Infrastructure Interim Action Report for East Bay Redevelopment Site

PREPARED FOR:

PORT OF OLYMPIA
915 WASHINGTON STREET NE
OLYMPIA, WA 98501

PREPARED BY:

2612 Yelm Hwy SE, Suite B
Olympia, WA 98501-4826
Phone: 360.570.1700
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JUNE 2010

APPENDIX G

SOIL STOCKPILE ANALYTICAL REPORTS AND DATA QUALITY REVIEW

DRAGON
Analytical Laboratory

RCRA CHAIN OF CUSTODY RECORD

2818 Madrona Beach Rd. NW, Olympia, WA 98502
Phone: (360) 866-0543 Fax: (360) 866-0556
Email: DragonLab@comcast.net
Website: dragonlaboratory.com

Samples Collected By: TB
Contact Number: ____

Client: PLC
Address: 2612 Yelm Hwy SE Suite ___ Oly, WA 98501
Phone: 570-1706
Fax: ____
Email: bussey@usp...
Project Name: East Bay IA Stockpile
Project Location: ____
Project Number: ____
Project P.O.: ____
Contact Person: Tim Bussey
DAL Project No.: ____

See RI ... sent previously

Matrix Code:
WW = wastewater GW = groundwater S = soil or solid
SL = sludge V = vapor O = other

Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Container Type
SP01-Zone N17-061209	S	6/12/09	1330	2 4oz 3 encore

Sample Identification	MtBE/BTEX (EPA 8021b)	Gasoline (NWTPH-Gx)	Diesel (NWTPH-Dx)	Diesel & Oil (NWTPH-Dx)	Fuel Scan (NWTPH-HCID)	VOC's (EPA 8021b)	Organochlorine Pesticides (EPA 8081)	PCB's (EPA 8082)	Volatiles (EPA 8260)	PAH's (EPA 8100 or 8270/8270SIM)	Semi-Volatiles (EPA 8270)	Ignitability (EPA 1010)	Oil and Grease (EPA 1664 HEM)	pH (EPA 9040/9045)	Specific Conductance (EPA 9050)	Paint Filter Test (EPA 9095)	Heavy Metals* (EPA 7000 Series)	Biogenic Gases (EPA 3C)	Natural Attenuation Indicators	Gross Alpha Radioactivity (EPA 900)	Gross Beta Radioactivity (EPA 900)									
SP01-Zone N17-061209	X	X		X						X							X													

Relinquished by (Signature)	Date/Time	Received by (Signature)	Date/Time
Tim Bussey	6/12/09 1030		
Relinquished by (Signature)	Date/Time	Received by (Signature)	Date/Time

Sample Disposal Instructions: ☐ DAL Disposal @ $2.50 per Container ☐ Return ☐ Pickup

Turn-Around-Time
☐ Same Day
☐ 24 Hour
☐ 48 Hour
☒ 5 Day
☐ 10 Day
☐ Other: ____

***Heavy Metals**: Please circle the desired analytes.

Ag Al (As) Ba Be (Cd) Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni (Pb) Sb Se Tl V Zn - Total
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - Dissolved
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - TCLP

Pioneer Technologies Corporation
Project: East Bay IA Stockpile

DAL Project No.: 090612-01

ANALYTICAL RESULTS FOR THE ANALYSIS OF GASOLINE RANGE ORGANICS IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Benzene EPA 8021B (mg/kg)	Toluene EPA 8021B (mg/kg)	Ethylbenzene EPA 8021B (mg/kg)	m&p-Xylene EPA 8021B (mg/kg)	o-Xylene EPA 8021B (mg/kg)	Gasoline NWTPH-Gx (mg/kg)	Surrogate Recovery BFB (%)	Data Flags
Method Blank	6/16/2009	n/a	nd	nd	nd	nd	nd	nd	97.7	
SP01-Zone n/a-061209	6/16/2009	87.4	nd	nd	nd	nd	nd	nd	113	
SP01-Zone n/a-061209 Dup.	6/16/2009	87.4	nd	nd	nd	nd	nd	nd	120	
LCS	6/16/2009	n/a	108%	122%	120%	98.9%	10.5%	94.9%	n/a	
090616-MS	6/16/2009	n/a	104%	101%	95.3%	110%	96.8%	108%	n/a	
Method Reporting Limits			0.05	0.10	0.10	0.10	0.10	5.0		

WA-DOE-Laboratory Certification No.: C2013

"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.

"n/a" indicates not applicable

Sample results based on dry weight.

Comments and Explanations: None

Analyst: T. McCall

Data reviewed by:

Pioneer Technologies Corporation
Project: East Bay IA Stockpile

DAL Project No.: 090612-01

ANALYTICAL RESULTS FOR THE ANALYSIS OF HEAVY METALS IN SOIL BY EPA METHOD 6020 A

Sample Identification	Date Analyzed	Percent Solids	Arsenic (As)	Cadmium (Cd)	Lead (Pb)
Chemical Abstract Number (CAS)			7440-38-2	7440-43-9	7439-92-1
Units		(%)	(mg/kg)	(mg/kg)	(mg/kg)
Method Blank	6/16/2009	n/a	nd	nd	nd
SP01-Zone n/a-061209	6/16/2009	87.4	**12.7**	**0.43**	**19.3**
SP01-Zone n/a-061209 Dup.	6/16/2009	87.4	**11.6**	**0.54**	**17.8**
LCS	6/16/2009	n/a	105%	102%	104%
090616-MS	6/16/2009	n/a	MI	99.2%	MI
090616-MSD	6/16/2009	n/a	MI	97.9%	MI
Method Reporting Limits			0.25	0.25	0.25

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
"MI" indicates Matrix Interference
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by:

Pioneer Technologies Corporation
Project: East Bay IA Stockpile

DAL Project No.: 090612-01

ANALYTICAL RESULTS FOR THE ANALYSIS OF FUEL IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Diesel Fuel #2 NWTPH-Dx (mg/kg)	Fuel Oil #6 (Buncker C) NWTPH-Dx (mg/kg)	Mineral Oil NWTPH-Dx (mg/kg)	Hydraulic Oil NWTPH-Dx (mg/kg)	Motor Oil NWTPH-Dx (mg/kg)	Surrogate Recovery 2-FBP (%)	Data Flags
Method Blank	6/12/2009	n/a	nd	nd	nd	nd	nd	101	
SP01-Zone n/a-061209	6/12/2009	87.4	nd	nd	nd	nd	**324**	102	
LCS	6/12/2009	n/a	105%	n/a	n/a	n/a	n/a	n/a	
090612-MS	6/12/2009	n/a	119%	n/a	n/a	n/a	n/a	n/a	
090612-MSD	6/12/2009	n/a	113%	n/a	n/a	n/a	n/a	n/a	
Method Reporting Limits			25	100	100	100	100		

WA-DOE-Laboratory Certification No.: C2013

"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.

"n/a" indicates not applicable

Sample results based on dry weight.

Comments and Explanations: None

Analyst: T. McCall

Data reviewed by:

Pioneer Technologies Corporation
Project: East Bay IA Stockpile
DAL Project No.: 090612-01

ANALYTICAL RESULTS FOR THE ANALYSIS OF SEMI-VOLATILE COMPOUNDS IN SOIL BY EPA METHOD 8270

Sample Identification			Blank	SP01-Zone n/a-061209	LCS	090618-MS	090618-MSD
Percent Solids (%)			n/a	87.4	n/a	n/a	n/a
Date Extracted	CAS	MRL	6/15/2009	6/15/2009	6/15/2009	6/15/2009	6/15/2009
Date Anlayzed	Number	(mg/kg)	6/18/2009	6/18/2009	6/18/2009	6/18/2009	6/18/2009
Acenaphthene	83-32-9	0.01	nd	nd	65.5%	71.1%	70.8%
Acenaphthylene	208-96-8	0.01	nd	nd	n/a	n/a	n/a
Anthracene	120-12-7	0.01	nd	**0.03**	n/a	n/a	n/a
Benzo(a)anthracene	56-55-3	0.01	nd	**0.11**	96.7%	101%	102%
Benzo(a)pyrene	50-32-8	0.01	nd	**0.18**	n/a	n/a	n/a
Benzo(b)fluoranthene	205-99-2	0.01	nd	**0.07**	n/a	n/a	n/a
Benzo(g,h,i)perylene	191-24-2	0.01	nd	**0.10**	n/a	n/a	n/a
Benzo(k)fluoranthene	207-08-9	0.01	nd	**0.06**	n/a	n/a	n/a
Chrysene	218-01-9	0.01	nd	**0.15**	102%	103%	104%
Dibenzo(a,h)anthracene	53-70-3	0.01	nd	nd	n/a	n/a	n/a
Fluoranthene	206-44-0	0.01	nd	**0.27**	n/a	n/a	n/a
Fluorene	86-73-7	0.01	nd	nd	n/a	n/a	n/a
Ideno(1,2,3-cd)pyrene	193-39-5	0.01	nd	**0.28**	73.3%	72.0%	75.9%
Naphthalene	91-20-3	0.01	nd	nd	n/a	n/a	n/a
Phenanthrene	85-01-8	0.01	nd	**0.25**	n/a	n/a	n/a
Pyrene	129-00-0	0.01	nd	**0.23**	98.1%	99.9%	101%
Surrogate Recovery (%)							
2-Fluorophenol			97.3	84.3	120	102	102
Phenol-d6			105	91.0	123	124	93.7
Nitrobenzene-d5			84	61.4	92.1	109	109
2-Fluorobiphenol			101	60.2	73.7	85.5	86.1
2,4,6-Tribromophenol			112	102	122	71.2	130
Terphenyl-d14			110	62.1	94.5	110	111
Data Flags							

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.
Acceptable surrogate recovery limits: 65% to 135%
Comments and Explanations: None
Analyst: T. McCall
Data reviewed by:

Anatek Labs, Inc.
1282 Alturas Drive, Moscow ID 83843 (208) 883-2839 FAX 882-9246
504 E Sprague Ste D, Spokane WA 99202 (509) 838-3999 FAX 838-4433

Chain of Custody Record

Anatek Log-In # 1097187

Company Name: PTC	Project Manager: TROY BUSSEY
Address: 2612 YELM HWY SO, SUITE B	Project Name & #: EAST BAY EFA STOCKPILES
City: OLY State: WA Zip: 98501	Email Address: busseyt@uspioneer.com
Phone: 360 570-1700	Purchase Order #: CREDIT CARD
Fax:	Sampler Name & phone: SAME

Turn Around Time & Reporting

Please refer to our normal turn around times at: http://www.anateklabs.com/services/guidelines/reporting.asp

__Normal
__Next Day*
__2nd Day*
X Other* 5 DAY TAT

*All rush order requests must be prior approved.

__Phone
__Mail
__Fax
X Email

Provide Sample Description / **List Analyses Requested**

Lab ID	Sample Identification	Sampling Date/Time	Matrix	# of Containers	Sample Volume	D/F (8290)								
	SP01-ZONE N/A-061209	06/12/09 1530	SOIL	1	4 oz.	X								

Preservative:

Note Special Instructions/Comments

~~SEE~~ SEE RL EXPECTATIONS SENT PREVIOUSLY 001

	Printed Name	Signature	Company	Date	Time
Relinquished by	TROY BUSSEY	[signature]	PTC	6/12/09	1630
Received by	Alex Kulzer	[signature]	Pace	6/13/09	0955
Relinquished by					
Received by					
Relinquished by					
Received by					

Inspection Checklist

Received Intact? (Y) N
Labels & Chains Agree? (Y) N
Containers Sealed? (Y) N
VOC Head Space? Y N

Temperature (°C): 5.0
Preservative:
Date & Time:
Inspected By:

www.pacelabs.com

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

Report Prepared for:

Troy Bussey
Pioneer Technologies Corporation
2612 Yelm Highway S.E.
Suite B
Olympia WA 98501-4826

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

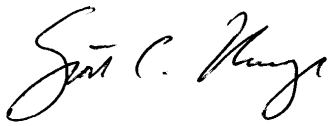
Pace Project #: 1097187
Sample Receipt Date: 06/13/2009
Client Project #: East Bay IA Stockpiles
Client Sub PO #: N/A
State Cert #: C218

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed and prepared by:



Scott Unze, Project Manager
(612) 607-6383
(612) 607-6444 (fax)
scott.unze@pacelabs.com

Report Prepared Date:
June 19, 2009

Report of Laboratory Analysis

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analyses performed on one sample submitted by a representative of Pioneer Technologies Corporation. The sample was analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. Reporting limits were based on signal-to-noise calculations.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extract ranged from 44-91%. All of the labeled standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Also, since the quantification of the native 2,3,7,8-substituted congeners was based on isotope dilution, the data were automatically corrected for variation in recovery and accurate values were obtained.

In one case, an interfering substance impacted the determination of a PCDD congener. The affected value was flagged "I" due to an incorrect isotope ratio.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show that PCDDs and PCDFs were not detected. These results indicate that the sample processing steps did not contribute significantly to the levels reported for the field sample.

A laboratory spike sample was also prepared with the sample batch using clean sand that had been fortified with native standard materials. The results show that the spiked native compounds were recovered at 90-109%. These results indicate a high degree of accuracy for these determinations. Matrix spikes were prepared with the sample batch using sample material from a separate project; results from these analyses will be provided upon request.

Appendix A

Sample Management

Pace Analytical

Sample Condition Upon Receipt

Client Name: Anatek Labs Inc Project # 1097187

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 8667-2411-9389

Optional: Proj. Due Date: Proj. Name:

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☑ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____ Temp Blank: Yes ____ No ☑

Thermometer Used ~~80344042~~, 179425 Type of Ice: (Wet) Blue None ☐ Samples on Ice, cooling process has begun

Cooler Temperature 5.0 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 6/13/09

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☐Yes ☑No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☐No ☑N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☐Yes ☑No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: SL		
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	☐Yes ☐No ☑N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	
Exceptions: VOA,Coliform, TOC, Oil and Grease, WI-DRO (water)	☐Yes ☑No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: 06/15/09

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Appendix B

Sample Analysis Summary

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP01-ZONEN/A-061209		
Lab Sample ID	1097187001		
Filename	F90618A_11		
Injected By	BPG		
Total Amount Extracted	12.3 g	Matrix	Soil
% Moisture	10.6	Dilution	NA
Dry Weight Extracted	11.0 g	Collected	06/12/2009
ICAL ID	F90501	Received	06/13/2009
CCal Filename(s)	F90618A_01 & F90618A_15	Extracted	06/15/2009
Method Blank ID	BLANK-20238	Analyzed	06/18/2009 19:06

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.40	-----	0.24	J	2,3,7,8-TCDF-13C	2.00	77
Total TCDF	2.20	-----	0.24		2,3,7,8-TCDD-13C	2.00	85
					1,2,3,7,8-PeCDF-13C	2.00	79
2,3,7,8-TCDD	ND	-----	0.30		2,3,4,7,8-PeCDF-13C	2.00	82
Total TCDD	ND	-----	0.30		1,2,3,7,8-PeCDD-13C	2.00	91
					1,2,3,4,7,8-HxCDF-13C	2.00	85
1,2,3,7,8-PeCDF	ND	-----	0.38		1,2,3,6,7,8-HxCDF-13C	2.00	71
2,3,4,7,8-PeCDF	0.68	-----	0.34	J	2,3,4,6,7,8-HxCDF-13C	2.00	78
Total PeCDF	6.60	-----	0.36		1,2,3,7,8,9-HxCDF-13C	2.00	80
					1,2,3,4,7,8-HxCDD-13C	2.00	88
1,2,3,7,8-PeCDD	ND	-----	0.32		1,2,3,6,7,8-HxCDD-13C	2.00	77
Total PeCDD	0.50	-----	0.32	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	69
					1,2,3,4,7,8,9-HpCDF-13C	2.00	64
1,2,3,4,7,8-HxCDF	ND	-----	0.64		1,2,3,4,6,7,8-HpCDD-13C	2.00	73
1,2,3,6,7,8-HxCDF	ND	-----	0.49		OCDD-13C	4.00	44
2,3,4,6,7,8-HxCDF	ND	-----	0.66				
1,2,3,7,8,9-HxCDF	ND	-----	0.52		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	4.60	-----	0.58		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.48		2,3,7,8-TCDD-37Cl4	0.20	83
1,2,3,6,7,8-HxCDD	1.60	-----	0.81	J			
1,2,3,7,8,9-HxCDD	ND	-----	0.74				
Total HxCDD	2.70	-----	0.68	J			
1,2,3,4,6,7,8-HpCDF	9.20	-----	0.59		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.72		Equivalence: 1.7 ng/Kg		
Total HpCDF	9.20	-----	0.66		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	52.00	-----	1.10				
Total HpCDD	100.00	-----	1.10				
OCDF	19.00	-----	0.67				
OCDD	760.00	-----	0.86				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Blank Analysis Results

Lab Sample ID	BLANK-20238	Matrix	Solid
Filename	F90619A_02	Dilution	NA
Total Amount Extracted	10.1 g	Extracted	06/15/2009
ICAL ID	F90501	Analyzed	06/19/2009 09:36
CCal Filename(s)	F90618B_12 & F90619A_06	Injected By	SMT

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.150		2,3,7,8-TCDF-13C	2.00	69
Total TCDF	ND	-----	0.150		2,3,7,8-TCDD-13C	2.00	79
					1,2,3,7,8-PeCDF-13C	2.00	77
2,3,7,8-TCDD	ND	-----	0.170		2,3,4,7,8-PeCDF-13C	2.00	81
Total TCDD	ND	-----	0.170		1,2,3,7,8-PeCDD-13C	2.00	88
					1,2,3,4,7,8-HxCDF-13C	2.00	77
1,2,3,7,8-PeCDF	ND	-----	0.086		1,2,3,6,7,8-HxCDF-13C	2.00	69
2,3,4,7,8-PeCDF	ND	-----	0.061		2,3,4,6,7,8-HxCDF-13C	2.00	73
Total PeCDF	ND	-----	0.074		1,2,3,7,8,9-HxCDF-13C	2.00	76
					1,2,3,4,7,8-HxCDD-13C	2.00	81
1,2,3,7,8-PeCDD	ND	-----	0.130		1,2,3,6,7,8-HxCDD-13C	2.00	76
Total PeCDD	ND	-----	0.130		1,2,3,4,6,7,8-HpCDF-13C	2.00	71
					1,2,3,4,7,8,9-HpCDF-13C	2.00	68
1,2,3,4,7,8-HxCDF	ND	-----	0.094		1,2,3,4,6,7,8-HpCDD-13C	2.00	75
1,2,3,6,7,8-HxCDF	ND	-----	0.087		OCDD-13C	4.00	49
2,3,4,6,7,8-HxCDF	ND	-----	0.088				
1,2,3,7,8,9-HxCDF	ND	-----	0.120		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.097		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.150		2,3,7,8-TCDD-37Cl4	0.20	79
1,2,3,6,7,8-HxCDD	ND	-----	0.160				
1,2,3,7,8,9-HxCDD	ND	-----	0.170				
Total HxCDD	ND	-----	0.160				
1,2,3,4,6,7,8-HpCDF	ND	-----	0.120		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.150		Equivalence: 0.21 ng/Kg		
Total HpCDF	ND	-----	0.140		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	ND	-----	0.180				
Total HpCDD	ND	-----	0.180				
OCDF	ND	-----	0.380				
OCDD	-----	0.53	0.440	I			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-20239		
Filename	F90618A_02	Matrix	Solid
Total Amount Extracted	10.6 g	Dilution	NA
ICAL ID	F90501	Extracted	06/15/2009
CCal Filename(s)	F90618A_01 & F90618A_15	Analyzed	06/18/2009 11:57
Method Blank ID	BLANK-20238	Injected By	BPG

Native Isomers	**Qs** (ng)	**Qm** (ng)	% Rec.	**Internal Standards**	**ng's Added**	**Percent Recovery**
2,3,7,8-TCDF	0.20	0.20	100	2,3,7,8-TCDF-13C	2.00	74
Total TCDF				2,3,7,8-TCDD-13C	2.00	84
				1,2,3,7,8-PeCDF-13C	2.00	78
2,3,7,8-TCDD	0.20	0.18	91	2,3,4,7,8-PeCDF-13C	2.00	82
Total TCDD				1,2,3,7,8-PeCDD-13C	2.00	93
				1,2,3,4,7,8-HxCDF-13C	2.00	77
1,2,3,7,8-PeCDF	1.00	1.00	100	1,2,3,6,7,8-HxCDF-13C	2.00	70
2,3,4,7,8-PeCDF	1.00	0.96	96	2,3,4,6,7,8-HxCDF-13C	2.00	76
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.00	79
				1,2,3,4,7,8-HxCDD-13C	2.00	81
1,2,3,7,8-PeCDD	1.00	0.90	90	1,2,3,6,7,8-HxCDD-13C	2.00	80
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.00	77
				1,2,3,4,7,8,9-HpCDF-13C	2.00	76
1,2,3,4,7,8-HxCDF	1.00	0.95	95	1,2,3,4,6,7,8-HpCDD-13C	2.00	86
1,2,3,6,7,8-HxCDF	1.00	0.98	98	OCDD-13C	4.00	67
2,3,4,6,7,8-HxCDF	1.00	0.98	98			
1,2,3,7,8,9-HxCDF	1.00	0.96	96	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.00	0.96	96	2,3,7,8-TCDD-37Cl4	0.20	82
1,2,3,6,7,8-HxCDD	1.00	0.99	99			
1,2,3,7,8,9-HxCDD	1.00	0.99	99			
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.00	1.02	102			
1,2,3,4,7,8,9-HpCDF	1.00	1.00	100			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.00	0.93	93			
Total HpCDD						
OCDF	2.00	1.99	100			
OCDD	2.00	2.18	109			

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
P = Recovery outside of target range
X = Background subtracted value
Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

DRAGON
Analytical Laboratory

RCRA CHAIN OF CUSTODY RECORD

2818 Madrona Beach Rd. NW, Olympia, WA 98502
Phone: (360) 866-0543 Fax: (360) 866-0556
Email: DragonLab@comcast.net
Website: dragonlaboratory.com

Page ___ of ___

Samples Collected By: KR
Contact Number: ___

Client: PTC
Address: 2612 Yelm Hwy SE Suite A, Olympia, WA 98501
Phone: 570-1700
Fax: ___
Email: bussey@...
Project Name: ...
Project Location: ___
Project Number: ___
Project P.O.: ___
Contact Person: Tom Bussey
DAL Project No.: ___

Matrix Code:
WW = wastewater **GW** = groundwater **S** = soil or solid
SL = sludge **V** = vapor **O** = other

Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Container Type	MtBE/BTEX (EPA 8021b)	Gasoline (NWTPH-Gx)	Diesel (NWTPH-Dx)	Diesel & Oil (NWTPH-Dx)	Fuel Scan (NWTPH-HCID)	VOC's (EPA 8021b)	Organochlorine Pesticides (EPA 8081)	PCB's (EPA 8082)	Volatiles (EPA 8260)	PAH's (EPA 8100 or 8270/8270SIM)	Semi-Volatiles (EPA 8270)	Ignitability (EPA 1010)	Oil and Grease (EPA 1664 HEM)	pH (EPA 9040/9045)	Specific Conductance (EPA 9050)	Paint Filter Test (EPA 9095)	Heavy Metals* (EPA 7000 Series)	Biogenic Gases (EPA 3C)	Natural Attenuation Indicators	Gross Alpha Radioactivity (EPA 900)	Gross Beta Radioactivity (EPA 900)	As, Cd, Pb, ...								
SP07-Zone 7-061509	S	6/15/09	1400	4 oz 3 ...	X	X		X						X							X													

Relinquished by (Signature)	Date/Time	Received by (Signature)	Date/Time
[signature]	6/15/09 1700		

Sample Disposal Instructions: ☐ DAL Disposal @ $2.50 per Container ☐ Return ☐ Pickup

Turn-Around-Time
☐ Same Day
☐ 24 Hour
☐ 48 Hour
☒ 5 Day
☐ 10 Day
☐ Other: ___

***Heavy Metals**: Please circle the desired analytes.

Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - Total
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - Dissolved
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - TCLP

Pioneer Technologies Corporation
Project: East Bay IA Stockpile

DAL Number: 090615-03

ANALYTICAL RESULTS FOR THE ANALYSIS OF FUEL IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Diesel Fuel #2 NWTPH-Dx (mg/kg)	Heavy Oil NWTPH-Dx (mg/kg)	Surrogate Recovery 2-FBP (%)	Data Flags
Method Blank	6/19/2009	n/a	nd	nd	85.2	
SP02-Zone 2-061509	6/19/2009	90.2	nd	nd	73.2	
LCS	6/19/2009	n/a	109%	n/a	n/a	
090619-MS	6/19/2009	n/a	105%	n/a	n/a	
090619-MSD	6/19/2009	n/a	108%	n/a	n/a	
Method Reporting Limits			25	100		

WA-DOE-Laboratory Certification No.: C2013

"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.

"n/a" indicates not applicable

Sample results based on dry weight.

Comments and Explanations: None

Analyst: T. McCall

Data reviewed by:

Pioneer Technologies Corporation
Project: East Bay IA Stockpile

DAL Number: 090615-03

ANALYTICAL RESULTS FOR THE ANALYSIS OF GASOLINE RANGE ORGANICS IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Benzene EPA 8021B (mg/kg)	Toluene EPA 8021B (mg/kg)	Ethylbenzene EPA 8021B (mg/kg)	m&p-Xylene EPA 8021B (mg/kg)	o-Xylene EPA 8021B (mg/kg)	Gasoline NWTPH-Gx (mg/kg)	Surrogate Recovery BFB (%)	Data Flags
Method Blank	6/17/2009	n/a	nd	nd	nd	nd	nd	nd	97.7	
SP02-Zone 2-061509	6/17/2009	90.9	nd	nd	nd	nd	nd	nd	90.4	
LCS	6/17/2009	n/a	108%	122%	120%	98.9%	105%	94.9%	n/a	
090617-MS	6/17/2009	n/a	104%	101%	95.3%	105%	96.8%	108%	n/a	
Method Reporting Limits			0.05	0.10	0.10	0.10	0.10	5.0		

WA-DOE-Laboratory Certification No.: C2013

"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.

"n/a" indicates not applicable

Sample results based on dry weight.

Comments and Explanations: None

Analyst: T. McCall

Data reviewed by:

Pioneer Technologies Corporation
Project: East Bay IA Stockpile

DAL Number: 090615-03

ANALYTICAL RESULTS FOR THE ANALYSIS OF HEAVY METALS IN SOIL BY EPA METHOD 6020 A

Sample Identification	Date Analyzed	Percent Solids	Arsenic (As)	Cadmium (Cd)	Lead (Pb)
Chemical Abstract Number (CAS)			7440-38-2	7440-43-9	7439-92-1
Units		(%)	(mg/kg)	(mg/kg)	(mg/kg)
Method Blank	6/18/2009	n/a	nd	nd	nd
SP02-Zone 2-061509	6/18/2009	90.9	**3.8**	**1.33**	**14.8**
LCS	6/18/2009	n/a	105%	102%	104%
090616-MS	6/18/2009	n/a	MI	99.2%	MI
090616-MSD	6/18/2009	n/a	MI	97.9%	MI
Method Reporting Limits			0.25	0.25	0.25

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
"MI" indicates Matrix Interference
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by:

Pioneer Technologies Corporation
Project: East Bay IA Stockpile

DAL Number: 090615-03

ANALYTICAL RESULTS FOR THE ANALYSIS OF SEMI-VOLATILE COMPOUNDS IN SOIL BY EPA METHOD 8270

Sample Identification			Blank	SP02-Zone 2-061509	LCS	090618-MS	090618-MSD
Percent Solids (%)			n/a	90.2	n/a	n/a	n/a
Date Extracted	CAS	MRL	6/15/2009	6/15/2009	6/15/2009	6/15/2009	6/15/2009
Date Anlayzed	Number	(mg/kg)	6/18/2009	6/18/2009	6/18/2009	6/18/2009	SP03-Zone 2-061609
Benzo(a)anthracene	56-55-3	0.01	nd	**0.04**	96.7%	101%	102%
Benzo(a)pyrene	50-32-8	0.01	nd	**0.15**	n/a	n/a	n/a
Benzo(b)fluoranthene	205-99-2	0.01	nd	nd	n/a	n/a	n/a
Benzo(k)fluoranthene	207-08-9	0.01	nd	**0.04**	n/a	n/a	n/a
Chrysene	218-01-9	0.01	nd	**0.05**	102%	103%	104%
Dibenzo(a,h)anthracene	53-70-3	0.01	nd	**0.10**	n/a	n/a	n/a
Ideno(1,2,3-cd)pyrene	193-39-5	0.01	nd	**0.26**	73.3%	72.0%	75.9%
1-Methylnaphthalene	90-12-0	0.01	nd	nd	n/a	n/a	n/a
2-Methylnaphthalene	91-57-6	0.01	nd	nd	n/a	n/a	n/a
Naphthalene	91-20-3	0.01	nd	nd	n/a	n/a	n/a
Surrogate Recovery (%)							
2-Fluorophenol			96.8	108	120	102	102
Phenol-d6			107	79	123	124	93.7
Nitrobenzene-d5			85.5	111	92.1	109	109
2-Fluorobiphenol			103	116	73.7	85.5	86.1
2,4,6-Tribromophenol			111	128	122	71.2	130
Terphenyl-d14			118	119	94.5	110	111
Data Flags							

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by:

1117

DRAGON Analytical Laboratory

RCRA CHAIN OF CUSTODY RECORD

2818 Madrona Beach Rd. NW, Olympia, WA 98502
Phone: (360) 866-0543 Fax: (360) 866-0556
Email: DragonLab@comcast.net
Website: dragonlaboratory.com

RUSH!

Samples Collected By: KR
Contact Number:

Client: PTC
Phone: 360-570-1700
Project Name: EAST BAY TA STOCKPILE
Project P.O.:
Address: 2612 YELM HIGHWAY SE, SUITE B, OLYMPIA, WA 98501
Fax:
Project Location:
Contact Person: TROY BUSSEY
Email: busseyt@…
Project Number:
DAL Project No.:

* PLEASE RETURN COOLER AND ALSO SEND OUT ADDITIONAL SAMPLE KITS OF SIMILAR SIZE

Matrix Code:
WW = wastewater GW = groundwater S = soil or solid
SL = sludge V = vapor O = other

Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Container Type	MtBE/BTEX (EPA 8021b)	Gasoline (NWTPH-Gx)	Diesel (NWTPH-Dx)	Diesel & Oil (NWTPH-Dx)	Fuel Scan (NWTPH-HCID)	VOC's (EPA 8021b)	Organochlorine Pesticides (EPA 8081)	PCB's (EPA 8082)	Volatiles (EPA 8260)	PAH's (EPA 8100 or 8270/8270SIM)	Semi-Volatiles (EPA 8270)	Ignitability (EPA 1010)	Oil and Grease (EPA 1664 HEM)	pH (EPA 9040/9045)	Specific Conductance (EPA 9050)	Paint Filter Test (EPA 9095)	Heavy Metals* (EPA 7000 Series)	Biogenic Gases (EPA 3C)	Natural Attenuation Indicators	Gross Alpha Radioactivity (EPA 900)	Gross Beta Radioactivity (EPA 900)	DIOXIN/FURAN 8290								
SP02-ZONE 2-061509	S	6/15/09	1400	4 oz.																						X						0	0	1

Relinquished by (Signature)	Date/Time	Received by (Signature)	Date/Time
[signature]	6/15/09 1630	[signature]	6/16/09 1000

Turn-Around-Time
☐ Same Day
☐ 24 Hour
☐ 48 Hour
☐ 5 Day
☐ 10 Day
☐ Other: ____

***Heavy Metals**: Please circle the desired analytes.

Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - Total
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - Dissolved
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - TCLP

Sample Disposal Instructions: ☐ DAL Disposal @ $2.50 per Container ☐ Return ☐ Pickup

Pace Analytical™

www.pacelabs.com

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

Report Prepared for:

Troy Bussey
Pioneer Technologies Corporation
2612 Yelm Highway S.E.
Suite B
Olympia WA 98501-4826

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

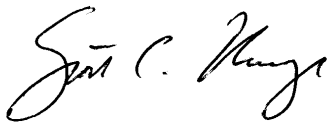
Pace Project #: 1097304
Sample Receipt Date: 06/16/2009
Client Project #: East Bay IA Stockpile
Client Sub PO #: N/A
State Cert #: C218

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed and prepared by:



Scott Unze, Project Manager
(612) 607-6383
(612) 607-6444 (fax)
scott.unze@pacelabs.com

ACCREDITED IN ACCORDANCE WITH nelac

Report of Laboratory Analysis

Report Prepared Date:
June 22, 2009

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analyses performed on one sample submitted by a representative of Pioneer Technologies Corporation. The sample was analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. Reporting limits were based on signal-to-noise calculations. The sample was received outside of the recommended temperature range of 0-6 degrees Celsius.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extract ranged from 47-123%. All of the labeled standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Also, since the quantification of the native 2,3,7,8-substituted congeners was based on isotope dilution, the data were automatically corrected for variation in recovery and accurate values were obtained.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to contain trace levels of selected congeners. These were below the calibration range of the method. The levels reported for the affected congeners in the field sample were higher than the corresponding blank levels by one or more orders of magnitude. These results indicate that the sample processing steps did not contribute significantly to the levels reported for the field sample.

Laboratory and matrix spike samples were also prepared with the sample batch using clean sand or sample matrix that had been fortified with native standard materials. The results show that the spiked native compounds were generally recovered at 88-130%, with relative percent differences of 0.1-7.6%. These results indicate generally high degrees of accuracy and precision for these determinations. Somewhat variable background-subtracted values were obtained for HpCDD, OCDF, and OCDD in the matrix spike samples, due to the levels of these compounds in the sample material.

Appendix A

Sample Management

Pace Analytical

Sample Condition Upon Receipt

Client Name: Pace - WA Project # 167304

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 7912 3041 0460

Optional: Proj. Due Date: Proj. Name:

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____ Temp Blank: Yes ____ No ✓

Thermometer Used: 80344042 179425 Type of Ice: Wet Blue None ☐ Samples on Ice, cooling process has begun

Cooler Temperature: 6-2 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: _____

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☐Yes ☑No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☐Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☑No ☐N/A	11.
Sample Labels match COC:	☐Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: SL		
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	☐Yes ☑No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☑No ☐N/A	
Exceptions: VOA,Coliform, TOC, Oil and Grease, WI-DRO (water)	☐Yes ☑No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☑No ☐N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.
Trip Blank Present:	☐Yes ☑No ☐N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: Kevin (phone) Date/Time: 06/16/09

Comments/ Resolution:

Waived temp req.

