3900	1100

#### 1 ORGANIC ANALYSIS DATA SHEET SEMIVOLATILE COMPOUNDS BY GC/MS

Client Sample ID:	Perimeter Road Chilled	Project:	General Testing
Lab Name:	EnviroTest Laboratories,	Job No.:	420-67423-1
SDG No.:			
Matrix:	Solid	Lab Sample ID:	420-67423-4
Analysis Method:	8270D	Lab File ID:	06281306.D
Sample wt/vol:	14.79 (g)	Date Received:	06/26/2013 11:10
Level: (low/med)	Low	Date Extracted:	06/27/2013 09:30
<pre>% Moisture:</pre>	12.7	Date Analyzed:	06/28/2013 15:24
Con. Extract Vol.:	1 (mL)	Dilution Factor:	10
Injection Volume:		Extract. Method:	3546
GPC Cleanup:(Y/N)	N	Units:	ug/Kg Dry
Analy. Batch No.:	67056		

CAS No.	Compound Name	Result	Q	RL	MDL
191-24-2	Benzo[g,h,i]perylene	3900	U	3900	1100
207-08-9	Benzo[k]fluoranthene	5800		3900	1100
100-51-6	Benzyl alcohol	3900	U	3900	2300
111-91-1	Bis(2-chloroethoxy)methane	3900	U	3900	2700
111-44-4	Bis(2-chloroethyl)ether	3900	U	3900	2200
117-81-7	Bis(2-ethylhexyl) phthalate	3900	U	3900	1300
108-60-1	bis(chloroisopropyl) ether	3900	U	3900	2000
85-68-7	Butyl benzyl phthalate	3900	U	3900	1200
86-74-8	Carbazole	4100		3900	1400
218-01-9	Chrysene	7900		3900	
53-70-3	Dibenz(a,h)anthracene	3900	U	3900	1100
132-64-9	Dibenzofuran	3900	U	3900	1200
84-66-2	Diethyl phthalate	3900	U	3900	990
131-11-3	Dimethyl phthalate	3900	U	3900	950
84-74-2	Di-n-butyl phthalate	3900	υ	3900	1,000
117-84-0	Di-n-octyl phthalate	3900	U	3900	1300
206-44-0	Fluoranthene	17000		3900	970
86-73-7	Fluorene	3900	U	3900	1100
118-74-1	Hexachlorobenzene	3900	U	3900	1100
87-68-3	Hexachlorobutadiene	3900	U	3900	1700
77-47-4	Hexachlorocyclopentadiene	3900	U	3900	1800
67-72-1	Hexachloroethane	3900	U	3900	1700
193-39-5	Indeno[1,2,3-cd]pyrene	3900	U	3900	3100
78-59-1	Isophorone	3900	U	3900	1900
91-20-3	Naphthalene	7500		3900	2100
621-64-7	N-Nitrosodi-n-propylamine	3900	U	3900	2000
98-95-3	Nitrobenzene	3900	U	3900	2000
62-75-9	N-Nitrosodimethylamine	3900	U	3900	2500
86-30-6	N-Nitrosodiphenylamine	3900	U	3900	1100
87-86-5	Pentachlorophenol	29000	Ũ	29000	1300

FORM I 8270D

#### 1 ORGANIC ANALYSIS DATA SHEET SEMIVOLATILE COMPOUNDS BY GC/MS

Client Sample ID:	Perimeter Road Chilled	Project:	General Testing
Lab Name:	EnviroTest Laboratories,	Job No.:	420-67423-1
SDG No.:			
Matrix:	Solid	Lab Sample ID:	420-67423-4
Analysis Method:	8270D	Lab File ID:	06281306.D
Sample wt/vol:	14.79 (g)	Date Received:	06/26/2013 11:10
Level: (low/med)	Low	Date Extracted:	06/27/2013 09:30
<pre>% Moisture:</pre>	12.7	Date Analyzed:	06/28/2013 15:24
Con. Extract Vol.:	1 (mL)	Dilution Factor:	10
Injection Volume:		Extract. Method:	3546
GPC Cleanup:(Y/N)	N	Units:	ug/Kg Dry
Analy. Batch No.:	67056		

CAS No.	Compound Name	Result	Q	RL	MDL
108-95-2	Phenol	3900	U	3900	1500
85-01-8	Phenanthrene	19000		3900	1100
129-00-0	Pyrene	14000		3900	1100
110-86-1	Pyridine	12000	Ŭ	12000	1800
59-50-7	4-Chloro-3-methylphenol	3900	U	3900	1300
99-65-0	1,3-Dinitrobenzene	3900	U	3900	960
92-52-4	1,1'-Biphenyl	3900	U	3900	1800
109-06-8	2-Picoline	3900	U	3900	2100
98-86-2	Acetophenone	3900	U	3900	2200
65-85-0	Benzoic acid	12000	U *	12000	330
55-18-5	N-Nitrosodiethylamine	3900	U	3900	2400
930-55-2	N-Nitrosopyrrolidine	3900	Ŭ	3900	2800
95-94-3	1,2,4,5-Tetrachlorobenzene	3900	U	3900	1800

FORM I 8270D

#### 1A-IN INORGANIC ANALYSIS DATA SHEET METALS - TCLP

Client Sample ID:	Perimeter Road Chilled Water B2A,	Lab Sample ID:	420-67423-4
Lab Name:	EnviroTest Laboratories, Inc.	Job No.:	420-67423-1
SDG ID.:			
Matrix:	Solid	Date Sampled:	06/26/2013 09:55
Reporting Basis:	WET	Date Received:	06/26/2013 11:10

% Moisture:

CAS No.	Analyte	Conc.	RL	Units	с	Q	DIL	Method
7440-22-4	Ag	20	20	ug/L	υ		2	6010B
7440-38-2	As	200	200	ug/L	U		2	6010B
7440-39-3	Ва	450	400	ug/L			2	6010B
7440-43-9	Cd	20	20	ug/L	Ŭ		2	6010B
7440-47-3	Cr ·	20	20	ug/L	U		2	6010B
7439-92-1	Pb	100	100	ug/L	U		2	6010B
7782-49-2	Se	50	50	ug/L	U		2	6010B
7439-97-6	Нд	0.50	0.50	ug/L	U		1	7470A

#### DATA REPORTING QUALIFIERS

Client: Fluor Industrial Services, Inc.

Job Number: 420-67423-1

Lab Section	Qualifier	Description
GC/MS VOA		
	F	MS or MSD exceeds the control limits
	E	Result exceeded calibration range, secondary dilution required.
	F	RPD of the MS and MSD exceeds the control limits
	U	The analyte was analyzed for but not detected at or above the stated limit.
GC/MS Semi VOA		
	*	LCS or LCSD exceeds the control limits
	F	MS or MSD exceeds the control limits
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
	D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
	U	The analyte was analyzed for but not detected at or above the stated limit.
Metals		
	U	The analyte was analyzed for but not detected at or above the stated limit.

#### **Definitions and Glossary**

#### Client: Fluor Industrial Services, Inc.

Job Number: 420-67423-1

Abbreviation	These commonly used abbreviations may or may not be present in this report.
%R	Percent Recovery
DL, RA, RE	Indicates a Dilution, Reanalysis or Reextraction.
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit - an estimate of the minimum amount of a substance that an analytical process can reliably detect. A MDL is analyte- and matrix-specific and may be laboratory-dependent.
ND	Not detected at the reporting limit (or MDL if shown).
QC	Quality Control
RL	Reporting Limit - the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence.
RPD	Relative Percent Difference - a measure of the relative difference between two points

# **QUALITY CONTROL RESULTS**

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#### Client: Fluor Industrial Services, Inc.

Job Number: 420-67423-1

#### **QC Association Summary**

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Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Prep Batch: 420-66965 420-67423-3	Perimeter Road Chilled Water B-3, 4'	T	Solid	5035-H	
Prep Batch: 420-66967					
420-67423-4	Perimeter Road Chilled Water B2A,	Т	Solid	5035-H	
Analysis Batch:420-66976					
LCS 420-66976/1	Lab Control Spike	Т	Solid	8260C	
MB 420-66976/2	Method Blank	Т	Solid	8260C	
420-67423-3	Perimeter Road Chilled Water B-3, 4	Т	Solid	8260C	420-66965
420-67423-4	Perimeter Road Chilled Water B2A,	т	Solid	8260C	420-66967
Analysis Batch:420-66977					
LCS 420-66977/1	Lab Control Spike	т	Solid	8260C	
MB 420-66977/2	Method Blank	Т	Solid	8260C	
420-67423-1	Perimeter Road Chilled Water B3A,	т	Solid	8260C	
420-67423-1MS	Matrix Spike	Т	Solid	8260C	
420-67423-1MSD	Matrix Spike Duplicate	Т	Solid	8260C	
420-67423-2	Perimeter Road Chilled Water B3, 7'	Т	Solid	8260C	
420-67423-4	Perimeter Road Chilled Water B2A,	Т	Solid	8260C	

#### Report Basis

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#### Client: Fluor Industrial Services, Inc.