Project Manager Review: [signature] Date: 06/16/09

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Appendix B

Sample Analysis Summary

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP02-ZONE2-061509		
Lab Sample ID	1097304001		
Filename	F90619A_17		
Injected By	AE		
Total Amount Extracted	12.6 g	Matrix	Solid
% Moisture	13.1	Dilution	NA
Dry Weight Extracted	11.0 g	Collected	06/15/2009
ICAL ID	F90501	Received	06/16/2009
CCal Filename(s)	F90619A_06 & F90619A_19	Extracted	06/17/2009
Method Blank ID	BLANK-20346	Analyzed	06/19/2009 22:53

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery	
2,3,7,8-TCDF	2.8	-----	0.82		2,3,7,8-TCDF-13C	2.00	79	
Total TCDF	53.0	-----	0.82		2,3,7,8-TCDD-13C	2.00	83	
					1,2,3,7,8-PeCDF-13C	2.00	112	
2,3,7,8-TCDD	ND	-----	1.20		2,3,4,7,8-PeCDF-13C	2.00	114	
Total TCDD	71.0	-----	1.20		1,2,3,7,8-PeCDD-13C	2.00	123	
					1,2,3,4,7,8-HxCDF-13C	2.00	77	Y
1,2,3,7,8-PeCDF	2.7	-----	0.86	J	1,2,3,6,7,8-HxCDF-13C	2.00	77	
2,3,4,7,8-PeCDF	7.7	-----	0.34		2,3,4,6,7,8-HxCDF-13C	2.00	71	Y
Total PeCDF	86.0	-----	0.60		1,2,3,7,8,9-HxCDF-13C	2.00	82	
					1,2,3,4,7,8-HxCDD-13C	2.00	72	
1,2,3,7,8-PeCDD	4.9	-----	0.54		1,2,3,6,7,8-HxCDD-13C	2.00	89	
Total PeCDD	88.0	-----	0.54		1,2,3,4,6,7,8-HpCDF-13C	2.00	62	
					1,2,3,4,7,8,9-HpCDF-13C	2.00	57	
1,2,3,4,7,8-HxCDF	9.2	-----	0.69		1,2,3,4,6,7,8-HpCDD-13C	2.00	56	
1,2,3,6,7,8-HxCDF	6.4	-----	0.65		OCDD-13C	4.00	47	Y
2,3,4,6,7,8-HxCDF	8.8	-----	0.65					
1,2,3,7,8,9-HxCDF	2.9	-----	0.82	J	1,2,3,4-TCDD-13C	2.00	NA	
Total HxCDF	100.0	-----	0.70		1,2,3,7,8,9-HxCDD-13C	2.00	NA	
1,2,3,4,7,8-HxCDD	4.9	-----	0.93		2,3,7,8-TCDD-37Cl4	0.20	90	
1,2,3,6,7,8-HxCDD	16.0	-----	0.88					
1,2,3,7,8,9-HxCDD	9.9	-----	1.00					
Total HxCDD	190.0	-----	0.94					
1,2,3,4,6,7,8-HpCDF	120.0	-----	1.60		Total 2,3,7,8-TCDD			
1,2,3,4,7,8,9-HpCDF	10.0	-----	1.80		Equivalence: 21 ng/Kg			
Total HpCDF	290.0	-----	1.70		(Using 2005 WHO Factors - Using PRL/2 where ND)			
1,2,3,4,6,7,8-HpCDD	420.0	-----	1.20					
Total HpCDD	770.0	-----	1.20					
OCDF	470.0	-----	2.20					
OCDD	4000.0	-----	2.70					

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
Y = Calculated using average of daily RFs

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Blank Analysis Results

Lab Sample ID	BLANK-20346	Matrix	Solid
Filename	F90621A_09	Dilution	NA
Total Amount Extracted	10.1 g	Extracted	06/17/2009
ICAL ID	F90501	Analyzed	06/21/2009 23:51
CCal Filename(s)	F90621A_02 & F90621A_11	Injected By	BAL

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.28	-----	0.110	J	2,3,7,8-TCDF-13C	2.00	82
Total TCDF	0.49	-----	0.110	J	2,3,7,8-TCDD-13C	2.00	81
					1,2,3,7,8-PeCDF-13C	2.00	88
2,3,7,8-TCDD	ND	-----	0.150		2,3,4,7,8-PeCDF-13C	2.00	96
Total TCDD	ND	-----	0.150		1,2,3,7,8-PeCDD-13C	2.00	101
					1,2,3,4,7,8-HxCDF-13C	2.00	92
1,2,3,7,8-PeCDF	ND	-----	0.084		1,2,3,6,7,8-HxCDF-13C	2.00	78
2,3,4,7,8-PeCDF	ND	-----	0.069		2,3,4,6,7,8-HxCDF-13C	2.00	86
Total PeCDF	ND	-----	0.077		1,2,3,7,8,9-HxCDF-13C	2.00	92
					1,2,3,4,7,8-HxCDD-13C	2.00	88
1,2,3,7,8-PeCDD	ND	-----	0.110		1,2,3,6,7,8-HxCDD-13C	2.00	79
Total PeCDD	ND	-----	0.110		1,2,3,4,6,7,8-HpCDF-13C	2.00	80
					1,2,3,4,7,8,9-HpCDF-13C	2.00	88
1,2,3,4,7,8-HxCDF	ND	-----	0.092		1,2,3,4,6,7,8-HpCDD-13C	2.00	84
1,2,3,6,7,8-HxCDF	ND	-----	0.092		OCDD-13C	4.00	86
2,3,4,6,7,8-HxCDF	ND	-----	0.100				
1,2,3,7,8,9-HxCDF	ND	-----	0.098		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.096		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.110		2,3,7,8-TCDD-37Cl4	0.20	87
1,2,3,6,7,8-HxCDD	ND	-----	0.110				
1,2,3,7,8,9-HxCDD	ND	-----	0.140				
Total HxCDD	ND	-----	0.120				
1,2,3,4,6,7,8-HpCDF	ND	-----	0.190		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.220		Equivalence: 0.21 ng/Kg		
Total HpCDF	ND	-----	0.200		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	ND	-----	0.120				
Total HpCDD	ND	-----	0.120				
OCDF	ND	-----	0.180				
OCDD	0.78	-----	0.200	J			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-20347		
Filename	F90621A_03	Matrix	Solid
Total Amount Extracted	10.3 g	Dilution	NA
ICAL ID	F90501	Extracted	06/17/2009
CCal Filename(s)	F90621A_02 & F90621A_11	Analyzed	06/21/2009 19:06
Method Blank ID	BLANK-20346	Injected By	BAL

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.20	0.21	105	2,3,7,8-TCDF-13C	2.00	78
Total TCDF				2,3,7,8-TCDD-13C	2.00	76
				1,2,3,7,8-PeCDF-13C	2.00	81
2,3,7,8-TCDD	0.20	0.20	101	2,3,4,7,8-PeCDF-13C	2.00	89
Total TCDD				1,2,3,7,8-PeCDD-13C	2.00	90
				1,2,3,4,7,8-HxCDF-13C	2.00	87
1,2,3,7,8-PeCDF	1.00	1.07	107	1,2,3,6,7,8-HxCDF-13C	2.00	79
2,3,4,7,8-PeCDF	1.00	1.04	104	2,3,4,6,7,8-HxCDF-13C	2.00	85
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.00	89
				1,2,3,4,7,8-HxCDD-13C	2.00	84
1,2,3,7,8-PeCDD	1.00	0.98	98	1,2,3,6,7,8-HxCDD-13C	2.00	82
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.00	73
				1,2,3,4,7,8,9-HpCDF-13C	2.00	80
1,2,3,4,7,8-HxCDF	1.00	1.01	101	1,2,3,4,6,7,8-HpCDD-13C	2.00	77
1,2,3,6,7,8-HxCDF	1.00	1.04	104	OCDD-13C	4.00	72
2,3,4,6,7,8-HxCDF	1.00	1.04	104			
1,2,3,7,8,9-HxCDF	1.00	1.03	103	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.00	1.03	103	2,3,7,8-TCDD-37Cl4	0.20	83
1,2,3,6,7,8-HxCDD	1.00	1.00	100			
1,2,3,7,8,9-HxCDD	1.00	1.05	105			
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.00	1.12	112			
1,2,3,4,7,8,9-HpCDF	1.00	1.05	105			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.00	0.99	99			
Total HpCDD						
OCDF	2.00	2.48	124			
OCDD	2.00	2.14	107			

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
P = Recovery outside of target range
X = Background subtracted value
Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Spiked Sample Report

Client - Pioneer Technologies Corporation

Client's Sample ID	SP02-ZONE2-061509-MS		
Lab Sample ID	1097304001-MS		
Filename	F90621A_05	Matrix	Solid
Total Amount Extracted	11.4 g	Dilution	NA
ICAL ID	F90501	Extracted	06/17/2009
CCal Filename(s)	F90621A_02 & F90621A_11	Analyzed	06/21/2009 20:40
Method Blank ID	BLANK-20346	Injected By	BAL

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.20	0.26	132	2,3,7,8-TCDF-13C	2.00	84
				2,3,7,8-TCDD-13C	2.00	82
				1,2,3,7,8-PeCDF-13C	2.00	86
2,3,7,8-TCDD	0.20	0.22	109	2,3,4,7,8-PeCDF-13C	2.00	93
				1,2,3,7,8-PeCDD-13C	2.00	96
				1,2,3,4,7,8-HxCDF-13C	2.00	92
1,2,3,7,8-PeCDF	1.00	1.13	113	1,2,3,6,7,8-HxCDF-13C	2.00	79
2,3,4,7,8-PeCDF	1.00	1.13	113	2,3,4,6,7,8-HxCDF-13C	2.00	85
				1,2,3,7,8,9-HxCDF-13C	2.00	84
				1,2,3,4,7,8-HxCDD-13C	2.00	91
1,2,3,7,8-PeCDD	1.00	1.03	103	1,2,3,6,7,8-HxCDD-13C	2.00	75
				1,2,3,4,6,7,8-HpCDF-13C	2.00	74
				1,2,3,4,7,8,9-HpCDF-13C	2.00	74
1,2,3,4,7,8-HxCDF	1.00	0.99	99	1,2,3,4,6,7,8-HpCDD-13C	2.00	74
1,2,3,6,7,8-HxCDF	1.00	1.10	110	OCDD-13C	4.00	60
2,3,4,6,7,8-HxCDF	1.00	1.16	116			
1,2,3,7,8,9-HxCDF	1.00	1.08	108	1,2,3,4-TCDD-13C	2.00	NA
				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.00	1.10	110	2,3,7,8-TCDD-37Cl4	0.20	96
1,2,3,6,7,8-HxCDD	1.00	1.25	125			
1,2,3,7,8,9-HxCDD	1.00	1.22	122			
1,2,3,4,6,7,8-HpCDF	1.00	2.49	249			
1,2,3,4,7,8,9-HpCDF	1.00	1.17	117			
1,2,3,4,6,7,8-HpCDD	1.00	5.64	564			
OCDF	2.00	8.32	416			
OCDD	2.00	50.34	2517			

Qs = Quantity Spiked Qm = Quantity Measured Rec. = Recovery (Expressed as Percent)

Results reported on a dry weight basis and are valid to no more than 2 significant figures.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Spiked Sample Report

Client - Pioneer Technologies Corporation

Client's Sample ID	SP02-ZONE2-061509-MSD		
Lab Sample ID	1097304001-MSD		
Filename	F90621A_06	Matrix	Solid
Total Amount Extracted	11.7 g	Dilution	NA
ICAL ID	F90501	Extracted	06/17/2009
CCal Filename(s)	F90621A_02 & F90621A_11	Analyzed	06/21/2009 21:27
Method Blank ID	BLANK-20346	Injected By	BAL

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.20	0.25	126	2,3,7,8-TCDF-13C	2.00	83
				2,3,7,8-TCDD-13C	2.00	83
				1,2,3,7,8-PeCDF-13C	2.00	82
2,3,7,8-TCDD	0.20	0.23	113	2,3,4,7,8-PeCDF-13C	2.00	87
				1,2,3,7,8-PeCDD-13C	2.00	90
				1,2,3,4,7,8-HxCDF-13C	2.00	92
1,2,3,7,8-PeCDF	1.00	1.13	113	1,2,3,6,7,8-HxCDF-13C	2.00	76
2,3,4,7,8-PeCDF	1.00	1.09	109	2,3,4,6,7,8-HxCDF-13C	2.00	88
				1,2,3,7,8,9-HxCDF-13C	2.00	85
				1,2,3,4,7,8-HxCDD-13C	2.00	97
1,2,3,7,8-PeCDD	1.00	1.04	104	1,2,3,6,7,8-HxCDD-13C	2.00	72
				1,2,3,4,6,7,8-HpCDF-13C	2.00	68
				1,2,3,4,7,8,9-HpCDF-13C	2.00	61
1,2,3,4,7,8-HxCDF	1.00	0.97	97	1,2,3,4,6,7,8-HpCDD-13C	2.00	63
1,2,3,6,7,8-HxCDF	1.00	1.11	111	OCDD-13C	4.00	53
2,3,4,6,7,8-HxCDF	1.00	1.16	116			
1,2,3,7,8,9-HxCDF	1.00	1.09	109	1,2,3,4-TCDD-13C	2.00	NA
				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.00	1.11	111	2,3,7,8-TCDD-37Cl4	0.20	96
1,2,3,6,7,8-HxCDD	1.00	1.30	130			
1,2,3,7,8,9-HxCDD	1.00	1.21	121			
1,2,3,4,6,7,8-HpCDF	1.00	2.47	247			
1,2,3,4,7,8,9-HpCDF	1.00	1.18	118			
1,2,3,4,6,7,8-HpCDD	1.00	6.08	608			
OCDF	2.00	8.45	423			
OCDD	2.00	52.79	2639			

Qs = Quantity Spiked Qm = Quantity Measured Rec. = Recovery (Expressed as Percent)

Results reported on a dry weight basis and are valid to no more than 2 significant figures.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Spike Sample Results

Client - Pioneer Technologies Corporation

Client Sample ID	SP02-ZONE2-061509			Dry Weights	
Lab Sample ID	1097304001	Sample Filename	F90619A_17	Sample Amount	11.0 g
MS ID	1097304001-MS	MS Filename	F90621A_05	MS Amount	9.9 g
MSD ID	1097304001-MSD	MSD Filename	F90621A_06	MSD Amount	10.2 g

Analyte	Sample Conc. ng/Kg	MS/MSD Qs (ng)	MS Qm (ng)	MSD Qm (ng)	RPD	Background Subtracted MS % Rec.	MSD % Rec.	RPD
2,3,7,8-TCDF	2.780	0.20	0.26	0.25	4.4	118	112	5.3
2,3,7,8-TCDD	0.000	0.20	0.22	0.23	3.4	103	107	3.5
1,2,3,7,8-PeCDF	2.660	1.00	1.13	1.13	0.4	110	111	0.3
2,3,4,7,8-PeCDF	7.700	1.00	1.13	1.09	4.0	106	101	4.5
1,2,3,7,8-PeCDD	4.860	1.00	1.03	1.04	1.1	98	99	1.0
1,2,3,4,7,8-HxCDF	9.200	1.00	0.99	0.97	1.7	90	88	2.1
1,2,3,6,7,8-HxCDF	6.420	1.00	1.10	1.11	1.0	103	104	0.9
2,3,4,6,7,8-HxCDF	8.760	1.00	1.16	1.16	0.1	108	107	0.1
1,2,3,7,8,9-HxCDF	2.860	1.00	1.08	1.09	0.2	106	106	0.1
1,2,3,4,7,8-HxCDD	4.920	1.00	1.10	1.11	0.6	105	106	0.5
1,2,3,6,7,8-HxCDD	15.800	1.00	1.25	1.30	4.1	109	114	4.4
1,2,3,7,8,9-HxCDD	9.920	1.00	1.22	1.21	1.4	112	111	1.7
1,2,3,4,6,7,8-HpCDF	120.000	1.00	2.49	2.47	0.8	130	125	3.8
1,2,3,4,7,8,9-HpCDF	10.100	1.00	1.17	1.18	1.3	107	108	1.2
1,2,3,4,6,7,8-HpCDD	424.000	1.00	5.64	6.08	7.6	143	178	21.8
OCDF	472.000	2.00	8.32	8.45	1.6	182	183	0.7
OCDD	4030.000	2.00	50.34	52.79	4.7	517	593	13.8

Definitions

MS = Matrix Spike
MSD = Matrix Spike Duplicate
Qm = Quantity Measured
Qs = Quantity Spiked
% Rec. = Percent Recovery
RPD = Relative Percent Difference
NA = Not Applicable
NC = Not Calculated

CDD = Chlorinated dibenzo-p-dioxin
CDF = Chlorinated dibenzo-p-furan
T = Tetra
Pe = Penta
Hx = Hexa
Hp = Hepta
O = Octa

DRAGON
Analytical Laboratory

RCRA CHAIN OF CUSTODY RECORD

2818 Madrona Beach Rd. NW, Olympia, WA 98502
Phone: (360) 866-0543 Fax: (360) 866-0556
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Samples Collected By: KR
Contact Number: 360 570 1700

Client: PTC
Address: 2162 Yelm Hwy SE Ste B
Olympia WA
Phone: 360 570 1700
Fax:
Email: bussat@uspioneer.com
Project Name: East Bay IA Stockpile
Project Location:
Project Number:
Project P.O.:
Contact Person: Troy Bussey
DAL Project No.:

Matrix Code:
WW = wastewater GW = groundwater S = soil or solid
SL = sludge V = vapor O = other

Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Container Type	MtBE/BTEX (EPA 8021b)	Gasoline (NWTPH-Gx)	Diesel (NWTPH-Dx)	Diesel & Oil (NWTPH-Dx)	Fuel Scan (NWTPH-HCID)	VOC's (EPA 8021b)	Organochlorine Pesticides (EPA 8081)	PCB's (EPA 8082)	Volatiles (EPA 8260)	PAH's (EPA 8100 or 8270/8270SIM)	Semi-Volatiles (EPA 8270)	Ignitability (EPA 1010)	Oil and Grease (EPA 1664 HEM)	pH (EPA 9040/9045)	Specific Conductance (EPA 9050)	Paint Filter Test (EPA 9095)	Heavy Metals* (EPA 7000 Series)	Biogenic Gases (EPA 3C)	Natural Attenuation Indicators	Gross Alpha Radioactivity (EPA 900)	Gross Beta Radioactivity (EPA 900)									
SP03-Zone2-061609	S	061609	1600	2 4oz 3 [illegible]	X	X		X						X							X													

Relinquished by (Signature)	Date/Time	Received by (Signature)	Date/Time
Kara Rollett	6/16/09		

Sample Disposal Instructions: ☐ DAL Disposal @ $2.50 per Container ☐ Return ☐ Pickup

Turn-Around-Time
☐ Same Day
☐ 24 Hour
☐ 48 Hour
☒ 5 Day
☐ 10 Day
☐ Other: ______

***Heavy Metals**: Please circle the desired analytes.

Ag Al (As) Ba Be (Cd) Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni (Pb) Sb Se Tl V Zn - Total
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - Dissolved
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - TCLP

Pioneer Technologies Corporation
Project: East Bay IA Stockpile

DAL Number: 090616-08

ANALYTICAL RESULTS FOR THE ANALYSIS OF FUEL IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Diesel Fuel #2 NWTPH-Dx (mg/kg)	Heavy Oil NWTPH-Dx (mg/kg)	Surrogate Recovery 2-FBP (%)	Data Flags
Method Blank	6/19/2009	n/a	nd	nd	85.2	
SP03-Zone 2-061609	6/19/2009	90.2	nd	nd	73.2	
LCS	6/19/2009	n/a	109%	n/a	n/a	
090619-MS	6/19/2009	n/a	105%	n/a	n/a	
090619-MSD	6/19/2009	n/a	108%	n/a	n/a	
Method Reporting Limits			25	100		

WA-DOE-Laboratory Certification No.: C2013

"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.

"n/a" indicates not applicable

Sample results based on dry weight.

Comments and Explanations: None

Analyst: T. McCall

Data reviewed by:

Pioneer Technologies Corporation
Project: East Bay IA Stockpile

DAL Number: 090616-08

ANALYTICAL RESULTS FOR THE ANALYSIS OF GASOLINE RANGE ORGANICS IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Benzene EPA 8021B (mg/kg)	Toluene EPA 8021B (mg/kg)	Ethylbenzene EPA 8021B (mg/kg)	m&p-Xylene EPA 8021B (mg/kg)	o-Xylene EPA 8021B (mg/kg)	Gasoline NWTPH-Gx (mg/kg)	Surrogate Recovery BFB (%)	Data Flags
Method Blank	6/17/2009	n/a	nd	nd	nd	nd	nd	nd	85.9	
SP03-Zone 2-061609	6/17/2009	90.2	nd	nd	nd	nd	nd	nd	94.7	
LCS	6/17/2009	n/a	108%	122%	120%	98.9%	105%	94.9%	n/a	
090617-MS	6/17/2009	n/a	104%	101%	95.3%	105%	96.8%	108%	n/a	
Method Reporting Limits			0.05	0.10	0.10	0.10	0.10	5.0		

WA-DOE-Laboratory Certification No.: C2013

"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.

"n/a" indicates not applicable

Sample results based on dry weight.

Comments and Explanations: None

Analyst: T. McCall

Data reviewed by:

Pioneer Technologies Corporation
Project: East Bay IA Stockpile

DAL Number: 090616-08

ANALYTICAL RESULTS FOR THE ANALYSIS OF HEAVY METALS IN SOIL BY EPA METHOD 6020 A

Sample Identification	Date Analyzed	Percent Solids	Arsenic (As)	Cadmium (Cd)	Lead (Pb)
Chemical Abstract Number (CAS)			7440-38-2	7440-43-9	7439-92-1
Units		(%)	(mg/kg)	(mg/kg)	(mg/kg)
Method Blank	6/18/2009	n/a	nd	nd	nd
SP03-Zone 2-061609	6/18/2009	90.2	**2.42**	**0.40**	**12.5**
LCS	6/18/2009	n/a	105%	102%	104%
090616-MS	6/18/2009	n/a	MI	99.2%	MI
090616-MSD	6/18/2009	n/a	MI	97.9%	MI
Method Reporting Limits			0.25	0.25	0.25

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
"MI" indicates Matrix Interference
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by:

Pioneer Technologies Corporation
Project: East Bay IA Stockpile

DAL Number: 090616-08

ANALYTICAL RESULTS FOR THE ANALYSIS OF SEMI-VOLATILE COMPOUNDS IN SOIL BY EPA METHOD 8270

Sample Identification			Blank	SP03-Zone 2-061609	LCS	090618-MS	090618-MSD
Percent Solids (%)			n/a	90.2	n/a	n/a	n/a
Date Extracted	CAS	MRL	6/15/2009	6/15/2009	6/15/2009	6/15/2009	6/15/2009
Date Anlayzed	Number	(mg/kg)	6/18/2009	6/18/2009	6/18/2009	6/18/2009	6/18/2009
Benzo(a)anthracene	56-55-3	0.01	nd	**0.04**	96.7%	101%	102%
Benzo(a)pyrene	50-32-8	0.01	nd	nd	n/a	n/a	n/a
Benzo(b)fluoranthene	205-99-2	0.01	nd	nd	n/a	n/a	n/a
Benzo(k)fluoranthene	207-08-9	0.01	nd	nd	n/a	n/a	n/a
Chrysene	218-01-9	0.01	nd	**0.04**	102%	103%	104%
Dibenzo(a,h)anthracene	53-70-3	0.01	nd	nd	n/a	n/a	n/a
Ideno(1,2,3-cd)pyrene	193-39-5	0.01	nd	**0.25**	73.3%	72.0%	75.9%
1-Methylnaphthalene	90-12-0	0.01	nd	**0.04**	n/a	n/a	n/a
2-Methylnaphthalene	91-57-6	0.01	nd	**0.03**	n/a	n/a	n/a
Naphthalene	91-20-3	0.01	nd	**0.08**	n/a	n/a	n/a
Surrogate Recovery (%)							
2-Fluorophenol			96.8	102	120	102	102
Phenol-d6			107	112	123	124	93.7
Nitrobenzene-d5			85.5	93.8	92.1	109	109
2-Fluorobiphenol			103	94.9	73.7	85.5	86.1
2,4,6-Tribromophenol			111	127	122	71.2	130
Terphenyl-d14			118	97.8	94.5	110	111
Data Flags							

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by:

PACE Analytical

Anatek Labs, Inc.

1097502

Chain of Custody Record

1282 Alturas Drive, Moscow ID 83843 (208) 883-2839 FAX 882-9246

504 E Sprague Ste D, Spokane WA 99202 (509) 838-3999 FAX 838-4433

Anatek Log-In #

Company Name: PTC

Address: 2612 Yelm Hwy SE Ste B

City: Olympia State: WA Zip: 98501

Phone: 360 570-1700

Fax:

Project Manager: Troy Bussey

Project Name & #: East Bay IA Stockpile

Email Address: Busseyt@uspioneer.com

Purchase Order #: Credit Card

Sampler Name & phone: KR 360-570-1700

Turn Around Time & Reporting

Please refer to our normal turn around times at: http://www.anateklabs.com/services/guidelines/reporting.asp

__Normal
__Next Day*
__2nd Day*
X Other* 5day TAT

*All rush order requests must be prior approved.

__Phone
__Mail
__Fax
X Email

Provide Sample Description / **List Analyses Requested**

Lab ID	Sample Identification	Sampling Date/Time	Matrix	# of Containers	Sample Volume	Dioxin/Furans 8290 (Preservative: NA)
001	SP03-Zone2-061609	061609/1600	Soil	1	4oz	X

Note Special Instructions/Comments

See RI expectations sent previously

	Printed Name	Signature	Company	Date	Time
Relinquished by	Kara Roberts	Kara Roberts	PTC	6/17/09	8:00
Received by	J. Richardson - Pace MN		Pace Mn	6/18/09	09:30
Relinquished by					
Received by					
Relinquished by					
Received by					

Inspection Checklist

Received Intact? Y N

Labels & Chains Agree? Y N

Containers Sealed? Y N

VOC Head Space? Y N

Temperature (°C): 7.7

Preservative:

Date & Time:

Inspected By:

Report No.....1097502_8290

Pace Analytical™

www.pacelabs.com

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

Report Prepared for:

Troy Bussey
Pioneer Technologies Corporation
2612 Yelm Highway S.E.
Suite B
Olympia WA 98501-4826

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

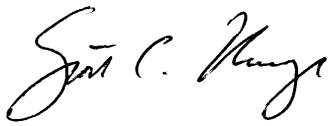
Pace Project #: 1097502
Sample Receipt Date: 06/18/2009
Client Project #: East Bay IA Stockpile
Client Sub PO #: N/A
State Cert #: C218

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed and prepared by:



Scott Unze, Project Manager
(612) 607-6383
(612) 607-6444 (fax)
scott.unze@pacelabs.com

ACCREDITED IN ACCORDANCE WITH nelac

Report of Laboratory Analysis

The results relate only to the samples included in this report.

Report Prepared Date:
June 23, 2009

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analyses performed on one sample submitted by a representative of Pioneer Technologies Corporation. The sample was analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. Reporting limits were based on signal-to-noise calculations. The sample was received outside of the recommended temperature range of 0-6 degrees Celsius.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extract ranged from 56-95%. All of the labeled standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Also, since the quantification of the native 2,3,7,8-substituted congeners was based on isotope dilution, the data were automatically corrected for variation in recovery and accurate values were obtained.

In some cases, interfering substances impacted the determinations of PCDD or PCDF congeners. The affected values were flagged "I" where incorrect isotope ratios were obtained.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to contain trace levels of selected congeners. These were below the calibration range of the method. The levels reported for the affected congeners in the field sample were higher than the corresponding blank levels by two or more orders of magnitude. These results indicate that the sample processing steps did not contribute significantly to the levels reported for the field sample.

A laboratory spike sample was also prepared with the sample batch using clean sand that had been fortified with native standard materials. The results show that the spiked native compounds were recovered at 85-104%. These results indicate a high degree of accuracy for these determinations. Matrix spikes were prepared with the sample batch using sample material from a separate project; results from these analyses will be provided upon request.

Appendix A

Sample Management

Sample Condition Upon Receipt

Pace Analytical

Client Name: Pace Washington Project # 1097502

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 8694 3419 3368

Optional: Proj. Due Date: Proj. Name:

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☐ yes ☐ no

Packing Material: ☒ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other _____ Temp Blank: Yes X No _____

Thermometer Used: (80344042) 179425 Type of Ice: (Wet) Blue None ☐ Samples on Ice, cooling process has begun

Cooler Temperature: 7.7 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: JR 6-18-09

		Comments:
Chain of Custody Present:	☒Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☒Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☐Yes ☒No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☒No ☐N/A	6.
Rush Turn Around Time Requested:	☒Yes ☐No ☐N/A	7. 5 day
Sufficient Volume:	☒Yes ☐No ☐N/A	8.
Correct Containers Used:	☒Yes ☐No ☐N/A	9.
-Pace Containers Used:	☐Yes ☒No ☐N/A	
Containers Intact:	☒Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☒N/A	11.
Sample Labels match COC:	☒Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: SL		
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	☐Yes ☐No ☒N/A	13. Ice is melted
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☒N/A	
Exceptions: VOA,Coliform, TOC, Oil and Grease, WI-DRO (water)	☐Yes ☒No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☒N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☒No ☒N/A	15.
Trip Blank Present:	☐Yes ☐No ☒N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☒N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Person Contacted: Troy B. Date/Time: 06/18/09 Field Data Required? Y / N

Comments/ Resolution:

Waived temp req.

Project Manager Review: _____ **Date:** _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

REVIEWED 6/18/09

Appendix B

Sample Analysis Summary

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP03-ZONE2-061609		
Lab Sample ID	1097502001		
Filename	F90622B_13		
Injected By	AE		
Total Amount Extracted	10.3 g	Matrix	Soil
% Moisture	10.0	Dilution	NA
Dry Weight Extracted	9.23 g	Collected	06/16/2009
ICAL ID	F90501	Received	06/18/2009
CCal Filename(s)	F90622A_16 & F90622B_15	Extracted	06/18/2009
Method Blank ID	BLANK-20301	Analyzed	06/23/2009 08:37

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	1.6	-----	0.16		2,3,7,8-TCDF-13C	2.00	83
Total TCDF	32.0	-----	0.16		2,3,7,8-TCDD-13C	2.00	85
					1,2,3,7,8-PeCDF-13C	2.00	82
2,3,7,8-TCDD	-----	0.60	0.18	I	2,3,4,7,8-PeCDF-13C	2.00	88
Total TCDD	30.0	-----	0.18		1,2,3,7,8-PeCDD-13C	2.00	95
					1,2,3,4,7,8-HxCDF-13C	2.00	90
1,2,3,7,8-PeCDF	-----	1.70	0.29	I	1,2,3,6,7,8-HxCDF-13C	2.00	73
2,3,4,7,8-PeCDF	6.0	-----	0.14		2,3,4,6,7,8-HxCDF-13C	2.00	79
Total PeCDF	50.0	-----	0.21		1,2,3,7,8,9-HxCDF-13C	2.00	81
					1,2,3,4,7,8-HxCDD-13C	2.00	88
1,2,3,7,8-PeCDD	2.4	-----	0.38	J	1,2,3,6,7,8-HxCDD-13C	2.00	74
Total PeCDD	42.0	-----	0.38		1,2,3,4,6,7,8-HpCDF-13C	2.00	72
					1,2,3,4,7,8,9-HpCDF-13C	2.00	67
1,2,3,4,7,8-HxCDF	12.0	-----	0.44		1,2,3,4,6,7,8-HpCDD-13C	2.00	70
1,2,3,6,7,8-HxCDF	4.5	-----	0.19	J	OCDD-13C	4.00	56
2,3,4,6,7,8-HxCDF	6.2	-----	0.27				
1,2,3,7,8,9-HxCDF	2.6	-----	0.29	J	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	66.0	-----	0.30		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	2.1	-----	0.30	J	2,3,7,8-TCDD-37Cl4	0.20	84
1,2,3,6,7,8-HxCDD	10.0	-----	0.46				
1,2,3,7,8,9-HxCDD	5.2	-----	0.47	J			
Total HxCDD	150.0	-----	0.41				
1,2,3,4,6,7,8-HpCDF	65.0	-----	0.82		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	5.2	-----	0.53	J	Equivalence: 13 ng/Kg		
Total HpCDF	160.0	-----	0.68		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	270.0	-----	0.94				
Total HpCDD	570.0	-----	0.94				
OCDF	280.0	-----	0.34				
OCDD	3500.0	-----	0.39				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Blank Analysis Results

Lab Sample ID	BLANK-20301	Matrix	Solid
Filename	F90622A_09	Dilution	NA
Total Amount Extracted	10.3 g	Extracted	06/18/2009
ICAL ID	F90501	Analyzed	06/22/2009 16:38
CCal Filename(s)	F90622A_02 & F90622A_16	Injected By	AE

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	-----	0.14	0.087	I	2,3,7,8-TCDF-13C	2.00	81
Total TCDF	ND	-----	0.087		2,3,7,8-TCDD-13C	2.00	85
					1,2,3,7,8-PeCDF-13C	2.00	87
2,3,7,8-TCDD	ND	-----	0.140		2,3,4,7,8-PeCDF-13C	2.00	94
Total TCDD	ND	-----	0.140		1,2,3,7,8-PeCDD-13C	2.00	101
					1,2,3,4,7,8-HxCDF-13C	2.00	88
1,2,3,7,8-PeCDF	ND	-----	0.088		1,2,3,6,7,8-HxCDF-13C	2.00	76
2,3,4,7,8-PeCDF	ND	-----	0.049		2,3,4,6,7,8-HxCDF-13C	2.00	84
Total PeCDF	ND	-----	0.068		1,2,3,7,8,9-HxCDF-13C	2.00	90
					1,2,3,4,7,8-HxCDD-13C	2.00	89
1,2,3,7,8-PeCDD	ND	-----	0.084		1,2,3,6,7,8-HxCDD-13C	2.00	85
Total PeCDD	ND	-----	0.084		1,2,3,4,6,7,8-HpCDF-13C	2.00	83
					1,2,3,4,7,8,9-HpCDF-13C	2.00	90
1,2,3,4,7,8-HxCDF	ND	-----	0.079		1,2,3,4,6,7,8-HpCDD-13C	2.00	85
1,2,3,6,7,8-HxCDF	ND	-----	0.049		OCDD-13C	4.00	84
2,3,4,6,7,8-HxCDF	ND	-----	0.062				
1,2,3,7,8,9-HxCDF	ND	-----	0.080		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.067		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.091		2,3,7,8-TCDD-37Cl4	0.20	84
1,2,3,6,7,8-HxCDD	ND	-----	0.110				
1,2,3,7,8,9-HxCDD	ND	-----	0.091				
Total HxCDD	0.30	-----	0.096	J			
1,2,3,4,6,7,8-HpCDF	ND	-----	0.110		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.110		Equivalence: 0.16 ng/Kg		
Total HpCDF	ND	-----	0.110		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	0.41	-----	0.110	J			
Total HpCDD	0.99	-----	0.110	J			
OCDF	ND	-----	0.130				
OCDD	4.40	-----	0.160	J			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-20302		
Filename	F90622A_04	Matrix	Solid
Total Amount Extracted	10.1 g	Dilution	NA
ICAL ID	F90501	Extracted	06/18/2009
CCal Filename(s)	F90622A_02 & F90622A_16	Analyzed	06/22/2009 12:41
Method Blank ID	BLANK-20301	Injected By	AE

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.20	0.19	93	2,3,7,8-TCDF-13C	2.00	81
Total TCDF				2,3,7,8-TCDD-13C	2.00	85
				1,2,3,7,8-PeCDF-13C	2.00	83
2,3,7,8-TCDD	0.20	0.18	89	2,3,4,7,8-PeCDF-13C	2.00	90
Total TCDD				1,2,3,7,8-PeCDD-13C	2.00	99
				1,2,3,4,7,8-HxCDF-13C	2.00	88
1,2,3,7,8-PeCDF	1.00	0.93	93	1,2,3,6,7,8-HxCDF-13C	2.00	75
2,3,4,7,8-PeCDF	1.00	0.88	88	2,3,4,6,7,8-HxCDF-13C	2.00	82
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.00	87
				1,2,3,4,7,8-HxCDD-13C	2.00	90
1,2,3,7,8-PeCDD	1.00	0.85	85	1,2,3,6,7,8-HxCDD-13C	2.00	83
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.00	85
				1,2,3,4,7,8,9-HpCDF-13C	2.00	91
1,2,3,4,7,8-HxCDF	1.00	0.87	87	1,2,3,4,6,7,8-HpCDD-13C	2.00	91
1,2,3,6,7,8-HxCDF	1.00	0.93	93	OCDD-13C	4.00	85
2,3,4,6,7,8-HxCDF	1.00	0.92	92			
1,2,3,7,8,9-HxCDF	1.00	0.90	90	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.00	0.90	90	2,3,7,8-TCDD-37Cl4	0.20	84
1,2,3,6,7,8-HxCDD	1.00	0.91	91			
1,2,3,7,8,9-HxCDD	1.00	0.91	91			
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.00	0.96	96			
1,2,3,4,7,8,9-HpCDF	1.00	0.94	94			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.00	0.91	91			
Total HpCDD						
OCDF	2.00	2.08	104			
OCDD	2.00	1.93	96			

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
P = Recovery outside of target range
X = Background subtracted value
Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

DRAGON
Analytical Laboratory

RCRA CHAIN OF CUSTODY RECORD

2818 Madrona Beach Rd. NW, Olympia, WA 98502
Phone: (360) 866-0543 Fax: (360) 866-0556
Email: DragonLab@comcast.net

Page ____ of ____

Samples Collected By: KR
Contact Number: 360-570-1700

Client: PTC Phone: 360-570-1700 Project Name: East Bay IA Stockpile Project P.O.: ____
Address: 26124 elm Hwy SE, Ste B Fax: ____ Project Location: ____ Contact Person: Troy Bussey
Olympia, WA 98501 Email: bussey@uspioneer.com Project Number: ____ DAL Project No.: 090623-03
grimstedb@uspioneer.com

Matrix Code:
WW = wastewater **GW** = groundwater **S** = soil or solid
SL = sludge **V** = vapor **O** = other

Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Container Type	~~MTBE~~/BTEX (EPA 8021b)	Gasoline (NWTPH-Gx)	Diesel (NWTPH-Dx)	Diesel & Oil (NWTPH-Dx)	Fuel Scan (NWTPH-HCID)	VOC's (EPA 8021b)	Organochlorine Pesticides (EPA 8081)	PCB's (EPA 8082)	Volatiles (EPA 8260)	PAH's (EPA 8100 or 8270/8270SIM)	Semi-Volatiles (EPA 8270)	Ignitability (EPA 1010)	Oil and Grease (EPA 1664 HEM)	pH (EPA 9040/9045)	Specific Conductance (EPA 9050)	Paint Filter Test (EPA 9095)	Heavy Metals* (EPA 7000 Series)	Biogenic Gases (EPA 3C)	Natural Attenuation Indicators	Gross Alpha Radioactivity (EPA 900)	Gross Beta Radioactivity (EPA 900)	TCLP Lead
SP04_Zone4_062309	S	6/23/09	1540	2 4oz 3Encore	X	X		X						X							X					X
SP05_Zone4_062309	S	6/23/09	1600	2 4oz 3Encore	X	X		X						X							X					X
SP06_Zone2_062309	S	6/23/09	1615	2 4oz 3Encore	X	X		X						X							X					

Relinquished by (Signature): Kara Robstad Date/Time: 6/23/09 Received by (Signature): Mista Rstott Date/Time: 6/23/09 1710
Relinquished by (Signature) Date/Time Received by (Signature) Date/Time

Sample Disposal Instructions: ☐ DAL Disposal @ $2.50 per Container ☐ Return ☐ Pickup

Turn-Around-Time
☐ Same Day
☐ 24 Hour
☐ 48 Hour
☒ 5 Day Email
☐ 10 Day
☐ Other: ____

***Heavy Metals**: Please circle the desired analytes.

Ag Al (As) Ba Be (Cd) Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni (Pb) Sb Se Tl V Zn - Total
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - Dissolved
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - TCLP

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpile

DAL Number: 090623-03

ANALYTICAL RESULTS FOR THE ANALYSIS OF FUEL IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Diesel Fuel #2 NWTPH-Dx (mg/kg)	Heavy Oil NWTPH-Dx (mg/kg)	Surrogate Recovery 2-FBP (%)	Data Flags
Method Blank	6/29/2009	n/a	nd	nd	94.4	
SP04-ZONE4-062309	6/29/2009	94.2	nd	nd	72.7	
SP05-ZONE4-062309	6/29/2009	79.0	nd	nd	102	
SP06-ZONE2-062309	6/29/2009	78.0	nd	nd	99.2	
LCS	6/29/2009	n/a	129%	n/a	n/a	
090629-MS	6/29/2009	n/a	134%	n/a	n/a	
090629-MSD	6/29/2009	n/a	111%	n/a	n/a	
SP04-ZONE4-062309 Dup.	6/29/2009	94.2	nd	nd	76.2	
Method Reporting Limits			25	100		

WA-DOE-Laboratory Certification No.: C2013

"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.

"n/a" indicates not applicable

Sample results based on dry weight.

Comments and Explanations: None

Analyst: T. McCall

Data reviewed by: R Lewis

DRAGON ANALYTICAL LABORATORY

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(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpile

DAL Number: 090623-03

ANALYTICAL RESULTS FOR THE ANALYSIS OF GASOLINE RANGE ORGANICS IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Benzene EPA 8021B (mg/kg)	Toluene EPA 8021B (mg/kg)	Ethylbenzene EPA 8021B (mg/kg)	m&p-Xylene EPA 8021B (mg/kg)	o-Xylene EPA 8021B (mg/kg)	Gasoline NWTPH-Gx (mg/kg)	Surrogate Recovery BFB (%)	Data Flags
Method Blank	6/29/2009	n/a	nd	nd	nd	nd	nd	nd	109	
SP04-ZONE4-062309	6/29/2009	94.2	nd	nd	nd	nd	nd	nd	116	
SP05-ZONE4-062309	6/29/2009	79.0	nd	nd	nd	nd	nd	nd	110	
SP06-ZONE2-062309	6/29/2009	78.0	nd	nd	nd	nd	nd	nd	98.2	
LCS	6/29/2009	n/a	99%	111%	109%	96.2%	97%	105.0%	n/a	
090629-MS	6/29/2009	n/a	103%	109%	106.0%	98.9%	95.0%	99%	n/a	
SP04-ZONE4-062309 Dup.	6/29/2009	94.2	nd	nd	nd	nd	nd	nd	125%	
Method Reporting Limits			0.05	0.10	0.10	0.10	0.10	5.0		

WA-DOE-Laboratory Certification No.: C2013

"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.