Job Number: 420-67423-1

#### **QC Association Summary**

		Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 420-67054					
LCS 420-67054/2-A	Lab Control Spike	Т	Solid	3546	
MB 420-67054/1-A	Method Blank	Т	Solid	3546	
420-67423-1	Perimeter Road Chilled Water B3A,	Т	Solid	3546	
420-67423-2	Perimeter Road Chilled Water B3, 7'	т	Solid	3546	
420-67423-3	Perimeter Road Chilled Water B-3, 4'	т	Solid	3546	
420-67423-4	Perimeter Road Chilled Water B2A,	Т	Solid	3546	
420-67423-4MS	Matrix Spike	т	Solid	3546	
Analysis Batch:420-670	55				
LCS 420-67054/2-A	Lab Control Spike	т	Solid	8270D	420-67054
MB 420-67054/1-A	Method Blank	т	Solid	8270D	420-67054
420-67423-1	Perimeter Road Chilled Water B3A,	т	Solid	8270D	420-67054
420-67423-2	Perimeter Road Chilled Water B3, 7'	т	Solid	8270D	420-67054
Analysis Batch:420-670	56				
420-67423-2	Perimeter Road Chilled Water B3, 7'	т	Solid	8270D	420-67054
420-67423-3	Perimeter Road Chilled Water B-3, 4'	т	Solid	8270D	420-67054
420-67423-4	Perimeter Road Chilled Water B2A,	Т	Solid	8270D	420-67054
420-67423-4MS	Matrix Spike	T	Solid	8270D	420-67054

#### <u>Report Basis</u>

T = Total

## Client: Fluor Industrial Services, Inc.

#### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 420-67020					
420-67423-1	Perimeter Road Chilled Water B3A,	Р	Solid	1311	
420-67423-2	Perimeter Road Chilled Water B3, 7	P	Solid	1311	
420-67423-3	Perimeter Road Chilled Water B-3, 4	P	Solid	1311	
420-67423-4	Perimeter Road Chilled Water B2A,	P	Solid	1311	
Prep Batch: 420-67039					
LCS 420-67039/3-A	Lab Control Spike	Т	Water	3010A	
MB 420-67039/2-A	Method Blank	т	Water	3010A	
420-67423-1	Perimeter Road Chilled Water B3A.	P	Solid	3010A	420 87000
420-67423-2	Perimeter Road Chilled Water B3, 7	P	Solid	3010A 3010A	420-67020
420-67423-3	Perimeter Road Chilled Water B-3, 4	P	Solid	3010A 3010A	420-67020
420-67423-4DU	Duplicate	P	Solid		420-67020
420-67423-4MS	Matrix Spike	P	Solid	3010A	
420-67423-4	Perimeter Road Chilled Water B2A.	P		3010A	
120 01 120-1	Fermeter Road Chilled Water BZA,	Р	Solid	3010A	420-67020
Prep Batch: 420-67074					
MB 420-67074/1-A	Method Blank	Т	Water	7470A	
420-67423-1	Perimeter Road Chilled Water B3A,	Р	Solid	7470A	
420-67423-1DU	Duplicate	Р	Solid	7470A	
420-67423-1MS	Matrix Spike	Р	Solid	7470A	
420-67423-2	Perimeter Road Chilled Water B3, 7'	Р	Solid	7470A	
420-67423-3	Perimeter Road Chilled Water B-3, 4	Р	Solid	7470A	
420-67423-4	Perimeter Road Chilled Water B2A,	Р	Solid	7470A	
Analysis Batch:420-67105					
LCS 420-67039/3-A	Lab Control Spike	Т	Water	6010B	420-67039
MB 420-67039/2-A	Method Blank	т	Water	6010B	420-67039
420-67423-1	Perimeter Road Chilled Water B3A.	P	Solid	6010B	420-67039
420-67423-2	Perimeter Road Chilled Water B3, 7	P	Solid	6010B	420-67039
420-67423-3	Perimeter Road Chilled Water B-3, 4'	P	Solid	6010B	420-67039
420-67423-4	Perimeter Road Chilled Water B2A	P	Solid	6010B	420-67039
420-67423-4DU	Duplicate	P	Solid	6010B	420-67039
120-67423-4MS	Matrix Spike	P	Solid	6010B	420-67039
Analysis Batch:420-67106					
MB 420-67074/1-A	Method Blank	т	Water	7470A	420-67074
20-67423-1	Perimeter Road Chilled Water B3A.	P	Solid	7470A	
20-67423-1DU	Duplicate	P	Solid	7470A 7470A	420-67074
20-67423-1MS	Matrix Spike	P	Solid	7470A 7470A	420-67074
20-67423-2	Perimeter Road Chilled Water B3, 7'	P	Solid	7470A 7470A	420-67074
20-67423-3	Perimeter Road Chilled Water B-3, 4'	P	Solid		420-67074
20-67423-4	Perimeter Road Chilled Water B2A,	P	Solid	7470A	420-67074
	Conneter road Onned Water DZA,	F	20110	7470A	420-67074

#### Client: Fluor Industrial Services, Inc.

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Job Number: 420-67423-1

#### **QC Association Summary**

		Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
Report Basis					
P = TCLP					
T = Total					
General Chemistry					
					NA 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.
Analysis Batch: <b>420-6697</b> 420-67423-1	Perimeter Road Chilled Water B3A,	т	Solid	PercentMoisture	
420-67423-2	Perimeter Road Chilled Water B3, 7	т	Solid	PercentMoisture	
420-67423-3	Perimeter Road Chilled Water B-3, 4'	Т	Solid	PercentMoisture	
420-67423-4	Perimeter Road Chilled Water B2A,	Т	Solid	PercentMoisture	
	•		Solid	PercentMoisture	

#### <u>Report Basis</u>

T = Total

Client: Fluor Industrial Services, Inc.

Job Number: 420-67423-1

#### Method Blank - Batch: 420-66976

#### Method: 8260C Preparation: N/A

Lab Sample ID:	MB 420-66976/2	Analysis Batch: 420-66976	Instrument ID: HP
Client Matrix:	Solid	Prep Batch: N/A	Lab File ID: V062605.D
Dilution:	1.0	Units: ug/Kg Dry	Initial Weight/Volume: 5 mL
Date Analyzed:	06/26/2013 1141		Final Weight/Volume: 5 mL
Date Prepared:	N/A		-

Analyte	Result	Qual	RL
Acrolein	1.0	U	1.0
Acrylonitrile	5.0	U	5.0
Ethyl methacrylate	1.0	U	1.0
Methyl methacrylate	10	U	10
1,2,4-Trichlorobenzene	1.0	U	1.0
1,2,4-Trimethylbenzene	1.0	U	1.0
1,2-Dichlorobenzene	1.0	U	1.0
1,2-Dichloroethane	1.0	U	1.0
1,2-Dichloropropane	1.0	U	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	1.0
1,3,5-Trimethylbenzene	1.0	U	1.0
1,3-Dichlorobenzene	1.0	U	1.0
1,3-Dichloropropane	1.0	U	1.0
1,4-Dichlorobenzene	1.0	U	1.0
1,4-Dioxane	1.0	U	1.0
2-Chlorotoluene	1.0	υ	1.0
2-Chloroethyl vinyl ether	1.0	U	1.0
4-Chlorotoluene	1.0	U	1.0
Benzene	1.0	U	1.0
Bromobenzene	1.0	U	1.0
Bromoform	1.0	U	1.0
Bromomethane	1.0	U	1.0
Chlorobenzene	1.0	U	1.0
Chloroform	1.0	U	1.0
Chloromethane	1.0	U	1.0
Chloroethane	1.0	U	1.0
Chlorodibromomethane	1.0	U	1.0
Chlorobromomethane	1.0	U	1.0
Ethylbenzene	1.0	U	1.0
Isopropylbenzene	1.0	U	1.0
Naphthalene	1.0	U	1.0
n-Butylbenzene	1.0	U	1.0
N-Propylbenzene	1.0	U	1.0
p-Isopropyltoluene	1.0	U	1.0
sec-Butylbenzene	1.0	U	1.0
Styrene	1.0	U	1.0
tert-Butylbenzene	1.0	U	1.0
Toluene	1.0	U	1.0
Xylenes, Total	2.0	U	2.0
Benzyl chloride	1.0	U	1.0
1,1,1,2-Tetrachloroethane	1.0	U	1.0

#### Client: Fluor Industrial Services, Inc.

Job Number: 420-67423-1

#### Method Blank - Batch: 420-66976

Lab Sample ID: MB 420-66976/2

Date Analyzed: 06/26/2013 1141

Solid

1.0

Client Matrix:

Date Prepared: N/A

Dilution:

#### Method: 8260C Preparation: N/A

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Instrument ID: HP Lab File ID: V062605.D Initial Weight/Volume: 5 mL Final Weight/Volume: 5 mL

Analyte	Result	Qual	RL
1,1,1-Trichloroethane	1.0	·U	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0
1,1,2-Trichloroethane	1.0	U	1.0
1,1-Dichloroethane	1.0	U	1.0
1,1-Dichloroethene	1.0	U	1.0
1,1-Dichloropropene	1.0	U	1.0
2,2-Dichloropropane	1.0	U	1.0
2-Hexanone	1.0	U	1.0
3-Chloropropene	1.0	U	1.0
Bromodichloromethane	1.0	U	1.0
Dichlorodifluoromethane	1.0	U	1.0
Carbon tetrachloride	1.0	U	1.0
Carbon disulfide	1.0	U	1.0
cis-1,2-Dichloroethene	1.0	U	1.0
cis-1,3-Dichloropropene	1.0	U	1.0
Hexachlorobutadiene	1.0	U	. 1.0
Dibromomethane	1.0	U	1,0
Methylene Chloride	1.0	U	1.0
Tetrachloroethene	1.0	U	1.0
trans-1,2-Dichloroethene	1.0	U	1.0
trans-1,3-Dichloropropene	1.0	U	1.0
trans-1,4-Dichloro-2-butene	1.0	U	1.0
Trichloroethene	1.0	U	1.0
Trichlorofluoromethane	1.0	U	1.0
Vinyl chloride	1.0	υ	1.0
Vinyl acetate	1.0	U	1.0
2-Butanone (MEK)	1.0	U	1.0
4-Methyl-2-pentanone (MIBK)	1.0	U	1.0
Methyl tert-butyl ether	1.0	U	1.0
Acetone	5.0	U	5.0
Acetonitrile	2.0	υ	2.0
m-Xylene & p-Xylene	2.0	U	2.0
o-Xylene	2.0	U	2.0
1,2-Dibromoethane	1.0	U	1.0
1,2-Dichloroethene, Total	1.0	U	1.0
Surrogate	% Rec		Acceptance Limits
Toluene-d8 (Surr)	100		72 - 143
4-Bromofluorobenzene	93		49 - 138
1,2-Dichloroethane-d4 (Surr)	97		80 - 136

Analysis Batch: 420-66976

Prep Batch: N/A

Units: ug/Kg Dry

Client: Fluor Industrial Services, Inc.

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#### Lab Control Spike - Batch: 420-66976

Lab Sample ID: LCS 420-66976/1

Date Analyzed: 06/26/2013 1029

Solid

1.0

Client Matrix:

Date Prepared: N/A

Dilution:

Job Number: 420-67423-1

#### Method: 8260C Preparation: N/A

Instrument ID: HP Lab File ID: V062603.D Initial Weight/Volume: 5 mL Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acrolein	40.0	• 44	110	70 - 130	
Acrylonitrile	20.0	22	111	70 - 130	
Ethyl methacrylate	20.0	21	103	70 - 130	
Methyl methacrylate	100	110	107	70 - 130	
1,2,4-Trichlorobenzene	20.0	19	94	70 - 130	
1,2,4-Trimethylbenzene	20.0	21	105	70 - 130	
1,2-Dichlorobenzene	20.0	21	105	70 - 130	
1,2-Dichloroethane	20.0	20	98	70 - 130	
1,2-Dichloropropane	20.0	21	105	70 - 130	
1,2-Dibromo-3-Chloropropane	20.0	18	92	70 - 130	
1,3,5-Trimethylbenzene	20.0	21	103	70 - 130	
1,3-Dichlorobenzene	20.0	21	104	70 - 130	
1,3-Dichloropropane	20.0	20	102	70 - 130	
1,4-Dichlorobenzene	20.0	21	104	70 - 130	
1,4-Dioxane	200	200	99	70 - 130	
2-Chlorotoluene	20.0	20	102	70 - 130	
2-Chloroethyl vinyl ether	20.0	19	93	70 - 130	
4-Chlorotoluene	20.0	21	106	70 - 130	
Benzene	20.0	21	104	70 - 130	
Bromobenzene	20.0	21	105	70 - 130	
Bromoform	20.0	20	99	70 - 130	
Bromomethane	20.0	21	106	70 - 130	
Chlorobenzene	20.0	21	103	70 - 130	
Chloroform	20.0	21	104	70 - 130	
Chloromethane	20.0	21	104	70 - 130	
Chloroethane	20.0	22	109	70 - 130	
Chlorodibromomethane	20.0	20	98	70 - 130	
Chlorobromomethane	20.0	21	105	70 - 130	
Ethylbenzene	20.0	20	102	70 - 130	
Isopropylbenzene	20.0	20	101	70 - 130	
Naphthalene	20.0	19	94	70 - 130	
n-Butylbenzene	20.0	21	105	70 - 130	
N-Propylbenzene	20.0	21	106	70 - 130	
p-lsopropyltoluene	20.0	21	103	70 - 130	
sec-Butylbenzene	20.0	21	103	70 - 130	
Styrene	20.0	22	108	70 - 130	
tert-Butylbenzene	20.0	21	104	70 - 130	
Toluene	20.0	21	104	70 - 130	
Xylenes, Total	60.0	62	103	70 - 130	
Benzyl chloride	20.0	15	77	70 - 130	
1,1,1,2-Tetrachloroethane	20.0	20	100	70 - 130	

Analysis Batch: 420-66976

Prep Batch: N/A

Units: ug/Kg Dry

Job Number: 420-67423-1

Client: Fluor Industrial Services, Inc.

Lab Sample ID: LCS 420-66976/1

Date Analyzed: 06/26/2013 1029

Solid

1.0

Client Matrix:

Date Prepared: N/A

Dilution:

Lab Control Spike - Batch: 420-66976

Preparation: N/A

Instrument ID: HP Lab File ID: V062603.D Initial Weight/Volume: 5 mL Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,1-Trichloroethane	20.0	19	94	70 - 130	1999 - 1999 - Eddon an a' anna ann an ann an ann an ann an
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	17	83	70 - 130	
1,1,2-Trichloroethane	20.0	21	105	70 - 130	
1,1-Dichloroethane	20.0	21	105	70 - 130	
1,1-Dichloroethene	20.0	19	94	70 - 130	
1,1-Dichloropropene	20.0	21	104	70 - 130	
2,2-Dichloropropane	20.0	16	82	70 - 130	
2-Hexanone	20.0	20	100	70 - 130	
3-Chioropropene	20.0	21	104	70 - 130	
Bromodichloromethane	20.0	20	98	70 - 130	
Dichlorodifluoromethane	20.0	16	81	70 - 130	
Carbon tetrachloride	20.0	20	98	70 - 130	
Carbon disulfide	20.0	19	95	70 - 130	
cis-1,2-Dichloroethene	20.0	21	106	70 - 130	
cis-1,3-Dichloropropene	20.0	20	100	70 - 130	
Hexachlorobutadiene	20.0	20	102	70 - 130	
Dibromomethane	20.0	20	98	70 - 130	
Methylene Chloride	20.0	21	104	70 - 130	
Tetrachloroethene	20.0	20	98	70 - 130	
trans-1,2-Dichloroethene	20.0	21	104	70 - 130	
trans-1,3-Dichloropropene	20.0	17	86	70 - 130	
trans-1,4-Dichloro-2-butene	20.0	18	90	70 - 130	
Trichloroethene	20.0	21	106	70 - 130	
Trichlorofluoromethane	20.0	19	96	70 - 130	
Vinyl chloride	20.0	20	99	70 - 130	
Vinyl acetate	20.0	22	112	70 - 130	
2-Butanone (MEK)	20.0	24	118	70 - 130	
4-Methyl-2-pentanone (MIBK)	20,0	21	104	70 - 130	
Methyl tert-butyl ether	20.0	17	83	70 - 130	
Acetone	20.0	20	100	70 - 130	
Acetonitrile	20.0	21	104	70 - 130	
m-Xylene & p-Xylene	40.0	41	103	70 - 130	
o-Xylene	20.0	20	102	70 - 130	
1,2-Dibromoethane	20.0	20	102	70 - 130	
1,2-Dichloroethene, Total	40.0	42	105	70 - 130	
Surrogate	% Б	lec	Acc	ceptance Limits	
Toluene-d8 (Surr)	10	)2		72 - 143	
4-Bromofluorobenzene	98	98 49 - 138		49 - 138	
1,2-Dichloroethane-d4 (Surr)	99	)		80 - 136	

Analysis Batch: 420-66976

Prep Batch: N/A

Units: ug/Kg Dry

Calculations are performed before rounding to avoid round-off errors in calculated results.

EnviroTest Laboratories, Inc.

Client: Fluor Industrial Services, Inc.