"n/a" indicates not applicable

Sample results based on dry weight.

Comments and Explanations: None

Analyst: T. McCall

Data reviewed by: R Lewis

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpile

DAL Number: 090623-03

ANALYTICAL RESULTS FOR THE ANALYSIS OF HEAVY METALS IN SOIL BY EPA METHOD 6020 A

Sample Identification	Date Analyzed	Percent Solids	Arsenic (As)	Cadmium (Cd)	Lead (Pb)
Chemical Abstract Number (CAS)			7440-38-2	7440-43-9	7439-92-1
Units		(%)	(mg/kg)	(mg/kg)	(mg/kg)
Method Blank	6/26/2009	n/a	nd	nd	nd
SP04-ZONE4-062309	6/26/2009	94.2	nd	nd	**0.22**
SP05-ZONE4-062309	6/26/2009	79.0	**0.26**	**0.34**	**4.52**
SP06-ZONE2-062309	6/26/2009	78.0	nd	nd	**0.66**
LCS	6/26/2009	n/a	96.3%	98.8%	94.5%
090626-MS	6/26/2009	n/a	132%	103%	MI
090626-MSD	6/26/2009	n/a	MI	100%	MI
SP06-ZONE2-062309 Dup.	6/26/2009	78.0	nd	nd	0.55
Method Reporting Limits			0.25	0.25	0.25

WA-DOE-Laboratory Certification No.: C2013

"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.

"n/a" indicates not applicable

"MI" indicates Matrix Interference

Sample results based on dry weight.

Comments and Explanations: None

Analyst: T. McCall
Data reviewed by: R Lewis

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpile

DAL Number: 090623-03

ANALYTICAL RESULTS FOR THE ANALYSIS OF SEMI-VOLATILE COMPOUNDS IN SOIL BY EPA METHOD 8270

Sample Identification			Blank	SP04-ZONE4-062309	SP05-ZONE4-062309	SP06-ZONE2-062309	LCS	090627-MS	090627-MSD	SP04-ZONE4-062309 Dup.
Percent Solids (%)			n/a	94.2	79.0	78.0	n/a	n/a	n/a	94.2
Date Extracted	CAS	MRL	6/15/2009	6/26/2009	6/26/2009	6/26/2009	6/26/2009	6/26/2009	6/26/2009	6/26/2009
Date Anlayzed	Number	(mg/kg)	6/18/2009	6/27/2009	6/27/2009	6/27/2009	6/27/2009	6/27/2009	6/27/2009	6/27/2009
Benzo(a)anthracene	56-55-3	0.01	nd	**0.02**	**0.06**	**0.04**	102%	100%	101%	**0.02**
Benzo(a)pyrene	50-32-8	0.01	nd	**0.12**	**0.16**	**0.13**	n/a	n/a	n/a	**0.11**
Benzo(b)fluoranthene	205-99-2	0.01	nd	**nd**	nd	nd	n/a	n/a	n/a	nd
Benzo(k)fluoranthene	207-08-9	0.01	nd	**0.01**	**0.04**	**0.01**	n/a	n/a	n/a	nd
Chrysene	218-01-9	0.01	nd	**0.01**	**0.07**	**0.01**	106%	104%	105%	nd
Dibenzo(a,h)anthracene	53-70-3	0.01	nd	**0.11**	**0.15**	**0.12**	n/a	n/a	n/a	**0.09**
Ideno(1,2,3-cd)pyrene	193-39-5	0.01	nd	nd	**0.29**	**0.27**	105.0%	102.0%	105.0%	nd
1-Methylnaphthalene	90-12-0	0.01	nd	nd	**0.01**	nd	n/a	n/a	n/a	nd
2-Methylnaphthalene	91-57-6	0.01	nd	nd	**0.01**	nd	n/a	n/a	n/a	nd
Naphthalene	91-20-3	0.01	nd	nd	**0.01**	nd	n/a	n/a	n/a	nd
Surrogate Recovery (%)										
2-Fluorophenol			109	118	115	124	112	117	118	118
Phenol-d6			128	105	104	112	103	107	107	105
Nitrobenzene-d5			88.1	79.7	78.3	81.8	89.5	89.7	90.5	80.9
2-Fluorobiphenol			118	110	107	112	106	107	108	109
2,4,6-Tribromophenol			61.0	56.1	61.5	60.2	58.3	60.5	60.6	56.6
Terphenyl-d14			118	106	112	127	98.4	129	99.7	122
Data Flags										

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by: R Lewis

DRAGON ANALYTICAL LABORATORY

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(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpile

DAL Number: 090623-03

ANALYTICAL RESULTS FOR THE ANALYSIS OF TCLP HEAVY METALS IN SOIL BY EPA METHOD 1311 AND EPA METHOD 6020 A

Sample Identification	Date Analyzed	Lead (Pb)
Chemical Abstract Number (CAS)		7439-92-1
Units		(mg/L)
Method Blank	6/26/2009	nd
SP04-ZONE4-062309	6/26/2009	**nd**
SP05-ZONE4-062309	6/26/2009	**nd**
LCS	6/26/2009	96.1%
090626-MS	6/26/2009	108%
090626-MSD	6/26/2009	80.3%
SP04-ZONE4-062309 Dup.	6/26/2009	nd
Method Reporting Limits		0.25

WA-DOE-Laboratory Certification No.: C2013

"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
"MI" indicates Matrix Interference
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by: R Lewis

RUSH!

Pace Analytical®
www.pacelabs.com

* 5 day turn around time, by Email

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

1097953

See RI Expectations Sent Previously

Page: of

1304768

Section A
Required Client Information:

Company: PTC
Address: 2612 Yelm Hwy SE Ste B
Olympia WA 98501
Email To: Busseyt@uspioneer.com
Phone: Fax:
Requested Due Date/TAT: 5TAT
Grimstedb@uspioneer.com

Section B
Required Project Information:

Report To:
Copy To:
Purchase Order No.: Credit Card
Project Name: East Bay IA Stockpiles
Project Number:

Section C
Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY

- NPDES
- GROUND WATER
- DRINKING WATER
- UST
- RCRA
- OTHER

Site Location STATE: WA

Section D
Required Client Information

Matrix Codes MATRIX / CODE: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Tissue TS, Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Dioxin/Furans 8290	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SP04-Zone4-062309	SL	G			6/23/09	1540		1										X		001
2	SP05-Zone4-062309	SL	G			6/23/09	1600		1										X		002
3	SP06-Zone2-062309	SL	G			6/23/09	1615		1										X		003
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
5day TAT, by Email	Kara Roberts / PTC	6/23/09		[signature] / PACE	6/25/09	0920	5.0	Y	Y	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Kara Roberts
SIGNATURE of SAMPLER: Kara Roberts
DATE Signed (MM/DD/YY): 6/23/09

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical™
www.pacelabs.com

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

Report Prepared for:

Troy Bussey
Pioneer Technologies Corporation
2612 Yelm Highway S.E.
Suite B
Olympia WA 98501-4826

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

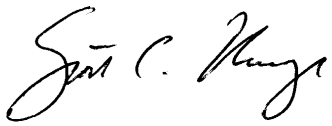
Pace Project #: 1097953
Sample Receipt Date: 06/25/2009
Client Project #: East Bay IA Stockpiles
Client Sub PO #: N/A
State Cert #: C218

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed and prepared by:



Scott Unze, Project Manager
(612) 607-6383
(612) 607-6444 (fax)
scott.unze@pacelabs.com

Report Prepared Date:
July 2, 2009

ACCREDITED IN ACCORDANCE WITH nelac

Report of Laboratory Analysis

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analyses performed on three samples submitted by a representative of Pioneer Technologies Corporation. The samples were analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. Reporting limits were based on signal-to-noise measurements.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extracts ranged from 36-96%. With the exceptions of three low values, which were flagged "P" on the results tables, the labeled standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Also, since the quantification of the native 2,3,7,8-substituted congeners was based on isotope dilution, the data were automatically corrected for variation in recovery and accurate values were obtained.

In some cases, interfering substances impacted the determinations of PCDD or PCDF congeners. The affected values were flagged "I" where incorrect isotope ratios were obtained.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to contain trace levels of selected congeners. These were below the calibration range of the method. Sample levels similar to the corresponding blank levels were flagged "B" on the results table and may be, at least partially, attributed to the background. It should be noted that levels less than ten times the background are not generally considered to be statistically different from the background.

A laboratory spike sample was also prepared with the sample batch using clean sand that had been fortified with native standard materials. The results show that the spiked native compounds were recovered at 87-101%. These results indicate a high degree of accuracy for these determinations. Matrix spikes were prepared with the sample batch using sample material from a separate project; results from these analyses will be provided upon request.

Appendix A

Sample Management

Pace Analytical

Sample Condition Upon Receipt

Client Name: Pioneer Tech Project # 1097953

Courier: [X] Fed Ex [ ] UPS [ ] USPS [ ] Client [ ] Commercial [ ] Pace Other ____

Tracking #: 7977 0864 8209

Optional: Proj. Due Date: Proj. Name:

Custody Seal on Cooler/Box Present: [X] yes [ ] no Seals intact: [X] yes [ ] no

Packing Material: [X] Bubble Wrap [ ] Bubble Bags [ ] None [ ] Other ____ Temp Blank: Yes [X] No ____

Thermometer Used ~~80844042~~, 179425 Type of Ice: (Wet) Blue None [ ] Samples on Ice, cooling process has begun

Cooler Temperature 5.0 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 6/25/09 RD

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	[X]Yes [ ]No [ ]N/A	1.
Chain of Custody Filled Out:	[X]Yes [ ]No [ ]N/A	2.
Chain of Custody Relinquished:	[X]Yes [ ]No [ ]N/A	3.
Sampler Name & Signature on COC:	[X]Yes [ ]No [ ]N/A	4.
Samples Arrived within Hold Time:	[ ]Yes [ ]No [X]N/A	5.
Short Hold Time Analysis (<72hr): 6/25/09 R	[ ]Yes [X]No [ ]N/A	6. 5 DAY
Rush Turn Around Time Requested:	[X]Yes [ ]No [ ]N/A	7.
Sufficient Volume:	[X]Yes [ ]No [ ]N/A	8.
Correct Containers Used:	[X]Yes [ ]No [ ]N/A	9.
-Pace Containers Used:	[ ]Yes [X]No [ ]N/A	
Containers Intact:	[X]Yes [ ]No [ ]N/A	10.
Filtered volume received for Dissolved tests	[ ]Yes [ ]No [X]N/A	11.
Sample Labels match COC:	[X]Yes [ ]No [ ]N/A	12.
-Includes date/time/ID/Analysis Matrix: SL		
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	[ ]Yes [ ]No [X]N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	[ ]Yes [ ]No [X]N/A	
Exceptions: VOA,Coliform, TOC, Oil and Grease, WI-DRO (water)	[ ]Yes [X]No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	[ ]Yes [ ]No [X]N/A	14.
Headspace in VOA Vials (>6mm):	[ ]Yes [ ]No [X]N/A	15.
Trip Blank Present:	[ ]Yes [ ]No [X]N/A	16.
Trip Blank Custody Seals Present	[ ]Yes [ ]No [X]N/A	
Pace Trip Blank Lot # (if purchased): ____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: ____ Date/Time: ____

Comments/ Resolution: ____

Project Manager Review: MAH Date: 6/25/09

NLW 6/25/09 RC

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Appendix B

Sample Analysis Summary

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP04-ZONE4-062309		
Lab Sample ID	1097953001-R		
Filename	F90702A_05		
Injected By	SMT		
Total Amount Extracted	11.3 g	Matrix	Solid
% Moisture	4.9	Dilution	NA
Dry Weight Extracted	10.7 g	Collected	06/23/2009
ICAL ID	F90501	Received	06/25/2009
CCal Filename(s)	F90701A_16 & F90702A_09	Extracted	06/30/2009
Method Blank ID	BLANK-20508	Analyzed	07/02/2009 11:19

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.28	-----	0.064	BJ	2,3,7,8-TCDF-13C	2.00	77
Total TCDF	0.99	-----	0.064		2,3,7,8-TCDD-13C	2.00	85
					1,2,3,7,8-PeCDF-13C	2.00	78
2,3,7,8-TCDD	ND	-----	0.094		2,3,4,7,8-PeCDF-13C	2.00	82
Total TCDD	0.47	-----	0.094	J	1,2,3,7,8-PeCDD-13C	2.00	92
					1,2,3,4,7,8-HxCDF-13C	2.00	78
1,2,3,7,8-PeCDF	ND	-----	0.083		1,2,3,6,7,8-HxCDF-13C	2.00	75
2,3,4,7,8-PeCDF	0.13	-----	0.077	J	2,3,4,6,7,8-HxCDF-13C	2.00	77
Total PeCDF	1.40	-----	0.080	J	1,2,3,7,8,9-HxCDF-13C	2.00	76
					1,2,3,4,7,8-HxCDD-13C	2.00	80
1,2,3,7,8-PeCDD	ND	-----	0.074		1,2,3,6,7,8-HxCDD-13C	2.00	83
Total PeCDD	0.36	-----	0.074	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	73
					1,2,3,4,7,8,9-HpCDF-13C	2.00	62
1,2,3,4,7,8-HxCDF	0.27	-----	0.073	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	69
1,2,3,6,7,8-HxCDF	ND	-----	0.077		OCDD-13C	4.00	36 P
2,3,4,6,7,8-HxCDF	ND	-----	0.066				
1,2,3,7,8,9-HxCDF	ND	-----	0.087		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	1.10	-----	0.076	J	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.110		2,3,7,8-TCDD-37Cl4	0.20	88
1,2,3,6,7,8-HxCDD	0.30	-----	0.094	J			
1,2,3,7,8,9-HxCDD	-----	0.21	0.110	I			
Total HxCDD	1.60	-----	0.100	J			
1,2,3,4,6,7,8-HpCDF	2.00	-----	0.079	J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.110		Equivalence: 0.34 ng/Kg		
Total HpCDF	2.00	-----	0.094	J	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	6.90	-----	0.180				
Total HpCDD	14.00	-----	0.180				
OCDF	8.30	-----	0.220	J			
OCDD	57.00	-----	0.740				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
B = Less than 10x higher than method blank level
P = Recovery outside target range
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP05-ZONE4-062309		
Lab Sample ID	1097953002-R		
Filename	F90702A_06		
Injected By	SMT		
Total Amount Extracted	13.4 g	Matrix	Solid
% Moisture	21.6	Dilution	NA
Dry Weight Extracted	10.5 g	Collected	06/23/2009
ICAL ID	F90501	Received	06/25/2009
CCal Filename(s)	F90701A_16 & F90702A_09	Extracted	06/30/2009
Method Blank ID	BLANK-20508	Analyzed	07/02/2009 12:06

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.58	-----	0.140	J	2,3,7,8-TCDF-13C	2.00	81
Total TCDF	7.90	-----	0.140		2,3,7,8-TCDD-13C	2.00	83
					1,2,3,7,8-PeCDF-13C	2.00	77
2,3,7,8-TCDD	1.20	-----	0.095		2,3,4,7,8-PeCDF-13C	2.00	82
Total TCDD	37.00	-----	0.095		1,2,3,7,8-PeCDD-13C	2.00	89
					1,2,3,4,7,8-HxCDF-13C	2.00	84
1,2,3,7,8-PeCDF	-----	0.44	0.076	I	1,2,3,6,7,8-HxCDF-13C	2.00	77
2,3,4,7,8-PeCDF	1.90	-----	0.077	J	2,3,4,6,7,8-HxCDF-13C	2.00	82
Total PeCDF	29.00	-----	0.077		1,2,3,7,8,9-HxCDF-13C	2.00	81
					1,2,3,4,7,8-HxCDD-13C	2.00	76
1,2,3,7,8-PeCDD	9.10	-----	0.110		1,2,3,6,7,8-HxCDD-13C	2.00	89
Total PeCDD	110.00	-----	0.110		1,2,3,4,6,7,8-HpCDF-13C	2.00	70
					1,2,3,4,7,8,9-HpCDF-13C	2.00	63
1,2,3,4,7,8-HxCDF	3.70	-----	0.160	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	73
1,2,3,6,7,8-HxCDF	-----	2.40	0.180	I	OCDD-13C	4.00	38 P
2,3,4,6,7,8-HxCDF	3.40	-----	0.170	J			
1,2,3,7,8,9-HxCDF	1.70	-----	0.170	J	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	43.00	-----	0.170		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	32.00	-----	0.430		2,3,7,8-TCDD-37Cl4	0.20	84
1,2,3,6,7,8-HxCDD	22.00	-----	0.380				
1,2,3,7,8,9-HxCDD	28.00	-----	0.410				
Total HxCDD	500.00	-----	0.410				
1,2,3,4,6,7,8-HpCDF	70.00	-----	0.560		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	5.40	-----	0.690		Equivalence: 29 ng/Kg		
Total HpCDF	79.00	-----	0.620		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	680.00	-----	1.400				
Total HpCDD	1900.00	-----	1.400				
OCDF	220.00	-----	1.000				
OCDD	3100.00	-----	4.300				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
P = Recovery outside target range
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP06-ZONE2-062309		
Lab Sample ID	1097953003-R		
Filename	F90702A_07		
Injected By	SMT		
Total Amount Extracted	12.3 g	Matrix	Solid
% Moisture	11.7	Dilution	NA
Dry Weight Extracted	10.9 g	Collected	06/23/2009
ICAL ID	F90501	Received	06/25/2009
CCal Filename(s)	F90701A_16 & F90702A_09	Extracted	06/30/2009
Method Blank ID	BLANK-20508	Analyzed	07/02/2009 12:54

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.44	-----	0.083	BJ	2,3,7,8-TCDF-13C	2.00	81
Total TCDF	3.90	-----	0.083		2,3,7,8-TCDD-13C	2.00	86
					1,2,3,7,8-PeCDF-13C	2.00	81
2,3,7,8-TCDD	-----	0.11	0.100	I	2,3,4,7,8-PeCDF-13C	2.00	87
Total TCDD	2.70	-----	0.100		1,2,3,7,8-PeCDD-13C	2.00	96
					1,2,3,4,7,8-HxCDF-13C	2.00	82
1,2,3,7,8-PeCDF	0.19	-----	0.064	J	1,2,3,6,7,8-HxCDF-13C	2.00	80
2,3,4,7,8-PeCDF	0.58	-----	0.050	J	2,3,4,6,7,8-HxCDF-13C	2.00	81
Total PeCDF	6.60	-----	0.057		1,2,3,7,8,9-HxCDF-13C	2.00	80
					1,2,3,4,7,8-HxCDD-13C	2.00	80
1,2,3,7,8-PeCDD	0.53	-----	0.067	J	1,2,3,6,7,8-HxCDD-13C	2.00	89
Total PeCDD	2.50	-----	0.067	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	77
					1,2,3,4,7,8,9-HpCDF-13C	2.00	70
1,2,3,4,7,8-HxCDF	0.73	-----	0.062	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	77
1,2,3,6,7,8-HxCDF	0.43	-----	0.071	J	OCDD-13C	4.00	43
2,3,4,6,7,8-HxCDF	0.67	-----	0.079	J			
1,2,3,7,8,9-HxCDF	-----	0.18	0.100	I	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	8.40	-----	0.079		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	0.44	-----	0.097	J	2,3,7,8-TCDD-37Cl4	0.20	88
1,2,3,6,7,8-HxCDD	3.00	-----	0.069	J			
1,2,3,7,8,9-HxCDD	2.00	-----	0.080	J			
Total HxCDD	19.00	-----	0.082				
1,2,3,4,6,7,8-HpCDF	11.00	-----	0.180		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	-----	0.41	0.150	I	Equivalence: 2.5 ng/Kg		
Total HpCDF	11.00	-----	0.160		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	65.00	-----	0.360				
Total HpCDD	130.00	-----	0.360				
OCDF	30.00	-----	0.340				
OCDD	570.00	-----	1.400				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
B = Less than 10x higher than method blank level
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Blank Analysis Results

Lab Sample ID	BLANK-20508	Matrix	Solid
Filename	F90702A_03	Dilution	NA
Total Amount Extracted	20.1 g	Extracted	06/30/2009
ICAL ID	F90501	Analyzed	07/02/2009 09:43
CCal Filename(s)	F90701A_16 & F90702A_09	Injected By	SMT

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.049	-----	0.035	J	2,3,7,8-TCDF-13C	2.00	71
Total TCDF	0.049	-----	0.035	J	2,3,7,8-TCDD-13C	2.00	77
					1,2,3,7,8-PeCDF-13C	2.00	74
2,3,7,8-TCDD	ND	-----	0.037		2,3,4,7,8-PeCDF-13C	2.00	80
Total TCDD	ND	-----	0.037		1,2,3,7,8-PeCDD-13C	2.00	90
					1,2,3,4,7,8-HxCDF-13C	2.00	74
1,2,3,7,8-PeCDF	ND	-----	0.024		1,2,3,6,7,8-HxCDF-13C	2.00	72
2,3,4,7,8-PeCDF	ND	-----	0.023		2,3,4,6,7,8-HxCDF-13C	2.00	74
Total PeCDF	ND	-----	0.023		1,2,3,7,8,9-HxCDF-13C	2.00	71
					1,2,3,4,7,8-HxCDD-13C	2.00	74
1,2,3,7,8-PeCDD	ND	-----	0.025		1,2,3,6,7,8-HxCDD-13C	2.00	80
Total PeCDD	ND	-----	0.025		1,2,3,4,6,7,8-HpCDF-13C	2.00	69
					1,2,3,4,7,8,9-HpCDF-13C	2.00	62
1,2,3,4,7,8-HxCDF	ND	-----	0.018		1,2,3,4,6,7,8-HpCDD-13C	2.00	68
1,2,3,6,7,8-HxCDF	ND	-----	0.016		OCDD-13C	4.00	39 P
2,3,4,6,7,8-HxCDF	ND	-----	0.019				
1,2,3,7,8,9-HxCDF	ND	-----	0.025		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.019		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.022		2,3,7,8-TCDD-37Cl4	0.20	82
1,2,3,6,7,8-HxCDD	ND	-----	0.029				
1,2,3,7,8,9-HxCDD	ND	-----	0.032				
Total HxCDD	ND	-----	0.028				
1,2,3,4,6,7,8-HpCDF	ND	-----	0.021		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.031		Equivalence: 0.048 ng/Kg		
Total HpCDF	ND	-----	0.026		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	-----	0.054	0.040	I			
Total HpCDD	ND	-----	0.040				
OCDF	0.180	-----	0.082	J			
OCDD	0.590	-----	0.140	J			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
P = Recovery outside target range
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-20509		
Filename	F90702A_01	Matrix	Solid
Total Amount Extracted	20.4 g	Dilution	NA
ICAL ID	F90501	Extracted	06/30/2009
CCal Filename(s)	F90701A_16 & F90702A_09	Analyzed	07/02/2009 08:09
Method Blank ID	BLANK-20508	Injected By	SMT

Native Isomers	**Qs** (ng)	**Qm** (ng)	% Rec.	**Internal Standards**	**ng's Added**	**Percent Recovery**
2,3,7,8-TCDF	0.20	0.20	98	2,3,7,8-TCDF-13C	2.00	89
Total TCDF				2,3,7,8-TCDD-13C	2.00	96
				1,2,3,7,8-PeCDF-13C	2.00	91
2,3,7,8-TCDD	0.20	0.19	94	2,3,4,7,8-PeCDF-13C	2.00	99
Total TCDD				1,2,3,7,8-PeCDD-13C	2.00	110
				1,2,3,4,7,8-HxCDF-13C	2.00	92
1,2,3,7,8-PeCDF	1.00	0.99	99	1,2,3,6,7,8-HxCDF-13C	2.00	86
2,3,4,7,8-PeCDF	1.00	0.93	93	2,3,4,6,7,8-HxCDF-13C	2.00	92
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.00	88
				1,2,3,4,7,8-HxCDD-13C	2.00	96
1,2,3,7,8-PeCDD	1.00	0.87	87	1,2,3,6,7,8-HxCDD-13C	2.00	94
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.00	86
				1,2,3,4,7,8,9-HpCDF-13C	2.00	81
1,2,3,4,7,8-HxCDF	1.00	0.92	92	1,2,3,4,6,7,8-HpCDD-13C	2.00	88
1,2,3,6,7,8-HxCDF	1.00	0.97	97	OCDD-13C	4.00	52
2,3,4,6,7,8-HxCDF	1.00	0.95	95			
1,2,3,7,8,9-HxCDF	1.00	0.95	95	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.00	0.93	93	2,3,7,8-TCDD-37Cl4	0.20	96
1,2,3,6,7,8-HxCDD	1.00	0.95	95			
1,2,3,7,8,9-HxCDD	1.00	0.94	94			
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.00	1.01	101			
1,2,3,4,7,8,9-HpCDF	1.00	0.98	98			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.00	0.92	92			
Total HpCDD						
OCDF	2.00	2.02	101			
OCDD	2.00	2.02	101			

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
P = Recovery outside of target range
X = Background subtracted value
Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

DRAGON
Analytical Laboratory

RCRA CHAIN OF CUSTODY RECORD

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Website: dragonlaboratory.com

Page ___ of ___

Samples Collected By: KR
Contact Number: 360 570 1700

Client: PTC
Address: 2612 Yelm Hwy SE Olympia, WA 98501
Phone: 360-570-1700
Fax: —
Email: robertskr@uspioneer.com
Project Name: East Bay IA Stockpiles
Project Location:
Project Number:
Project P.O.: Credit Card
Contact Person: Kara Roberts
DAL Project No.:

Matrix Code:
WW = wastewater **GW** = groundwater **S** = soil or solid
SL = sludge **V** = vapor **O** = other

Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Container Type	MtBE/BTEX (EPA 8021b)	Gasoline (NWTPH-Gx)	Diesel (NWTPH-Dx)	Diesel & Oil (NWTPH-Dx)	Fuel Scan (NWTPH-HCID)	VOC's (EPA 8021b)	Organochlorine Pesticides (EPA 8081)	PCB's (EPA 8082)	Volatiles (EPA 8260)	PAH's (EPA 8100 or 8270/8270SIM)	Semi-Volatiles (EPA 8270)	Ignitability (EPA 1010)	Oil and Grease (EPA 1664 HEM)	pH (EPA 9040/9045)	Specific Conductance (EPA 9050)	Paint Filter Test (EPA 9095)	Heavy Metals* (EPA 7000 Series)	Biogenic Gases (EPA 3C)	Natural Attenuation Indicators	Gross Alpha Radioactivity (EPA 900)	Gross Beta Radioactivity (EPA 900)	TCLP Lead
SP07-Zone2-072109	S	072109	0730	2 4oz 3 Encore	X	X		X						X							X					
SP08-Zone4-072109-1	S	"	0745	2 4oz 3 Encore	X	X		X						X							X					
SP08-Zone4-072109-2	S	"	0900	2 4oz 3 Encore	X	X		X						X							X					
SP08-Zone4-072109-3	S	"	0800	1 4oz																						X

Relinquished by (Signature) Kara Roberts Date/Time 7/21/09 Received by (Signature) Date/Time 1141

Relinquished by (Signature) Date/Time Received by (Signature) Date/Time

Sample Disposal Instructions: ☐ DAL Disposal @ $2.50 per Container ☐ Return ☐ Pickup

Turn-Around-Time
☐ Same Day
☐ 24 Hour
☐ 48 Hour
☑ 5 Day Email
☐ 10 Day
☐ Other: _____

***Heavy Metals**: Please circle the desired analytes.

Ag Al (As) Ba Be (Cd) Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni (Pb) Sb Se Tl V Zn - Total
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - Dissolved
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - TCLP

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090721-02

ANALYTICAL RESULTS FOR THE ANALYSIS OF FUEL IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Diesel Fuel #2 NWTPH-Dx (mg/kg)	Heavy Oil NWTPH-Dx (mg/kg)	Surrogate Recovery 2-FBP (%)	Data Flags
Method Blank	7/22/2009	n/a	nd	nd	72.5	
SP07-ZONE2-072109	7/22/2009	85.6	nd	nd	124	
SP08-ZONE4-072109-1	7/22/2009	92.4	nd	nd	104	
SP08-ZONE4-072109-2	7/22/2009	94.6	nd	nd	97.4	
LCS	7/22/2009	n/a	103%	n/a	n/a	
090612-MS	7/22/2009	n/a	111%	n/a	n/a	
090612-MSD	7/22/2009	n/a	117%	n/a	n/a	
SP07-ZONE2-072109 Dup.	7/22/2009	85.6	nd	n	120	
Method Reporting Limits			25	100		

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by: R Lewis

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
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Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090721-02

ANALYTICAL RESULTS FOR THE ANALYSIS OF GASOLINE RANGE ORGANICS IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Benzene EPA 8021B (mg/kg)	Toluene EPA 8021B (mg/kg)	Ethylbenzene EPA 8021B (mg/kg)	m&p-Xylene EPA 8021B (mg/kg)	o-Xylene EPA 8021B (mg/kg)	Gasoline NWTPH-Gx (mg/kg)	Surrogate Recovery BFB (%)	Data Flags
Method Blank	7/22/2009	n/a	nd	nd	nd	nd	nd	nd	67.5	
SP07-ZONE2-072109	7/22/2009	85.6	nd	nd	nd	nd	nd	nd	98.0	
SP08-ZONE4-072109-1	7/22/2009	92.4	nd	nd	nd	nd	nd	nd	89.7	
SP08-ZONE4-072109-2	7/22/2009	94.6	nd	nd	nd	nd	nd	nd	111	
LCS	7/22/2009	n/a	95.6%	95.2%	86.3%	73.9%	85.2%	100%	n/a	
090612-MS	7/22/2009	n/a	104%	111%	95.1%	80.4%	103%	96.5%	n/a	
090612-MSD	7/22/2009	n/a	110%	110%	83.1%	77.6%	100%	100%	n/a	
SP07-ZONE2-072109 Dup.	7/22/2009	85.6	nd	nd	nd	nd	nd	nd	75.6	
Method Reporting Limits			0.05	0.10	0.10	0.10	0.10	5.0		

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.

Comments and Explanations: None

Analyst: T. McCall
Data reviewed by: R Lewis

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090721-02

ANALYTICAL RESULTS FOR THE ANALYSIS OF HEAVY METALS IN SOIL BY EPA METHOD 6020 A

Sample Identification	Date Analyzed	Percent Solids	Arsenic (As)	Cadmium (Cd)	Lead (Pb)
Chemical Abstract Number (CAS)			7440-38-2	7440-43-9	7439-92-1
Units		(%)	(mg/kg)	(mg/kg)	(mg/kg)
Method Blank	7/29/2009	n/a	nd	nd	nd
SP07-ZONE2-072109	7/29/2009	85.6	**7.38**	**1.07**	**188**
SP08-ZONE4-072109-1	7/29/2009	92.4	**2.52**	**0.49**	**5.30**
SP08-ZONE4-072109-2	7/29/2009	94.6	**3.81**	**0.43**	**6.66**
LCS	7/29/2009	n/a	101%	107%	104%
090729-MS	7/29/2009	n/a	124%	150%	135%
090729-MSD	7/29/2009	n/a	111%	133%	116%
SP08-ZONE4-072109 Dup.	7/29/2009	94.6	**3.57**	**0.41**	**6.02**
Method Reporting Limits			0.25	0.25	0.25

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
"MI" indicates Matrix Interference
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by: R Lewis

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090721-02

ANALYTICAL RESULTS FOR THE ANALYSIS OF SEMI-VOLATILE COMPOUNDS IN SOIL BY EPA METHOD 8270

Sample Identification			Blank	SP07-ZONE2-072109	SP08-ZONE4-072109-1	SP08-ZONE4-072109-2	SP07-ZONE2-072109 Dup.	LCS	090723-MS	090723-MSD
Percent Solids (%)			n/a	85.6	92.4	94.6	85.6	n/a	n/a	n/a
Date Extracted	CAS	MRL	7/23/2009	7/23/2009	7/23/2009	7/23/2009	7/23/2009	7/23/2009	7/23/2009	7/23/2009
Date Anlayzed	Number	(mg/kg)	7/23/2009	7/23/2009	7/23/2009	7/23/2009	7/23/2009	7/23/2009	7/23/2009	7/23/2009
Benzo(a)anthracene	56-55-3	0.01	nd	nd	nd	nd	nd	95.7%	88.2%	89.2%
Benzo(a)pyrene	50-32-8	0.01	nd	nd	nd	nd	nd	n/a	n/a	n/a
Benzo(b)fluoranthene	205-99-2	0.01	nd	nd	nd	nd	nd	n/a	n/a	n/a
Benzo(k)fluoranthene	207-08-9	0.01	nd	nd	nd	nd	nd	n/a	n/a	n/a
Chrysene	218-01-9	0.01	nd	nd	nd	nd	nd	94.2%	88.2%	97.9%
Dibenzo(a,h)anthracene	53-70-3	0.01	nd	nd	nd	nd	nd	n/a	n/a	n/a
Ideno(1,2,3-cd)pyrene	193-39-5	0.01	nd	nd	nd	nd	nd	108%	104%	104%
1-Methylnaphthalene	90-12-0	0.01	nd	nd	nd	nd	nd	n/a	n/a	n/a
2-Methylnaphthalene	91-57-6	0.01	nd	nd	nd	nd	nd	n/a	n/a	n/a
Naphthalene	91-20-3	0.01	nd	nd	nd	nd	nd	n/a	n/a	n/a
Surrogate Recovery (%)										
2-Fluorophenol			69.7	66.6	101	79.5	66.8	90.5	100	98.9
Phenol-d6			75.4	72.1	108	85.3	73	92.6	101	101
Nitrobenzene-d5			84.5	97.9	77.0	82.7	97.9	108	95.3	96.3
2-Fluorobiphenol			97.3	109	90.4	96.2	109	113	98.6	99.5
2,4,6-Tribromophenol			79.4	79.5	120	95.0	82.2	101	114	112
Terphenyl-d14			96.9	109	88.6	95.8	108	118	108	106
Data Flags										

WA-DOE-Laboratory Certification No.: C2013

"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.

"n/a" indicates not applicable

Sample results based on dry weight.

Comments and Explanations: None

Analyst: T. McCall

Data reviewed by: R Lewis

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090721-02

ANALYTICAL RESULTS FOR THE ANALYSIS OF TCLP HEAVY METALS IN SOIL BY EPA METHOD 6020 A

Sample Identification	Date Analyzed	Lead (Pb)	Data Flags
Chemical Abstract Number (CAS)		7439-92-1	
Analytical Method		EPA 6020 A	
Units		(mg/L)	
Method Blank	7/29/2009	nd	
SP08-ZONE4-072109-comp	7/29/2009	nd	
LCS	7/29/2009	100%	
090729-MS	7/29/2009	103%	
090729-MSD	7/29/2009	68.0%	
SP08-ZONE4-072109-comp Dup.	7/29/2009	nd	
Method Detection Limit (MDL)		0.25	

WA-DOE-Laboratory Certification No.: C2013

"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.

"n/a" indicates not applicable

Comments and Explanations: None

Analyst: T. McCall

Data reviewed by: R. Lewis

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090721-02

QUALITY CONTROL RESULTS FOR THE ANALYSIS OF TCLP HEAVY METALS IN SOIL BY EPA METHOD 6020 A

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	Method Blank
Percent Solids	100
No. of Extractions	1
Type of Extraction	Rotary
Extraction Fluid	#1
Date Extracted	7/21/2009

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	SP08-ZONE4-072109-comp
Percent Solids	93.7
No. of Extractions	1
Type of Extraction	Rotary
Extraction Fluid	#1
Date Extracted	7/21/2009

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	SP08-ZONE4-072109-comp Dup.
Percent Solids	93.7
No. of Extractions	1
Type of Extraction	Rotary
Extraction Fluid	#1
Date Extracted	7/21/2009

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	LCS
Percent Solids	100
No. of Extractions	1
Type of Extraction	Rotary
Extraction Fluid	#1
Date Extracted	7/21/2009

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	090729-MS
Percent Solids	100
No. of Extractions	1
Type of Extraction	Rotary
Extraction Fluid	#1
Date Extracted	7/21/2009

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	090729-MSD
Percent Solids	100
No. of Extractions	1
Type of Extraction	Rotary
Extraction Fluid	#1
Date Extracted	7/21/2009

Comments and Explanations: None

Analyst: T. McCall
Data reviewed by: R. Lewis

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

*See RI Expectations Sent Previously

1126

1099878

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	Page: of
Company: PTC	Report To:	Attention:	1304771
Address: 2612 Yelm Hwy SE Olympia WA	Copy To:	Company Name:	REGULATORY AGENCY
Email To: robertsk@uspioneer.com	Purchase Order No.: Credit Card	Address:	☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
Phone: 360 570 1700 Fax:	Project Name: East Bay IA Stockpile	Pace Quote Reference:	☐ UST ☐ RCRA ☐ OTHER
Requested Due Date/TAT: 5day TAT	Project Number:	Pace Project Manager:	Site Location STATE: WA
		Pace Profile #:	

Section D Required Client Information

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: N	Analysis Test: Dioxan/Furans 8290	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SP07-Zone2-072209	SL	G	072209	1000				1									X	X		001
2	SP08-Zone 4-072209-1	SL	G	072209	1015				1									X	X		002
3	SP08-Zone 4-072209-2	SL	G	072209	1030				1									X	X		003
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
5day TAT by Email	Kara Roberts	7/22/09		J Richardson-Pace MN	7/23/09	09:31	5.6	Y		

SAMPLER NAME AND SIGNATURE: Kara Roberts

PRINT Name of SAMPLER: Kara Roberts

SIGNATURE of SAMPLER: Kara Roberts DATE Signed (MM/DD/YY): 7/22/09

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Page 4 of 11

Pace Analytical™
www.pacelabs.com

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

Report Prepared for:

Troy Bussey
Pioneer Technologies Corporation
2612 Yelm Highway S.E.
Suite B
Olympia WA 98501-4826

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

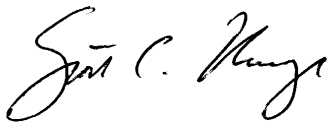
Pace Project #: 1099878
Sample Receipt Date: 07/23/2009
Client Project #: East Bay IA Stockpile
Client Sub PO #: N/A
State Cert #: C218

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed and prepared by:



Scott Unze, Project Manager
(612) 607-6383
(612) 607-6444 (fax)
scott.unze@pacelabs.com

Report Prepared Date:
July 30, 2009

ACCREDITED IN ACCORDANCE WITH nelac

Report of Laboratory Analysis

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analyses performed on three samples submitted by a representative of Pioneer Technologies Corporation. The samples were analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. Reporting limits were based on signal-to-noise measurements.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extracts ranged from 47-102%. All of the labeled standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Also, since the quantification of the native 2,3,7,8-substituted congeners was based on isotope dilution, the data were automatically corrected for variation in recovery and accurate values were obtained.