#### Method Blank - Batch: 420-66977

Lab Sample ID:	MB 420-66977/2				
Client Matrix:	Solid				
Dilution:	1.0				
Date Analyzed:	06/26/2013 1244				
Date Prepared:	06/26/2013 1244				

Analyte	Result	Qual	RL
Acrolein	1.0	U	1.0
Acrylonitrile	5.0	U	5.0
Ethyl methacrylate	1.0	U	1.0
Methyl methacrylate	10	U	10
1,2,4-Trichlorobenzene	1.0	U	1.0
1,2,4-Trimethylbenzene	1.0	U	1.0
1,2-Dichlorobenzene	1.0	U	1.0
1,2-Dichloroethane	1.0	U	1.0
1,2-Dichloropropane	1.0	U	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	1.0
1,3,5-Trimethylbenzene	1.0	U	1.0
1,3-Dichlorobenzene	1.0	U	1.0
1,3-Dichloropropane	1.0	Ŭ	1.0
1,4-Dichlorobenzene	1.0	U	1.0
1,4-Dioxane	1.0	U	1.0
2-Chlorotoluene	1.0	U	1.0
2-Chloroethyl vinyl ether	1.0	Ū	1.0
4-Chlorotoluene	1.0	Ū	1.0
Benzene	1.0	Ū	1.0
Bromobenzene	1.0	Ū	1.0
Bromoform	1.0	Ū	1.0
Bromomethane	1.0	U	1.0
Chlorobenzene	1.0	U	1.0
Chloroform	1.0	U	1.0
Chloromethane	1.0	Ū	1.0
Chloroethane	1.0	Ū	1.0
Chlorodibromomethane	1.0	U	1.0
Chlorobromomethane	1.0	U	1.0
Ethylbenzene	1.0	Ŭ	1.0
Isopropylbenzene	1.0	Ū	1.0
Naphthalene	1.0	Ŭ	1.0
n-Butylbenzene	1.0	U	1.0
N-Propylbenzene	1.0	U	1.0
p-lsopropyltoluene	1.0	U	1.0
sec-Butylbenzene	1.0	Ū	1.0
Styrene	1.0	U	1.0
tert-Butylbenzene	1.0	Ű	1.0
Toluene	1.0	Ŭ	1.0
Xylenes, Total	2.0	U	2.0
Benzyl chloride	1.0	Ŭ	1.0
1,1,1,2-Tetrachloroethane	1.0	- U	1.0

Analysis Batch: 420-66977

Prep Batch: N/A Units: ug/Kg Dry

#### **Quality Control Results**

Job Number: 420-67423-1

#### Method: 8260C Preparation: 5035-L

Instrument ID:	Agilen	t 789	0A/5975C GC-MS
Lab File ID:	X0626	05.E	)
Initial Weight/Vo	lume:	5	g
Final Weight/Vo	lume:	5	mL

Lab Sample ID: MB 420-66977/2

Date Analyzed: 06/26/2013 1244 Date Prepared: 06/26/2013 1244

Solid

1.0

Client Matrix:

Dilution:

Client: Fluor Industrial Services, Inc.

#### **Quality Control Results**

Job Number: 420-67423-1

#### Method: 8260C Preparation: 5035-L

Instrument ID:	Agilent 7890A/5975C GC-MS	
Lab File ID:	X062605,D	
Initial Weight/Ve	olume: 5 g	
Final Weight/Vo	olume: 5 mL	

Analyte	Result	Qual	RL
1,1,1-Trichloroethane	1.0	U	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0
1,1,2-Trichloroethane	1.0	U	1.0
1,1-Dichloroethane	1.0	U	1.0
1,1-Dichloroethene	1.0	U	1.0
1,1-Dichloropropene	1.0	U	1.0
2,2-Dichloropropane	1.0	U	1.0
2-Hexanone	1.0	U	1.0
3-Chioropropene	1.0	U	1.0
Bromodichloromethane	1.0	U	1.0
Dichlorodifluoromethane	1.0	U	1.0
Carbon tetrachloride	1.0	U	1.0
Carbon disulfide	1.0	U	1.0
cis-1,2-Dichloroethene	1.0	U	1.0
cis-1,3-Dichloropropene	1.0	Ū	1.0
Hexachlorobutadiene	1.0	U	1.0
Dibromomethane	1.0	U	1.0
Methylene Chloride	1.0	U	1.0
Tetrachloroethene	1.0	U	1.0
trans-1,2-Dichloroethene	1.0	U	1.0
trans-1,3-Dichloropropene	1.0	U	1.0
trans-1,4-Dichloro-2-butene	1.0	U	1.0
Trichloroethene	1.0	U	1.0
Trichlorofluoromethane	1.0	U	1.0
Vinyl chloride	1.0	U	1.0
Vinyl acetate	1.0	U	1.0
2-Butanone (MEK)	1.0	U	1.0
4-Methyl-2-pentanone (MIBK)	1.0	U	1.0
Methyl tert-butyl ether	1.0	U	1.0
Acetone	5.0	U	5.0
Acetonitrile	2.0	U	2.0
m-Xylene & p-Xylene	2.0	U	2.0
o-Xylene	2.0	Ŭ	2.0
1,2-Dibromoethane	1.0	U	1.0
1,2-Dichloroethene, Total	1.0	U	1.0
Surrogate	% Rec		Acceptance Limits
Toluene-d8 (Surr)	79		72 - 143
4-Bromofluorobenzene	81		49 - 138
1,2-Dichloroethane-d4 (Surr)	89		80 - 136

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Analysis Batch: 420-66977

Prep Batch: N/A

Units: ug/Kg Dry

07/10/2013

#### Client: Fluor Industrial Services, Inc.

#### Lab Control Spike - Batch: 420-66977

Date Prepared: 06/26/2013 1147

Analyte	Spike Amount	Result	% Rec.	Limit	Qua
Acrolein	40.0	33	82	70 - 130	int on the solid activity of a subscreen solid states
Acrylonitrile	20.0	18	89	70 - 130	
Ethyl methacrylate	20.0	20	100	70 - 130	
Methyl methacrylate	100	92	92	70 - 130	
1,2,4-Trichlorobenzene	20.0	17	87	70 - 130	
1,2,4-Trimethylbenzene	20.0	19	96	70 - 130	
I,2-Dichlorobenzene	20.0	18	90	70 - 130	
,2-Dichloroethane	20.0	22	110	70 - 130	
,2-Dichloropropane	20.0	20	100	70 - 130	
,2-Dibromo-3-Chloropropane	20.0	16	82	70 - 130	
,3,5-Trimethylbenzene	20.0	19	97	70 - 130	
,3-Dichlorobenzene	20.0	18	90	70 - 130	
,3-Dichloropropane	20.0	22	110	70 - 130	
,4-Dichlorobenzene	20.0	18	90	70 - 130	
4-Dioxane	200	190	94	70 - 130	
-Chlorotoluene	20.0	19	94	70 - 130	
-Chloroethyl vinyl ether	20.0	18	92	70 - 130	
-Chlorotoluene	20.0	19	95	70 - 130	
Benzene	20.0	20	99	70 - 130	
Bromobenzene	20.0	19	93	70 - 130	
Bromoform	20.0	23	116	70 - 130	
Bromomethane	20.0	20	100	70 - 130	
hlorobenzene	20.0	19	93	70 - 130	
hloroform	20.0	22	108	70 - 130	
hloromethane	20.0	17	84	70 - 130	
chloroethane	20.0	19	96	70 - 130	
hlorodibromomethane	20.0	22	110	70 - 130	
hlorobromomethane	20.0	21	107	70 - 130	
thylbenzene	20.0	18	91	70 - 130 70 - 130	÷
sopropylbenzene	20.0	19	97 97	70 - 130 70 - 130	
laphthalene	20.0	17	85	70 - 130 70 - 130	
-Butylbenzene	20,0	18	89	70 - 130	
-Propylbenzene	20.0	20	99	70 - 130	
-isopropyltoluene	20.0	18	89	70 - 130 70 - 130	
ec-Butylbenzene	20.0	18	90	70 - 130	
tyrene	20.0	19	95	70 - 130	
ert-Butylbenzene	20.0	20	98	70 - 130 70 - 130	
bluene	20.0	16	38 79		
ylenes, Total	60.0	53	88	70 - 130	
enzyl chloride	20.0	16	80	70 - 130 70 - 130	
1,1,2-Tetrachloroethane	20.0	19	97	70 - 130 70 - 130	

Calculations are performed before rounding to avoid round-off errors in calculated results.

## **Quality Control Results**

Job Number: 420-67423-1

Method: 8260C Preparation: 5035-L

Job Number: 420-67423-1

#### Client: Fluor Industrial Services, Inc.

#### Lab Control Spike - Batch: 420-66977

Lab Sample ID: LCS 420-66977/1

Date Analyzed: 06/26/2013 1147

Date Prepared: 06/26/2013 1147

Solid

1.0

Client Matrix:

Dilution:

Method: 8260C Preparation: 5035-L

Instrument ID: Agilent 7890A/5975C GC-MS Lab File ID: X062603.D Initial Weight/Volume: 5 g Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,1-Trichloroethane	20.0	23	113	70 - 130	
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	20	100	70 - 130	
1,1,2-Trichloroethane	20.0	22	109	70 - 130	
1,1-Dichloroethane	20.0	20	98	70 - 130	
1,1-Dichloroethene	20.0	19	97	70 - 130	
1,1-Dichloropropene	20.0	21	103	70 - 130	
2,2-Dichloropropane	20.0	20	98	70 - 130	
2-Hexanone	20.0	17	85	70 - 130	
3-Chloropropene	20.0	19	93	70 - 130	
Bromodichloromethane	20.0	22	109	70 - 130	
Dichlorodifluoromethane	20.0	17	84	70 - 130	
Carbon tetrachloride	20.0	24	118	70 - 130	
Carbon disulfide	20.0	21	103	70 - 130	
cis-1,2-Dichloroethene	20.0	20	100	70 - 130	
cis-1,3-Dichloropropene	20.0	20	98	70 - 130	
Hexachlorobutadiene	20.0	19	96	70 - 130	
Dibromomethane	20.0	20	102	70 - 130	
Methylene Chloride	20.0	19	95	70 - 130	
Tetrachloroethene	20.0	18	89	70 - 130	
rans-1,2-Dichloroethene	20.0	20	98	70 - 130	
rans-1,3-Dichloropropene	20.0	20	102	70 - 130	
rans-1,4-Dichloro-2-butene	20.0	18	92	70 - 130	
Frichloroethene	20.0	22	108	70 - 130	
Frichlorofluoromethane	20.0	22	112	70 - 130	
/inyl chloride	20.0	20	100	70 - 130	
/inyl acetate	20.0	15	77	70 - 130	
2-Butanone (MEK)	20.0	18	88	70 - 130	
i-Methyl-2-pentanone (MIBK)	20.0	20	101	70 - 130	
Methyl tert-butyl ether	20.0	20	99	70 - 130	
Acetone	20.0	18	88	70 - 130	
Acetonitrile	20.0	22	109	70 - 130	
n-Xylene & p-Xylene	40.0	35	87	70 - 130	
-Xylene	20.0	18	90	70 - 130	
1,2-Dibromoethane	20.0	21	107	70 - 130	
1,2-Dichloroethene, Total	40.0	40	99	70 - 130	
Surrogate	% R	lec	Acc	eptance Limits	
Foluene-d8 (Surr)	. 72			72 - 143	*****
4-Bromofluorobenzene	87	,		49 - 138	
1,2-Dichloroethane-d4 (Surr)	86	5		80 - 136	

Analysis Batch: 420-66977

Prep Batch: N/A

Units: ug/Kg Dry

Calculations are performed before rounding to avoid round-off errors in calculated results.

<u>د</u> \_

Client: Fluor Industrial Services, Inc.

#### Matrix Spike/

#### Matrix Spike Duplicate Recovery Report - Batch: 420-66977

420-67423-1
Solid
1.0
06/26/2013 1545
06/26/2013 1545

Analysis Batch: 420-66977 Prep Batch: N/A Job Number: 420-67423-1

#### Method: 8260C Preparation: 5035-L

Instrument ID:Agilent 7890A/5975C GC-MLab File ID:X062611.DInitial Weight/Volume:4.61 gFinal Weight/Volume:5 mL

MSD Lab Sample ID:	420-67423-1	Analysis Batch: 420-66977	Instrument ID:	Agilent 7890A/5975C GC-MS
Client Matrix:	Solid	Prep Batch: N/A	Lab File ID:	X062612.D
Dilution:	1.0		Initial Weight/Vo	olume: 4.48 g
Date Analyzed:	06/26/2013 1614		Final Weight/Vo	lume: 5 mL
Date Prepared:	06/26/2013 1614			

	<u>%</u>	Rec.					
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Quai	MSD Quai
Acrolein	65	50	70 - 130	24	20	F	F
Acrylonitrile	98	95	70 - 130	0	20		
Ethyl methacrylate	106	96	70 - 130	7	20		
Methyl methacrylate	111	105	70 - 130	3	20		
1,2,4-Trichlorobenzene	56	51	70 - 130	6	20	F	F
1,2,4-Trimethylbenzene	83	74	70 - 130	6	20		
1,2-Dichlorobenzene	76	68	70 - 130	8	20		F
1,2-Dichloroethane	116	110	70 - 130	2	20		
1,2-Dichloropropane	109	107	70 - 130	1	20		
1,2-Dibromo-3-Chloropropane	93	99	70 - 130	9	20		
1,3,5-Trimethylbenzene	85	78	70 - 130	4	20		
1,3-Dichlorobenzene	67	57	70 - 130	13	20	F	F
1,3-Dichloropropane	113	106	70 - 130	4	20		
1,4-Dichlorobenzene	62	54	70 - 130	12	20	F	F
1,4-Dioxane	127	124	70 - 130	0	20		
2-Chlorotoluene	87	76	70 - 130	11	20		
2-Chloroethyl vinyl ether	111	101	70 - 130	6	20		
4-Chlorotoluene	76	64	70 - 130	14	20		F
Benzene	105	102	70 - 130	0	20		
Bromobenzene	87	76	70 - 130	11	20		
Bromoform	110	99	70 - 130	7	20		
Bromomethane	99	95	70 - 130	1	20		
Chlorobenzene	92	80	70 - 130	11	20		
Chloroform	110	107	70 - 130	0	20		
Chloromethane	86	88	70 - 130	5	20		
Chloroethane	99	97	70 - 130	1	20		
Chlorodibromomethane	111	101	70 - 130	7	20		
Chlorobromomethane	101	97	70 - 130	1	20		
Ethylbenzene	97	86	70 - 130	9	20		

Client: Fluor Industrial Services, Inc.

#### Matrix Spike/

#### Matrix Spike Duplicate Recovery Report - Batch: 420-66977

MS Lab Sample ID:	420-67423-1
Client Matrix:	Solid
Dilution:	1.0
Date Analyzed:	06/26/2013 1545
Date Prepared:	06/26/2013 1545

3-1 Analysis Batch: 420-66977 Prep Batch: N/A 3 1545 Job Number: 420-67423-1

#### Method: 8260C Preparation: 5035-L

Instrument ID: Agilent 7890A/5975C GC-M Lab File ID: X062611.D Initial Weight/Volume: 4.61 g Final Weight/Volume: 5 mL

MSD Lab Sample ID: Client Matrix:	420-67423-1 Solid	Analysis Batch: 420-66977 Prep Batch: N/A	Instrument ID: Agilent 7890A/5975C GC-MS Lab File ID: X062612.D
Dilution: Date Analyzed:	1.0 06/26/2013 1614		Initial Weight/Volume: 4.48 g
Date Prepared:	06/26/2013 1614		Final Weight/Volume: 5 mL

	<u>%</u>	Rec.					
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Isopropylbenzene	97	88	70 - 130	7	20		
Naphthalene	57	46	70 - 130	9	20	F	F
n-Butylbenzene	50	45	70 - 130	7	20	F	F
N-Propylbenzene	86	74	70 - 130	12	20		
p-Isopropyltoluene	59	55	70 - 130	4	20	F	F
sec-Butylbenzene	60	56	70 - 130	5	20	F	F
Styrene	86	73	70 - 130	13	20		
tert-Butylbenzene	87	77	70 - 130	9	20		
Toluene	97	86	70 - 130	9	20		
Xylenes, Total	91	81	70 - 130	8	20		
Benzyl chloride	72	68	70 - 130	4	20		F
1,1,1,2-Tetrachloroethane	121	112	70 - 130	5	20		
1,1,1-Trichloroethane	115	117	70 - 130	4	20		
1,1,2-Trichloro-1,2,2-trifluoroethane	98	98	70 - 130	2	20		
1,1,2-Trichloroethane	127	116	70 - 130	6	20		
1,1-Dichloroethane	101	101	70 - 130	3	20		
1,1-Dichloroethene	92	89	70 - 130	1	20		
1,1-Dichloropropene	90	85	70 - 130	3	20		
2,2-Dichloropropane	98	100	70 - 130	5	20		
2-Hexanone	122	115	70 - 130	3	20		
3-Chloropropene	83	79	70 - 130	2	20		
Bromodichloromethane	113	106	70 - 130	4	20		
Dichlorodifluoromethane	88	88	70 - 130	3	20		
Carbon tetrachloride	117	108	70 - 130	5	20		
Carbon disulfide	46	60	70 - 130	26	20	F	F
cis-1,2-Dichloroethene	87	84	70 - 130	0	20		
cis-1,3-Dichloropropene	84	78	70 - 130	4	20		
Hexachlorobutadiene	46	40	70 - 130	10	20	F	F
Dibromomethane	94	90	70 - 130	2	20		

Client: Fluor Industrial Services, Inc.