In some cases, interfering substances impacted the determinations of native or labeled PCDD or PCDF congeners. The affected values were flagged "I" where incorrect isotope ratios were obtained, or "E" where polychlorinated diphenyl ethers were present.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to contain trace levels of selected congeners. These were below the calibration range of the method. Sample levels similar to the corresponding blank levels were flagged "B" on the results tables and may be, at least partially, attributed to the background. It should be noted that levels less than ten times the background are not generally considered to be statistically different from the background.

A laboratory spike sample was also prepared with the sample batch using clean sand that had been fortified with native standard materials. The results show that the spiked native compounds were recovered at 97-112%. These results indicate a high degree of accuracy for these determinations. Matrix spikes were prepared with the sample batch using sample material from a separate project; results from these analyses will be provided upon request.

Appendix A

Sample Management

Sample Condition Upon Receipt

Pace Analytical

Client Name: PTC

Project # 1099878

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 8683 2775 9920

Optional
Proj. Due Date:
Proj. Name:

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☒ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other _____ Temp Blank: Yes X No _____

Thermometer Used 80344042 179425 Type of Ice: Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 5.6° Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 7/23/09 JR

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☑Yes ☐No ☐N/A	7. 5 day
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: SL		
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	☐Yes ☐No ☑N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	
Exceptions: VOA,Coliform, TOC, Oil and Grease, WI-DRO (water)	☐Yes ☑No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☑No ☐N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Field Data Required? Y / N

Comments/ Resolution: _____

Project Manager Review: _____ Date: 07/23/09

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

7-23-09

Appendix B

Sample Analysis Summary

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP07-ZONE2-072209		
Lab Sample ID	1099878001		
Filename	R90728A_08		
Injected By	SMT		
Total Amount Extracted	11.2 g	Matrix	Solid
% Moisture	15.7	Dilution	NA
Dry Weight Extracted	9.48 g	Collected	07/22/2009 10:00
ICAL ID	R90512GC2	Received	07/23/2009 09:31
CCal Filename(s)	R90727B_15 & R90728A_13	Extracted	07/24/2009 14:15
Method Blank ID	BLANK-20735	Analyzed	07/28/2009 09:18

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	-----	4.80	0.47	E	2,3,7,8-TCDF-13C	2.00	73
Total TCDF	300.00	-----	0.47		2,3,7,8-TCDD-13C	2.00	84
					1,2,3,7,8-PeCDF-13C	2.00	85
2,3,7,8-TCDD	1.00	-----	0.12	J	2,3,4,7,8-PeCDF-13C	2.00	85
Total TCDD	47.00	-----	0.12		1,2,3,7,8-PeCDD-13C	2.00	99
					1,2,3,4,7,8-HxCDF-13C	2.00	74
1,2,3,7,8-PeCDF	2.60	-----	1.20	J	1,2,3,6,7,8-HxCDF-13C	2.00	71
2,3,4,7,8-PeCDF	53.00	-----	0.64		2,3,4,6,7,8-HxCDF-13C	2.00	72
Total PeCDF	540.00	-----	0.94		1,2,3,7,8,9-HxCDF-13C	2.00	77
					1,2,3,4,7,8-HxCDD-13C	2.00	80
1,2,3,7,8-PeCDD	2.60	-----	0.24	J	1,2,3,6,7,8-HxCDD-13C	2.00	75
Total PeCDD	52.00	-----	0.24		1,2,3,4,6,7,8-HpCDF-13C	2.00	69
					1,2,3,4,7,8,9-HpCDF-13C	2.00	71
1,2,3,4,7,8-HxCDF	5.60	-----	1.40		1,2,3,4,6,7,8-HpCDD-13C	2.00	81
1,2,3,6,7,8-HxCDF	12.00	-----	1.50		OCDD-13C	4.00	65
2,3,4,6,7,8-HxCDF	26.00	-----	0.32				
1,2,3,7,8,9-HxCDF	-----	0.65	0.22	I	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	350.00	-----	0.87		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	3.40	-----	0.41	J	2,3,7,8-TCDD-37Cl4	0.20	87
1,2,3,6,7,8-HxCDD	14.00	-----	0.26				
1,2,3,7,8,9-HxCDD	7.20	-----	0.50				
Total HxCDD	160.00	-----	0.39				
1,2,3,4,6,7,8-HpCDF	73.00	-----	0.15		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	4.00	-----	0.25	J	Equivalence: 35 ng/Kg		
Total HpCDF	230.00	-----	0.20		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	600.00	-----	0.17				
Total HpCDD	1900.00	-----	0.17				
OCDF	210.00	-----	0.25				
OCDD	6600.00	-----	0.31				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
E = PCDE Interference
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP08-ZONE4-072209-1		
Lab Sample ID	1099878002		
Filename	R90728A_09		
Injected By	SMT		
Total Amount Extracted	11.3 g	Matrix	Solid
% Moisture	3.1	Dilution	NA
Dry Weight Extracted	10.9 g	Collected	07/22/2009 10:15
ICAL ID	R90512GC2	Received	07/23/2009 09:31
CCal Filename(s)	R90727B_15 & R90728A_13	Extracted	07/24/2009 14:15
Method Blank ID	BLANK-20735	Analyzed	07/28/2009 10:11

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.21		2,3,7,8-TCDF-13C	2.00	71
Total TCDF	0.31	-----	0.21	J	2,3,7,8-TCDD-13C	2.00	82
					1,2,3,7,8-PeCDF-13C	2.00	84
2,3,7,8-TCDD	ND	-----	0.26		2,3,4,7,8-PeCDF-13C	2.00	86
Total TCDD	ND	-----	0.26		1,2,3,7,8-PeCDD-13C	2.00	102
					1,2,3,4,7,8-HxCDF-13C	2.00	73
1,2,3,7,8-PeCDF	ND	-----	0.30		1,2,3,6,7,8-HxCDF-13C	2.00	68
2,3,4,7,8-PeCDF	-----	0.30	0.26	I	2,3,4,6,7,8-HxCDF-13C	2.00	71
Total PeCDF	1.20	-----	0.28	BJ	1,2,3,7,8,9-HxCDF-13C	2.00	74
					1,2,3,4,7,8-HxCDD-13C	2.00	76
1,2,3,7,8-PeCDD	ND	-----	0.30		1,2,3,6,7,8-HxCDD-13C	2.00	72
Total PeCDD	ND	-----	0.30		1,2,3,4,6,7,8-HpCDF-13C	2.00	67
					1,2,3,4,7,8,9-HpCDF-13C	2.00	70
1,2,3,4,7,8-HxCDF	-----	0.40	0.25	I	1,2,3,4,6,7,8-HpCDD-13C	2.00	79
1,2,3,6,7,8-HxCDF	-----	0.55	0.27	I	OCDD-13C	4.00	61
2,3,4,6,7,8-HxCDF	-----	0.53	0.20	I			
1,2,3,7,8,9-HxCDF	-----	0.29	0.24	I	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	6.20	-----	0.24	B	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	-----	0.40	0.33	I	2,3,7,8-TCDD-37Cl4	0.20	88
1,2,3,6,7,8-HxCDD	1.10	-----	0.26	J			
1,2,3,7,8,9-HxCDD	-----	0.85	0.53	I			
Total HxCDD	7.40	-----	0.38				
1,2,3,4,6,7,8-HpCDF	4.20	-----	0.31	J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	-----	0.52	0.35	I	Equivalence: 0.88 ng/Kg		
Total HpCDF	13.00	-----	0.33		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	24.00	-----	0.33				
Total HpCDD	46.00	-----	0.33				
OCDF	13.00	-----	0.67				
OCDD	200.00	-----	0.80				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
B = Less than 10x higher than method blank level
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP08-ZONE4-072209-2		
Lab Sample ID	1099878003		
Filename	R90728A_10		
Injected By	SMT		
Total Amount Extracted	11.2 g	Matrix	Solid
% Moisture	4.3	Dilution	NA
Dry Weight Extracted	10.7 g	Collected	07/22/2009 10:30
ICAL ID	R90512GC2	Received	07/23/2009 09:31
CCal Filename(s)	R90727B_15 & R90728A_13	Extracted	07/24/2009 14:15
Method Blank ID	BLANK-20735	Analyzed	07/28/2009 11:04

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.31	-----	0.25	J	2,3,7,8-TCDF-13C	2.00	70
Total TCDF	1.00	-----	0.25		2,3,7,8-TCDD-13C	2.00	82
					1,2,3,7,8-PeCDF-13C	2.00	79
2,3,7,8-TCDD	ND	-----	0.23		2,3,4,7,8-PeCDF-13C	2.00	82
Total TCDD	ND	-----	0.23		1,2,3,7,8-PeCDD-13C	2.00	97
					1,2,3,4,7,8-HxCDF-13C	2.00	75
1,2,3,7,8-PeCDF	ND	-----	0.43		1,2,3,6,7,8-HxCDF-13C	2.00	71
2,3,4,7,8-PeCDF	0.36	-----	0.28	J	2,3,4,6,7,8-HxCDF-13C	2.00	71
Total PeCDF	2.10	-----	0.36	BJ	1,2,3,7,8,9-HxCDF-13C	2.00	75
					1,2,3,4,7,8-HxCDD-13C	2.00	79
1,2,3,7,8-PeCDD	-----	0.41	0.37	I	1,2,3,6,7,8-HxCDD-13C	2.00	74
Total PeCDD	ND	-----	0.37		1,2,3,4,6,7,8-HpCDF-13C	2.00	63
					1,2,3,4,7,8,9-HpCDF-13C	2.00	64
1,2,3,4,7,8-HxCDF	0.74	-----	0.30	BJ	1,2,3,4,6,7,8-HpCDD-13C	2.00	74
1,2,3,6,7,8-HxCDF	0.66	-----	0.36	BJ	OCDD-13C	4.00	47
2,3,4,6,7,8-HxCDF	0.73	-----	0.38	BJ			
1,2,3,7,8,9-HxCDF	ND	-----	0.43		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	7.90	-----	0.37		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.51		2,3,7,8-TCDD-37Cl4	0.20	88
1,2,3,6,7,8-HxCDD	1.20	-----	0.45	J			
1,2,3,7,8,9-HxCDD	-----	0.84	0.60	I			
Total HxCDD	6.50	-----	0.52				
1,2,3,4,6,7,8-HpCDF	4.50	-----	0.33	J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	1.00	-----	0.46	J	Equivalence: 1.2 ng/Kg		
Total HpCDF	16.00	-----	0.39		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	24.00	-----	0.39				
Total HpCDD	53.00	-----	0.39				
OCDF	14.00	-----	1.50				
OCDD	230.00	-----	1.30				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
B = Less than 10x higher than method blank level
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Blank Analysis Results

Lab Sample ID	BLANK-20735	Matrix	Solid
Filename	R90728A_07	Dilution	NA
Total Amount Extracted	10.1 g	Extracted	07/24/2009 14:15
ICAL ID	R90512GC2	Analyzed	07/28/2009 08:25
CCal Filename(s)	R90727B_15 & R90728A_13	Injected By	SMT

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	-----	0.17	0.150	I	2,3,7,8-TCDF-13C	2.00	59
Total TCDF	ND	-----	0.150		2,3,7,8-TCDD-13C	2.00	71
					1,2,3,7,8-PeCDF-13C	2.00	72
2,3,7,8-TCDD	ND	-----	0.230		2,3,4,7,8-PeCDF-13C	2.00	74
Total TCDD	0.81	-----	0.230	J	1,2,3,7,8-PeCDD-13C	2.00	90
					1,2,3,4,7,8-HxCDF-13C	2.00	68
1,2,3,7,8-PeCDF	ND	-----	0.170		1,2,3,6,7,8-HxCDF-13C	2.00	68
2,3,4,7,8-PeCDF	ND	-----	0.200		2,3,4,6,7,8-HxCDF-13C	2.00	66
Total PeCDF	0.64	-----	0.180	J	1,2,3,7,8,9-HxCDF-13C	2.00	64
					1,2,3,4,7,8-HxCDD-13C	2.00	75
1,2,3,7,8-PeCDD	0.14	-----	0.120	J	1,2,3,6,7,8-HxCDD-13C	2.00	73
Total PeCDD	0.14	-----	0.120	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	68
					1,2,3,4,7,8,9-HpCDF-13C	2.00	58
1,2,3,4,7,8-HxCDF	0.18	-----	0.130	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	74
1,2,3,6,7,8-HxCDF	0.23	-----	0.110	J	OCDD-13C	4.00	53
2,3,4,6,7,8-HxCDF	0.18	-----	0.089	J			
1,2,3,7,8,9-HxCDF	ND	-----	0.120		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	0.74	-----	0.110	J	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	-----	0.12	0.110	I	2,3,7,8-TCDD-37Cl4	0.20	80
1,2,3,6,7,8-HxCDD	ND	-----	0.120				
1,2,3,7,8,9-HxCDD	ND	-----	0.120				
Total HxCDD	ND	-----	0.110				
1,2,3,4,6,7,8-HpCDF	0.28	-----	0.130	J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.180		Equivalence: 0.40 ng/Kg		
Total HpCDF	0.28	-----	0.160	J	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	0.98	-----	0.240	J			
Total HpCDD	1.70	-----	0.240	J			
OCDF	0.79	-----	0.440	J			
OCDD	8.40	-----	0.910	J			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-20736		
Filename	R90729B_12	Matrix	Solid
Total Amount Extracted	10.1 g	Dilution	NA
ICAL ID	R90512GC2	Extracted	07/24/2009 14:15
CCal Filename(s)	R90729A_07 & R90729B_13	Analyzed	07/29/2009 23:40
Method Blank ID	BLANK-20735	Injected By	SMT

Native Isomers	**Qs** (ng)	**Qm** (ng)	% Rec.	**Internal Standards**	**ng's Added**	**Percent Recovery**
2,3,7,8-TCDF	0.20	0.22	108	2,3,7,8-TCDF-13C	2.00	61
Total TCDF				2,3,7,8-TCDD-13C	2.00	74
				1,2,3,7,8-PeCDF-13C	2.00	74
2,3,7,8-TCDD	0.20	0.20	98	2,3,4,7,8-PeCDF-13C	2.00	75
Total TCDD				1,2,3,7,8-PeCDD-13C	2.00	90
				1,2,3,4,7,8-HxCDF-13C	2.00	69
1,2,3,7,8-PeCDF	1.00	1.06	106	1,2,3,6,7,8-HxCDF-13C	2.00	68
2,3,4,7,8-PeCDF	1.00	1.01	101	2,3,4,6,7,8-HxCDF-13C	2.00	71
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.00	68
				1,2,3,4,7,8-HxCDD-13C	2.00	77
1,2,3,7,8-PeCDD	1.00	0.99	99	1,2,3,6,7,8-HxCDD-13C	2.00	78
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.00	71
				1,2,3,4,7,8,9-HpCDF-13C	2.00	62
1,2,3,4,7,8-HxCDF	1.00	1.03	103	1,2,3,4,6,7,8-HpCDD-13C	2.00	79
1,2,3,6,7,8-HxCDF	1.00	1.08	108	OCDD-13C	4.00	52
2,3,4,6,7,8-HxCDF	1.00	1.07	107			
1,2,3,7,8,9-HxCDF	1.00	1.06	106	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.00	1.00	100	2,3,7,8-TCDD-37Cl4	0.20	78
1,2,3,6,7,8-HxCDD	1.00	1.02	102			
1,2,3,7,8,9-HxCDD	1.00	1.07	107			
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.00	1.07	107			
1,2,3,4,7,8,9-HpCDF	1.00	1.05	105			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.00	0.98	98			
Total HpCDD						
OCDF	2.00	1.95	97			
OCDD	2.00	2.23	112			

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
P = Recovery outside of target range
X = Background subtracted value
Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

DRAGON
Analytical Laboratory

RCRA CHAIN OF CUSTODY RECORD

2818 Madrona Beach Rd. NW, Olympia, WA 98502
Phone: (360) 866-0543 Fax: (360) 866-0556
Email: DragonLab@comcast.net
Website: dragonlaboratory.com

Page ____ of ____

Samples Collected By: KR
Contact Number: 360 570 1700

Client: PTC
Address: 2612 Yelm Hwy SE Olympia WA 98501

Phone: 360-570-1700
Fax: ____
Email: robertsk@uspioneer.com

Project Name: East Bay IA Stockpile
Project Location: ____
Project Number: ____

Project P.O.: Credit Card
Contact Person: ____
DAL Project No.: 090729-04

Matrix Code:
WW = wastewater **GW** = groundwater **S** = soil or solid
SL = sludge **V** = vapor **O** = other

Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Container Type	MtBE/BTEX (EPA 8021b)	Gasoline (NWTPH-Gx)	Diesel (NWTPH-Dx)	Diesel & Oil (NWTPH-Dx)	Fuel Scan (NWTPH-HCID)	VOC's (EPA 8021b)	Organochlorine Pesticides (EPA 8081)	PCB's (EPA 8082)	Volatiles (EPA 8260)	PAH's (EPA 8100 or 8270/8270SIM)	Semi-Volatiles (EPA 8270)	Ignitability (EPA 1010)	Oil and Grease (EPA 1664 HEM)	pH (EPA 9040/9045)	Specific Conductance (EPA 9050)	Paint Filter Test (EPA 9095)	Heavy Metals* (EPA 7000 Series)	Biogenic Gases (EPA 3C)	Natural Attenuation Indicators	Gross Alpha Radioactivity (EPA 900)	Gross Beta Radioactivity (EPA 900)
SP09-Zone1-072909	S	072909	1000	2 4oz 3encore	X	X		X						X							X				
SP10-Zone2-072909	S	072909	1030	2 4oz 3Encore	X	X		X						X							X				

Relinquished by (Signature): Kara Roberts — Date/Time: 7/29/09
Received by (Signature): — Date/Time: 7/29/09 1205
Relinquished by (Signature): — Date/Time:
Received by (Signature): — Date/Time:

Sample Disposal Instructions: ☐ DAL Disposal @ $2.50 per Container ☐ Return ☐ Pickup

Turn-Around-Time
☐ Same Day
☐ 24 Hour
☐ 48 Hour
☒ 5 Day Email
☐ 10 Day
☐ Other: ____

***Heavy Metals**: Please circle the desired analytes.

Ag Al (As) Ba Be (Cd) Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni (Pb) Sb Se Tl V Zn - Total
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - Dissolved
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - TCLP

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090729-04

ANALYTICAL RESULTS FOR THE ANALYSIS OF FUEL IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Diesel Fuel #2 NWTPH-Dx (mg/kg)	Heavy Oil NWTPH-Dx (mg/kg)	Surrogate Recovery 2-FBP (%)	Data Flags
Method Blank	8/2/2009	n/a	nd	nd	72.5	
SP09-ZONE1-072909	8/2/2009	88.0	nd	nd	105	
SP10-ZONE2-072909	8/2/2009	83.9	nd	**349**	112	
LCS	8/2/2009	n/a	107%	n/a	n/a	
090802-MS	8/2/2009	n/a	110%	n/a	n/a	
090802-MSD	8/2/2009	n/a	100%	n/a	n/a	
SP09-ZONE1-072909 Dup.	8/2/2009	88.0	nd	nd	115	
Method Reporting Limits			25	100		

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by: R Lewis

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090729-04

ANALYTICAL RESULTS FOR THE ANALYSIS OF GASOLINE RANGE ORGANICS IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Benzene EPA 8021B (mg/kg)	Toluene EPA 8021B (mg/kg)	Ethylbenzene EPA 8021B (mg/kg)	m&p-Xylene EPA 8021B (mg/kg)	o-Xylene EPA 8021B (mg/kg)	Gasoline NWTPH-Gx (mg/kg)	Surrogate Recovery BFB (%)	Data Flags
Method Blank	8/2/2009	n/a	nd	nd	nd	nd	nd	nd	92.9	
SP09-ZONE1-072909	8/2/2009	88.0	nd	nd	nd	nd	nd	nd	85.8	
SP10-ZONE2-072909	8/2/2009	83.9	nd	nd	nd	nd	nd	nd	71.0	
LCS	8/2/2009	n/a	96.2%	95.7%	112.0%	87.5%	83.7%	94.5%	n/a	
090802-MS	8/2/2009	n/a	93.2%	108%	78.8%	71.2%	81.8%	84.8%	n/a	
090802-MSD	8/2/2009	n/a	95.0%	94.8%	83.3%	82.0%	107%	86.0%	n/a	
SP10-ZONE2-072909 Dup.	8/2/2009	88.0	nd	nd	nd	nd	nd	nd	91.1	
Method Reporting Limits			0.05	0.10	0.10	0.10	0.10	5.0		

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.

Comments and Explanations: None

Analyst: T. McCall
Data reviewed by: R Lewis

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090729-04

ANALYTICAL RESULTS FOR THE ANALYSIS OF HEAVY METALS IN SOIL BY EPA METHOD 6020 A

Sample Identification	Date Analyzed	Percent Solids	Arsenic (As)	Cadmium (Cd)	Lead (Pb)
Chemical Abstract Number (CAS)			7440-38-2	7440-43-9	7439-92-1
Units		(%)	(mg/kg)	(mg/kg)	(mg/kg)
Method Blank	8/3/2009	n/a	nd	nd	nd
SP09-ZONE1-072909	8/3/2009	88.0	**5.60**	**nd**	**7.65**
SP10-ZONE2-072909	8/3/2009	83.9	**14.4**	**0.75**	**119**
LCS	8/3/2009	n/a	101%	94.0%	89.7%
090803-MS	8/3/2009	n/a	127%	100%	78%
090803-MSD	8/3/2009	n/a	100%	82%	48%
SP10-ZONE2-072909 Dup.	8/3/2009	83.9	12.3	0.66	102
Method Reporting Limits			0.25	0.25	0.25

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
"MI" indicates Matrix Interference
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by: R Lewis

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090729-04

ANALYTICAL RESULTS FOR THE ANALYSIS OF SEMI-VOLATILE COMPOUNDS IN SOIL BY EPA METHOD 827(

Sample Identification			Blank	SP09-ZONE1-072109	SP10-ZONE2-072109	SP09-ZONE1-072109 Dup.	LCS	090803-MS	090803-MSD
Percent Solids (%)			n/a	88.0	83.9	88	n/a	n/a	n/a
Date Extracted	CAS	MRL	8/3/2009	8/3/2009	8/3/2009	8/3/2009	8/3/2009	8/3/2009	8/3/2009
Date Anlayzed	Number	(mg/kg)	8/3/2009	8/3/2009	8/3/2009	8/3/2009	8/3/2009	8/3/2009	8/3/2009
Benzo(a)anthracene	56-55-3	0.01	nd	**0.02**	**0.32**	0.02	97.2%	49.0%	49.2%
Benzo(a)pyrene	50-32-8	0.01	nd	nd	**0.97**	nd	n/a	n/a	n/a
Benzo(b)fluoranthene	205-99-2	0.01	nd	nd	**1.03**	nd	n/a	n/a	n/a
Benzo(k)fluoranthene	207-08-9	0.01	nd	nd	**0.29**	nd	n/a	n/a	n/a
Chrysene	218-01-9	0.01	nd	nd	**0.85**	nd	97.1%	48.1%	48.3%
Dibenzo(a,h)anthracene	53-70-3	0.01	nd	nd	**0.32**	nd	n/a	n/a	n/a
Ideno(1,2,3-cd)pyrene	193-39-5	0.01	nd	nd	**0.58**	nd	107%	51.7%	52.0%
1-Methylnaphthalene	90-12-0	0.01	nd	nd	**0.02**	nd	n/a	n/a	n/a
2-Methylnaphthalene	91-57-6	0.01	nd	nd	**0.02**	nd	n/a	n/a	n/a
Naphthalene	91-20-3	0.01	nd	nd	**0.04**	nd	n/a	n/a	n/a
Surrogate Recovery (%)									
2-Fluorophenol			54.4	49.6	48.3	50.0	98.9	41.6	41.7
Phenol-d6			57.5	52.5	53.4	53.1	99.6	42.3	42.4
Nitrobenzene-d5			57.5	55.6	50.9	56.1	78.1	57.5	57.5
2-Fluorobiphenol			68.9	126	118	124	82.6	122	121
2,4,6-Tribromophenol			46.5	46.4	54.5	47.2	104	42.7	42.4
Terphenyl-d14			61.5	65.9	62.3	65.4	85.4	61.9	61.5
Data Flags									

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by: R Lewis

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

See RI Expectations Sent Previously

10100830

Page: of 1304776

Section A Required Client Information:
Company: PTC
Address: 2612 Yelm Hwy SE
Olympia WA 98501
Email To: robertsk@cspioneer.com
Phone: 360 570 1700 Fax:
Requested Due Date/TAT: 5day TAT

Section B Required Project Information:
Report To:
Copy To:
Purchase Order No.: Credit Card
Project Name: East Bay IA Stockpile
Project Number:

Section C Invoice Information:
Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER
Site Location STATE: WA

Report No: 080330 8290

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: Dioxin Furans 8290A/	PAH 8270C	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SP09-Zone1-072909	SL	G	072909	1000				2									X	X		10100330001
2	SP10-Zone2-072909	SL	G	072909	1030				2									X	X		002
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

Requested Analysis Filtered (Y/N)

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
5 day TAT by Email	Kara Roberts	072909			7/29/09	1450	8.6	Y	Y	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Kara Roberts
SIGNATURE of SAMPLER: Kara Roberts
DATE Signed (MM/DD/YY): 072909

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Pace Analytical™

www.pacelabs.com

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

Report Prepared for:

Troy Bussey
Pioneer Technologies Corporation
2612 Yelm Highway S.E.
Suite B
Olympia WA 98501-4826

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

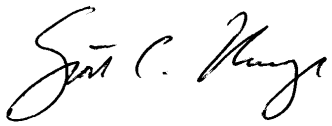
Pace Project #: 10100330
Sample Receipt Date: 07/30/2009
Client Project #: East Bay IA Stockpile
Client Sub PO #: N/A
State Cert #: C218

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed and prepared by:



Scott Unze, Project Manager
(612) 607-6383
(612) 607-6444 (fax)
scott.unze@pacelabs.com

ACCREDITED IN ACCORDANCE WITH nelac

Report of Laboratory Analysis

Report Prepared Date:
August 4, 2009

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analyses performed on two samples submitted by a representative of Pioneer Technologies Corporation. The samples were analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. Reporting limits were based on signal-to-noise calculations. The samples were received within the recommended temperature range of 0-6 degrees Celsius.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extracts ranged from 65-119%. All of the labeled standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Since the quantification of the native 2,3,7,8-substituted isomers was based on isotope dilution, the data were automatically corrected for variation in recovery and accurate values were obtained.

In some cases, interfering substances impacted the determinations of PCDD or PCDF isomers. The affected values were flagged "I" where incorrect isotope ratios were obtained, or "E" where polychlorinated diphenyl ethers were present.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to contain trace levels of selected isomers. These levels were below the calibration range of the method. Sample levels similar to the corresponding blank levels were flagged "B" on the results tables and may be, at least partially, attributed to the background. It should be noted that levels less than ten times the background are not generally considered to be statistically different from the background.

A laboratory spike sample was also prepared with the sample batch using clean reference matrix that had been fortified with native standards. The results show that the spiked native compounds were recovered at 89-108%. These results indicate a high degree of accuracy for these determinations. Matrix spikes were prepared using a different sample in this extraction batch. Results are available upon request.

Appendix A

Sample Management

Pace Analytical

Sample Condition Upon Receipt

Client Name: PTC

Project # 10100330

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #: 7960 1659 3430

Optional: Proj. Due Date: Proj. Name:

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Packing Material: ☑ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other

Thermometer Used: 80344042, 179425

Type of Ice: ☑ Wet ☐ Blue ☐ None

Temp Blank: Yes ☑ No ☐

Cooler Temperature: 0.6

Biological Tissue is Frozen: Yes No

☐ Samples on Ice, cooling process has begun

Date and Initials of person examining contents: OK 7/30/09

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☑Yes ☐No ☐N/A	7. 5 Day
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: SL		
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	☐Yes ☐No ☑N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	
Exceptions: VOA,Coliform, TOC, Oil and Grease, WI-DRO (water)	☐Yes ☑No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Field Data Required? Y / N

Comments/ Resolution: _____

Project Manager Review: NEW 7/30/09 Date: _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Appendix B

Sample Analysis Summary

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP09-ZONE1-072909		
Lab Sample ID	10100330001		
Filename	R90804A_03		
Injected By	SMT		
Total Amount Extracted	12.5 g	Matrix	Solid
% Moisture	11.1	Dilution	NA
Dry Weight Extracted	11.1 g	Collected	07/29/2009 10:00
ICAL ID	R90512GC2	Received	07/30/2009 11:11
CCal Filename(s)	R90803B_12 & R90804A_07	Extracted	07/30/2009 20:30
Method Blank ID	BLANK-20800	Analyzed	08/04/2009 10:31

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	-----	0.46	0.30	I	2,3,7,8-TCDF-13C	2.00	75
Total TCDF	4.80	-----	0.30		2,3,7,8-TCDD-13C	2.00	90
					1,2,3,7,8-PeCDF-13C	2.00	86
2,3,7,8-TCDD	ND	-----	0.17		2,3,4,7,8-PeCDF-13C	2.00	90
Total TCDD	2.10	-----	0.17		1,2,3,7,8-PeCDD-13C	2.00	104
					1,2,3,4,7,8-HxCDF-13C	2.00	78
1,2,3,7,8-PeCDF	0.33	-----	0.33	BJ	1,2,3,6,7,8-HxCDF-13C	2.00	75
2,3,4,7,8-PeCDF	0.68	-----	0.16	J	2,3,4,6,7,8-HxCDF-13C	2.00	76
Total PeCDF	3.40	-----	0.25	J	1,2,3,7,8,9-HxCDF-13C	2.00	78
					1,2,3,4,7,8-HxCDD-13C	2.00	82
1,2,3,7,8-PeCDD	ND	-----	0.21		1,2,3,6,7,8-HxCDD-13C	2.00	81
Total PeCDD	2.50	-----	0.21	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	73
					1,2,3,4,7,8,9-HpCDF-13C	2.00	76
1,2,3,4,7,8-HxCDF	0.59	-----	0.10	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	86
1,2,3,6,7,8-HxCDF	-----	1.00	0.11	E	OCDD-13C	4.00	72
2,3,4,6,7,8-HxCDF	-----	0.56	0.11	I			
1,2,3,7,8,9-HxCDF	-----	0.26	0.15	I	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	10.00	-----	0.12		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	0.42	-----	0.13	J	2,3,7,8-TCDD-37Cl4	0.20	92
1,2,3,6,7,8-HxCDD	-----	0.67	0.15	I			
1,2,3,7,8,9-HxCDD	0.56	-----	0.12	J			
Total HxCDD	5.30	-----	0.13				
1,2,3,4,6,7,8-HpCDF	6.30	-----	0.18		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	-----	0.62	0.18	I	Equivalence: 0.98 ng/Kg		
Total HpCDF	26.00	-----	0.18		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	23.00	-----	0.11				
Total HpCDD	64.00	-----	0.11				
OCDF	23.00	-----	0.25				
OCDD	280.00	-----	0.41				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
B = Less than 10x higher than method blank level
E = PCDE Interference
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP10-ZONE2-072909		
Lab Sample ID	10100330002		
Filename	R90804A_05		
Injected By	SMT		
Total Amount Extracted	16.9 g	Matrix	Solid
% Moisture	12.0	Dilution	5
Dry Weight Extracted	14.9 g	Collected	07/29/2009 10:30
ICAL ID	R90512GC2	Received	07/30/2009 11:11
CCal Filename(s)	R90803B_12 & R90804A_07	Extracted	07/30/2009 20:30
Method Blank ID	BLANK-20800	Analyzed	08/04/2009 13:10

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	3.60		2,3,7,8-TCDF-13C	2.00	75
Total TCDF	190.0	-----	3.60		2,3,7,8-TCDD-13C	2.00	93
					1,2,3,7,8-PeCDF-13C	2.00	92
2,3,7,8-TCDD	ND	-----	3.90		2,3,4,7,8-PeCDF-13C	2.00	90
Total TCDD	ND	-----	3.90		1,2,3,7,8-PeCDD-13C	2.00	119
					1,2,3,4,7,8-HxCDF-13C	2.00	74
1,2,3,7,8-PeCDF	ND	-----	1.80		1,2,3,6,7,8-HxCDF-13C	2.00	70
2,3,4,7,8-PeCDF	36.0	-----	1.80		2,3,4,6,7,8-HxCDF-13C	2.00	71
Total PeCDF	410.0	-----	1.80		1,2,3,7,8,9-HxCDF-13C	2.00	65
					1,2,3,4,7,8-HxCDD-13C	2.00	81
1,2,3,7,8-PeCDD	2.0	-----	0.93	J	1,2,3,6,7,8-HxCDD-13C	2.00	81
Total PeCDD	7.5	-----	0.93	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	71
					1,2,3,4,7,8,9-HpCDF-13C	2.00	79
1,2,3,4,7,8-HxCDF	5.5	-----	0.80	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	82
1,2,3,6,7,8-HxCDF	9.1	-----	0.82	J	OCDD-13C	4.00	74
2,3,4,6,7,8-HxCDF	9.0	-----	0.74	J			
1,2,3,7,8,9-HxCDF	-----	2.0	0.55	I	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	180.0	-----	0.73		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	-----	1.5	0.67	I	2,3,7,8-TCDD-37Cl4	0.20	98
1,2,3,6,7,8-HxCDD	10.0	-----	0.46	J			
1,2,3,7,8,9-HxCDD	4.6	-----	0.94	J			
Total HxCDD	68.0	-----	0.69				
1,2,3,4,6,7,8-HpCDF	99.0	-----	0.69		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	3.6	-----	0.60	BJ	Equivalence: 22 ng/Kg		
Total HpCDF	280.0	-----	0.64		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	200.0	-----	0.50				
Total HpCDD	430.0	-----	0.50				
OCDF	240.0	-----	1.20				
OCDD	2000.0	-----	1.60				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
B = Less than 10x higher than method blank level
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Blank Analysis Results

Lab Sample Name	DFBLKBC		
Lab Sample ID	BLANK-20800	Matrix	Solid
Filename	R90804A_02	Dilution	NA
Total Amount Extracted	10.3 g	Extracted	07/30/2009 20:30
ICAL ID	R90512GC2	Analyzed	08/04/2009 09:38
CCal Filename(s)	R90803B_12	Injected By	SMT

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.150		2,3,7,8-TCDF-13C	2.00	68
Total TCDF	0.25	-----	0.150	J	2,3,7,8-TCDD-13C	2.00	79
					1,2,3,7,8-PeCDF-13C	2.00	78
2,3,7,8-TCDD	ND	-----	0.230		2,3,4,7,8-PeCDF-13C	2.00	84
Total TCDD	ND	-----	0.230		1,2,3,7,8-PeCDD-13C	2.00	97
					1,2,3,4,7,8-HxCDF-13C	2.00	77
1,2,3,7,8-PeCDF	0.27	-----	0.130	J	1,2,3,6,7,8-HxCDF-13C	2.00	76
2,3,4,7,8-PeCDF	-----	0.22	0.090	I	2,3,4,6,7,8-HxCDF-13C	2.00	74
Total PeCDF	0.27	-----	0.110	J	1,2,3,7,8,9-HxCDF-13C	2.00	65
					1,2,3,4,7,8-HxCDD-13C	2.00	78
1,2,3,7,8-PeCDD	-----	0.37	0.160	I	1,2,3,6,7,8-HxCDD-13C	2.00	79
Total PeCDD	ND	-----	0.160		1,2,3,4,6,7,8-HpCDF-13C	2.00	68
					1,2,3,4,7,8,9-HpCDF-13C	2.00	57
1,2,3,4,7,8-HxCDF	-----	0.23	0.160	I	1,2,3,4,6,7,8-HpCDD-13C	2.00	73
1,2,3,6,7,8-HxCDF	-----	0.29	0.170	I	OCDD-13C	4.00	50
2,3,4,6,7,8-HxCDF	-----	0.13	0.110	I			
1,2,3,7,8,9-HxCDF	-----	0.34	0.210	I	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.160		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	-----	0.26	0.180	I	2,3,7,8-TCDD-37Cl4	0.20	85
1,2,3,6,7,8-HxCDD	0.43	-----	0.110	J			
1,2,3,7,8,9-HxCDD	-----	0.34	0.200	I			
Total HxCDD	0.43	-----	0.160	J			
1,2,3,4,6,7,8-HpCDF	0.59	-----	0.160	J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	0.69	-----	0.350	J	Equivalence: 0.34 ng/Kg		
Total HpCDF	1.30	-----	0.250	J	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	-----	0.77	0.220	I			
Total HpCDD	ND	-----	0.220				
OCDF	1.50	-----	0.470	J			
OCDD	7.80	-----	1.100	J			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-20801		
Filename	R90804A_06	Matrix	Solid
Total Amount Extracted	10.1 g	Dilution	NA
ICAL ID	R90512GC2	Extracted	07/30/2009 20:30
CCal Filename(s)	R90803B_12	Analyzed	08/04/2009 14:01
Method Blank ID	BLANK-20800	Injected By	SMT

Native Isomers	**Qs** (ng)	**Qm** (ng)	% Rec.	**Internal Standards**	**ng's Added**	**Percent Recovery**
2,3,7,8-TCDF	0.20	0.20	99	2,3,7,8-TCDF-13C	2.00	71
Total TCDF				2,3,7,8-TCDD-13C	2.00	86
				1,2,3,7,8-PeCDF-13C	2.00	86
2,3,7,8-TCDD	0.20	0.18	92	2,3,4,7,8-PeCDF-13C	2.00	88
Total TCDD				1,2,3,7,8-PeCDD-13C	2.00	105
				1,2,3,4,7,8-HxCDF-13C	2.00	76
1,2,3,7,8-PeCDF	1.00	1.02	102	1,2,3,6,7,8-HxCDF-13C	2.00	73
2,3,4,7,8-PeCDF	1.00	0.96	96	2,3,4,6,7,8-HxCDF-13C	2.00	73
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.00	71
				1,2,3,4,7,8-HxCDD-13C	2.00	85
1,2,3,7,8-PeCDD	1.00	0.89	89	1,2,3,6,7,8-HxCDD-13C	2.00	79
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.00	69
				1,2,3,4,7,8,9-HpCDF-13C	2.00	67
1,2,3,4,7,8-HxCDF	1.00	1.00	100	1,2,3,4,6,7,8-HpCDD-13C	2.00	81
1,2,3,6,7,8-HxCDF	1.00	1.02	102	OCDD-13C	4.00	66
2,3,4,6,7,8-HxCDF	1.00	1.04	104			
1,2,3,7,8,9-HxCDF	1.00	1.05	105	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.00	0.94	94	2,3,7,8-TCDD-37Cl4	0.20	92
1,2,3,6,7,8-HxCDD	1.00	0.99	99			
1,2,3,7,8,9-HxCDD	1.00	0.96	96			
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.00	1.05	105			
1,2,3,4,7,8,9-HpCDF	1.00	1.02	102			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.00	0.96	96			
Total HpCDD						
OCDF	2.00	1.85	93			
OCDD	2.00	2.16	108			

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
P = Recovery outside of target range
X = Background subtracted value
Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

DRAGON
Analytical Laboratory

RCRA CHAIN OF CUSTODY RECORD

2818 Madrona Beach Rd. NW, Olympia, WA 98502
Phone: (360) 866-0543 Fax: (360) 866-0556
Email: DragonLab@comcast.net
Website: dragonlaboratory.com

Samples Collected By: MF
Contact Number: 360-570-1700

Client: PTC
Address: 2612 Yelm Hwy SE
Olympia, WA 98501

Phone: 360-570-1700
Fax:
Email: robertsk@uspioneer.com

Project Name: East Bay IA Stockpile
Project Location:
Project Number:

Project P.O.: Credit Card
Contact Person:
DAL Project No.: 090805-10

Matrix Code:
WW = wastewater **GW** = groundwater **S** = soil or solid
SL = sludge **V** = vapor **O** = other

Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Container Type	MtBE/BTEX (EPA 8021b)	Gasoline (NWTPH-Gx)	Diesel (NWTPH-Dx)	Diesel & Oil (NWTPH-Dx)	Fuel Scan (NWTPH-HCID)	VOC's (EPA 8021b)	Organochlorine Pesticides (EPA 8081)	PCB's (EPA 8082)	Volatiles (EPA 8260)	PAH's (EPA 8100 or 8270/8270SIM)	Semi-Volatiles (EPA 8270)	Ignitability (EPA 1010)	Oil and Grease (EPA 1664 HEM)	pH (EPA 9040/9045)	Specific Conductance (EPA 9050)	Paint Filter Test (EPA 9095)	Heavy Metals* (EPA 7000 Series)	Biogenic Gases (EPA 3C)	Natural Attenuation Indicators	Gross Alpha Radioactivity (EPA 900)	Gross Beta Radioactivity (EPA 900)
SP11 - Zone 2 - 080509	S	080509	1130	2402 3 encore	X	X		X						X							X				

Relinquished by (Signature) Melody Tonn Date/Time 8/5/09
Received by (Signature) Date/Time 8/5/09 1231
Relinquished by (Signature) Date/Time
Received by (Signature) Date/Time

Sample Disposal Instructions: ☐ DAL Disposal @ $2.50 per Container ☐ Return ☐ Pickup

Turn-Around-Time
☐ Same Day
☐ 24 Hour
☐ 48 Hour
☒ 5 Day
☐ 10 Day
☐ Other:

***Heavy Metals**: Please circle the desired analytes.

Ag Al (As) Ba Be (Cd) Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni (Pb) Sb Se Tl V Zn - Total
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - Dissolved
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - TCLP

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090805-10

ANALYTICAL RESULTS FOR THE ANALYSIS OF FUEL IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Diesel Fuel #2 NWTPH-Dx (mg/kg)	Heavy Oil NWTPH-Dx (mg/kg)	Surrogate Recovery 2-FBP (%)	Data Flags
Method Blank	8/8/2009	n/a	nd	nd	123	
SP11-ZONE2-080509	8/8/2009	93.7	nd	nd	115	
LCS	8/8/2009	n/a	111%	n/a	n/a	
090808-MS	8/8/2009	n/a	112%	n/a	n/a	
090808-MSD	8/8/2009	n/a	97.4%	n/a	n/a	
SP11-ZONE2-080509 Dup.	8/8/2009	93.4	nd	nd	112	
Method Reporting Limits			25	100		

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by:

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090805-10

ANALYTICAL RESULTS FOR THE ANALYSIS OF GASOLINE RANGE ORGANICS IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Benzene EPA 8021B (mg/kg)	Toluene EPA 8021B (mg/kg)	Ethylbenzene EPA 8021B (mg/kg)	m&p-Xylene EPA 8021B (mg/kg)	o-Xylene EPA 8021B (mg/kg)	Gasoline NWTPH-Gx (mg/kg)	Surrogate Recovery BFB (%)	Data Flags
Method Blank	8/8/2009	n/a	nd	nd	nd	nd	nd	nd	82.8	
SP11-Zone2-080509	8/8/2009	93.7	nd	nd	nd	nd	nd	nd	114	
LCS	8/8/2009	n/a	96.0%	98.0%	85.0%	80.9%	91.1%	99.0%	n/a	
090802-MS	8/8/2009	n/a	95.0%	86.5%	72.1%	87.5%	80.0%	81.1%	n/a	
090802-MSD	8/8/2009	n/a	96.0%	98.0%	66.1%	74.5%	87.5%	92.9%	n/a	
SP11-Zone2-080509	8/8/2009	93.4	nd	nd	nd	nd	nd	nd	96.8	
Method Reporting Limits			0.05	0.10	0.10	0.10	0.10	5.0		

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.

Comments and Explanations: None

Analyst: T. McCall
Data reviewed by:

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090805-10

ANALYTICAL RESULTS FOR THE ANALYSIS OF HEAVY METALS IN SOIL BY EPA METHOD 6020 A

Sample Identification	Date Analyzed	Percent Solids	Arsenic (As)	Cadmium (Cd)	Lead (Pb)
Chemical Abstract Number (CAS)			7440-38-2	7440-43-9	7439-92-1
Units		(%)	(mg/kg)	(mg/kg)	(mg/kg)
Method Blank	8/6/2009	n/a	nd	nd	nd
SP11-Zone2-080509	8/6/2009	93.7	**6.35**	**0.34**	**7.13**
LCS	8/6/2009	n/a	101%	94.0%	89.7%
090803-MS	8/6/2009	n/a	127%	100%	78%
090803-MSD	8/6/2009	n/a	100%	82%	48%
SP11-Zone2-080509 Dup.	8/6/2009	93.4	4.31	nd	4.42
Method Reporting Limits			0.25	0.25	0.25

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
"MI" indicates Matrix Interference
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by:

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090805-10

ANALYTICAL RESULTS FOR THE ANALYSIS OF SEMI-VOLATILE COMPOUNDS IN SOIL BY EPA METHOD 8270

Sample Identification			Blank	SP11-Zone2-080509	SP11-Zone2-080509 Dup.	LCS	090805-MS	090805-MSD
Percent Solids (%)			n/a	93.7	93.4	n/a	n/a	n/a
Date Extracted	CAS	MRL	8/5/2009	8/5/2009	8/5/2009	8/5/2009	8/5/2009	8/5/2009
Date Anlayzed	Number	(mg/kg)	8/5/2009	8/5/2009	8/5/2009	8/5/2009	8/5/2009	8/5/2009
Benzo(a)anthracene	56-55-3	0.01	nd	**0.03**	0.02	102%	101%	102%
Benzo(a)pyrene	50-32-8	0.01	nd	**0.01**	nd	n/a	n/a	n/a
Benzo(b)fluoranthene	205-99-2	0.01	nd	nd	nd	n/a	n/a	n/a
Benzo(k)fluoranthene	207-08-9	0.01	nd	nd	nd	n/a	n/a	n/a
Chrysene	218-01-9	0.01	nd	nd	nd	101%	101%	99.8%
Dibenzo(a,h)anthracene	53-70-3	0.01	nd	**0.20**	0.20	n/a	n/a	n/a
Ideno(1,2,3-cd)pyrene	193-39-5	0.01	nd	nd	nd	120%	125%	130%
1-Methylnaphthalene	90-12-0	0.01	nd	nd	nd	n/a	n/a	n/a
2-Methylnaphthalene	91-57-6	0.01	nd	nd	nd	n/a	n/a	n/a
Naphthalene	91-20-3	0.01	nd	nd	nd	n/a	n/a	n/a
Surrogate Recovery (%)								
2-Fluorophenol			52.8	45.8	46.5	62.5	59.3	59.2
Phenol-d6			56.7	49.1	50.3	64.3	61.0	60.2
Nitrobenzene-d5			54.0	52.5	53.3	62.4	61.5	61.8
2-Fluorobiphenol			65.4	63.3	63.6	63.4	63.4	63.0
2,4,6-Tribromophenol			49.6	47.1	50.0	64.4	62.7	63.3
Terphenyl-d14			65.0	57.8	56.6	61.5	61.5	61.6
Data Flags								

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by:

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

~~The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.~~

See RI Expectations Sent Previously

10100839

Report No.: 10100839 8290

Page: of

1304772

Section A Required Client Information:

Company:	PTC
Address:	2612 Yelm Hwy SE, Olympia, WA 98501
Email To:	robertsk@uspioneer.com
Phone:	360-570-1700
Fax:	
Requested Due Date/TAT:	5 day TAT

Section B Required Project Information:

Report To:	
Copy To:	
Purchase Order No.:	Credit card
Project Name:	East Bay IA Stockpile
Project Number:	

Section C Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER ______

Site Location STATE: WA

Section D Required Client Information

Matrix Codes MATRIX / CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

Preservatives: Unpreserved, H_2SO_4, HNO_3, HCl, NaOH, $Na_2S_2O_3$, Methanol, Other

Analysis Test: ~~NWTPH-Dx/Gx~~, PAH 8270C

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	NWTPH-Dx/Gx	PAH 8270C	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SPII-Zone2-080509	SL	G	080509	1130				2										X	X		001
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
5 day TAT by email	Melody Feden / PTC	08/05/09		[signature] / Pace	8/6	0943	3.2	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Melody Feden

SIGNATURE of SAMPLER: Melody Feden

DATE Signed (MM/DD/YY): 08-05-09

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical™

www.pacelabs.com

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

Report Prepared for:

Troy Bussey
Pioneer Technologies Corporation
2612 Yelm Highway S.E.
Suite B
Olympia WA 98501-4826

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

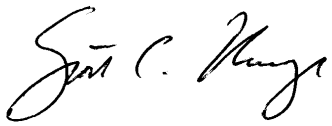
Pace Project #: 10100839
Sample Receipt Date: 08/06/2009
Client Project #: East Bay IA Stockpile
Client Sub PO #: N/A
State Cert #: C218

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed and prepared by:



Scott Unze, Project Manager
(612) 607-6383
(612) 607-6444 (fax)
scott.unze@pacelabs.com

ACCREDITED IN ACCORDANCE WITH nelac

Report of Laboratory Analysis

Report Prepared Date:
August 13, 2009

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analysis performed on one sample submitted by a representative of Pioneer Technologies Corporation. The sample was analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. Reporting limits were based on signal-to-noise calculations.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extracts ranged from 60-92%. All of the labeled standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Since the quantification of the native 2,3,7,8-substituted isomers was based on isotope dilution, the data were automatically corrected for variation in recovery and accurate values were obtained.

In some cases, interfering substances impacted the determinations of PCDD or PCDF congeners. The affected values were flagged "I" where incorrect isotope ratios were obtained.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to contain trace levels of selected congeners. These levels were below the calibration range of the method. The levels reported for the affected congeners in the field sample were higher than the levels in the blank by an order of magnitude or more. These results indicate that the sample processing steps did not contribute significantly to the levels reported for the field sample.

A laboratory spike sample was also prepared with the sample batch using clean sand that had been fortified with native standard materials. The results show that the spiked native compounds were recovered at 91-114%. These results indicate a high degree of accuracy for these determinations. Matrix spikes were prepared with the sample batch using sample material from a separate project; results from these analyses will be provided upon request.

Appendix A

Sample Management

Sample Condition Upon Receipt

Pace Analytical

Client Name: Pioneer Tech Project # 10100839

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other _____

Tracking #: 7968 3678 1229

Optional
Proj. Due Date:
Proj. Name:

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other _____ Temp Blank: Yes ☒ No ☐

Thermometer Used 80344042 or 179425 **Type of Ice:** Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 3.2 **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 8/6/09

Comments:

Chain of Custody Present:	☒Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☒Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☒No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☒No ☐N/A	7.
Sufficient Volume:	☒Yes ☐No ☐N/A	8.
Correct Containers Used:	☒Yes ☐No ☐N/A	9.
-Pace Containers Used:	☐Yes ☒No ☐N/A	
Containers Intact:	☒Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☒N/A	11.
Sample Labels match COC:	☒Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: SL		
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	☐Yes ☐No ☒N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH Samp #
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☒N/A	Initial when completed / Lot # of added preservative
Exceptions: VOA,Coliform, TOC, Oil and Grease, WI-DRO (water)	☐Yes ☒No	
Samples checked for dechlorination:	☐Yes ☐No ☒N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☒N/A	15.
Trip Blank Present:	☐Yes ☐No ☒N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☒N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: NEW 8/6/09 SL **Date:** 08/06/09

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR.

F-L213Rev.00, 05Aug2009

Pace Analytical Services, Inc.
1700 Elm Street SE, Suite 200, Minneapolis, MN 55414

Appendix B

Sample Analysis Summary

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP11-Zone 2-080509		
Lab Sample ID	10100839001		
Filename	R90812A_03		
Injected By	CVS		
Total Amount Extracted	12.5 g	Matrix	Solid
% Moisture	6.8	Dilution	NA
Dry Weight Extracted	11.7 g	Collected	08/05/2009 11:30
ICAL ID	R90512GC2	Received	08/06/2009 11:13
CCal Filename(s)	R90811B_15 & R90812A_06	Extracted	08/07/2009 19:20
Method Blank ID	BLANK-20860	Analyzed	08/12/2009 13:50

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.240		2,3,7,8-TCDF-13C	2.00	68
Total TCDF	3.30	-----	0.240		2,3,7,8-TCDD-13C	2.00	81
					1,2,3,7,8-PeCDF-13C	2.00	78
2,3,7,8-TCDD	ND	-----	0.084		2,3,4,7,8-PeCDF-13C	2.00	79
Total TCDD	ND	-----	0.084		1,2,3,7,8-PeCDD-13C	2.00	92
					1,2,3,4,7,8-HxCDF-13C	2.00	70
1,2,3,7,8-PeCDF	ND	-----	0.240		1,2,3,6,7,8-HxCDF-13C	2.00	69
2,3,4,7,8-PeCDF	-----	0.33	0.180	I	2,3,4,6,7,8-HxCDF-13C	2.00	70
Total PeCDF	1.40	-----	0.210	J	1,2,3,7,8,9-HxCDF-13C	2.00	71
					1,2,3,4,7,8-HxCDD-13C	2.00	74
1,2,3,7,8-PeCDD	ND	-----	0.120		1,2,3,6,7,8-HxCDD-13C	2.00	74
Total PeCDD	ND	-----	0.120		1,2,3,4,6,7,8-HpCDF-13C	2.00	65
					1,2,3,4,7,8,9-HpCDF-13C	2.00	66
1,2,3,4,7,8-HxCDF	-----	0.42	0.210	I	1,2,3,4,6,7,8-HpCDD-13C	2.00	79
1,2,3,6,7,8-HxCDF	-----	0.34	0.180	I	OCDD-13C	4.00	60
2,3,4,6,7,8-HxCDF	0.45	-----	0.090	J			
1,2,3,7,8,9-HxCDF	-----	0.13	0.091	I	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	4.10	-----	0.140	J	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	0.20	-----	0.170	J	2,3,7,8-TCDD-37Cl4	0.20	80
1,2,3,6,7,8-HxCDD	-----	0.39	0.200	I			
1,2,3,7,8,9-HxCDD	-----	0.28	0.220	I			
Total HxCDD	3.10	-----	0.200	J			
1,2,3,4,6,7,8-HpCDF	2.70	-----	0.150	J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	-----	0.32	0.220	I	Equivalence: 0.45 ng/Kg		
Total HpCDF	8.00	-----	0.180		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	12.00	-----	0.310				
Total HpCDD	30.00	-----	0.310				
OCDF	8.70	-----	0.520				
OCDD	140.00	-----	0.440				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Blank Analysis Results

Lab Sample ID	BLANK-20860	Matrix	Solid
Filename	U90812B_08	Dilution	NA
Total Amount Extracted	10.5 g	Extracted	08/07/2009 19:20
ICAL ID	U90807	Analyzed	08/12/2009 17:45
CCal Filename(s)	U90812B_01 & U90812B_15	Injected By	AE

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery	
2,3,7,8-TCDF	ND	-----	0.21		2,3,7,8-TCDF-13C	2.00	82	
Total TCDF	ND	-----	0.21		2,3,7,8-TCDD-13C	2.00	69	
					1,2,3,7,8-PeCDF-13C	2.00	70	Y
2,3,7,8-TCDD	ND	-----	0.33		2,3,4,7,8-PeCDF-13C	2.00	74	Y
Total TCDD	ND	-----	0.33		1,2,3,7,8-PeCDD-13C	2.00	92	
					1,2,3,4,7,8-HxCDF-13C	2.00	77	
1,2,3,7,8-PeCDF	ND	-----	0.18		1,2,3,6,7,8-HxCDF-13C	2.00	68	
2,3,4,7,8-PeCDF	ND	-----	0.22		2,3,4,6,7,8-HxCDF-13C	2.00	74	
Total PeCDF	ND	-----	0.20		1,2,3,7,8,9-HxCDF-13C	2.00	79	
					1,2,3,4,7,8-HxCDD-13C	2.00	75	
1,2,3,7,8-PeCDD	ND	-----	0.28		1,2,3,6,7,8-HxCDD-13C	2.00	65	
Total PeCDD	ND	-----	0.28		1,2,3,4,6,7,8-HpCDF-13C	2.00	53	
					1,2,3,4,7,8,9-HpCDF-13C	2.00	55	
1,2,3,4,7,8-HxCDF	ND	-----	0.16		1,2,3,4,6,7,8-HpCDD-13C	2.00	57	
1,2,3,6,7,8-HxCDF	ND	-----	0.19		OCDD-13C	4.00	48	
2,3,4,6,7,8-HxCDF	ND	-----	0.15					
1,2,3,7,8,9-HxCDF	ND	-----	0.15		1,2,3,4-TCDD-13C	2.00	NA	
Total HxCDF	ND	-----	0.16		1,2,3,7,8,9-HxCDD-13C	2.00	NA	
1,2,3,4,7,8-HxCDD	ND	-----	0.20		2,3,7,8-TCDD-37Cl4	0.20	78	
1,2,3,6,7,8-HxCDD	ND	-----	0.25					
1,2,3,7,8,9-HxCDD	ND	-----	0.22					
Total HxCDD	ND	-----	0.22					
1,2,3,4,6,7,8-HpCDF	ND	-----	0.19		Total 2,3,7,8-TCDD			
1,2,3,4,7,8,9-HpCDF	ND	-----	0.22		Equivalence: 0.42 ng/Kg			
Total HpCDF	ND	-----	0.21		(Using 2005 WHO Factors - Using PRL/2 where ND)			
1,2,3,4,6,7,8-HpCDD	ND	-----	0.30					
Total HpCDD	0.43	-----	0.30	J				
OCDF	-----	0.45	0.40	IY				
OCDD	3.20	-----	0.70	J				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
I = Interference present
Y = Calculated using average of daily RFs

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-20861		
Filename	R90811B_01	Matrix	Solid
Total Amount Extracted	10.3 g	Dilution	NA
ICAL ID	R90512GC2	Extracted	08/07/2009 19:20
CCal Filename(s)	R90810B_13 & R90811B_15	Analyzed	08/11/2009 16:36
Method Blank ID	BLANK-20860	Injected By	CVS

Native Isomers	**Qs** (ng)	**Qm** (ng)	% Rec.	**Internal Standards**	**ng's Added**	**Percent Recovery**
2,3,7,8-TCDF	0.20	0.21	104	2,3,7,8-TCDF-13C	2.00	57
Total TCDF				2,3,7,8-TCDD-13C	2.00	71
				1,2,3,7,8-PeCDF-13C	2.00	66
2,3,7,8-TCDD	0.20	0.19	97	2,3,4,7,8-PeCDF-13C	2.00	70
Total TCDD				1,2,3,7,8-PeCDD-13C	2.00	80
				1,2,3,4,7,8-HxCDF-13C	2.00	66
1,2,3,7,8-PeCDF	1.00	1.04	104	1,2,3,6,7,8-HxCDF-13C	2.00	69
2,3,4,7,8-PeCDF	1.00	0.98	98	2,3,4,6,7,8-HxCDF-13C	2.00	67
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.00	61
				1,2,3,4,7,8-HxCDD-13C	2.00	70
1,2,3,7,8-PeCDD	1.00	0.91	91	1,2,3,6,7,8-HxCDD-13C	2.00	75
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.00	62
				1,2,3,4,7,8,9-HpCDF-13C	2.00	54
1,2,3,4,7,8-HxCDF	1.00	1.04	104	1,2,3,4,6,7,8-HpCDD-13C	2.00	68
1,2,3,6,7,8-HxCDF	1.00	1.03	103	OCDD-13C	4.00	48
2,3,4,6,7,8-HxCDF	1.00	1.03	103			
1,2,3,7,8,9-HxCDF	1.00	1.03	103	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.00	0.99	99	2,3,7,8-TCDD-37Cl4	0.20	73
1,2,3,6,7,8-HxCDD	1.00	1.04	104			
1,2,3,7,8,9-HxCDD	1.00	1.04	104			
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.00	1.10	110			
1,2,3,4,7,8,9-HpCDF	1.00	1.05	105			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.00	1.01	101			
Total HpCDD						
OCDF	2.00	2.07	103			
OCDD	2.00	2.28	114			

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
P = Recovery outside of target range
X = Background subtracted value
Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

Dragon Analytical

Anatek Labs, Inc.

Chain of Custody Record

1282 Alturas Drive, Moscow ID 83843 (208) 883-2839 FAX 882-9246
504 E Sprague Ste D, Spokane WA 99202 (509) 838-3999 FAX 838-4433

Anatek Log-In #

Company Name: PTC
Address: 2612 Yelm Hwy SE
City: ~~Eugene~~ Olympia State: WA Zip: 98501
Phone: 360 570 1700
Fax:

Project Manager:
Project Name & # : East Bay IA Sheetpiles
Email Address : roberts k@uspioneer.com
Purchase Order #: Credit Card
Sampler Name & phone:

Turn Around Time & Reporting

Please refer to our normal turn around times at:
http://www.anateklabs.com/services/guidelines/reporting.asp

__Normal
__Next Day*
__2nd Day*
X Other* 5day

*All rush order requests must be prior approved.

__Phone
__Mail
__Fax
X Email

Provide Sample Description

List Analyses Requested

Note Special Instructions/Comments

*Heavy Metals: As, Cd, Pb

Lab ID	Sample Identification	Sampling Date/Time	Matrix	# of Containers	Sample Volume	Preservative:										
						—	—	—	—	—						
	SP12-Zone1-081209	081209/1300	Soil	2 4oz Glass		X	X	X	X	X						

Inspection Checklist

	Y	N
Received Intact?	Y	N
Labels & Chains Agree?	Y	N
Containers Sealed?	Y	N
VOC Head Space?	Y	N

Temperature (°C):
Preservative:
Date & Time:
Inspected By:

	Printed Name	Signature	Company	Date	Time
Relinquished by	Kara Roberts	Kara Roberts	PTC	081209	1416
Received by	CHRIS A	C	DAL	081209	1417
Relinquished by					
Received by					
Relinquished by					
Received by					

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090812-02

ANALYTICAL RESULTS FOR THE ANALYSIS OF FUEL IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Diesel Fuel #2 NWTPH-Dx (mg/kg)	Heavy Oil NWTPH-Dx (mg/kg)	Surrogate Recovery 2-FBP (%)	Data Flags
Method Blank	8/20/2009	n/a	nd	nd	118	
SP12-ZONE1-081209	8/20/2009	91.8	nd	nd	126	
LCS	8/20/2009	n/a	112%	n/a	n/a	
090820-MS	8/20/2009	n/a	108%	n/a	n/a	
090820-MSD	8/20/2009	n/a	112%	n/a	n/a	
Method Reporting Limits			25	100		

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by:

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090812-02

ANALYTICAL RESULTS FOR THE ANALYSIS OF GASOLINE RANGE ORGANICS IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Benzene EPA 8021B (mg/kg)	Toluene EPA 8021B (mg/kg)	Ethylbenzene EPA 8021B (mg/kg)	m&p-Xylene EPA 8021B (mg/kg)	o-Xylene EPA 8021B (mg/kg)	Gasoline NWTPH-Gx (mg/kg)	Surrogate Recovery BFB (%)	Data Flags
Method Blank	8/20/2009	n/a	nd	nd	nd	nd	nd	nd	74.4	
SP12-ZONE1-081209	8/20/2009	91.8	nd	nd	nd	nd	nd	nd	69.6	
LCS	8/20/2009	n/a	101%	102%	97.6%	92.4%	105%	82.1%	n/a	
090820-MS	8/20/2009	n/a	99.6%	103.0%	95.7%	85.2%	99.5%	82.3%	n/a	
090820-MSD	8/20/2009	n/a	103%	104%	96.3%	94.8%	100%	85.3%	n/a	
SP12-ZONE1-081209 Dup.	8/20/2009	91.8	nd	nd	nd	nd	nd	nd	72.5	
Method Reporting Limits			0.05	0.10	0.10	0.10	0.10	5.0		

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.

Comments and Explanations: None

Analyst: T. McCall
Data reviewed by:

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090812-02

ANALYTICAL RESULTS FOR THE ANALYSIS OF HEAVY METALS IN SOIL BY EPA METHOD 6020 A

Sample Identification	Date Analyzed	Percent Solids	Arsenic (As)	Cadmium (Cd)	Lead (Pb)
Chemical Abstract Number (CAS)			7440-38-2	7440-43-9	7439-92-1
Units		(%)	(mg/kg)	(mg/kg)	(mg/kg)
Method Blank	8/17/2009	n/a	nd	nd	nd
SP12-ZONE1-081209	8/17/2009	91.8	nd	nd	**0.45**
LCS	8/17/2009	n/a	110%	101.0%	104.0%
090817-MS	8/17/2009	n/a	106%	98.9%	90.8%
090817-MSD	8/17/2009	n/a	109%	99.6%	91%
Method Reporting Limits			0.25	0.25	0.25

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
"MI" indicates Matrix Interference
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by:

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090812-02

ANALYTICAL RESULTS FOR THE ANALYSIS OF SEMI-VOLATILE COMPOUNDS IN SOIL BY EPA METHOD 8270

Sample Identification			Blank	SP12-Zone1-081209	SP12-Zone1-081209	LCS	090814-MS	090814-MSD
Percent Solids (%)			n/a	91.8	91.8	n/a	n/a	n/a
Date Extracted	CAS	MRL	8/14/2009	8/14/2009	8/14/2009	8/14/2009	8/14/2009	8/14/2009
Date Anlayzed	Number	(mg/kg)	8/14/2009	8/14/2009	8/14/2009	8/14/2009	8/14/2009	8/14/2009
Benzo(a)anthracene	56-55-3	0.01	nd	**0.13**	**0.13**	109%	103%	103%
Benzo(a)pyrene	50-32-8	0.01	nd	**0.12**	**0.12**	n/a	n/a	n/a
Benzo(b)fluoranthene	205-99-2	0.01	nd	**0.19**	**0.19**	n/a	n/a	n/a
Benzo(k)fluoranthene	207-08-9	0.01	nd	**0.07**	**0.05**	n/a	n/a	n/a
Chrysene	218-01-9	0.01	nd	**0.13**	**0.14**	109%	98.9%	101.0%
Dibenzo(a,h)anthracene	53-70-3	0.01	nd	**0.22**	**0.22**	n/a	n/a	n/a
Ideno(1,2,3-cd)pyrene	193-39-5	0.01	nd	nd	**0.01**	103%	109%	118%
1-Methylnaphthalene	90-12-0	0.01	nd	nd	nd	n/a	n/a	n/a
2-Methylnaphthalene	91-57-6	0.01	nd	**0.01**	nd	n/a	n/a	n/a
Naphthalene	91-20-3	0.01	nd	**0.01**	**0.01**	n/a	n/a	n/a
Surrogate Recovery (%)								
2-Fluorophenol			54.7	54.5	55.4	64.8	57.1	57.2
Phenol-d6			61.1	60.2	62.0	69.9	61.3	61.7
Nitrobenzene-d5			58.3	62.1	60.9	69.9	63.5	64.8
2-Fluorobiphenol			67.1	70.7	68.7	66.8	63.1	64.3
2,4,6-Tribromophenol			37.4	41	42.1	47.3	47.6	46.1
Terphenyl-d14			70.4	69.9	70.8	64.6	64.4	63.2
Data Flags								

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by:

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

See RI Expectations Sent Previously

RUSH! 10110254

of 1304773

Section A Required Client Information:

Company: PTC
Address: 2612 Yelm Hwy SE Olympia WA 98501
Email To: robertsk@uspioneer.com
Phone: 360 570 1700 Fax:
Requested Due Date/TAT: 5day

Section B Required Project Information:

Report To:
Copy To:
Purchase Order No.: Credit Card
Project Name: East Bay IA stockpile
Project Number:

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: WA

Section D Required Client Information

Matrix Codes MATRIX / CODE: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Tissue TS, Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N): N

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	TIME	COMPOSITE END/GRAB DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Dioxin/Furans 8290	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SP12-Zone1-081209	SL	G			081209	1300		1										X		007
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
5day TAT by Email	Kara Roberts	8/12/09		SHunter/Pace	8/13/09	934	3.7	Y	N	Y

SAMPLE CONDITIONS

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Kara Roberts
SIGNATURE of SAMPLER: Kara Roberts DATE Signed (MM/DD/YY): 8/12/09

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical™

www.pacelabs.com

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

Report Prepared for:

Troy Bussey
Pioneer Technologies Corporation
2612 Yelm Highway S.E.
Suite B
Olympia WA 98501-4826

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

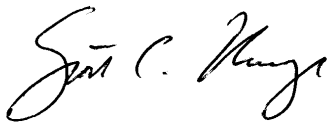
Pace Project #: 10110254
Sample Receipt Date: 08/13/2009
Client Project #: East Bay IA Stockpile
Client Sub PO #: N/A
State Cert #: C218

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed and prepared by:



Scott Unze, Project Manager
(612) 607-6383
(612) 607-6444 (fax)
scott.unze@pacelabs.com

Report Prepared Date:
August 31, 2009

ACCREDITED IN ACCORDANCE WITH nelac

Report of Laboratory Analysis

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analysis performed on one sample submitted by a representative of Pioneer Technologies Corporation. The sample was analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. Reporting limits were based on signal-to-noise calculations.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extract ranged from 51-97%. With the exception of one low value, which was flagged "P" on the results table, the labeled standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Since the quantification of the native 2,3,7,8-substituted isomers was based on isotope dilution, the data were automatically corrected for variation in recovery and accurate values were obtained.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to be free of PCDDs and PCDFs at the reporting limits. These results indicate that the sample processing steps did not contribute significantly to the levels reported for the field sample.

A laboratory spike sample was also prepared with the sample batch using clean sand that had been fortified with native standard materials. The results show that the spiked native compounds were recovered at 93-114%. These results indicate a high degree of accuracy for these determinations. Matrix spikes were prepared with the sample batch using sample material from a separate project; results from these analyses will be provided upon request.

Appendix A

Sample Management

Sample Condition Upon Receipt

Pace Analytical

Client Name: PTC Project # 10110254

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 7978 3811 4956

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Optional
Proj. Due Date:
Proj. Name:

Packing Material: ☑ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other _____ Temp Blank: Yes ✓ No _____

Thermometer Used: 80344042 or 179425 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature: 3.7 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 8/13/09 SL

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☑Yes ☐No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☐Yes ☑No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: SL		
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	☐Yes ☐No ☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	Samp #
Exceptions: VOA,Coliform, TOC, Oil and Grease, WI-DRO (water	☐Yes ☐No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: @ **Date:** 08/13/09

Rev 8/13/09 SL

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR.

Appendix B

Sample Analysis Summary

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP12-Zone1-081209		
Lab Sample ID	10110254001-R		
Filename	F90828B_09		
Injected By	AE		
Total Amount Extracted	11.0 g	Matrix	Solid
% Moisture	8.0	Dilution	NA
Dry Weight Extracted	10.1 g	Collected	08/12/2009 13:00
ICAL ID	F90817	Received	08/13/2009 09:34
CCal Filename(s)	F90828B_01 & F90828B_16	Extracted	08/25/2009 19:40
Method Blank ID	BLANK-20961	Analyzed	08/28/2009 21:15

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	2.4	-----	0.24		2,3,7,8-TCDF-13C	2.00	83
Total TCDF	36.0	-----	0.24		2,3,7,8-TCDD-13C	2.00	73
					1,2,3,7,8-PeCDF-13C	2.00	95
2,3,7,8-TCDD	2.4	-----	0.51		2,3,4,7,8-PeCDF-13C	2.00	90
Total TCDD	36.0	-----	0.51		1,2,3,7,8-PeCDD-13C	2.00	97
					1,2,3,4,7,8-HxCDF-13C	2.00	92
1,2,3,7,8-PeCDF	1.8	-----	0.97	J	1,2,3,6,7,8-HxCDF-13C	2.00	85
2,3,4,7,8-PeCDF	5.4	-----	0.48		2,3,4,6,7,8-HxCDF-13C	2.00	78
Total PeCDF	53.0	-----	0.72		1,2,3,7,8,9-HxCDF-13C	2.00	79
					1,2,3,4,7,8-HxCDD-13C	2.00	86
1,2,3,7,8-PeCDD	3.3	-----	0.88	J	1,2,3,6,7,8-HxCDD-13C	2.00	75
Total PeCDD	42.0	-----	0.88		1,2,3,4,6,7,8-HpCDF-13C	2.00	64
					1,2,3,4,7,8,9-HpCDF-13C	2.00	63
1,2,3,4,7,8-HxCDF	6.2	-----	0.52		1,2,3,4,6,7,8-HpCDD-13C	2.00	75
1,2,3,6,7,8-HxCDF	3.8	-----	0.62	J	OCDD-13C	4.00	51
2,3,4,6,7,8-HxCDF	2.9	-----	0.51	J			
1,2,3,7,8,9-HxCDF	1.8	-----	0.57	J	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	170.0	-----	0.55		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	5.5	-----	0.67		2,3,7,8-TCDD-37Cl4	0.20	84
1,2,3,6,7,8-HxCDD	24.0	-----	0.64				
1,2,3,7,8,9-HxCDD	10.0	-----	0.80				
Total HxCDD	370.0	-----	0.70				
1,2,3,4,6,7,8-HpCDF	100.0	-----	1.30		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	6.3	-----	1.80		Equivalence: 29 ng/Kg		
Total HpCDF	400.0	-----	1.50		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	1200.0	-----	5.70				
Total HpCDD	3900.0	-----	5.70				
OCDF	440.0	-----	1.30				
OCDD	11000.0	-----	1.00				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.
ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Blank Analysis Results

Lab Sample ID	BLANK-20961	Matrix	Solid
Filename	F90828B_07	Dilution	NA
Total Amount Extracted	20.0 g	Extracted	08/25/2009 19:40
ICAL ID	F90817	Analyzed	08/28/2009 19:42
CCal Filename(s)	F90828B_01 & F90828B_16	Injected By	AE

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.067	2,3,7,8-TCDF-13C	2.00	78
Total TCDF	ND	-----	0.067	2,3,7,8-TCDD-13C	2.00	69
				1,2,3,7,8-PeCDF-13C	2.00	82
2,3,7,8-TCDD	ND	-----	0.090	2,3,4,7,8-PeCDF-13C	2.00	78
Total TCDD	ND	-----	0.090	1,2,3,7,8-PeCDD-13C	2.00	86
				1,2,3,4,7,8-HxCDF-13C	2.00	90
1,2,3,7,8-PeCDF	ND	-----	0.110	1,2,3,6,7,8-HxCDF-13C	2.00	73
2,3,4,7,8-PeCDF	ND	-----	0.095	2,3,4,6,7,8-HxCDF-13C	2.00	75
Total PeCDF	ND	-----	0.100	1,2,3,7,8,9-HxCDF-13C	2.00	67
				1,2,3,4,7,8-HxCDD-13C	2.00	81
1,2,3,7,8-PeCDD	ND	-----	0.120	1,2,3,6,7,8-HxCDD-13C	2.00	76
Total PeCDD	ND	-----	0.120	1,2,3,4,6,7,8-HpCDF-13C	2.00	55
				1,2,3,4,7,8,9-HpCDF-13C	2.00	45
1,2,3,4,7,8-HxCDF	ND	-----	0.089	1,2,3,4,6,7,8-HpCDD-13C	2.00	54
1,2,3,6,7,8-HxCDF	ND	-----	0.110	OCDD-13C	4.00	36 P
2,3,4,6,7,8-HxCDF	ND	-----	0.120			
1,2,3,7,8,9-HxCDF	ND	-----	0.200	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.130	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.260	2,3,7,8-TCDD-37Cl4	0.20	76
1,2,3,6,7,8-HxCDD	ND	-----	0.260			
1,2,3,7,8,9-HxCDD	ND	-----	0.230			
Total HxCDD	ND	-----	0.250			
1,2,3,4,6,7,8-HpCDF	ND	-----	0.230	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.370	Equivalence: 0.19 ng/Kg		
Total HpCDF	ND	-----	0.300	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	ND	-----	0.290			
Total HpCDD	ND	-----	0.290			
OCDF	ND	-----	0.550			
OCDD	ND	-----	0.920			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
P = Recovery outside target range

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-20962		
Filename	F90828B_02	Matrix	Solid
Total Amount Extracted	20.0 g	Dilution	NA
ICAL ID	F90817	Extracted	08/25/2009 19:40
CCal Filename(s)	F90828B_01 & F90828B_16	Analyzed	08/28/2009 15:53
Method Blank ID	BLANK-20961	Injected By	

Native Isomers	**Qs** (ng)	**Qm** (ng)	% Rec.	**Internal Standards**	**ng's Added**	**Percent Recovery**
2,3,7,8-TCDF	0.20	0.22	108	2,3,7,8-TCDF-13C	2.00	82
Total TCDF				2,3,7,8-TCDD-13C	2.00	77
				1,2,3,7,8-PeCDF-13C	2.00	93
2,3,7,8-TCDD	0.20	0.21	105	2,3,4,7,8-PeCDF-13C	2.00	85
Total TCDD				1,2,3,7,8-PeCDD-13C	2.00	100
				1,2,3,4,7,8-HxCDF-13C	2.00	89
1,2,3,7,8-PeCDF	1.00	1.02	102	1,2,3,6,7,8-HxCDF-13C	2.00	75
2,3,4,7,8-PeCDF	1.00	1.00	100	2,3,4,6,7,8-HxCDF-13C	2.00	77
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.00	76
				1,2,3,4,7,8-HxCDD-13C	2.00	82
1,2,3,7,8-PeCDD	1.00	0.93	93	1,2,3,6,7,8-HxCDD-13C	2.00	83
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.00	66
				1,2,3,4,7,8,9-HpCDF-13C	2.00	60
1,2,3,4,7,8-HxCDF	1.00	0.97	97	1,2,3,4,6,7,8-HpCDD-13C	2.00	68
1,2,3,6,7,8-HxCDF	1.00	1.05	105	OCDD-13C	4.00	51
2,3,4,6,7,8-HxCDF	1.00	1.02	102			
1,2,3,7,8,9-HxCDF	1.00	1.00	100	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.00	0.96	96	2,3,7,8-TCDD-37Cl4	0.20	84
1,2,3,6,7,8-HxCDD	1.00	1.00	100			
1,2,3,7,8,9-HxCDD	1.00	0.97	97			
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.00	1.05	105			
1,2,3,4,7,8,9-HpCDF	1.00	1.02	102			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.00	0.93	93			
Total HpCDD						
OCDF	2.00	2.27	114			
OCDD	2.00	2.26	113			

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
P = Recovery outside of target range
X = Background subtracted value
Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

DRAGON
Analytical Laboratory

CWA CHAIN OF CUSTODY RECORD

2818 Madrona Beach Rd. NW, Olympia, WA 98502
Phone: (360) 866-0543 Fax: (360) 866-0556
Email: DragonLab@comcast.net
Website: dragonlaboratory.com

Page ____ of ____

Samples Collected By: KR
Contact Number: 360 570 1700

Client: PTC
Address: 2612 Yelm Hwy SE
Olympia, WA 98225
Phone: 360 570 1700
Fax:
Email: robertsk@uspioneer.com
Project Name: East Bay IA Stockpile
Project Location:
Project Number:
Project P.O.: Credit Card
Contact Person:
DAL Project No.: 090819-03

Matrix Code:
WW = wastewater GW = groundwater S = soil or solid
SL = sludge V = vapor O = other

Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Container Type	Alkalinity	BOD or cBOD	Chloride	Chemical Oxygen Demand (COD)	Fecal Coliform	Total Coliform	Hardness, Total	Metals[1,2] EPA 7000 Series	Nitrogen, Ammonia	Nitrogen, Nitrate	Nitrogen, Nitrite	Nitrogen, Nitrate-Nitrite	Nitrogen, Total Kjeldahl	Oil and Grease	pH	Phosphorus, Ortho	Phosphorus, Total	Specific Conductance	Solids, Total	Solids, Total Dissolved	Solids, Total Suspended	Solids, Total Volatile	Turbidity	PCBs	Pesticides	Semi-Volatile Compounds	Volatile Organic Compounds	MTBE/BTEX (EPA 8021b)	Gasoline (NWTPH-Gx)	Diesel and Oil (NWTPH-Dx)	PAHs (EPA 8100/8270SIM)
SP13-Zone2-081909	S	081909	730	2 4oz 3 Encore								X																				X	X	X	X

Cancel MTBE per Kara - Gas (BTEX added) 8/19/09 1257 MR25

Relinquished by (Signature): Kara Robert Date/Time
Received by (Signature): Misty Prescott Date/Time: 8-19-09 1025
Relinquished by (Signature) Date/Time
Received by (Signature) Date/Time

Turn-Around-Time
☐ Same Day
☐ 24 Hour
☐ 48 Hour
☒ 5 Day Email
☐ 10 Day (Approx.)
☐ Other: ________

[1]**Metals**: Please circle the desired analytes. [2] **Total or Dissolved**
Ag Al (As) Ba Be Ca (Cd) Cr Cr-VI Cu Fe Hg K Mg Mn Mo Na Ni (Pb) Sb Se Sn Tl Zn

Comments:
Changed to 3 day per Kara

Sample Disposal Instructions: ☐ DAL Disposal @ $2.50 per Container ☐ Return ☐ Pickup

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090819-03

ANALYTICAL RESULTS FOR THE ANALYSIS OF FUEL IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Diesel Fuel #2 NWTPH-Dx (mg/kg)	Heavy Oil NWTPH-Dx (mg/kg)	Surrogate Recovery 2-FBP (%)	Data Flags
Method Blank	8/20/2009	n/a	nd	nd	102	
SP13-ZONE2-081909	8/20/2009	92.6	nd	nd	98.5	
LCS	8/20/2009	n/a	112%	n/a	n/a	
090820-MS	8/20/2009	n/a	112%	n/a	n/a	
090820-MSD	8/20/2009	n/a	108%	n/a	n/a	
Method Reporting Limits			25	100		

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by:

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090819-03

ANALYTICAL RESULTS FOR THE ANALYSIS OF GASOLINE RANGE ORGANICS IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Benzene EPA 8021B (mg/kg)	Toluene EPA 8021B (mg/kg)	Ethylbenzene EPA 8021B (mg/kg)	m&p-Xylene EPA 8021B (mg/kg)	o-Xylene EPA 8021B (mg/kg)	Gasoline NWTPH-Gx (mg/kg)	Surrogate Recovery BFB (%)	Data Flags
Method Blank	8/20/2009	n/a	nd	nd	nd	nd	nd	nd	74.4	
SP13-ZONE2-081909	8/20/2009	92.6	nd	nd	nd	nd	nd	nd	70.7	
LCS	8/20/2009	n/a	101%	102%	97.6%	92.4%	105%	82.1%	n/a	
090820-MS	8/20/2009	n/a	99.6%	103%	95.7%	85.2%	99.5%	82.3%	n/a	
090820-MSD	8/20/2009	n/a	103%	104%	96.3%	94.8%	100%	85.3%	n/a	
Method Reporting Limits			0.05	0.10	0.10	0.10	0.10	5.0		

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.