#### Job Number: 420-67423-1

#### Matrix Spike/

MSD Lab Sample ID:

Client Matrix:

Date Analyzed:

Date Prepared:

Dilution:

#### Matrix Spike Duplicate Recovery Report - Batch: 420-66977

# MS Lab Sample ID: 420-67423-1 Client Matrix: Solid Dilution: 1.0 Date Analyzed: 06/26/2013 1545 Date Prepared: 06/26/2013 1545

Solid

06/26/2013 1614

06/26/2013 1614

1.0

1.0 06/26/2013 1545 06/26/2013 1545 420-67423-1

Analysis Batch: 420-66977 Prep Batch: N/A

Analysis Batch: 420-66977

Prep Batch: N/A

#### Method: 8260C Preparation: 5035-L

 Instrument ID:
 Agilent 7890A/5975C GC-M§

 Lab File ID:
 X062611.D

 Initial Weight/Volume:
 4.61 g

 Final Weight/Volume:
 5 mL

Instrument ID: Agilent 7890A/5975C GC-MS Lab File ID: X062612.D Initial Weight/Volume: 4.48 g Final Weight/Volume: 5 mL

	<u>%</u>	<u> Rec.</u>					
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qua
Methylene Chloride	97	92	70 - 130	3	20		
Tetrachloroethene	100	89	70 - 130	8	20		
rans-1,2-Dichloroethene	65	69	70 - 130	7	20	F	F
rans-1,3-Dichloropropene	70	65	70 - 130	4	20		F
rans-1,4-Dichloro-2-butene	72	64	70 - 130	9	20		F
Trichloroethene	94	87	70 - 130	5	20		
Frichlorofluoromethane	121	115	70 - 130	2	20		
/inyl chloride	93	90	70 - 130	0	20		
/inyl acetate	80	72	70 - 130	7	20		
-Butanone (MEK)	131	137	70 - 130	7	20	F	F
-Methyl-2-pentanone (MIBK)	118	118	70 - 130	3	20		
Methyl tert-butyl ether	115	122	70 - 130	8	20		
Acetone	50	58	70 - 130	4	20	F	F
Acetonitrile	57	75	70 - 130	30	20	F	F
n-Xylene & p-Xylene	88	78	70 - 130	9	20		
o-Xylene	105	96	70 - 130	6	20		
,2-Dibromoethane	98	88	70 - 130	7	20		
1,2-Dichloroethene, Total							
Surrogate		MS % Rec	MSD 9	% Rec	Acce	ptance Limits	
Foluene-d8 (Surr)		91	85		7	2 - 143	Ф.30000466-состоянности и на изв
-Bromofluorobenzene		78	78		4	9 - 138	
l,2-Dichloroethane-d4 (Surr)		97	96		8	0 - 136	

.

**Quality Control Results** 

Job Number: 420-67423-1

#### Method: 8270D Preparation: 3546

Instrument ID:	2012 A	gilent 5	975C MSD and
Lab File ID:	062713	304.D	
Initial Weight/Vo	olume:	15.06	g
Final Weight/Vo	lume:	1 mL	
Injection Volum	e:		

Analyte	Result	Qual	RL
1,2,4-Trichlorobenzene	330	U	330
2,4,5-Trichlorophenol	330	U	330
2,4,6-Trichlorophenol	330	U	330
2,4-Dichlorophenol	330	U	330
2,4-Dimethylphenol	330	U	330
2,4-Dinitrophenol	330	U	330
2,4-Dinitrotoluene	330	U	330
2,6-Dinitrotoluene	330	U	330
2-Chloronaphthalene	330	U	330
2-Chlorophenol	330	U	330
2-Methylnaphthalene	330	U	330
2-Methylphenol	330	U	330
2-Nitroaniline	330	U	330
2-Nitrophenol	330	U	330
3,3'-Dichlorobenzidine	330	U	330
3 & 4 Methylphenol	330	U	330
3-Nitroaniline	330	U	330
4,6-Dinitro-2-methylphenol	330	U	330
4-Bromophenyl phenyl ether	330	U	330
4-Chloroaniline	330	U	330
4-Chlorophenyl phenyl ether	330	U	330
4-Nitrophenol	330	U	330
Acenaphthene	330	U	330
Acenaphthylene	330	U	330
Aniline	330	U	330
Anthracene	330	U	330
Benzidine	2500	U	2500
Benzo[a]anthracene	330	U	330
Benzo[a]pyrene	330	U	330
Benzo[b]fiuoranthene	330	U	330
Benzo[g,h,i]perytene	330	U	330
Benzo[k]fluoranthene	330	U	330
Benzyl alcohol	330	U	330
Bis(2-chloroethoxy)methane	330	U	330
Bis(2-chloroethyl)ether	330	U	330
Bis(2-ethylhexyl) phthalate	330	U	330
bis(chloroisopropyl) ether	330	U	330
Butyl benzyl phthalate	330	U	330
Carbazole	330	U	330
Chrysene	330	U	330
Dibenz(a,h)anthracene	330	U	330

Analysis Batch: 420-67055

Prep Batch: 420-67054

Units: ug/Kg Dry

Calculations are performed before rounding to avoid round-off errors in calculated results.

Method Blank - Batch: 420-67054

Lab Sample ID: MB 420-67054/1-A Client Matrix: Solid Dilution: 1.0 Date Analyzed: 06/27/2013 1622 Date Prepared: 06/27/2013 0930

Client: Fluor Industrial Services, Inc.

Job Number: 420-67423-1

#### Method: 8270D Preparation: 3546

Instrument ID: 2012 Agilent 5975C MSD and Lab File ID: 06271304.D Initial Weight/Volume: 15.06 g Final Weight/Volume: 1 mL Injection Volume:

RL

Dibenzofuran	330	U	330
Diethyl phthalate	330	U	330
Dimethyl phthalate	330	U	330
Di-n-butyl phthalate	330	U	330
Di-n-octyl phthalate	330	U	330
Fluoranthene	330	U	330
Fluorene	330	U	330
Hexachlorobenzene	330	U	330
Hexachlorobutadiene	330	U	330
Hexachlorocyclopentadiene	330	U	330
Hexachloroethane	330	U	330
Indeno[1,2,3-cd]pyrene	330	U	330
Isophorone	330	U	330
Naphthalene	330	U	330
N-Nitrosodi-n-propylamine	330	· U	330
Nitrobenzene	330	U	330
N-Nitrosodimethylamine	330	U	330
N-Nitrosodiphenylamine	330	U	330
Pentachlorophenol	2500	U	2500
Phenol	330	U	330
Phenanthrene	330	U	330
Pyrene	330	· U	330
Pyridine	1000	U	1000
4-Chloro-3-methylphenol	330	U	330
1,3-Dinitrobenzene	330	U	330
1,1'-Biphenyl	330	U	330
2-Picoline	330	U	330
Acetophenone	330	U	330
Benzoic acid	1000	Ŭ	1000
N-Nitrosodiethylamine	330	Ū	330
N-Nitrosopyrrolidine	330	Ū	330
1,2,4,5-Tetrachlorobenzene	330	Ŭ	330
Surrogate	% Rec		Acceptance Limits
2-Fluorophenol	44		10 - 120
Nitrobenzene-d5	41		10 - 120
Phenol-d5	46		10 - 120
Terphenyl-d14	103		10 - 120
2-Fluorobiphenyl	38		10 - 120
2,4,6 - Tribromophenol	47		10 - 120

Calculations are performed before rounding to avoid round-off errors in calculated results.

Method Blank - Batch: 420-67054

Lab Sample ID: MB 420-67054/1-A Client Matrix: Solid Dilution: 1.0 Date Analyzed: 06/27/2013 1622 Date Prepared: 06/27/2013 0930

Analyte

Analysis Batch: 420-67055 Prep Batch: 420-67054 Units: ug/Kg Dry

Result

Qual

## Client: Fluor Industrial Services, Inc.

Calculations are performed before rounding to avoid round-off errors in calculated results.

#### Lab Control Spike - Batch: 420-67054

Date Analyzed: 06/27/2013 1923

Date Prepared: 06/27/2013 0930

			Preparation: 3546
Lab Sample ID:	LCS 420-67054/2-A	Analysis Batch: 420-87055	Instrument ID: 2012 Agilent 5975C MSD and
Client Matrix:	Solid	Prep Batch: 420-67054	Lab File ID: 06271310.D
Dilution:	1.0	Units: ug/Kg Dry	Initial Weight/Volume: 15.26 g

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,2,4-Trichlorobenzene	3280	2000	62	20 - 160	
2,4,5-Trichlorophenol	3280	2500	75	20 - 160	
2,4,6-Trichlorophenol	3280	2400	73	20 - 160	
2,4-Dichlorophenol	3280	2400	73	20 - 160	
2,4-Dimethylphenol	3280	2500	77	20 - 160	
2,4-Dinitrophenol	3280	1000	31	20 - 160	
2,4-Dinitrotoluene	3280	2900	88	20 - 160	
2,6-Dinitrotoluene	3280	2300	71	20 - 160	
2-Chloronaphthalene	3280	2300	71	20 - 160	
2-Chlorophenol	3280	2400	72	20 - 160	
2-Methylnaphthalene	3280	2300	71	20 - 160	
2-Methylphenol	3280	2600	79	20 - 160	
2-Nitroaniline	3280	2800	84	20 - 160	
2-Nitrophenol	3280	2400	73	20 - 160	
3,3'-Dichlorobenzidine	6550	5800	88	20 - 160	
3 & 4 Methylphenoi	3280	2600	80	20 - 160	
3-Nitroaniline	3280	2700	82	20 - 160	
4,6-Dinitro-2-methylphenol	3280	2000	62	20 - 160	
-Bromophenyl phenyl ether	3280	2600	80	20 - 160	
4-Chloroaniline	3280	2500	75	20 - 160	
-Chlorophenyl phenyl ether	3280	2300	70	20 - 160	
I-Nitrophenol	3280	3900	118	20 - 160	
Acenaphthene	3280	2300	69	20 - 160	
Acenaphthylene	3280	2300	69	20 - 160	
Aniline	3280	2200	68	20 - 160	
Anthracene	3280	2900	89	20 - 160	
Benzidine	6550	4300	66	20 - 160	
Benzo[a]anthracene	3280	3100	94	20 - 160	
Benzo[a]pyrene	3280	3100	96	20 - 160	
Benzo[b]fluoranthene	3280	3700	112	20 - 160	
Benzo[g,h,i]perylene	3280	2100	63	20 - 160	
Benzo[k]fluoranthene	3280	2600	81	20 - 160	
Benzyl alcohol	3280	2700	83	20 - 160	
Bis(2-chloroethoxy)methane	3280	2500	77	20 - 160	
Bis(2-chloroethyl)ether	3280	2400	74	20 - 160	
Bis(2-ethylhexyl) phthalate	3280	3300	101	20 - 160	
is(chloroisopropyl) ether	3280	2400	72	20 - 160	
Butyl benzyl phthalate	3280	3300	102	20 - 160	
Carbazole	3280	3100	95	20 - 160	
Chrysene	3280	3000	91	20 - 160	
Dibenz(a,h)anthracene	3280	2400	73	20 - 160	

#### **Quality Control Results**

Method: 8270D

Injection Volume:

Final Weight/Volume: 1 mL

Job Number: 420-67423-1

Calculations are performed before rounding to avoid round-off errors in calculated results.