Comments and Explanations: None

Analyst: T. McCall
Data reviewed by:

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090819-03

ANALYTICAL RESULTS FOR THE ANALYSIS OF HEAVY METALS IN SOIL BY EPA METHOD 6020 A

Sample Identification	Date Analyzed	Percent Solids	Arsenic (As)	Cadmium (Cd)	Lead (Pb)
Chemical Abstract Number (CAS)			7440-38-2	7440-43-9	7439-92-1
Units		(%)	(mg/kg)	(mg/kg)	(mg/kg)
Method Blank	8/24/2009	n/a	nd	nd	nd
SP13-ZONE2-081909	8/24/2009	92.6	**3.23**	nd	**10.2**
LCS	8/24/2009	n/a	100%	100%	104%
090824-MS	8/24/2009	n/a	99.3%	97.6%	123%
090824-MSD	8/24/2009	n/a	99.6%	97.1%	122%
Method Reporting Limits			0.25	0.25	0.25

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
"MI" indicates Matrix Interference
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by:

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090819-03

ANALYTICAL RESULTS FOR THE ANALYSIS OF SEMI-VOLATILE COMPOUNDS IN SOIL BY EPA METHOD 8270

Sample Identification			Blank	SP13-Zone2-081209	LCS	090821-MS	090821-MSD
Percent Solids (%)			n/a	92.6	n/a	n/a	n/a
Date Extracted	CAS	MRL	8/21/2009	8/21/2009	8/21/2009	8/21/2009	8/21/2009
Date Anlayzed	Number	(mg/kg)	8/21/2009	8/21/2009	8/21/2009	8/21/2009	8/21/2009
Benzo(a)anthracene	56-55-3	0.01	nd	**0.04**	106%	105%	105%
Benzo(a)pyrene	50-32-8	0.01	nd	**0.01**	n/a	n/a	n/a
Benzo(b)fluoranthene	205-99-2	0.01	nd	nd	n/a	n/a	n/a
Benzo(k)fluoranthene	207-08-9	0.01	nd	**0.02**	n/a	n/a	n/a
Chrysene	218-01-9	0.01	nd	**0.03**	104%	102%	104%
Dibenzo(a,h)anthracene	53-70-3	0.01	nd	nd	n/a	n/a	n/a
Ideno(1,2,3-cd)pyrene	193-39-5	0.01	nd	nd	97%	80.1%	82.0%
1-Methylnaphthalene	90-12-0	0.01	nd	**0.51**	n/a	n/a	n/a
2-Methylnaphthalene	91-57-6	0.01	nd	**0.45**	n/a	n/a	n/a
Naphthalene	91-20-3	0.01	nd	**0.04**	n/a	n/a	n/a
Surrogate Recovery (%)							
2-Fluorophenol			90.6	83.5	97.8	103	103
Phenol-d6			101	92.1	104	110	101
Nitrobenzene-d5			108	108	86.4	111	105
2-Fluorobiphenol			129	120	82	110	113.0
2,4,6-Tribromophenol			58.0	63.1	78.3	83.1	82.9
Terphenyl-d14			139	139	89.3	121	120
Data Flags							

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by:

DRAGON
Analytical Laboratory

RCRA CHAIN OF CUSTODY RECORD

2818 Madrona Beach Rd. NW, Olympia, WA 98502
Phone: (360) 866-0543 Fax: (360) 866-0556
Email: DragonLab@comcast.net
Website: dragonlaboratory.com

Page ____ of ____

Samples Collected By: KR
Contact Number: 360 570 1700

Client: PTC Phone: 360 570 1700 Project Name: East Bay IA Stockpiles Project P.O.: Credit Card
Address: 2612 Yelm Hwy SE Suite B Olympia WA 98501 Fax: ____ Email: robertsk@uspioneer.com
Project Location: ____ Project Number: ____ Contact Person: ____ DAL Project No.: 090820-07

Matrix Code:
WW = wastewater **GW** = groundwater **S** = soil or solid
SL = sludge **V** = vapor **O** = other

Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Container Type	~~BTEX~~ BTEX (EPA 8021b)	Gasoline (NWTPH-Gx)	Diesel (NWTPH-Dx)	Diesel & Oil (NWTPH-Dx)	Fuel Scan (NWTPH-HCID)	VOC's (EPA 8021b)	Organochlorine Pesticides (EPA 8081)	PCB's (EPA 8082)	Volatiles (EPA 8260)	PAH's (EPA 8100 or 8270/8270SIM)	Semi-Volatiles (EPA 8270)	Ignitability (EPA 1010)	Oil and Grease (EPA 1664 HEM)	pH (EPA 9040/9045)	Specific Conductance (EPA 9050)	Paint Filter Test (EPA 9095)	Heavy Metals* (EPA 7000 Series)	Biogenic Gases (EPA 3C)	Natural Attenuation Indicators	Gross Alpha Radioactivity (EPA 900)	Gross Beta Radioactivity (EPA 900)
SP14_Zone1_082009	S	082009	1100	3Encore 2402	X	X		X						X							X				
SP15_Zone3_082009	S	082009	1130	3Encore 2402	X	X		X						X							X				

Relinquished by (Signature) Kara Robert Date/Time 8/20/09 1200 Received by (Signature) Jim McFall Date/Time 8/20/09 1555

Relinquished by (Signature) ____ Date/Time ____ Received by (Signature) ____ Date/Time ____

Sample Disposal Instructions: ☐ DAL Disposal @ $2.50 per Container ☐ Return ☐ Pickup

Turn-Around-Time
☐ Same Day
☐ 24 Hour
☐ 48 Hour
☒ 5 Day Email
☐ 10 Day
☐ Other: ____

***Heavy Metals**: Please circle the desired analytes.

Ag Al (As) Ba Be (Cd) Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni (Pb) Sb Se Tl V Zn - Total
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - Dissolved
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - TCLP

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090820-07

ANALYTICAL RESULTS FOR THE ANALYSIS OF FUEL IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Diesel Fuel #2 NWTPH-Dx (mg/kg)	Heavy Oil NWTPH-Dx (mg/kg)	Surrogate Recovery 2-FBP (%)	Data Flags
Method Blank	8/20/2009	n/a	nd	nd	118	
SP14-Zone1-082009	8/20/2009	95.5	nd	nd	118	
SP15-Zone3-082009	8/20/2009	93.2	nd	nd	127	
LCS	8/20/2009	n/a	112%	n/a	n/a	
090820-MS	8/20/2009	n/a	108%	n/a	n/a	
090820-MSD	8/20/2009	n/a	112%	n/a	n/a	
Method Reporting Limits			25	100		

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by:

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090820-07

ANALYTICAL RESULTS FOR THE ANALYSIS OF GASOLINE RANGE ORGANICS IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Benzene EPA 8021B (mg/kg)	Toluene EPA 8021B (mg/kg)	Ethylbenzene EPA 8021B (mg/kg)	m&p-Xylene EPA 8021B (mg/kg)	o-Xylene EPA 8021B (mg/kg)	Gasoline NWTPH-Gx (mg/kg)	Surrogate Recovery BFB (%)	Data Flags
Method Blank	8/20/2009	n/a	nd	nd	nd	nd	nd	nd	74.4	
SP14-Zone1-082009	8/20/2009	95.5	nd	nd	nd	nd	nd	nd	83.5	
SP15-Zone3-082009	8/20/2009	93.2	nd	nd	nd	nd	nd	nd	67.4	
LCS	8/20/2009	n/a	101%	102%	97.6%	92.4%	105%	82.1%	n/a	
090820-MS	8/20/2009	n/a	99.6%	103%	95.7%	85.2%	99.5%	82.3%	n/a	
090820-MSD	8/20/2009	n/a	103%	104%	96.3%	94.8%	100%	85.3%	n/a	
Method Reporting Limits			0.05	0.10	0.10	0.10	0.10	5.0		

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.

Comments and Explanations: None

Analyst: T. McCall
Data reviewed by:

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090820-07

ANALYTICAL RESULTS FOR THE ANALYSIS OF HEAVY METALS IN SOIL BY EPA METHOD 6020 A

Sample Identification	Date Analyzed	Percent Solids	Arsenic (As)	Cadmium (Cd)	Lead (Pb)
Chemical Abstract Number (CAS)			7440-38-2	7440-43-9	7439-92-1
Units		(%)	(mg/kg)	(mg/kg)	(mg/kg)
Method Blank	8/24/2009	n/a	nd	nd	nd
SP14-Zone1-082009	8/24/2009	95.5	**3.06**	nd	**6.15**
SP15-Zone3-082009	8/24/2009	93.2	**2.01**	nd	**2.83**
LCS	8/24/2009	n/a	100%	100%	104%
090824-MS	8/24/2009	n/a	99.3%	97.6%	123%
090824-MSD	8/24/2009	n/a	100%	97.1%	122%
SP15-Zone3-082009 Dup.	8/24/2009	93.2	**2.01**	nd	**2.81**
Method Reporting Limits			0.25	0.25	0.25

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
"MI" indicates Matrix Interference
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by:

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090820-07

ANALYTICAL RESULTS FOR THE ANALYSIS OF SEMI-VOLATILE COMPOUNDS IN SOIL BY EPA METHOD 8270

Sample Identification			Blank	SP14-Zone1-082009	SP15-Zone3-082009	LCS	090821-MS	090821-MSD	SP15-Zone3-082009 Dup.
Percent Solids (%)			n/a	95.5	93.2	n/a	n/a	n/a	93.2
Date Extracted	CAS	MRL	8/21/2009	8/21/2009	8/21/2009	8/21/2009	8/21/2009	8/21/2009	8/21/2009
Date Anlayzed	Number	(mg/kg)	8/21/2009	8/21/2009	8/21/2009	8/21/2009	8/21/2009	8/21/2009	8/21/2009
Benzo(a)anthracene	56-55-3	0.01	nd	**0.03**	**0.02**	106%	105%	105%	**0.01**
Benzo(a)pyrene	50-32-8	0.01	nd	**0.01**	nd	n/a	n/a	n/a	nd
Benzo(b)fluoranthene	205-99-2	0.01	nd	nd	nd	n/a	n/a	n/a	nd
Benzo(k)fluoranthene	207-08-9	0.01	nd	**0.01**	nd	n/a	n/a	n/a	nd
Chrysene	218-01-9	0.01	nd	**0.02**	**0.01**	104%	102%	104%	nd
Dibenzo(a,h)anthracene	53-70-3	0.01	nd	**0.19**	nd	n/a	n/a	n/a	nd
Ideno(1,2,3-cd)pyrene	193-39-5	0.01	nd	nd	nd	96.9%	80.1%	82.0%	nd
1-Methylnaphthalene	90-12-0	0.01	nd	nd	nd	n/a	n/a	n/a	nd
2-Methylnaphthalene	91-57-6	0.01	nd	nd	nd	n/a	n/a	n/a	nd
Naphthalene	91-20-3	0.01	nd	nd	**0.01**	n/a	n/a	n/a	nd
Surrogate Recovery (%)									
2-Fluorophenol			90.6	94	88.0	97.8	103	103	88.0
Phenol-d6			101	104.0	97.0	104	110	101	98.2
Nitrobenzene-d5			108	101	107	86.4	111	105	107
2-Fluorobiphenol			129	115	122	82	110	113.0	113
2,4,6-Tribromophenol			58.0	63.3	62.7	78.3	83.1	82.9	63.7
Terphenyl-d14			139	128	132	89.3	121	120	131
Data Flags									

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.
Comments and Explanations: None
Analyst: T. McCall
Data reviewed by:

Pace Analytical®
www.pacelabs.com

RUSH!

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

See RI Expectations Sent Previously

1010806

Page: of

1304774

Report No.: 1010806_8290

Section A Required Client Information:
- Company: PTC
- Address: 2612 Yelm Hwy SE, Olympia WA 98501
- Email To: robertsk@uspioneer.com
- Phone: 3605701700
- Fax:
- Requested Due Date/TAT: 3day TAT

Section B Required Project Information:
- Report To:
- Copy To:
- Purchase Order No.:
- Project Name: Credit Card
- Project Number: East

Section C Invoice Information:
- Attention:
- Company Name:
- Address:
- Pace Quote Reference:
- Pace Project Manager:
- Pace Profile #:

REGULATORY AGENCY: NPDES / GROUND WATER / DRINKING WATER / UST / RCRA / OTHER

Site Location STATE: WA

Section D Required Client Information

Matrix Codes MATRIX / CODE: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Tissue TS, Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N): N

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	Composite Start DATE	Composite Start TIME	Composite End/Grab DATE	Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Dioxin/Furans 8290	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SP14_Zone 1_082009	S	G			082009	1100		1									X		001
2	SP15_Zone 3_082009	S	G			082009	1130		1									X		002
3	SP13_Zone 2_081909	S	G			082009	1200		1									X		003
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
5day TAT by Email (or faster if possible I know the lab is being cleaned.)	Kara Roberts / PTC	082009	1:00	[signature] / Pace	8/21/09	1000	3.8	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE
- PRINT Name of SAMPLER: Kara Roberts
- SIGNATURE of SAMPLER: Kara Roberts
- DATE Signed (MM/DD/YY): 8/20/09

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

www.pacelabs.com

Report Prepared for:

Kara Roberts
Pioneer Technologies Corporation
2612 Yelm Highway SE
Olympia WA 98501

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

Pace Project #: 10110806
Sample Receipt Date: 08/21/2009
Client Project #: East Bay IA Stockpile
Client Sub PO #: N/A
State Cert #: C218

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed and prepared by:

Scott Unze, Project Manager
(612) 607-6383
(612) 607-6444 (fax)
scott.unze@pacelabs.com

Report Prepared Date:
September 3, 2009

ACCREDITED IN ACCORDANCE WITH nelac

Report of Laboratory Analysis

The results relate only to the samples included in this report.

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analyses performed on three samples submitted by a representative of Pioneer Technologies Corporation. The samples were analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. Reporting limits were based on signal-to-noise calculations. The samples were received within the recommended temperature range of 0-6 degrees Celsius.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extracts ranged from 34-114%. With the exception of one low value, which was flagged "P" on the results table, the labeled standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Since the quantification of the native 2,3,7,8-substituted isomers was based on isotope dilution, the data were automatically corrected for variation in recovery and accurate values were obtained.

In some cases, interfering substances impacted the determinations of PCDD or PCDF congeners. The affected values were flagged "I" where incorrect isotope ratios were obtained, or "E" where polychlorinated diphenyl ethers were present.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to be free of PCDDs and PCDFs at the reporting limits. These results indicate that the sample processing steps did not contribute significantly to the levels reported for the field samples.

A laboratory spike sample was also prepared with the sample batch using clean sand that had been fortified with native standards. The results show that the spiked native compounds were recovered at 87-104%. These results indicate a high degree of accuracy for these determinations. Matrix spikes were prepared with the sample batch using sample material from a separate project; results from these analyses will be provided upon request.

Appendix A

Sample Management

Sample Condition Upon Receipt

Pace Analytical

Client Name: PTC Project # 10110806

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other _____

Tracking #: 7978 6731 9685 8/21/09sh

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals Intact: ☐ yes ☐ no

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____ Temp Blank: Yes ____ No ✓

Thermometer Used: 80344042 or 179425 Type of Ice: Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature: 3.8 Biological Tissue is Frozen: Yes No

Date and initials of person examining contents: 8/21/09sh

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☐No ☑N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☐Yes ☑No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☑No ☐N/A	11.
Sample Labels match COC:	☐Yes ☐No ☑N/A	12.
-Includes date/time/ID/Analysis Matrix: WT		
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	☐Yes ☐No ☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ HCl
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	Samp #
Exceptions: VOA,Coliform, TOC, Oil and Grease, WI-DRO (water	☐Yes ☐No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: [signature] **Date:** 08/21/09

NLW 8/21/09sh

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR.

Appendix B

Sample Analysis Summary

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP14_ZONE1_082009		
Lab Sample ID	10110806001		
Filename	F90902C_11		
Injected By	SMT		
Total Amount Extracted	11.0 g	Matrix	Solid
% Moisture	9.2	Dilution	NA
Dry Weight Extracted	9.95 g	Collected	08/20/2009 11:00
ICAL ID	F90817	Received	08/21/2009 10:00
CCal Filename(s)	F90902C_06 & F90902C_22	Extracted	08/27/2009 18:30
Method Blank ID	BLANK-21083	Analyzed	09/02/2009 23:14

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.83	-----	0.081	J	2,3,7,8-TCDF-13C	2.00	81
Total TCDF	12.00	-----	0.081		2,3,7,8-TCDD-13C	2.00	72
					1,2,3,7,8-PeCDF-13C	2.00	92
2,3,7,8-TCDD	0.41	-----	0.075	J	2,3,4,7,8-PeCDF-13C	2.00	92
Total TCDD	9.50	-----	0.075		1,2,3,7,8-PeCDD-13C	2.00	111
					1,2,3,4,7,8-HxCDF-13C	2.00	97
1,2,3,7,8-PeCDF	0.62	-----	0.130	J	1,2,3,6,7,8-HxCDF-13C	2.00	61
2,3,4,7,8-PeCDF	1.30	-----	0.100	J	2,3,4,6,7,8-HxCDF-13C	2.00	66
Total PeCDF	15.00	-----	0.110		1,2,3,7,8,9-HxCDF-13C	2.00	76
					1,2,3,4,7,8-HxCDD-13C	2.00	92
1,2,3,7,8-PeCDD	1.10	-----	0.160	J	1,2,3,6,7,8-HxCDD-13C	2.00	73
Total PeCDD	17.00	-----	0.160		1,2,3,4,6,7,8-HpCDF-13C	2.00	64
					1,2,3,4,7,8,9-HpCDF-13C	2.00	59
1,2,3,4,7,8-HxCDF	1.00	-----	0.110	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	61
1,2,3,6,7,8-HxCDF	0.94	-----	0.130	J	OCDD-13C	4.00	59
2,3,4,6,7,8-HxCDF	1.30	-----	0.150	J			
1,2,3,7,8,9-HxCDF	0.45	-----	0.110	J	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	16.00	-----	0.120		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.40	-----	0.170	J	2,3,7,8-TCDD-37Cl4	0.20	86
1,2,3,6,7,8-HxCDD	3.10	-----	0.180	J			
1,2,3,7,8,9-HxCDD	1.80	-----	0.170	J			
Total HxCDD	37.00	-----	0.170				
1,2,3,4,6,7,8-HpCDF	19.00	-----	0.270		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	1.50	-----	0.340	J	Equivalence: 4.4 ng/Kg		
Total HpCDF	56.00	-----	0.310		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	91.00	-----	0.510				
Total HpCDD	200.00	-----	0.510				
OCDF	66.00	-----	0.400				
OCDD	940.00	-----	0.370				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.
ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP15_ZONE3_082009		
Lab Sample ID	10110806002		
Filename	F90902C_12		
Injected By	SMT		
Total Amount Extracted	10.9 g	Matrix	Solid
% Moisture	5.9	Dilution	NA
Dry Weight Extracted	10.2 g	Collected	08/20/2009 11:30
ICAL ID	F90817	Received	08/21/2009 10:00
CCal Filename(s)	F90902C_06 & F90902C_22	Extracted	08/27/2009 18:30
Method Blank ID	BLANK-21083	Analyzed	09/03/2009 00:00

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	-----	0.33	0.15	I	2,3,7,8-TCDF-13C	2.00	83
Total TCDF	3.20	-----	0.15		2,3,7,8-TCDD-13C	2.00	84
					1,2,3,7,8-PeCDF-13C	2.00	95
2,3,7,8-TCDD	0.29	-----	0.16	J	2,3,4,7,8-PeCDF-13C	2.00	95
Total TCDD	5.50	-----	0.16		1,2,3,7,8-PeCDD-13C	2.00	114
					1,2,3,4,7,8-HxCDF-13C	2.00	78
1,2,3,7,8-PeCDF	1.10	-----	0.19	J	1,2,3,6,7,8-HxCDF-13C	2.00	69
2,3,4,7,8-PeCDF	4.30	-----	0.19	J	2,3,4,6,7,8-HxCDF-13C	2.00	71
Total PeCDF	40.00	-----	0.19		1,2,3,7,8,9-HxCDF-13C	2.00	72
					1,2,3,4,7,8-HxCDD-13C	2.00	96
1,2,3,7,8-PeCDD	0.47	-----	0.14	J	1,2,3,6,7,8-HxCDD-13C	2.00	74
Total PeCDD	9.80	-----	0.14		1,2,3,4,6,7,8-HpCDF-13C	2.00	62
					1,2,3,4,7,8,9-HpCDF-13C	2.00	59
1,2,3,4,7,8-HxCDF	-----	16.00	0.17	E	1,2,3,4,6,7,8-HpCDD-13C	2.00	61
1,2,3,6,7,8-HxCDF	3.00	-----	0.30	J	OCDD-13C	4.00	57
2,3,4,6,7,8-HxCDF	4.30	-----	0.17	J			
1,2,3,7,8,9-HxCDF	2.80	-----	0.28	J	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	61.00	-----	0.23		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	0.73	-----	0.26	J	2,3,7,8-TCDD-37Cl4	0.20	97
1,2,3,6,7,8-HxCDD	7.00	-----	0.25				
1,2,3,7,8,9-HxCDD	1.70	-----	0.18	J			
Total HxCDD	47.00	-----	0.23				
1,2,3,4,6,7,8-HpCDF	110.00	-----	0.99		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	8.70	-----	0.80		Equivalence: 8.3 ng/Kg		
Total HpCDF	390.00	-----	0.89		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	230.00	-----	0.18				
Total HpCDD	400.00	-----	0.18				
OCDF	390.00	-----	0.34				
OCDD	2200.00	-----	0.41				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
E = PCDE Interference
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP13_ZONE2_081909		
Lab Sample ID	10110806003		
Filename	F90902C_13		
Injected By	SMT		
Total Amount Extracted	11.2 g	Matrix	Solid
% Moisture	8.0	Dilution	NA
Dry Weight Extracted	10.3 g	Collected	08/20/2009 12:00
ICAL ID	F90817	Received	08/21/2009 10:00
CCal Filename(s)	F90902C_06 & F90902C_22	Extracted	08/27/2009 18:30
Method Blank ID	BLANK-21083	Analyzed	09/03/2009 00:47

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.60	-----	0.39	J	2,3,7,8-TCDF-13C	2.00	83
Total TCDF	9.60	-----	0.39		2,3,7,8-TCDD-13C	2.00	84
					1,2,3,7,8-PeCDF-13C	2.00	88
2,3,7,8-TCDD	ND	-----	0.32		2,3,4,7,8-PeCDF-13C	2.00	85
Total TCDD	8.10	-----	0.32		1,2,3,7,8-PeCDD-13C	2.00	99
					1,2,3,4,7,8-HxCDF-13C	2.00	97
1,2,3,7,8-PeCDF	ND	-----	0.48		1,2,3,6,7,8-HxCDF-13C	2.00	72
2,3,4,7,8-PeCDF	1.10	-----	0.40	J	2,3,4,6,7,8-HxCDF-13C	2.00	71
Total PeCDF	7.40	-----	0.44		1,2,3,7,8,9-HxCDF-13C	2.00	76
					1,2,3,4,7,8-HxCDD-13C	2.00	99
1,2,3,7,8-PeCDD	0.86	-----	0.39	J	1,2,3,6,7,8-HxCDD-13C	2.00	85
Total PeCDD	14.00	-----	0.39		1,2,3,4,6,7,8-HpCDF-13C	2.00	50
					1,2,3,4,7,8,9-HpCDF-13C	2.00	42
1,2,3,4,7,8-HxCDF	0.59	-----	0.34	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	45
1,2,3,6,7,8-HxCDF	0.61	-----	0.47	J	OCDD-13C	4.00	34 P
2,3,4,6,7,8-HxCDF	0.79	-----	0.48	J			
1,2,3,7,8,9-HxCDF	ND	-----	0.54		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	12.00	-----	0.46		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	-----	0.41	0.40	I	2,3,7,8-TCDD-37Cl4	0.20	91
1,2,3,6,7,8-HxCDD	1.30	-----	0.48	J			
1,2,3,7,8,9-HxCDD	0.97	-----	0.40	J			
Total HxCDD	18.00	-----	0.42				
1,2,3,4,6,7,8-HpCDF	7.70	-----	0.66		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.64		Equivalence: 2.2 ng/Kg		
Total HpCDF	20.00	-----	0.65		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	20.00	-----	0.73				
Total HpCDD	41.00	-----	0.73				
OCDF	18.00	-----	1.40				
OCDD	170.00	-----	2.00				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
P = Recovery outside target range
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Blank Analysis Results

Lab Sample ID	BLANK-21083	Matrix	Solid
Filename	F90901A_11	Dilution	NA
Total Amount Extracted	20.2 g	Extracted	08/27/2009 18:30
ICAL ID	F90817	Analyzed	09/01/2009 16:35
CCal Filename(s)	F90831B_25 & F90901A_15	Injected By	SMT

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.095		2,3,7,8-TCDF-13C	2.00	78
Total TCDF	ND	-----	0.095		2,3,7,8-TCDD-13C	2.00	83
					1,2,3,7,8-PeCDF-13C	2.00	87
2,3,7,8-TCDD	ND	-----	0.150		2,3,4,7,8-PeCDF-13C	2.00	86
Total TCDD	ND	-----	0.150		1,2,3,7,8-PeCDD-13C	2.00	97
					1,2,3,4,7,8-HxCDF-13C	2.00	84
1,2,3,7,8-PeCDF	ND	-----	0.190		1,2,3,6,7,8-HxCDF-13C	2.00	75
2,3,4,7,8-PeCDF	ND	-----	0.092		2,3,4,6,7,8-HxCDF-13C	2.00	76
Total PeCDF	ND	-----	0.140		1,2,3,7,8,9-HxCDF-13C	2.00	72
					1,2,3,4,7,8-HxCDD-13C	2.00	82
1,2,3,7,8-PeCDD	ND	-----	0.150		1,2,3,6,7,8-HxCDD-13C	2.00	84
Total PeCDD	ND	-----	0.150		1,2,3,4,6,7,8-HpCDF-13C	2.00	69
					1,2,3,4,7,8,9-HpCDF-13C	2.00	60
1,2,3,4,7,8-HxCDF	ND	-----	0.100		1,2,3,4,6,7,8-HpCDD-13C	2.00	73
1,2,3,6,7,8-HxCDF	ND	-----	0.075		OCDD-13C	4.00	46
2,3,4,6,7,8-HxCDF	ND	-----	0.096				
1,2,3,7,8,9-HxCDF	ND	-----	0.140		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.100		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.160		2,3,7,8-TCDD-37Cl4	0.20	85
1,2,3,6,7,8-HxCDD	ND	-----	0.100				
1,2,3,7,8,9-HxCDD	ND	-----	0.120				
Total HxCDD	ND	-----	0.130				
1,2,3,4,6,7,8-HpCDF	ND	-----	0.120		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.170		Equivalence: 0.21 ng/Kg		
Total HpCDF	ND	-----	0.140		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	ND	-----	0.130				
Total HpCDD	ND	-----	0.130				
OCDF	ND	-----	0.390				
OCDD	-----	0.61	0.430	I			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-21084		
Filename	F90901A_14	Matrix	Solid
Total Amount Extracted	22.3 g	Dilution	NA
ICAL ID	F90817	Extracted	08/27/2009 18:30
CCal Filename(s)	F90831B_25 & F90901A_15	Analyzed	09/01/2009 18:52
Method Blank ID	BLANK-21083	Injected By	SMT

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.20	0.20	102	2,3,7,8-TCDF-13C	2.00	82
Total TCDF				2,3,7,8-TCDD-13C	2.00	88
				1,2,3,7,8-PeCDF-13C	2.00	91
2,3,7,8-TCDD	0.20	0.19	96	2,3,4,7,8-PeCDF-13C	2.00	91
Total TCDD				1,2,3,7,8-PeCDD-13C	2.00	104
				1,2,3,4,7,8-HxCDF-13C	2.00	84
1,2,3,7,8-PeCDF	1.00	0.99	99	1,2,3,6,7,8-HxCDF-13C	2.00	78
2,3,4,7,8-PeCDF	1.00	0.95	95	2,3,4,6,7,8-HxCDF-13C	2.00	77
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.00	74
				1,2,3,4,7,8-HxCDD-13C	2.00	85
1,2,3,7,8-PeCDD	1.00	0.87	87	1,2,3,6,7,8-HxCDD-13C	2.00	83
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.00	69
				1,2,3,4,7,8,9-HpCDF-13C	2.00	59
1,2,3,4,7,8-HxCDF	1.00	0.94	94	1,2,3,4,6,7,8-HpCDD-13C	2.00	73
1,2,3,6,7,8-HxCDF	1.00	1.00	100	OCDD-13C	4.00	46
2,3,4,6,7,8-HxCDF	1.00	0.97	97			
1,2,3,7,8,9-HxCDF	1.00	0.97	97	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.00	0.87	87	2,3,7,8-TCDD-37Cl4	0.20	91
1,2,3,6,7,8-HxCDD	1.00	1.00	100			
1,2,3,7,8,9-HxCDD	1.00	0.95	95			
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.00	1.01	101			
1,2,3,4,7,8,9-HpCDF	1.00	0.94	94			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.00	0.91	91			
Total HpCDD						
OCDF	2.00	2.00	100			
OCDD	2.00	2.08	104			

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
P = Recovery outside of target range
X = Background subtracted value
Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

DRAGON
Analytical Laboratory

RCRA CHAIN OF CUSTODY RECORD

2818 Madrona Beach Rd. NW, Olympia, WA 98502
Phone: (360) 866-0543 Fax: (360) 866-0556
Email: DragonLab@comcast.net
Website: dragonlaboratory.com

Page ____ of ____

Samples Collected By: KR
Contact Number: 360 570 1700

Client: PTC
Address: 2612 Yelm Hwy SE Suite B Olympia WA 98501
Phone: 360 5701700
Fax:
Email: robertsk@cspioneer.com
Project Name: East Bay IA Stockpiles
Project Location:
Project Number:
Project P.O.: Credit Card
Contact Person:
DAL Project No.: 070826-01

Matrix Code:
WW = wastewater **GW** = groundwater **S** = soil or solid
SL = sludge **V** = vapor **O** = other

Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Container Type	MtBE/BTEX (EPA 8021b)	Gasoline (NWTPH-Gx)	Diesel (NWTPH-Dx)	Diesel & Oil (NWTPH-Dx)	Fuel Scan (NWTPH-HCID)	VOC's (EPA 8021b)	Organochlorine Pesticides (EPA 8081)	PCB's (EPA 8082)	Volatiles (EPA 8260)	PAH's (EPA 8100 or 8270/8270SIM)	Semi-Volatiles (EPA 8270)	Ignitability (EPA 1010)	Oil and Grease (EPA 1664 HEM)	pH (EPA 9040/9045)	Specific Conductance (EPA 9050)	Paint Filter Test (EPA 9095)	Heavy Metals* (EPA 7000 Series)	Biogenic Gases (EPA 3C)	Natural Attenuation Indicators	Gross Alpha Radioactivity (EPA 900)	Gross Beta Radioactivity (EPA 900)
SP16-Zone2-082109-1	S	082109	800	3 Encore 2 4oz	X	X		X						X							X				
SP16-Zone2-082109-2	S	082109	900	3 Encore 2 4oz	X	X		X						X							X				

Relinquished by (Signature) Date/Time Received by (Signature) Date/Time
Kara Roberts 082109 1012 082109

Relinquished by (Signature) Date/Time Received by (Signature) Date/Time

Sample Disposal Instructions: ☐ DAL Disposal @ $2.50 per Container ☐ Return ☐ Pickup

Turn-Around-Time
☐ Same Day
☐ 24 Hour
☐ 48 Hour
☒ 5 Day Email
☐ 10 Day
☐ Other: ____

***Heavy Metals**: Please circle the desired analytes.

Ag Al (As) Ba Be (Cd) Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni (Pb) Sb Se Tl V Zn - Total
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - Dissolved
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - TCLP

2pc

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090821-01

ANALYTICAL RESULTS FOR THE ANALYSIS OF FUEL IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Diesel Fuel #2 NWTPH-Dx (mg/kg)	Heavy Oil NWTPH-Dx (mg/kg)	Surrogate Recovery 2-FBP (%)	Data Flags
Method Blank	8/24/2009	n/a	nd	nd	100	
SP16-Zone2-082109-1	8/24/2009	91.1	nd	nd	134	
SP16-Zone2-082109-2	8/24/2009	91.5	nd	nd	133	
LCS	8/24/2009	n/a	132%	n/a	n/a	
090824-MS	8/24/2009	n/a	83.8%	n/a	n/a	
090824-MSD	8/24/2009	n/a	101%	n/a	n/a	
SP16-Zone2-082109-1 Dup.	8/24/2009	91.1	nd	nd	122	
Method Reporting Limits			25	100		

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by:

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090821-01

ANALYTICAL RESULTS FOR THE ANALYSIS OF GASOLINE RANGE ORGANICS IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Benzene EPA 8021B (mg/kg)	Toluene EPA 8021B (mg/kg)	Ethylbenzene EPA 8021B (mg/kg)	m&p-Xylene EPA 8021B (mg/kg)	o-Xylene EPA 8021B (mg/kg)	Gasoline NWTPH-Gx (mg/kg)	Surrogate Recovery BFB (%)	Data Flags
Method Blank	8/24/2009	n/a	nd	nd	nd	nd	nd	nd	71.1	
SP16-Zone2-082109-1	8/24/2009	91.1	nd	nd	nd	nd	nd	nd	80.0	
SP16-Zone2-082109-2	8/24/2009	91.5	nd	nd	nd	nd	nd	nd	65.3	
LCS	8/24/2009	n/a	104%	116%	98.9%	91.1%	110%	97.2%	n/a	
090824-MS	8/24/2009	n/a	106%	106%	95.5%	80.6%	96.8%	79.5%	n/a	
090824-MSD	8/24/2009	n/a	107%	104%	90.4%	83.9%	97.0%	108.0%	n/a	
SP16-Zone2-082109-1 Dup.	8/24/2009	91.1	nd	nd	nd	nd	nd	nd	76.1	
Method Reporting Limits			0.05	0.10	0.10	0.10	0.10	5.0		

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.

Comments and Explanations: None

Analyst: T. McCall
Data reviewed by:

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090821-01

ANALYTICAL RESULTS FOR THE ANALYSIS OF HEAVY METALS IN SOIL BY EPA METHOD 6020 A

Sample Identification	Date Analyzed	Percent Solids	Arsenic (As)	Cadmium (Cd)	Lead (Pb)
Chemical Abstract Number (CAS)			7440-38-2	7440-43-9	7439-92-1
Units		(%)	(mg/kg)	(mg/kg)	(mg/kg)
Method Blank	8/24/2009	n/a	nd	nd	nd
SP16-Zone2-082109-1	8/24/2009	91.1	**3.49**	nd	**12.4**
SP16-Zone2-082109-2	8/24/2009	91.5	**3.01**	**0.29**	**40.0**
LCS	8/24/2009	n/a	100%	100%	104%
090824-MS	8/24/2009	n/a	99.3%	97.6%	123%
090824-MSD	8/24/2009	n/a	100%	97.1%	122%
Method Reporting Limits			0.25	0.25	0.25

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
"MI" indicates Matrix Interference
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by:

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090821-01

ANALYTICAL RESULTS FOR THE ANALYSIS OF SEMI-VOLATILE COMPOUNDS IN SOIL BY EPA METHOD 8270

Sample Identification			Blank	SP16-Zone2-082109-1	SP16-Zone2-082109-2	LCS	090823-MS	090823-MSD	SP16-Zone2-082109-2
Percent Solids (%)			n/a	91.1	91.5	n/a	n/a	n/a	91.5
Date Extracted	CAS	MRL	8/21/2009	8/23/2009	8/23/2009	8/23/2009	8/23/2009	8/23/2009	8/23/2009
Date Anlayzed	Number	(mg/kg)	8/21/2009	8/23/2009	8/23/2009	8/23/2009	8/23/2009	8/23/2009	8/23/2009
Benzo(a)anthracene	56-55-3	0.01	nd	**0.05**	**0.14**	106%	107%	108%	**0.14**
Benzo(a)pyrene	50-32-8	0.01	nd	**0.03**	**0.12**	108%	109%	109%	**0.13**
Benzo(b)fluoranthene	205-99-2	0.01	nd	**0.04**	**0.19**	107%	108%	108%	**0.19**
Benzo(k)fluoranthene	207-08-9	0.01	nd	**0.01**	**0.14**	103%	104%	104%	**0.05**
Chrysene	218-01-9	0.01	nd	**0.04**	**0.19**	108%	110%	108%	**0.19**
Dibenzo(a,h)anthracene	53-70-3	0.01	nd	nd	nd	100%	100%	97.6%	nd
Ideno(1,2,3-cd)pyrene	193-39-5	0.01	nd	nd	nd	79.3%	108%	104%	nd
1-Methylnaphthalene	90-12-0	0.01	nd	**0.02**	**0.03**	101%	102%	104%	**0.07**
2-Methylnaphthalene	91-57-6	0.01	nd	**0.03**	**0.06**	109%	110%	112%	**0.03**
Naphthalene	91-20-3	0.01	nd	**0.04**	**0.10**	94.3%	95.4%	97.7%	**0.10**
Surrogate Recovery (%)									
2-Fluorophenol			81.7	82.9	98.8	95.6	105	105	99.5
Phenol-d6			88.2	92.2	106.0	89.3	108	107	107
Nitrobenzene-d5			104	103	112	113	107	105	113
2-Fluorobiphenol			111	106	121	109	103	119.0	121
2,4,6-Tribromophenol			50.1	60.6	75.9	83.5	77.8	80.1	77.5
Terphenyl-d14			131	119	130	123	117	113	125
Data Flags									

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.
Comments and Explanations: None
Analyst: T. McCall
Data reviewed by:

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

See RI Expectations Sent Previously

10110956

Page: of

1304775

Section A Required Client Information:

Company: PTC
Address: 2612 Yelm Hwy SE
Olympia WA 98501
Email To: robertsk@uspioneer.com
Phone: 360 570 1700 Fax:
Requested Due Date/TAT: 5day TAT

Section B Required Project Information:

Report To:
Copy To:
Purchase Order No.:
Project Name: Credit Card
Project Number: East Bay IA Stockpiles

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: WA

Work Order No: 10110956_8290

Section D Required Client Information

Matrix Codes (MATRIX / CODE)

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Y/N	Analysis Test: Dioxin/Furans 8290	Analysis Test: PAH	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		N	N			
1	SP16-Zone2-082109-1	SL	G			082109	800											X	X			
2	SP16-Zone2-082109-2	SL	G			082109	900											X	X			
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

proceed, despite temp exceedance for both analyses

Flexible TAT on 8290 testing

per Kara Roberts 8/24/09 MH

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
5day TAT by Email,	Kara Roberts	082109		Pace	9/2/09	9:18

SAMPLE CONDITIONS

Temp in °C	Received on Ice (Y/N)	Custody Seated Cooler (Y/N)	Samples Intact (Y/N)
15.3	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kara Roberts
SIGNATURE of SAMPLER: Kara Roberts
DATE Signed (MM/DD/YY): 082109

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

www.pacelabs.com

Report Prepared for:

Kara Roberts
Pioneer Technologies Corporation
2612 Yelm Highway SE
Olympia WA 98501

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

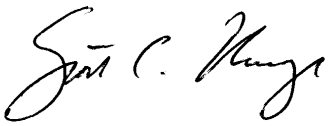
Pace Project #: 10110956
Sample Receipt Date: 08/24/2009
Client Project #: East Bay IA Stockpiles
Client Sub PO #: N/A
State Cert #: C218

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed and prepared by:



Scott Unze, Project Manager
(612) 607-6383
(612) 607-6444 (fax)
scott.unze@pacelabs.com

Report Prepared Date:
September 3, 2009

Report of Laboratory Analysis

The results relate only to the samples included in this report.

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analyses performed on two samples submitted by a representative of Pioneer Technologies Corporation. The samples were analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. Reporting limits were based on signal-to-noise calculations. The samples were received above the recommended temperature range of 0-6 degrees Celsius.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extracts ranged from 46-113%. All of the labeled standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Since the quantification of the native 2,3,7,8-substituted isomers was based on isotope dilution, the data were automatically corrected for variation in recovery and accurate values were obtained.

In some cases, interfering substances impacted the determinations of PCDD or PCDF congeners. The affected values were flagged "I" where incorrect isotope ratios were obtained.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to be free of PCDDs and PCDFs at the reporting limits. These results indicate that the sample processing steps did not contribute significantly to the levels reported for the field samples.

A laboratory spike sample was also prepared with the sample batch using clean sand that had been fortified with native standards. The results show that the spiked native compounds were recovered at 87-104%. These results indicate a high degree of accuracy for these determinations. Matrix spikes were prepared with the sample batch using sample material from a separate project; results from these analyses will be provided upon request.

Appendix A

Sample Management

Pace Analytical

Sample Condition Upon Receipt

Client Name: Pioneer Tech **Project #** 10110956

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 7968 8012 8559

Optional: Proj. Due Date: Proj. Name:

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals Intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____ Temp Blank: Yes ✓ No _____

Thermometer Used 80344042 or 179425 **Type of Ice:** Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 15.3 **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C **Comments:**

Date and initials of person examining contents: 8/24/09 SL

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☑Yes ☐No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☑No ☐N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: SL		
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	☐Yes ☐No ☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ HCl
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	Samp #
Exceptions: VOA,Coliform, TOC, Oil and Grease, WI-DRO (water)	☐Yes ☐No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: NAH **Date:** 8/25/09

NW 8/24/09

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR.

F-L213Rev.00, 05Aug2009

Appendix B

Sample Analysis Summary

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP16-Zone2-082109-1		
Lab Sample ID	10110956001		
Filename	F90902C_14		
Injected By	SMT		
Total Amount Extracted	11.1 g	Matrix	Solid
% Moisture	9.3	Dilution	NA
Dry Weight Extracted	10.0 g	Collected	08/21/2009 08:00
ICAL ID	F90817	Received	08/24/2009 09:18
CCal Filename(s)	F90902C_06 & F90902C_22	Extracted	08/27/2009 18:30
Method Blank ID	BLANK-21083	Analyzed	09/03/2009 01:33

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.89	-----	0.19	J	2,3,7,8-TCDF-13C	2.00	86
Total TCDF	20.00	-----	0.19		2,3,7,8-TCDD-13C	2.00	87
					1,2,3,7,8-PeCDF-13C	2.00	96
2,3,7,8-TCDD	0.41	-----	0.18	J	2,3,4,7,8-PeCDF-13C	2.00	94
Total TCDD	7.80	-----	0.18		1,2,3,7,8-PeCDD-13C	2.00	113
					1,2,3,4,7,8-HxCDF-13C	2.00	84
1,2,3,7,8-PeCDF	-----	0.61	0.22	I	1,2,3,6,7,8-HxCDF-13C	2.00	67
2,3,4,7,8-PeCDF	3.30	-----	0.18	J	2,3,4,6,7,8-HxCDF-13C	2.00	73
Total PeCDF	40.00	-----	0.20		1,2,3,7,8,9-HxCDF-13C	2.00	74
					1,2,3,4,7,8-HxCDD-13C	2.00	91
1,2,3,7,8-PeCDD	0.93	-----	0.29	J	1,2,3,6,7,8-HxCDD-13C	2.00	77
Total PeCDD	14.00	-----	0.29		1,2,3,4,6,7,8-HpCDF-13C	2.00	55
					1,2,3,4,7,8,9-HpCDF-13C	2.00	55
1,2,3,4,7,8-HxCDF	1.50	-----	0.22	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	52
1,2,3,6,7,8-HxCDF	1.70	-----	0.21	J	OCDD-13C	4.00	46
2,3,4,6,7,8-HxCDF	2.40	-----	0.22	J			
1,2,3,7,8,9-HxCDF	-----	0.69	0.32	I	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	26.00	-----	0.24		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	0.90	-----	0.29	J	2,3,7,8-TCDD-37Cl4	0.20	95
1,2,3,6,7,8-HxCDD	5.30	-----	0.33				
1,2,3,7,8,9-HxCDD	2.10	-----	0.31	J			
Total HxCDD	73.00	-----	0.31				
1,2,3,4,6,7,8-HpCDF	31.00	-----	0.48		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	2.10	-----	0.75	J	Equivalence: 9.5 ng/Kg		
Total HpCDF	33.00	-----	0.61		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	380.00	-----	1.40				
Total HpCDD	1400.00	-----	1.40				
OCDF	150.00	-----	0.78				
OCDD	4900.00	-----	0.60				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.
ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP16-Zone2-082109-2		
Lab Sample ID	10110956002		
Filename	F90903A_06		
Injected By	SMT		
Total Amount Extracted	11.0 g	Matrix	Solid
% Moisture	9.5	Dilution	20
Dry Weight Extracted	9.96 g	Collected	08/21/2009 09:00
ICAL ID	F90817	Received	08/24/2009 09:18
CCal Filename(s)	F90902C_22 & F90903A_09	Extracted	08/27/2009 18:30
Method Blank ID	BLANK-21083	Analyzed	09/03/2009 12:29

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	3.2	-----	1.5		2,3,7,8-TCDF-13C	2.00	87
Total TCDF	83.0	-----	1.5		2,3,7,8-TCDD-13C	2.00	92
					1,2,3,7,8-PeCDF-13C	2.00	90
2,3,7,8-TCDD	ND	-----	1.5		2,3,4,7,8-PeCDF-13C	2.00	90
Total TCDD	48.0	-----	1.5		1,2,3,7,8-PeCDD-13C	2.00	103
					1,2,3,4,7,8-HxCDF-13C	2.00	83
1,2,3,7,8-PeCDF	ND	-----	1.8		1,2,3,6,7,8-HxCDF-13C	2.00	73
2,3,4,7,8-PeCDF	18.0	-----	1.2		2,3,4,6,7,8-HxCDF-13C	2.00	72
Total PeCDF	230.0	-----	1.5		1,2,3,7,8,9-HxCDF-13C	2.00	82
					1,2,3,4,7,8-HxCDD-13C	2.00	89
1,2,3,7,8-PeCDD	-----	4.7	1.5	I	1,2,3,6,7,8-HxCDD-13C	2.00	81
Total PeCDD	42.0	-----	1.5		1,2,3,4,6,7,8-HpCDF-13C	2.00	61
					1,2,3,4,7,8,9-HpCDF-13C	2.00	68
1,2,3,4,7,8-HxCDF	-----	6.0	1.6	I	1,2,3,4,6,7,8-HpCDD-13C	2.00	65
1,2,3,6,7,8-HxCDF	-----	5.7	1.3	I	OCDD-13C	4.00	62
2,3,4,6,7,8-HxCDF	7.2	-----	2.1				
1,2,3,7,8,9-HxCDF	3.0	-----	1.6	J	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	230.0	-----	1.6		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	5.1	-----	2.6		2,3,7,8-TCDD-37Cl4	0.20	96
1,2,3,6,7,8-HxCDD	34.0	-----	2.2				
1,2,3,7,8,9-HxCDD	14.0	-----	2.5				
Total HxCDD	470.0	-----	2.4				
1,2,3,4,6,7,8-HpCDF	160.0	-----	4.2		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	9.2	-----	2.8		Equivalence: 51 ng/Kg		
Total HpCDF	550.0	-----	3.5		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	2600.0	-----	1.8				
Total HpCDD	9100.0	-----	1.8				
OCDF	900.0	-----	4.0				
OCDD	32000.0	-----	3.2				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Blank Analysis Results

Lab Sample ID	BLANK-21083	Matrix	Solid
Filename	F90901A_11	Dilution	NA
Total Amount Extracted	20.2 g	Extracted	08/27/2009 18:30
ICAL ID	F90817	Analyzed	09/01/2009 16:35
CCal Filename(s)	F90831B_25 & F90901A_15	Injected By	SMT

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.095		2,3,7,8-TCDF-13C	2.00	78
Total TCDF	ND	-----	0.095		2,3,7,8-TCDD-13C	2.00	83
					1,2,3,7,8-PeCDF-13C	2.00	87
2,3,7,8-TCDD	ND	-----	0.150		2,3,4,7,8-PeCDF-13C	2.00	86
Total TCDD	ND	-----	0.150		1,2,3,7,8-PeCDD-13C	2.00	97
					1,2,3,4,7,8-HxCDF-13C	2.00	84
1,2,3,7,8-PeCDF	ND	-----	0.190		1,2,3,6,7,8-HxCDF-13C	2.00	75
2,3,4,7,8-PeCDF	ND	-----	0.092		2,3,4,6,7,8-HxCDF-13C	2.00	76
Total PeCDF	ND	-----	0.140		1,2,3,7,8,9-HxCDF-13C	2.00	72
					1,2,3,4,7,8-HxCDD-13C	2.00	82
1,2,3,7,8-PeCDD	ND	-----	0.150		1,2,3,6,7,8-HxCDD-13C	2.00	84
Total PeCDD	ND	-----	0.150		1,2,3,4,6,7,8-HpCDF-13C	2.00	69
					1,2,3,4,7,8,9-HpCDF-13C	2.00	60
1,2,3,4,7,8-HxCDF	ND	-----	0.100		1,2,3,4,6,7,8-HpCDD-13C	2.00	73
1,2,3,6,7,8-HxCDF	ND	-----	0.075		OCDD-13C	4.00	46
2,3,4,6,7,8-HxCDF	ND	-----	0.096				
1,2,3,7,8,9-HxCDF	ND	-----	0.140		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.100		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.160		2,3,7,8-TCDD-37Cl4	0.20	85
1,2,3,6,7,8-HxCDD	ND	-----	0.100				
1,2,3,7,8,9-HxCDD	ND	-----	0.120				
Total HxCDD	ND	-----	0.130				
1,2,3,4,6,7,8-HpCDF	ND	-----	0.120		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.170		Equivalence: 0.21 ng/Kg		
Total HpCDF	ND	-----	0.140		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	ND	-----	0.130				
Total HpCDD	ND	-----	0.130				
OCDF	ND	-----	0.390				
OCDD	-----	0.61	0.430	I			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-21084		
Filename	F90901A_14	Matrix	Solid
Total Amount Extracted	22.3 g	Dilution	NA
ICAL ID	F90817	Extracted	08/27/2009 18:30
CCal Filename(s)	F90831B_25 & F90901A_15	Analyzed	09/01/2009 18:52
Method Blank ID	BLANK-21083	Injected By	SMT

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.20	0.20	102	2,3,7,8-TCDF-13C	2.00	82
Total TCDF				2,3,7,8-TCDD-13C	2.00	88
				1,2,3,7,8-PeCDF-13C	2.00	91
2,3,7,8-TCDD	0.20	0.19	96	2,3,4,7,8-PeCDF-13C	2.00	91
Total TCDD				1,2,3,7,8-PeCDD-13C	2.00	104
				1,2,3,4,7,8-HxCDF-13C	2.00	84
1,2,3,7,8-PeCDF	1.00	0.99	99	1,2,3,6,7,8-HxCDF-13C	2.00	78
2,3,4,7,8-PeCDF	1.00	0.95	95	2,3,4,6,7,8-HxCDF-13C	2.00	77
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.00	74
				1,2,3,4,7,8-HxCDD-13C	2.00	85
1,2,3,7,8-PeCDD	1.00	0.87	87	1,2,3,6,7,8-HxCDD-13C	2.00	83
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.00	69
				1,2,3,4,7,8,9-HpCDF-13C	2.00	59
1,2,3,4,7,8-HxCDF	1.00	0.94	94	1,2,3,4,6,7,8-HpCDD-13C	2.00	73
1,2,3,6,7,8-HxCDF	1.00	1.00	100	OCDD-13C	4.00	46
2,3,4,6,7,8-HxCDF	1.00	0.97	97			
1,2,3,7,8,9-HxCDF	1.00	0.97	97	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.00	0.87	87	2,3,7,8-TCDD-37Cl4	0.20	91
1,2,3,6,7,8-HxCDD	1.00	1.00	100			
1,2,3,7,8,9-HxCDD	1.00	0.95	95			
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.00	1.01	101			
1,2,3,4,7,8,9-HpCDF	1.00	0.94	94			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.00	0.91	91			
Total HpCDD						
OCDF	2.00	2.00	100			
OCDD	2.00	2.08	104			

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
P = Recovery outside of target range
X = Background subtracted value
Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

DRAGON
Analytical Laboratory

RCRA CHAIN OF CUSTODY RECORD

2818 Madrona Beach Rd. NW, Olympia, WA 98502
Phone: (360) 866-0543 Fax: (360) 866-0556
Email: DragonLab@comcast.net
Website: dragonlaboratory.com

Samples Collected By: Troy Bussey
Contact Number: _____

Client: PTC
Address: 2612 Yelm Hwy SE, Olympia, WA 98501
Phone: (360) 570-1700
Fax: _____
Email: robertsk@uspioneer.com
Project Name: East Bay IA Stockpiles
Project Location: Port of Olympia
Project Number: _____
Project P.O.: _____
Contact Person: Kara Roberts
DAL Project No.: 090828-01

Matrix Code:
WW = wastewater **GW** = groundwater **S** = soil or solid
SL = sludge **V** = vapor **O** = other

Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Container Type	~~Arom~~/BTEX (EPA 8021b)	Gasoline (NWTPH-Gx)	Diesel (NWTPH-Dx)	Diesel & Oil (NWTPH-Dx)	Fuel Scan (NWTPH-HCID)	VOC's (EPA 8021b)	Organochlorine Pesticides (EPA 8081)	PCB's (EPA 8082)	Volatiles (EPA 8260)	PAH's (EPA 8100 or 8270/8270SIM)	Semi-Volatiles (EPA 8270)	Ignitability (EPA 1010)	Oil and Grease (EPA 1664 HEM)	pH (EPA 9040/9045)	Specific Conductance (EPA 9050)	Paint Filter Test (EPA 9095)	Heavy Metals* (EPA 7000 Series)	Biogenic Gases (EPA 3C)	Natural Attenuation Indicators	Gross Alpha Radioactivity (EPA 900)	Gross Beta Radioactivity (EPA 900)	TCLP LEAD only
SP17_ZONE4_082709	S	8/27/09	1645	3 Encore 2 4-oz	X	X		X						X							X					
SP18_ZONE2_082709	↓	↓	1700	↓	X	X		X						X							X					
SP19_ZONE4_082709	↓	↓	1715	1 4oz																						X
SP17_ZONE4_COMPOSITE	S	8/27/09	1720	1 4oz																						X

Relinquished by (Signature): Troy Bussey — Date/Time: 8/28/09 1230 — Received by (Signature): _____ — Date/Time: _____
Relinquished by (Signature): _____ — Date/Time: _____ — Received by (Signature): _____ — Date/Time: _____

Sample Disposal Instructions: ☐ DAL Disposal @ $2.50 per Container ☐ Return ☐ Pickup

Turn-Around-Time
☐ Same Day
☐ 24 Hour
☐ 48 Hour
~~☒ 5 Day~~
☐ 10 Day
☐ Other: _____

***Heavy Metals**: Please circle the desired analytes.

Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - Total
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - Dissolved
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - TCLP

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090828-01

ANALYTICAL RESULTS FOR THE ANALYSIS OF FUEL IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Diesel Fuel #2 NWTPH-Dx (mg/kg)	Heavy Oil NWTPH-Dx (mg/kg)	Surrogate Recovery 2-FBP (%)	Data Flags
Method Blank	9/2/2009	n/a	nd	nd	111	
SP17-Zone4-082709	9/2/2009	93.1	nd	nd	96.8	
SP18-Zone2-082709	9/2/2009	88.5	nd	nd	134	
LCS	9/2/2009	n/a	112%	n/a	n/a	
090902-MS	9/2/2009	n/a	101%	n/a	n/a	
090902-MSD	9/2/2009	n/a	97.5%	n/a	n/a	
SP17-Zone4-082709 Dup.	9/2/2009	93.1	nd	nd	72.7	
Method Reporting Limits			25	100		

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by:

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090828-01

ANALYTICAL RESULTS FOR THE ANALYSIS OF GASOLINE RANGE ORGANICS IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Benzene EPA 8021B (mg/kg)	Toluene EPA 8021B (mg/kg)	Ethylbenzene EPA 8021B (mg/kg)	m&p-Xylene EPA 8021B (mg/kg)	o-Xylene EPA 8021B (mg/kg)	Gasoline NWTPH-Gx (mg/kg)	Surrogate Recovery BFB (%)	Data Flags
Method Blank	9/2/2009	n/a	nd	nd	nd	nd	nd	nd	74.6	
SP17-Zone4-082709	9/2/2009	93.1	nd	nd	nd	nd	nd	nd	67.7	
SP18-Zone2-082709	9/2/2009	88.5	nd	nd	nd	nd	nd	nd	87.1	
LCS	9/2/2009	n/a	104%	90.9%	96.2%	86.8%	97.1%	95.4%	n/a	
090902-MS	9/2/2009	n/a	91%	98%	80.3%	72.0%	84.0%	105%	n/a	
090902-MSD	9/2/2009	n/a	89.8%	89.5%	87.2%	86.1%	121.0%	93.7%	n/a	
SP17-Zone4-082709 Dup	9/2/2009	93.1	nd	nd	nd	nd	nd	nd		
Method Reporting Limits			0.05	0.10	0.10	0.10	0.10	5.0	109	

WA-DOE-Laboratory Certification No.: C2013

"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.

"n/a" indicates not applicable

Sample results based on dry weight.

Comments and Explanations: None

Analyst: T. McCall
Data reviewed by:

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090828-01

ANALYTICAL RESULTS FOR THE ANALYSIS OF HEAVY METALS IN SOIL BY EPA METHOD 6020 A

Sample Identification	Date Analyzed	Percent Solids	Arsenic (As)	Cadmium (Cd)	Lead (Pb)
Chemical Abstract Number (CAS)			7440-38-2	7440-43-9	7439-92-1
Units		(%)	(mg/kg)	(mg/kg)	(mg/kg)
Method Blank	9/4/2009	n/a	nd	nd	nd
SP17-Zone4-082709	9/4/2009	93.1	**2.56**	nd	**10.1**
SP18-Zone2-082709	9/4/2009	88.5	**2.45**	nd	**14.20**
LCS	9/4/2009	n/a	96.8%	93.0%	96.5%
090904-MS	9/4/2009	n/a	MI	101%	MI
090904-MSD	9/4/2009	n/a	MI	99.0%	MI
SP18-Zone2-082709 Dup.	9/4/2009	88.5	**2.50**	nd	**14.20**
Method Reporting Limits			0.25	0.25	0.25

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
"MI" indicates Matrix Interference
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by:

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090828-01

ANALYTICAL RESULTS FOR THE ANALYSIS OF SEMI-VOLATILE COMPOUNDS IN SOIL BY EPA METHOD 8270

Sample Identification			Blank	SP17-Zone4-082709	SP18-Zone2-082709	LCS	090904-MS	090904-MSD	SP17-Zone4-082709 Dup.
Percent Solids (%)			n/a	93.1	88.5	n/a	n/a	n/a	93.1
Date Extracted	CAS	MRL	9/4/2009	9/4/2009	9/4/2009	9/4/2009	9/4/2009	9/4/2009	9/4/2009
Date Anlayzed	Number	(mg/kg)	9/4/2009	9/4/2009	9/4/2009	9/4/2009	9/4/2009	9/4/2009	9/4/2009
Benzo(a)anthracene	56-55-3	0.01	nd	**0.02**	**0.52**	137%	117%	118%	**0.02**
Benzo(a)pyrene	50-32-8	0.01	nd	nd	**0.31**	n/a	n/a	n/a	nd
Benzo(b)fluoranthene	205-99-2	0.01	nd	nd	**0.34**	n/a	n/a	n/a	nd
Benzo(k)fluoranthene	207-08-9	0.01	nd	nd	**0.16**	n/a	n/a	n/a	nd
Chrysene	218-01-9	0.01	nd	**0.01**	**0.57**	130%	113%	111%	**0.01**
Dibenzo(a,h)anthracene	53-70-3	0.01	nd	nd	nd	n/a	n/a	n/a	nd
Ideno(1,2,3-cd)pyrene	193-39-5	0.01	nd	nd	**0.02**	71.4%	67.1%	66.5%	nd
1-Methylnaphthalene	90-12-0	0.01	nd	nd	**0.28**	n/a	n/a	n/a	nd
2-Methylnaphthalene	91-57-6	0.01	nd	nd	**0.2**	n/a	n/a	n/a	nd
Naphthalene	91-20-3	0.01	nd	**0.01**	**0.16**	n/a	n/a	n/a	nd
Surrogate Recovery (%)									
2-Fluorophenol			98.8	39.4	45.3	53.0	81.0	81.1	40.7
Phenol-d6			93.6	59.4	77.9	89.3	104	105	59.6
Nitrobenzene-d5			111	106	112	113	104	103	106
2-Fluorobiphenol			114	96.7	130	117	117	110	103
2,4,6-Tribromophenol			51.7	53.2	78.2	93.1	89.1	88.1	56.3
Terphenyl-d14			128	124	150	151	135	133	126
Data Flags									

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.
Comments and Explanations: None
Analyst: T. McCall
Data reviewed by:

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpile

DAL Number: 090828-01

QUALITY CONTROL RESULTS FOR THE ANALYSIS OF TCLP HEAVY METALS IN SOIL BY EPA METHOD 1311 AND EPA METHOD 6020 A

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	Method Blank
Percent Solids	n/a
No. of Extractions	1
Type of Extraction	Rotary
Extraction Fluid	#1
Date Extracted	9/2/2009

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	LCS
Percent Solids	n/a
No. of Extractions	1
Type of Extraction	Rotary
Extraction Fluid	#1
Date Extracted	9/2/2009

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	SP17-ZONE4-Composite MS
Percent Solids	n/a
No. of Extractions	1
Type of Extraction	Rotary
Extraction Fluid	#1
Date Extracted	9/2/2009

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	SP17-ZONE4-Composite
Percent Solids	93.7
No. of Extractions	1
Type of Extraction	Rotary
Extraction Fluid	#1
Date Extracted	9/2/2009

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	SP17-ZONE4-Composite Dup.
Percent Solids	93.7
No. of Extractions	1
Type of Extraction	Rotary
Extraction Fluid	#1
Date Extracted	9/2/2009

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	SP17-ZONE4-Composite MSD
Percent Solids	n/a
No. of Extractions	1
Type of Extraction	Rotary
Extraction Fluid	#1
Date Extracted	9/2/2009

Sample Preparation Information for

Sample Identification	SP19-ZONE4-082709
Percent Solids	87.9
No. of Extractions	1
Type of Extraction	Rotary
Extraction Fluid	#1
Date Extracted	9/2/2009

Comments and Explanations: None

Analyst: T. McCall
Data reviewed by: R. Lewis

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpile

DAL Number: 090828-01

ANALYTICAL RESULTS FOR THE ANALYSIS OF TCLP HEAVY METALS IN SOIL BY EPA METHOD 1311 AND EPA METHOD 6020 A

Sample Identification	Date Analyzed	Lead (Pb)
Chemical Abstract Number (CAS)		7439-92-1
Units		(mg/L)
Method Blank	9/4/2009	nd
SP17-ZONE4-Composite	9/4/2009	nd
SP19-ZONE4-082709	9/4/2009	nd
LCS	9/4/2009	110.0%
090904-MS	9/4/2009	122%
090904-MSD	9/4/2009	118.0%
SP17-ZONE4-082709 Dup.	9/4/2009	nd
Method Reporting Limits		0.25

WA-DOE-Laboratory Certification No.: C2013

"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.

"n/a" indicates not applicable
"MI" indicates Matrix Interference
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by:

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

1011483

Report No.: 1011483_8290

Page: of

1269218

Section A Required Client Information:

Company: Pioneer Technologies
Address: 2612 Yelm Hwy SE
Oly, WA 98501
Email To: robertsk@uspioneer.com
Phone: 360) 570-1700 Fax:
Requested Due Date/TAT: 5-Day

Section B Required Project Information:

Report To: Kara Roberts
Copy To: Troy Bussey
Purchase Order No.: Credit Card
Project Name: East Bay IA Stockpiles
Project Number:

Section C Invoice Information:

Attention: Same
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: Scott Unze
Pace Profile #:

REGULATORY AGENCY: NPDES / GROUND WATER / DRINKING WATER / UST / RCRA / X OTHER

Site Location STATE: WA

Section D Required Client Information

Matrix Codes MATRIX / CODE: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Tissue TS, Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N): N, N

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test	Dioxins/Furans 8290	PAHs 8270	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SP17_Zone 4_082709	SL	G	8/27/09	1645			9°F	1	X									X	X		001
2	SP18_Zone 2_082709	↓	↓	↓	1700			↓	1	X									X	X		002
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
5-Day TAT by Email	Troy Bussey	8/28/09	1230	[signature] Pace MN	8-31-09	0910	1.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE [signature]

PRINT Name of SAMPLER: Troy Bussey

SIGNATURE of SAMPLER:

DATE Signed (MM/DD/YY): 8/28/09

3

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

www.pacelabs.com

Report Prepared for:

Kara Roberts
Pioneer Technologies Corporation
2612 Yelm Highway SE
Olympia WA 98501

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

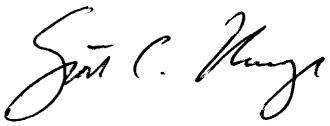
Pace Project #: 10111483
Sample Receipt Date: 08/31/2009
Client Project #: East Bay IA Stockpiles
Client Sub PO #: N/A
State Cert #: C218

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed and prepared by:



Scott Unze, Project Manager
(612) 607-6383
(612) 607-6444 (fax)
scott.unze@pacelabs.com

Report Prepared Date:
September 8, 2009

Report of Laboratory Analysis

The results relate only to the samples included in this report.

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analyses performed on two samples submitted by a representative of Pioneer Technologies Corporation. The samples were analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. Reporting limits were based on signal-to-noise calculations. The samples were received above the recommended temperature range of 0-6 degrees Celsius.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extracts ranged from 55-110%. All of the labeled standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Since the quantification of the native 2,3,7,8-substituted isomers was based on isotope dilution, the data were automatically corrected for variation in recovery and accurate values were obtained.

In some cases, interfering substances impacted the determinations of PCDD or PCDF congeners. The affected values were flagged "I" where incorrect isotope ratios were obtained, or "E" where polychlorinated diphenyl ethers were present.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to be free of PCDDs and PCDFs at the reporting limits, with the exception of a trace level of HpCDD. This was below the calibration range of the method. The HpCDD levels reported for the field samples were higher than the HpCDD level in the blank by three orders of magnitude. These results indicate that the sample processing steps did not contribute significantly to the levels reported for the field samples.

A laboratory spike sample was also prepared with the sample batch using clean sand that had been fortified with native standards. The results show that the spiked native compounds were recovered at 92-110%. These results indicate a high degree of accuracy for these determinations. Matrix spikes were prepared with the sample batch using sample material from a separate project; results from these analyses will be provided upon request.

Appendix A

Sample Management

Sample Condition Upon Receipt

Pace Analytical

Client Name: Pioneer Technologies **Project #** 10111483

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other ______

Tracking #: 7915-0475-6553

Custody Seal on Cooler/Box Present: ☑ yes ☐ no **Seals intact:** ☑ yes ☐ no

Optional
Proj. Due Date:
Proj. Name:

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other ______ **Temp Blank:** Yes ______ **No** ✓

Thermometer Used 80344042 or (179425) **Type of Ice:** (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 16.0 **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: [initials] 8-31-09

				Comments:
Chain of Custody Present:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes	☐No	☑N/A	6.
Rush Turn Around Time Requested:	☑Yes	☐No	☐N/A	7. 5 day
Sufficient Volume:	☑Yes	☐No	☐N/A	8.
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☑Yes	☐No	☐N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11.
Sample Labels match COC:	☑Yes	☐No	☐N/A	12.
-Includes date/time/ID/Analysis Matrix: SL				
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	☐Yes	☐No	☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ HCl
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☐No	☑N/A	Samp #
Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water)	☐Yes	☑No		Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes	☐No	☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	15.
Trip Blank Present:	☐Yes	☐No	☑N/A	16.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if purchased): ______				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Kara Date/Time: 08/31/09

Comments/ Resolution:

Waived temp req.