#### Lab Control Spike - Batch: 420-67054

Lab Sample ID: Client Matrix:	LCS 420-67054/2-A Solid	Analysis Batch: 420-67055 Prep Batch: 420-67054	Instrument ID: 2012 Agilent 5975C MSD and Lab File ID: 06271310.D
Dilution:	1.0	Units: ug/Kg Dry	Initial Weight/Volume: 15.26 g
Date Analyzed:	06/27/2013 1923		Final Weight/Volume: 1 mL
Date Prepared:	06/27/2013 0930		Injection Volume:

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Dibenzofuran	3280	2500	75	20 - 160	
Diethyl phthalate	3280	2700	83	20 - 160	
Dimethyl phthalate	3280	2600	81	20 - 160	
Di-n-butyl phthalate	3280	3400	104	20 - 160	
Di-n-octyl phthalate	3280	3800	116	20 - 160	
Fluoranthene	3280	2900	89	20 - 160	
Fluorene	3280	2500	76	20 - 160	
Hexachlorobenzene	3280	2500	76	20 - 160	
Hexachlorobutadiene	3280	1800	56	20 - 160	
lexachlorocyclopentadiene	3280	740	23	20 - 160	
Hexachloroethane	3280	1800	53	20 - 160	
ndeno[1,2,3-cd]pyrene	3280	2500	77	20 - 160	
Isophorone	3280	2600	78	20 - 160	
Naphthalene	3280	2100	65	20 - 160	
N-Nitrosodi-n-propylamine	3280	2700	82	20 - 160	
Nitrobenzene	3280	2300	71	20 - 160	
N-Nitrosodimethylamine	3280	2600	78	20 - 160	
N-Nitrosodiphenylamine	3280	3000	91	20 - 160	
Pentachlorophenol	3280	2500	76	20 - 160	
Phenol	3280	2700	83	20 - 160	
Phenanthrene	3280	3100	93	20 - 160	
Pyrene	3280	3100	94	20 - 160	
Pyridine	3280	2200	68	20 - 160	
4-Chloro-3-methylphenol	3280	2600	80	20 - 160	
1,3-Dinitrobenzene	3280	2500	76	20 - 160	
2-Picoline	3280	1900	59	20 - 160	
Acetophenone	3280	2500	77	20 - 160	
Benzoic acid	3280	570	17	20 - 160	*
N-Nitrosodiethylamine	3280	2400	74	20 - 160	
N-Nitrosopyrrolidine	3280	2500	77	20 - 160	
1,2,4,5-Tetrachlorobenzene	3280	2000	60	20 - 160	
Surrogate	% R	ec	Ac	ceptance Limits	
2-Fluorophenol	66			10 - 120	
Nitrobenzene-d5	68			10 - 120	
Phenol-d5	73			10 - 120	
Terphenyl-d14	11	5		10 - 120	
2-Fluorobiphenyl	63			10 - 120	
2,4,6 - Tribromophenol	67			10 - 120	

# Quality Control Results

Method: 8270D Preparation: 3546

Job Number: 420-67423-1

Client: Fluor Industrial Services, Inc.

420-67423-4

06/28/2013 1554

06/27/2013 0930

Solid

10

Matrix Spike - Batch: 420-67054

Lab Sample ID:

**Client Matrix:** 

Date Analyzed:

Date Prepared:

Dilution:

Job Number: 420-67423-1

#### Method: 8270D Preparation: 3546

Instrument ID: 2012 Agilent 5975C MSD and Lab File ID: 06281307.D Initial Weight/Volume: 15.36 g Final Weight/Volume: 1 mL Injection Volume:

Analyte Sample Result/Qual Spike Amount Result % Rec. Limit Qual 1.2.4-Trichlorobenzene 3900 U 3730 1700 46 20 - 160 U 2,4,5-Trichlorophenol 3900 U 3730 2000 53 20 - 160 U 2,4,6-Trichlorophenol 3900 U 3730 2100 55 20 - 160 U 2,4-Dichlorophenol 3900 U 3730 1900 52 20 - 160 υ 2,4-Dimethylphenol 3900 H 3730 2200 60 20 - 160 U 2,4-Dinitrophenol 3900 U 3730 0 0 20 - 160 UF 2,4-Dinitrotoluene 3900 H 3730 1400 37 20 - 160 U 2,6-Dinitrotoluene 3900 U 3730 1700 46 20 - 160 U 2-Chloronaphthalene 3900 U 3730 2300 62 20 - 160 U 2-Chlorophenol 3900 U 3730 1600 42 20 - 160 U 2-Methylnaphthalene 3900 υ 3730 4100 53 20 - 160 2-Methylphenol 3900 U 3730 1900 50 20 - 160 U 2-Nitroaniline 3900 U 3730 3100 83 20 - 160 U 2-Nitrophenol 3900 υ 3730 420 11 20 - 160 UΕ 3,3'-Dichlorobenzidine 3900 υ 7460 3700 49 20 - 160 U 3 & 4 Methylphenol 3900 U 3730 2300 62 20 - 160 U 3-Nitroaniline U 3900 3730 2700 72 20 - 160 U 4,6-Dinitro-2-methylphenol 3900 U 3730 0 0 20 - 160 UΕ 4-Bromophenyl phenyl ether 3900 υ 3730 2000 54 20 - 160 н 4-Chloroaniline 3900 U 3730 1900 52 20 - 160 υ 4-Chlorophenyl phenyl ether 3900 U 3730 2000 53 20 - 160 U 4-Nitrophenol 3900 U 3730 1200 33 20 - 160 U Acenaphthene 4000 3730 7500 94 20 - 160 Acenaphthylene 3900 U 3730 2400 63 20 - 160 U Aniline 3900 U 3730 1700 44 20 - 160 П Anthracene 4700 3730 9100 118 20 - 160 Benzidine 29000 U 7460 2100 28 20 - 160 Ð 7100 Benzo[a]anthracene 3730 13000 169 20 - 160 F Benzo[a]pyrene 6100 3730 12000 160 20 - 160 Benzo[b]fluoranthene 5500 3730 12000 179 20 - 160 F Benzo[g,h,i]perylene 3900 U 3730 6600 80 20 - 160 Benzo[k]fluoranthene 5800 3730 11000 129 20 - 160 Benzyl alcohol 3900 U 3730 1700 46 20 - 160 U Bis(2-chloroethoxy)methane 3900 U 3730 2000 53 20 - 160 IJ Bis(2-chloroethyl)ether 3900 U 3730 1800 48 20 - 160 U Bis(2-ethylhexyl) phthalate 3900 Ų 3730 2700 72 20 - 160 U.

Analysis Batch: 420-67056

Prep Batch: 420-67054

Units: ug/Kg Dry

#### Matrix Spike - Batch: 420-67054

 Lab Sample ID:
 420-67423-4

 Client Matrix:
 Solid

 Dilution:
 10

 Date Analyzed:
 06/28/2013 1554

 Date Prepared:
 06/27/2013 0930

Analysis Batch: 420-67056 Prep Batch: 420-67054 Units: ug/Kg Dry

#### Method: 8270D Preparation: 3546

Instrument ID: 2012 Agilent 5975C MSD and Lab File ID: 06281307.D Initial Weight/Volume: 15.36 g Final Weight/Volume: 1 mL Injection Volume:

Analyte	Sample Re	sult/Qual	Spike Amount	Result	% Rec.	Limit	Qual
bis(chloroisopropyl) ether	3900	U	3730	1800	47	20 - 160	U
Butyl benzyl phthalate	3900	U	3730	2700	73	20 - 160	ບ
Carbazole	4100		3730	7300	85	20 - 160	
Chrysene	7900		3730	14000	169	20 - 160	F
Dibenz(a,h)anthracene	3900	U	3730	420	11	20 - 160	UF
Dibenzofuran	3900	U	3730	5500	64	20 - 160	
Diethyl phthalate	3900	U	3730	2300	61	20 - 160	U
Dimethyl phthalate	3900	U	3730	2400	65	20 - 160	U
Di-n-butyl phthalate	3900	• U	3730	2500	68	20 - 160	U
Di-n-octyl phthalate	3900	U	3730	3200	86	20 - 160	U
Fluoranthene	17000		3730	29000	323	20 - 160	4
Fluorene	3900	U	3730	6800	82	20 - 160	
Hexachlorobenzene	3900	Ŭ	3730	1900	50	20 - 160	U
Hexachlorobutadiene	3900	U	3730	1600	42	20 - 160	U
Hexachlorocyclopentadiene	3900	U	3730	7.4	0	20 - 160	UF
Hexachloroethane	3900	U	3730	370	10	20 - 160	UF
Indeno[1,2,3-cd]pyrene	3900	U	3730	7200	97	20 - 160	
Isophorone	3900	U	3730	2100	55	20 - 160	U
Naphthalene	7500		3730	9000	39	20 - 160	
N-Nitrosodi-n-propylamine	3900	U	3730	1900	51	20 - 160	U
Nitrobenzene	3900	U	3730	1600	43	20 - 160	U
N-Nitrosodimethylamine	3900	U	3730	1500	41	20 - 160	U
N-Nitrosodiphenylamine	3900	U	3730	2500	67	20 - 160	U
Pentachlorophenol	29000	U	3730	2500	66	20 - 160	U
Phenol	3900	U	3730	2000	55	20 - 160	U
Phenanthrene	19000		3730	30000	276	20 - 160	4
Pyrene	14000		3730	24000	285	20 - 160	F
Pyridine	12000	U	3730	1400	37	20 - 160	U
4-Chloro-3-methylphenol	3900	U	3730	2300	61	20 - 160	U
1,3-Dinitrobenzene	3900	U	3730	780	21	20 - 160	U
2-Picoline	3900	U	3730	1300	34	20 - 160	U
Acetophenone	3900	U	3730	1900	50	20 - 160	U
Benzoic acid	12000	U	3730	7600	204	20 - 160	UF
N-Nitrosodiethylamine	3900	U	3730	1500	40	20 - 160	U
N-Nitrosopyrrolidine	3900	U	3730	1900	50	20 - 160	Ū
1,2,4,5-Tetrachlorobenzene	3900	U	3730	1800	49	20 - 160	Ū

Client: Fluor Industrial Services, Inc.

Job Number: 420-67423-1

#### Method Blank - Batch: 420-67039

#### Method: 6010B Preparation: 3010A

Lab Sample ID:	MB 420-67039/2-A	Analysis Batch: 420-67105	Instrument ID: Therm	o ICP
Client Matrix:	Water	Prep Batch: 420-67039	Lab File ID: N/A	
Dilution:	2.0	Units: ug/L	Initial Weight/Volume:	50 mL
Date Analyzed:	07/01/2013 1444		Final Weight/Volume:	50 mL
Date Prepared:	06/28/2013 1045		-	

Analyte	Result	Qual	RL
	20	U	20
As	200	U	200
Ва	400	U	400
Cd	20	U	20
Cr	20	U	20
Pb	100	U	100
Se	50	U	50

#### Lab Control Spike - Batch: 420-67039

#### Method: 6010B Preparation: 3010A

Lab Sample ID: Client Matrix:	LCS 420-67039/3-A Water	Analysis Batch: 420-67105 Prep Batch: 420-67039	Instrument ID: Thermo ICP Lab File ID: N/A
Dilution:	1.0	Units: ug/L	Initial Weight/Volume: 50 mL
Date Analyzed:	07/01/2013 1448		Final Weight/Volume: 50 mL
Date Prepared:	06/28/2013 1045		-

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Ag	50.0	43	86	80 - 120	*****
As	2000	1900	94	80 - 120	
Ва	1000	920	92	80 - 120	
Cd	1000	920	92	80 - 120	
Cr	500	460	92	80 - 120	
Pb	2000	1800	92	80 - 120	
Se	2000	2100	104	80 - 120	

Method: 6010B Preparation: 3010A

Client: Fluor Industrial Services, Inc.

Job Number: 420-67423-1

Matrix Spike - Batch: 420-67039			Method: 6010B Preparation: 3010A TCLP		
Lab Sample ID: Client Matrix:	420-67423-4 Solid	Analysis Batch: 420-67105 Prep Batch: 420-67039	Instrument ID: Thermo ICP Lab File ID: N/A		
Dilution: Date Analyzed: Date Prepared:	2.0 07/01/2013 1515 06/28/2013 1045	Units: ug/L	Initial Weight/Volume: 50 mL Final Weight/Volume: 50 mL		

Analyte	Sample R	esult/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Ag	20	U	250	230	93	50 - 150	
As	200	U	250	280	110	50 - 150	
Ba	450		5000	5000	92	50 - 150	
Cd	20	U	50.0	48	96	50 - 150	
Cr	20	U	250	230	92	50 - 150	
Pb	100	U	250	230	92	50 - 150	
Se	50	U	50.0	52	104	50 - 150	

			TCLP
Lab Sample ID:	420-67423-4	Analysis Batch: 420-67105	Instrument ID: Thermo ICP
Client Matrix:	Solid	Prep Batch: 420-67039	Lab File ID: N/A
Dilution:	2.0	Units: ug/L	Initial Weight/Volume: 50 mL
Date Analyzed:	07/01/2013 1510	·	Final Weight/Volume: 50 mL
Date Prepared:	06/28/2013 1045		-

Analyte	Sample Re		Result	RPD	Limit	Qual
Ag	20	U	0.18	NC	20	U .
As	200	U	16	NC	20	U
Ba	450		450	0	20	
Cd	20	U	2.4	NC	20	U
Cr	20	U	0.88	NC	20	U
Pb	100	U	7.3	NC	20	U
Se	50	U	-5.3	NC	20	U

Calculations are performed before rounding to avoid round-off errors in calculated results.

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Client: Fluor Industrial Services, Inc.

Job Number: 420-67423-1

Method Blank	- Batch: 420-67074			Method: 7470A Preparation: 7470A	
Lab Sample ID: Client Matrix: Dilution: Date Analyzed: Date Prepared:	MB 420-67074/1-A Water 1.0 07/01/2013 1546 07/01/2013 1037	Analysis Batch: 420 Prep Batch: 420-67 Units: ug/L		Instrument ID: Perkir Lab File ID: N/A Initial Weight/Volume: Final Weight/Volume:	n Elmer FIMS 25 mL 25 mL
Analyte		Result	Qual		RL
Hg		0.50	U		0.50
Matrix Spike - I	Batch: 420-67074			Method: 7470A Preparation: 7470A TCLP	
Lab Sample ID: Client Matrix: Dilution: Date Analyzed: Date Prepared:	420-67423-1 Solid 1.0 07/01/2013 1553 07/01/2013 1037	Analysis Batch: 420-67 Prep Batch: 420-67074 Units: ug/L		Instrument ID: Perkii Lab File ID: N/A Initial Weight/Volume: Final Weight/Volume:	n Elmer FIMS 25 mL 25 mL
Analyte		Sample Result/Qual	Spike Amount	Result % Rec.	Limit Qual
Hg		0.50 U	1.00	0.92 92	75 - 125
Duplicate - Bat	ch: 420-67074			Method: 7470A Preparation: 7470A TCLP	
Lab Sample ID: Client Matrix: Dilution: Date Analyzed: Date Prepared:	420-67423-1 Solid 1.0 07/01/2013 1551 07/01/2013 1037	Analysis Batch: 420-67 Prep Batch: 420-67074 Units: ug/L		Instrument ID: Perki Lab File ID: N/A Initial Weight/Volume: Final Weight/Volume:	n Elmer FIMS 25 mL 25 mL
Analyte		Sample Result/Qual	Result	RPD Li	mit Qual
Hg	999 MARTINGTON ANT STATUTE VIEW MARTIN ANT AND AN ANT STATUTE STATUTE AND AND AN AND AND AND AND AND AND AND	0.50 U	-0.019	NC 20	) U

Client: Fluor Industrial Services, Inc.

Duplicate - Batch: 420-66975

Job Number: 420-67423-1

#### Method: PercentMoisture Preparation: N/A

Client Matrix: Dilution: Date Analyzed:	420-67423-4 Solid 1.0 06/26/2013 1220 N/A	Analysis Batch: 420-66975 Prep Batch: N/A Units: %	Instrument ID: Lab File ID: Initial Weight/Vo Final Weight/Vo	
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Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Solids	87	87	0	30	

#### LOGIN SAMPLE RECEIPT CHECK LIST

#### Client: Fluor Industrial Services, Inc.

Job Number: 420-67423-1

#### Login Number: 67423

Question	T/F/NA	Comment
Samples were collected by ETL employee as per SOP-SAM-1	NA	
The cooler's custody seal, if present, is intact.	NA	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is recorded.	True	3.8 C
Cooler Temp. is within method specified range.(0-6 C PW, 0-8 C NPW, or BAC <10 C	True	
If false, was sample received on ice within 6 hours of collection.	NA	
Based on above criteria cooler temperature is acceptable.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	NA	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	