Project Manager Review: [signature] **Date:** 08/31/09

New 8/31/09 Sh

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

F-L213Rev.00, 05Aug2009

1700 Elm Street SE, Suite 200, Minneapolis, MN 55414

Appendix B

Sample Analysis Summary

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP17-ZONE4-082709		
Lab Sample ID	10111483001		
Filename	F90905B_13		
Injected By	BAL		
Total Amount Extracted	11.4 g	Matrix	Solid
% Moisture	9.6	Dilution	NA
Dry Weight Extracted	10.3 g	Collected	08/27/2009 16:45
ICAL ID	F90817	Received	08/31/2009 09:10
CCal Filename(s)	F90905B_01 & F90905B_17	Extracted	09/02/2009 17:00
Method Blank ID	BLANK-20963	Analyzed	09/06/2009 00:11

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	-----	0.46	0.19	I	2,3,7,8-TCDF-13C	2.00	87
Total TCDF	17.00	-----	0.19		2,3,7,8-TCDD-13C	2.00	91
					1,2,3,7,8-PeCDF-13C	2.00	95
2,3,7,8-TCDD	ND	-----	0.30		2,3,4,7,8-PeCDF-13C	2.00	94
Total TCDD	25.00	-----	0.30		1,2,3,7,8-PeCDD-13C	2.00	109
					1,2,3,4,7,8-HxCDF-13C	2.00	88
1,2,3,7,8-PeCDF	0.66	-----	0.27	J	1,2,3,6,7,8-HxCDF-13C	2.00	84
2,3,4,7,8-PeCDF	5.40	-----	0.32		2,3,4,6,7,8-HxCDF-13C	2.00	83
Total PeCDF	83.00	-----	0.29		1,2,3,7,8,9-HxCDF-13C	2.00	83
					1,2,3,4,7,8-HxCDD-13C	2.00	95
1,2,3,7,8-PeCDD	0.51	-----	0.48	J	1,2,3,6,7,8-HxCDD-13C	2.00	88
Total PeCDD	31.00	-----	0.48		1,2,3,4,6,7,8-HpCDF-13C	2.00	73
					1,2,3,4,7,8,9-HpCDF-13C	2.00	67
1,2,3,4,7,8-HxCDF	-----	25.00	0.31	E	1,2,3,4,6,7,8-HpCDD-13C	2.00	78
1,2,3,6,7,8-HxCDF	3.50	-----	0.42	J	OCDD-13C	4.00	55
2,3,4,6,7,8-HxCDF	-----	1.90	0.23	I			
1,2,3,7,8,9-HxCDF	4.00	-----	0.30	J	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	60.00	-----	0.32		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	-----	0.46	0.32	I	2,3,7,8-TCDD-37Cl4	0.20	97
1,2,3,6,7,8-HxCDD	7.90	-----	0.29				
1,2,3,7,8,9-HxCDD	1.90	-----	0.28	J			
Total HxCDD	96.00	-----	0.30				
1,2,3,4,6,7,8-HpCDF	150.00	-----	0.69		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	15.00	-----	1.10		Equivalence: 9.8 ng/Kg		
Total HpCDF	600.00	-----	0.87		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	310.00	-----	0.32				
Total HpCDD	530.00	-----	0.32				
OCDF	780.00	-----	0.61				
OCDD	2700.00	-----	0.87				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
E = PCDE Interference
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP18-ZONE2-082709		
Lab Sample ID	10111483002		
Filename	F90905B_14		
Injected By	BAL		
Total Amount Extracted	11.4 g	Matrix	Solid
% Moisture	11.7	Dilution	NA
Dry Weight Extracted	10.1 g	Collected	08/27/2009 17:00
ICAL ID	F90817	Received	08/31/2009 09:10
CCal Filename(s)	F90905B_01 & F90905B_17	Extracted	09/02/2009 17:00
Method Blank ID	BLANK-20963	Analyzed	09/06/2009 00:58

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	1.4	-----	0.18		2,3,7,8-TCDF-13C	2.00	88
Total TCDF	25.0	-----	0.18		2,3,7,8-TCDD-13C	2.00	90
					1,2,3,7,8-PeCDF-13C	2.00	96
2,3,7,8-TCDD	ND	-----	0.25		2,3,4,7,8-PeCDF-13C	2.00	96
Total TCDD	12.0	-----	0.25		1,2,3,7,8-PeCDD-13C	2.00	110
					1,2,3,4,7,8-HxCDF-13C	2.00	86
1,2,3,7,8-PeCDF	-----	0.74	0.62	I	1,2,3,6,7,8-HxCDF-13C	2.00	76
2,3,4,7,8-PeCDF	2.1	-----	0.25	J	2,3,4,6,7,8-HxCDF-13C	2.00	77
Total PeCDF	26.0	-----	0.44		1,2,3,7,8,9-HxCDF-13C	2.00	83
					1,2,3,4,7,8-HxCDD-13C	2.00	89
1,2,3,7,8-PeCDD	1.2	-----	0.39	J	1,2,3,6,7,8-HxCDD-13C	2.00	83
Total PeCDD	21.0	-----	0.39		1,2,3,4,6,7,8-HpCDF-13C	2.00	71
					1,2,3,4,7,8,9-HpCDF-13C	2.00	69
1,2,3,4,7,8-HxCDF	-----	2.10	0.25	I	1,2,3,4,6,7,8-HpCDD-13C	2.00	77
1,2,3,6,7,8-HxCDF	1.4	-----	0.19	J	OCDD-13C	4.00	58
2,3,4,6,7,8-HxCDF	1.7	-----	0.22	J			
1,2,3,7,8,9-HxCDF	-----	0.31	0.22	I	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	20.0	-----	0.22		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	-----	0.96	0.35	I	2,3,7,8-TCDD-37Cl4	0.20	95
1,2,3,6,7,8-HxCDD	3.6	-----	0.31	J			
1,2,3,7,8,9-HxCDD	2.1	-----	0.30	J			
Total HxCDD	41.0	-----	0.32				
1,2,3,4,6,7,8-HpCDF	30.0	-----	0.27		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	1.4	-----	0.41	J	Equivalence: 4.5 ng/Kg		
Total HpCDF	32.0	-----	0.34		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	87.0	-----	0.60				
Total HpCDD	210.0	-----	0.60				
OCDF	83.0	-----	0.39				
OCDD	860.0	-----	0.35				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.
ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Blank Analysis Results

Lab Sample ID	BLANK-20963	Matrix	Solid
Filename	F90905B_09	Dilution	NA
Total Amount Extracted	20.5 g	Extracted	09/02/2009 17:00
ICAL ID	F90817	Analyzed	09/05/2009 21:06
CCal Filename(s)	F90905B_01 & F90905B_17	Injected By	BAL

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.043		2,3,7,8-TCDF-13C	2.00	74
Total TCDF	ND	-----	0.043		2,3,7,8-TCDD-13C	2.00	80
					1,2,3,7,8-PeCDF-13C	2.00	85
2,3,7,8-TCDD	ND	-----	0.070		2,3,4,7,8-PeCDF-13C	2.00	88
Total TCDD	ND	-----	0.070		1,2,3,7,8-PeCDD-13C	2.00	100
					1,2,3,4,7,8-HxCDF-13C	2.00	75
1,2,3,7,8-PeCDF	ND	-----	0.064		1,2,3,6,7,8-HxCDF-13C	2.00	74
2,3,4,7,8-PeCDF	ND	-----	0.053		2,3,4,6,7,8-HxCDF-13C	2.00	73
Total PeCDF	ND	-----	0.058		1,2,3,7,8,9-HxCDF-13C	2.00	76
					1,2,3,4,7,8-HxCDD-13C	2.00	79
1,2,3,7,8-PeCDD	ND	-----	0.064		1,2,3,6,7,8-HxCDD-13C	2.00	83
Total PeCDD	ND	-----	0.064		1,2,3,4,6,7,8-HpCDF-13C	2.00	67
					1,2,3,4,7,8,9-HpCDF-13C	2.00	65
1,2,3,4,7,8-HxCDF	ND	-----	0.045		1,2,3,4,6,7,8-HpCDD-13C	2.00	75
1,2,3,6,7,8-HxCDF	ND	-----	0.051		OCDD-13C	4.00	54
2,3,4,6,7,8-HxCDF	ND	-----	0.034				
1,2,3,7,8,9-HxCDF	ND	-----	0.050		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.045		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.059		2,3,7,8-TCDD-37Cl4	0.20	83
1,2,3,6,7,8-HxCDD	ND	-----	0.052				
1,2,3,7,8,9-HxCDD	ND	-----	0.046				
Total HxCDD	ND	-----	0.052				
1,2,3,4,6,7,8-HpCDF	ND	-----	0.066		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.075		Equivalence: 0.096 ng/Kg		
Total HpCDF	ND	-----	0.071		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	ND	-----	0.084				
Total HpCDD	0.12	-----	0.084	J			
OCDF	ND	-----	0.110				
OCDD	-----	0.56	0.140	I			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-20964		
Filename	F90905B_02	Matrix	Solid
Total Amount Extracted	20.3 g	Dilution	NA
ICAL ID	F90817	Extracted	09/02/2009 17:00
CCal Filename(s)	F90905B_01 & F90905B_17	Analyzed	09/05/2009 15:45
Method Blank ID	LCS-20964	Injected By	BAL

Native Isomers	**Qs** (ng)	**Qm** (ng)	% Rec.	**Internal Standards**	**ng's Added**	**Percent Recovery**
2,3,7,8-TCDF	0.20	0.20	100	2,3,7,8-TCDF-13C	2.00	80
Total TCDF				2,3,7,8-TCDD-13C	2.00	85
				1,2,3,7,8-PeCDF-13C	2.00	89
2,3,7,8-TCDD	0.20	0.20	98	2,3,4,7,8-PeCDF-13C	2.00	91
Total TCDD				1,2,3,7,8-PeCDD-13C	2.00	104
				1,2,3,4,7,8-HxCDF-13C	2.00	84
1,2,3,7,8-PeCDF	1.00	1.00	100	1,2,3,6,7,8-HxCDF-13C	2.00	76
2,3,4,7,8-PeCDF	1.00	0.95	95	2,3,4,6,7,8-HxCDF-13C	2.00	77
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.00	81
				1,2,3,4,7,8-HxCDD-13C	2.00	91
1,2,3,7,8-PeCDD	1.00	0.92	92	1,2,3,6,7,8-HxCDD-13C	2.00	84
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.00	73
				1,2,3,4,7,8,9-HpCDF-13C	2.00	71
1,2,3,4,7,8-HxCDF	1.00	0.95	95	1,2,3,4,6,7,8-HpCDD-13C	2.00	80
1,2,3,6,7,8-HxCDF	1.00	1.05	105	OCDD-13C	4.00	59
2,3,4,6,7,8-HxCDF	1.00	1.00	100			
1,2,3,7,8,9-HxCDF	1.00	1.00	100	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.00	0.94	94	2,3,7,8-TCDD-37Cl4	0.20	88
1,2,3,6,7,8-HxCDD	1.00	0.98	98			
1,2,3,7,8,9-HxCDD	1.00	0.95	95			
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.00	1.10	110			
1,2,3,4,7,8,9-HpCDF	1.00	1.03	103			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.00	0.95	95			
Total HpCDD						
OCDF	2.00	1.97	98			
OCDD	2.00	2.17	109			

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
P = Recovery outside of target range
X = Background subtracted value
Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

DRAGON
Analytical Laboratory

RCRA CHAIN OF CUSTODY RECORD

2818 Madrona Beach Rd. NW, Olympia, WA 98502
Phone: (360) 866-0543 Fax: (360) 866-0556
Email: DragonLab@comcast.net
Website: dragonlaboratory.com

Samples Collected By: MF
Contact Number: 360-570-1700

Client: PTC
Address: 2612 Yelm Hwy SE Olympia, WA 98501
Phone: 360-570-1700
Fax:
Email: robertskdws@pioneer.com
Project Name: East Bay IA Stockpiles
Project Location:
Project Number:
Project P.O.: Credit Card
Contact Person:
DAL Project No.: 090904-02

Matrix Code:
WW = wastewater **GW** = groundwater **S** = soil or solid
SL = sludge **V** = vapor **O** = other

Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Container Type	MTBE/BTEX (EPA 8021b)	Gasoline (NWTPH-Gx)	Diesel (NWTPH-Dx)	Diesel & Oil (NWTPH-Dx)	Fuel Scan (NWTPH-HCID)	VOC's (EPA 8021b)	Organochlorine Pesticides (EPA 8081)	PCB's (EPA 8082)	Volatiles (EPA 8260)	PAH's (EPA 8100 or 8270/8270SIM)	Semi-Volatiles (EPA 8270)	Ignitability (EPA 1010)	Oil and Grease (EPA 1664 HEM)	pH (EPA 9040/9045)	Specific Conductance (EPA 9050)	Paint Filter Test (EPA 9095)	Heavy Metals* (EPA 7000 Series)	Biogenic Gases (EPA 3C)	Natural Attenuation Indicators	Gross Alpha Radioactivity (EPA 900)	Gross Beta Radioactivity (EPA 900)
SP20-Zone3-090409	S	09/04/09	1015	3 encore 2 40z	X	X		X						X							X				

Relinquished by (Signature) Date/Time: Michelle Finn 09/04/09
Received by (Signature) Date/Time: 9/4/09 1052
Relinquished by (Signature) Date/Time:
Received by (Signature) Date/Time:

Sample Disposal Instructions: ☐ DAL Disposal @ $2.50 per Container ☐ Return ☐ Pickup

Turn-Around-Time
☐ Same Day
☐ 24 Hour
☐ 48 Hour
~~☐ 5 Day~~ email
☐ 10 Day
☐ Other:

***Heavy Metals**: Please circle the desired analytes.

Ag Al (As) Ba Be (Cd) Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni (Pb) Sb Se Tl V Zn - Total
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - Dissolved
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - TCLP

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles
ADD ON

DAL Number: 090904-02

ANALYTICAL RESULTS FOR THE ANALYSIS OF PCB's IN SOIL BY EPA METHOD 8082

Sample Identification	Date Analyzed	Percent Solids (%)	Aroclor 1016 (mg/kg)	Aroclor 1221 (mg/kg)	Aroclor 1232 (mg/kg)	Aroclor 1242 (mg/kg)	Aroclor 1248 (mg/kg)	Aroclor 1254 (mg/kg)	Aroclor 1260 (mg/kg)	Surrogate Recovery TCMX (%)	Surrogate Recovery DCBP (%)	Data Flags
Method Blank	9/21/2009	n/a	nd	nd	nd	nd	nd	nd	nd	104	75.5	
SP20-ZONE3-090409	9/21/2009	95.1	nd	nd	nd	nd	nd	nd	nd	106	72.5	
LCS	9/21/2009	n/a	102%	n/a	n/a	n/a	n/a	n/a	82.9%	103	68.4	
090908-MS	9/21/2009	n/a	99%	n/a	n/a	n/a	n/a	n/a	103%	108	80.1	
090908-MSD	9/21/2009	n/a	99%	n/a	n/a	n/a	n/a	n/a	81.4%	134	133	
SP20-ZONE3-090409 Dup.	9/21/2009	95.1	nd	nd	nd	nd	nd	nd	nd	128	135	
Method Reporting Limits			0.05	0.05	0.05	0.05	0.05	0.05	0.05			

WA-DOE-Laboratory Certification No.: C2013

"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.

"n/a" indicates not applicable

All results based on dry weight.

Comments and Explanations: None

Analyst: T. McCall
Data reviewed by: R. Lewis

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
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Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090904-02

ANALYTICAL RESULTS FOR THE ANALYSIS OF FUEL IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Diesel Fuel #2 NWTPH-Dx (mg/kg)	Heavy Oil NWTPH-Dx (mg/kg)	Surrogate Recovery 2-FBP (%)	Data Flags
Method Blank	9/8/2009	n/a	nd	nd	84.7	
SP20-ZONE3-090409	9/8/2009	95.1	nd	nd	89.7	
LCS	9/8/2009	n/a	116%	n/a	n/a	
090908-MS	9/8/2009	n/a	108%	n/a	n/a	
090908-MSD	9/8/2009	n/a	90.4%	n/a	n/a	
Method Reporting Limits			25	100		

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by:

DRAGON ANALYTICAL LABORATORY

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Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090904-02

ANALYTICAL RESULTS FOR THE ANALYSIS OF GASOLINE RANGE ORGANICS IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Benzene EPA 8021B (mg/kg)	Toluene EPA 8021B (mg/kg)	Ethylbenzene EPA 8021B (mg/kg)	m&p-Xylene EPA 8021B (mg/kg)	o-Xylene EPA 8021B (mg/kg)	Gasoline NWTPH-Gx (mg/kg)	Surrogate Recovery BFB (%)	Data Flags
Method Blank	9/2/2009	n/a	nd	nd	nd	nd	nd	nd	76.7	
SP20-ZONE3-090409	9/2/2009	95.1	nd	nd	nd	nd	nd	nd	71.4	
LCS	9/2/2009	n/a	95%	104%	115%	83.4%	93.1%	84.8%	n/a	
090908-MS	9/2/2009	n/a	104%	101%	73.5%	74.8%	87.9%	92.7%	n/a	
090908-MSD	9/2/2009	n/a	89.8%	89.5%	87.2%	86.1%	121%	89.3%	n/a	
SP20-ZONE3-090409 Dup.	9/2/2009	95.1	nd	nd	nd	nd	nd	nd	76.9	
Method Reporting Limits			0.05	0.10	0.10	0.10	0.10	5.0	109	

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.

Comments and Explanations: None

Analyst: T. McCall
Data reviewed by:

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
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Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090904-02

ANALYTICAL RESULTS FOR THE ANALYSIS OF HEAVY METALS IN SOIL BY EPA METHOD 6020 A

Sample Identification	Date Analyzed	Percent Solids	Arsenic (As)	Cadmium (Cd)	Lead (Pb)
Chemical Abstract Number (CAS)			7440-38-2	7440-43-9	7439-92-1
Units		(%)	(mg/kg)	(mg/kg)	(mg/kg)
Method Blank	9/10/2009	n/a	nd	nd	nd
SP20-ZONE3-090409	9/10/2009	95.1	**3.76**	nd	**3.96**
LCS	9/10/2009	n/a	113%	105%	107%
090908-MS	9/10/2009	n/a	DO	DO	DO
090908-MSD	9/10/2009	n/a	DO	DO	DO
SP20-ZONE3-090409 Dup.	9/10/2009	95.1	**3.54**	nd	**3.81**
Method Reporting Limits			0.25	0.25	0.25

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
"MI" indicates Matrix Interference
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by:

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
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Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090904-02

ANALYTICAL RESULTS FOR THE ANALYSIS OF SEMI-VOLATILE COMPOUNDS IN SOIL BY EPA METHOD 8270

Sample Identification			Blank	SP20-Zone3-090409	LCS	090904-MS	090904-MSD
Percent Solids (%)			n/a	93.1	n/a	n/a	n/a
Date Extracted	CAS	MRL	9/4/2009	9/4/2009	9/4/2009	9/4/2009	9/4/2009
Date Anlayzed	Number	(mg/kg)	9/4/2009	9/4/2009	9/4/2009	9/4/2009	9/4/2009
Benzo(a)anthracene	56-55-3	0.01	nd	nd	137%	117%	118%
Benzo(a)pyrene	50-32-8	0.01	nd	nd	n/a	n/a	n/a
Benzo(b)fluoranthene	205-99-2	0.01	nd	nd	n/a	n/a	n/a
Benzo(k)fluoranthene	207-08-9	0.01	nd	nd	n/a	n/a	n/a
Chrysene	218-01-9	0.01	nd	nd	130%	113%	111%
Dibenzo(a,h)anthracene	53-70-3	0.01	nd	nd	n/a	n/a	n/a
Ideno(1,2,3-cd)pyrene	193-39-5	0.01	nd	nd	71.4%	67.1%	66.5%
1-Methylnaphthalene	90-12-0	0.01	nd	nd	n/a	n/a	n/a
2-Methylnaphthalene	91-57-6	0.01	nd	nd	n/a	n/a	n/a
Naphthalene	91-20-3	0.01	nd	nd	n/a	n/a	n/a
Surrogate Recovery (%)							
2-Fluorophenol			98.8	88.9	53.0	81.0	81.1
Phenol-d6			93.6	97.7	89.3	104	105
Nitrobenzene-d5			111	113	113	104	103
2-Fluorobiphenol			114	106.0	117	117	110
2,4,6-Tribromophenol			51.7	60.6	93.1	89.1	88.1
Terphenyl-d14			128	138	151	135	133
Data Flags							

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.
Comments and Explanations: None
Analyst: T. McCall

Data reviewed by:

1158

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

10/1/2009

Page: of

1269209

Section A Required Client Information:

Company: Pioneer Tech.
Address: 2612 Yelm Hwy SE Olympia WA 98501
Email To: roberts@pioneer.com
Phone: 570.1700 Fax:
Requested Due Date/TAT: 5-Day

Section B Required Project Information:

Report To: Kara Roberts
Copy To: Troy Russell
Purchase Order No.: Credit card
Project Name: East Bay IA Stockpiles
Project Number:

Section C Invoice Information:

Attention: Same
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: Scott
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☒ OTHER

Site Location STATE: WA

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Dioxins/Furans 8290	PAHs 8270C	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SP20-Zone 3-090409	SL	G	9/04/09	1015				1	X									X	X		001
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

Requested Analysis Filtered (Y/N)

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
5-Day TAT by email	Melody Feden / PTC	09/04/09		Matt Jing / Pace	9-5-09	11:00	4.6	X	Y	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Melody Feden

SIGNATURE of SAMPLER: Melody Feden DATE Signed (MM/DD/YY): 09/04/09

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15 May 2007

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Pace Analytical™
www.pacelabs.com

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

Report Prepared for:

Troy Bussey
Pioneer Technologies Corporation
2612 Yelm Highway S.E.
Suite B
Olympia WA 98501-4826

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

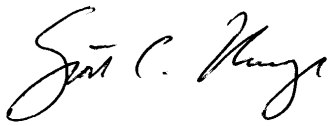
Pace Project #: 10112009
Sample Receipt Date: 09/05/2009
Client Project #: East Bay IA Stockpiles
Client Sub PO #: N/A
State Cert #: C218

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed and prepared by:



Scott Unze, Project Manager
(612) 607-6383
(612) 607-6444 (fax)
scott.unze@pacelabs.com

ACCREDITED IN ACCORDANCE WITH nelac

Report of Laboratory Analysis

Report Prepared Date:
September 17, 2009

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analysis performed on one sample submitted by a representative of Pioneer Technologies Corporation. The sample was analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. The reporting limits were based on signal-to-noise calculations.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extract ranged from 57-88%. All of the labeled standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Since the quantification of the native 2,3,7,8-substituted isomers was based on isotope dilution, the data were automatically corrected for variation in recovery and accurate values were obtained.

In some cases, interfering substances impacted the determinations of PCDD or PCDF congeners. The affected values were flagged "I" where incorrect isotope ratios were obtained.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to contain trace levels of selected congeners. These were below the calibration range of the method. Sample levels similar to the corresponding blank levels were flagged "B" on the results table and may be, at least partially, attributed to the background. It should be noted that levels less than ten times the background are not generally considered to be statistically different from the background.

A laboratory spike sample was also prepared with the sample batch using clean sand that had been fortified with native standard materials. The results show that the spiked native compounds were recovered at 90-110%. These results indicate a high degree of accuracy for these determinations. Matrix spikes were prepared with the sample batch using sample material from a separate project; results from these analyses will be provided upon request.

Appendix A

Sample Management

Sample Condition Upon Receipt

Pace Analytical

Client Name: Pioneer Tech - WA **Project #** 10112009

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 8694 3427 5209

Optional: Proj. Due Date: Proj. Name:

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals Intact: ☒ yes ☐ no

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other _____ Temp Blank: Yes ☒ No ☐

Thermometer Used 80344042 or 179425 **Type of Ice:** (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 4.6° **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C **Comments:**

Date and initials of person examining contents: MI 9-5-09

Chain of Custody Present:	☒Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☒Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☒No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☒No ☐N/A	7.
Sufficient Volume:	☒Yes ☐No ☐N/A	8.
Correct Containers Used:	☒Yes ☐No ☐N/A	9.
-Pace Containers Used:	☒Yes ☐No ☐N/A	
Containers Intact:	☒Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☒N/A	11.
Sample Labels match COC:	☒Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: SL		
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	☐Yes ☐No ☒N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ HCl Samp #
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☒N/A	
Exceptions: VOA,Coliform, TOC, Oil and Grease, WI-DRO (water)	☐Yes ☒No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☒N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☒N/A	15.
Trip Blank Present:	☐Yes ☐No ☒N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☒N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: P **Date:** 09/08/09

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR.

9-4-09

Appendix B

Sample Analysis Summary

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP20-Zone3-090409		
Lab Sample ID	10112009001		
Filename	D90916B_12		
Injected By	SMT		
Total Amount Extracted	12.1 g	Matrix	Solid
% Moisture	6.7	Dilution	NA
Dry Weight Extracted	11.3 g	Collected	09/04/2009 10:15
ICAL ID	D90914GC2	Received	09/05/2009 11:00
CCal Filename(s)	D90916A_21 & D90916B_13	Extracted	09/10/2009 18:00
Method Blank ID	BLANK-21259	Analyzed	09/17/2009 14:14

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.19		2,3,7,8-TCDF-13C	2.00	58
Total TCDF	ND	-----	0.19		2,3,7,8-TCDD-13C	2.00	72
					1,2,3,7,8-PeCDF-13C	2.00	70
2,3,7,8-TCDD	ND	-----	0.16		2,3,4,7,8-PeCDF-13C	2.00	69
Total TCDD	ND	-----	0.16		1,2,3,7,8-PeCDD-13C	2.00	88
					1,2,3,4,7,8-HxCDF-13C	2.00	76
1,2,3,7,8-PeCDF	ND	-----	0.19		1,2,3,6,7,8-HxCDF-13C	2.00	65
2,3,4,7,8-PeCDF	ND	-----	0.27		2,3,4,6,7,8-HxCDF-13C	2.00	69
Total PeCDF	ND	-----	0.23		1,2,3,7,8,9-HxCDF-13C	2.00	75
					1,2,3,4,7,8-HxCDD-13C	2.00	76
1,2,3,7,8-PeCDD	ND	-----	0.23		1,2,3,6,7,8-HxCDD-13C	2.00	68
Total PeCDD	ND	-----	0.23		1,2,3,4,6,7,8-HpCDF-13C	2.00	61
					1,2,3,4,7,8,9-HpCDF-13C	2.00	68
1,2,3,4,7,8-HxCDF	0.39	-----	0.27	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	78
1,2,3,6,7,8-HxCDF	0.47	-----	0.31	J	OCDD-13C	4.00	57
2,3,4,6,7,8-HxCDF	0.41	-----	0.24	BJ			
1,2,3,7,8,9-HxCDF	ND	-----	0.24		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	4.60	-----	0.27		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.34		2,3,7,8-TCDD-37Cl4	0.20	81
1,2,3,6,7,8-HxCDD	0.84	-----	0.36	J			
1,2,3,7,8,9-HxCDD	-----	0.46	0.43	I			
Total HxCDD	1.30	-----	0.37	J			
1,2,3,4,6,7,8-HpCDF	1.90	-----	0.33	J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.31		Equivalence: 0.66 ng/Kg		
Total HpCDF	6.40	-----	0.32		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	9.90	-----	0.45				
Total HpCDD	20.00	-----	0.45				
OCDF	6.30	-----	0.50	J			
OCDD	87.00	-----	1.10				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
B = Less than 10x higher than method blank level
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Blank Analysis Results

Lab Sample ID	BLANK-21259	Matrix	Solid
Filename	D90916A_14	Dilution	NA
Total Amount Extracted	10.1 g	Extracted	09/10/2009 18:00
ICAL ID	D90914GC2	Analyzed	09/16/2009 20:54
CCal Filename(s)	D90916A_07 & D90916A_21	Injected By	BAL

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	-----	0.083	0.062	I	2,3,7,8-TCDF-13C	2.00	53
Total TCDF	0.081	-----	0.062	J	2,3,7,8-TCDD-13C	2.00	72
					1,2,3,7,8-PeCDF-13C	2.00	66
2,3,7,8-TCDD	ND	-----	0.100		2,3,4,7,8-PeCDF-13C	2.00	71
Total TCDD	ND	-----	0.100		1,2,3,7,8-PeCDD-13C	2.00	95
					1,2,3,4,7,8-HxCDF-13C	2.00	68
1,2,3,7,8-PeCDF	0.110	-----	0.110	J	1,2,3,6,7,8-HxCDF-13C	2.00	61
2,3,4,7,8-PeCDF	ND	-----	0.083		2,3,4,6,7,8-HxCDF-13C	2.00	68
Total PeCDF	0.110	-----	0.097	J	1,2,3,7,8,9-HxCDF-13C	2.00	72
					1,2,3,4,7,8-HxCDD-13C	2.00	85
1,2,3,7,8-PeCDD	ND	-----	0.100		1,2,3,6,7,8-HxCDD-13C	2.00	77
Total PeCDD	ND	-----	0.100		1,2,3,4,6,7,8-HpCDF-13C	2.00	60
					1,2,3,4,7,8,9-HpCDF-13C	2.00	67
1,2,3,4,7,8-HxCDF	ND	-----	0.130		1,2,3,4,6,7,8-HpCDD-13C	2.00	80
1,2,3,6,7,8-HxCDF	-----	0.120	0.110	I	OCDD-13C	4.00	63
2,3,4,6,7,8-HxCDF	0.120	-----	0.110	J			
1,2,3,7,8,9-HxCDF	ND	-----	0.140		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	0.120	-----	0.120		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.180		2,3,7,8-TCDD-37Cl4	0.20	75
1,2,3,6,7,8-HxCDD	ND	-----	0.150				
1,2,3,7,8,9-HxCDD	ND	-----	0.140				
Total HxCDD	ND	-----	0.160				
1,2,3,4,6,7,8-HpCDF	ND	-----	0.160		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.260		Equivalence: 0.18 ng/Kg		
Total HpCDF	ND	-----	0.210		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	0.500	-----	0.240	J			
Total HpCDD	1.000	-----	0.240	J			
OCDF	-----	0.440	0.270	I			
OCDD	3.600	-----	0.530	J			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-21260		
Filename	U90916A_20	Matrix	Solid
Total Amount Extracted	10.3 g	Dilution	NA
ICAL ID	U90911	Extracted	09/10/2009 18:00
CCal Filename(s)	U90916A_07 & U90916A_21	Analyzed	09/17/2009 01:13
Method Blank ID	BLANK-21259	Injected By	BAL

Native Isomers	**Qs** (ng)	**Qm** (ng)	% Rec.	**Internal Standards**	**ng's Added**	**Percent Recovery**
2,3,7,8-TCDF	0.20	0.22	110	2,3,7,8-TCDF-13C	2.00	58
Total TCDF				2,3,7,8-TCDD-13C	2.00	63
				1,2,3,7,8-PeCDF-13C	2.00	70
2,3,7,8-TCDD	0.20	0.20	102	2,3,4,7,8-PeCDF-13C	2.00	74
Total TCDD				1,2,3,7,8-PeCDD-13C	2.00	80
				1,2,3,4,7,8-HxCDF-13C	2.00	79
1,2,3,7,8-PeCDF	1.00	1.06	106	1,2,3,6,7,8-HxCDF-13C	2.00	71
2,3,4,7,8-PeCDF	1.00	1.01	101	2,3,4,6,7,8-HxCDF-13C	2.00	75
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.00	75
				1,2,3,4,7,8-HxCDD-13C	2.00	79
1,2,3,7,8-PeCDD	1.00	0.90	90	1,2,3,6,7,8-HxCDD-13C	2.00	71
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.00	69
				1,2,3,4,7,8,9-HpCDF-13C	2.00	69
1,2,3,4,7,8-HxCDF	1.00	1.00	100	1,2,3,4,6,7,8-HpCDD-13C	2.00	71
1,2,3,6,7,8-HxCDF	1.00	1.06	106	OCDD-13C	4.00	56
2,3,4,6,7,8-HxCDF	1.00	1.05	105			
1,2,3,7,8,9-HxCDF	1.00	1.05	105	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.00	1.01	101	2,3,7,8-TCDD-37Cl4	0.20	69
1,2,3,6,7,8-HxCDD	1.00	0.99	99			
1,2,3,7,8,9-HxCDD	1.00	1.01	101			
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.00	1.07	107			
1,2,3,4,7,8,9-HpCDF	1.00	1.05	105			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.00	1.00	100			
Total HpCDD						
OCDF	2.00	2.01	101			
OCDD	2.00	2.12	106			

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
P = Recovery outside of target range
X = Background subtracted value
Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

DRAGON
Analytical Laboratory

RCRA CHAIN OF CUSTODY RECORD

2818 Madrona Beach Rd. NW, Olympia, WA 98502
Phone: (360) 866-0543 Fax: (360) 866-0556
Email: DragonLab@comcast.net
Website: dragonlaboratory.com

Page ____ of ____

Samples Collected By: KR
Contact Number: 360 570 1700

Client: PTC
Address: 2602 Yelm Hwy SE Olympia WA 98501
Phone: 3605701700
Fax:
Email: robertsk@wpioneer.com
Project Name: East Bay IA Stockpiles
Project Location:
Project Number:
Project P.O.:
Contact Person:
DAL Project No.: 090915-04

Matrix Code:
WW = wastewater **GW** = groundwater **S** = soil or solid
SL = sludge **V** = vapor **O** = other

Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Container Type	~~BTEX~~/BTEX (EPA 8021b)	Gasoline (NWTPH-Gx)	Diesel (NWTPH-Dx)	Diesel & Oil (NWTPH-Dx)	Fuel Scan (NWTPH-HCID)	VOC's (EPA 8021b)	Organochlorine Pesticides (EPA 8081)	PCB's (EPA 8082)	Volatiles (EPA 8260)	PAH's (EPA 8100 or 8270/8270SIM)	Semi-Volatiles (EPA 8270)	Ignitability (EPA 1010)	Oil and Grease (EPA 1664 HEM)	pH (EPA 9040/9045)	Specific Conductance (EPA 9050)	Paint Filter Test (EPA 9095)	Heavy Metals* (EPA 7000 Series)	Biogenic Gases (EPA 3C)	Natural Attenuation Indicators	Gross Alpha Radioactivity (EPA 900)	Gross Beta Radioactivity (EPA 900)	TCLP Lead
SP21_Zone1-091509	S	091509	1215	3Encore 3 4oz	X	X		X				X		X							X					
SP22_Zone3_091509	S	091509	1300	3Encore 3 4oz	X	X		X				X		X							X					
SP23_Zone4-091509	S	091509	1330	3Encore 3 4oz	X	X		X				X		X							X					X
SP15_Zone3_091509	S	091509	1400	1 4oz								X														

Relinquished by (Signature) Kara Robert Date/Time 091509 Received by (Signature) Jim McCall Date/Time 9/15/09 337
Relinquished by (Signature) Date/Time Received by (Signature) Date/Time

Turn-Around-Time
☐ Same Day
☐ 24 Hour
☐ 48 Hour
☒ 5 Day Email
☐ 10 Day
☐ Other:

Sample Disposal Instructions: ☐ DAL Disposal @ $2.50 per Container ☐ Return ☐ Pickup

***Heavy Metals**: Please circle the desired analytes.

Ag Al (As) Ba Be (Cd) Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni (Pb) Sb Se Tl V Zn - Total
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - Dissolved
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - TCLP

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090915-04

ANALYTICAL RESULTS FOR THE ANALYSIS OF FUEL IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Diesel Fuel #2 NWTPH-Dx (mg/kg)	Heavy Oil NWTPH-Dx (mg/kg)	Surrogate Recovery 2-FBP (%)	Data Flags
Method Blank	9/17/2009	n/a	nd	nd	71.3	
SP21-ZONE1-091509	9/17/2009	57.8	nd	nd	130	
SP22-ZONE3-091509	9/17/2009	90.5	nd	nd	124	
SP23-ZONE4-091509	9/17/2009	55.3	nd	nd	70.4	
LCS	9/17/2009	n/a	103%	n/a	70.6	
090917-MS	9/17/2009	n/a	92.2%	n/a	n/a	
090917-MSD	9/17/2009	n/a	89.0%	n/a	n/a	
SP15-ZONE3-091509 Dup.	9/17/2009	67.8	nd	nd	90.4	
Method Reporting Limits			25	100		

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by:

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090915-04

ANALYTICAL RESULTS FOR THE ANALYSIS OF GASOLINE RANGE ORGANICS IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Benzene EPA 8021B (mg/kg)	Toluene EPA 8021B (mg/kg)	Ethylbenzene EPA 8021B (mg/kg)	m&p-Xylene EPA 8021B (mg/kg)	o-Xylene EPA 8021B (mg/kg)	Gasoline NWTPH-Gx (mg/kg)	Surrogate Recovery BFB (%)	Data Flags
Method Blank	9/17/2009	n/a	nd	nd	nd	nd	nd	nd	81.4	
SP21-ZONE1-091509	9/17/2009	57.8	nd	nd	nd	nd	nd	nd	70.4	
SP22-ZONE3-091509	9/17/2009	90.5	nd	nd	nd	nd	nd	nd	72.2	
SP23-ZONE4-091509	9/17/2009	55.3	nd	nd	nd	nd	nd	nd	72.1	
LCS	9/17/2009	n/a	95.3%	92.9%	83.6%	83.0%	87.4%	86.7%	n/a	
090917-MS	9/17/2009	n/a	92.5%	84.4%	83.1%	86.7%	83.8%	85.4%	n/a	
090917-MSD	9/17/2009	n/a	94.2%	95.8%	75.5%	74.4%	112.0%	86.7%	n/a	
SP15-ZONE3-091509 Dup.	9/17/2009	67.8	nd	nd	nd	nd	nd	nd	72.8	
Method Reporting Limits			0.05	0.10	0.10	0.10	0.10	5.0	109	

WA-DOE-Laboratory Certification No.: C2013

"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.

"n/a" indicates not applicable

Sample results based on dry weight.

Comments and Explanations: None

Analyst: T. McCall

Data reviewed by:

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090915-04

ANALYTICAL RESULTS FOR THE ANALYSIS OF HEAVY METALS IN SOIL BY EPA METHOD 6020 A

Sample Identification	Date Analyzed	Percent Solids	Arsenic (As)	Cadmium (Cd)	Lead (Pb)
Chemical Abstract Number (CAS)			7440-38-2	7440-43-9	7439-92-1
Units		(%)	(mg/kg)	(mg/kg)	(mg/kg)
Method Blank	9/23/2009	n/a	nd	nd	nd
SP21-ZONE1-091509	9/23/2009	57.8	**8.45**	**0.37**	**27.8**
SP22-ZONE3-091509	9/23/2009	90.5	**5.32**	**0.31**	**23.8**
SP23-ZONE4-091509	9/23/2009	55.3	**6.24**	**0.28**	**64.4**
LCS	9/23/2009	n/a	106%	103%	106%
090923-MS	9/23/2009	n/a	MI	MI	MI
090923-MSD	9/23/2009	n/a	MI	MI	MI
SP21-ZONE1-091509 Dup.	9/23/2009	57.8	8.28	0.38	27.2
Method Reporting Limits			0.25	0.25	0.25

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
"MI" indicates Matrix Interference
Sample results based on dry weight.
Comments and Explanations: None

Analyst: Z. Froyland
Data reviewed by:

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090915-04

ANALYTICAL RESULTS FOR THE ANALYSIS OF SEMI-VOLATILE COMPOUNDS IN SOIL BY EPA METHOD 8270

Sample Identification			Blank	SP21-ZONE1-091509	SP22-ZONE3-091509	SP23-ZONE4-091509	LCS	090922-MS	090922-MSD
Percent Solids (%)			n/a	57.8	90.5	55.3	n/a	n/a	n/a
Date Extracted	CAS	MRL	9/22/2009	9/22/2009	9/22/2009	9/22/2009	9/22/2009	9/22/2009	9/22/2009
Date Anlayzed	Number	(mg/kg)	9/22/2009	9/22/2009	9/22/2009	9/22/2009	9/22/2009	9/22/2009	9/22/2009
Benzo(a)anthracene	56-55-3	0.01	nd	**0.33**	**0.14**	**0.07**	96.8%	87.9%	87.4%
Benzo(a)pyrene	50-32-8	0.01	nd	**0.29**	**0.14**	**0.04**	n/a	n/a	n/a
Benzo(b)fluoranthene	205-99-2	0.01	nd	**0.40**	**0.29**	**0.05**	n/a	n/a	n/a
Benzo(k)fluoranthene	207-08-9	0.01	nd	**0.17**	**0.11**	**0.02**	n/a	n/a	n/a
Chrysene	218-01-9	0.01	nd	**0.40**	**0.18**	**0.05**	93.9%	85.8%	86.8%
Dibenzo(a,h)anthracene	53-70-3	0.01	nd	nd	nd	**0.34**	n/a	n/a	n/a
Ideno(1,2,3-cd)pyrene	193-39-5	0.01	nd	nd	**0.02**	nd	92.4%	88.5%	84.6%
1-Methylnaphthalene	90-12-0	0.01	nd	**0.03**	**0.01**	**0.02**	n/a	n/a	n/a
2-Methylnaphthalene	91-57-6	0.01	nd	**0.05**	**0.02**	**0.02**	n/a	n/a	n/a
Naphthalene	91-20-3	0.01	nd	**0.09**	**0.02**	**0.04**	n/a	n/a	n/a
Surrogate Recovery (%)									
2-Fluorophenol			65.5	82.2	82.6	94.3	100.0	105	106
Phenol-d6			80.1	89.3	88.8	104	110	115	117
Nitrobenzene-d5			101	114	113	108	106	101	104
2-Fluorobiphenol			111	105.0	111	111	113	90.9	110
2,4,6-Tribromophenol			48.2	58.3	60.2	70.4	77.0	80.9	82.4
Terphenyl-d14			140	125	122	126	139	112	111
Data Flags									

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.
Comments and Explanations: None
Analyst: T. McCall
Data reviewed by:

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpile

DAL Number: 090915-04

QUALITY CONTROL RESULTS FOR THE ANALYSIS OF TCLP HEAVY METALS IN SOIL BY EPA METHOD 1311 AND EPA METHOD 6020 A

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	Method Blank
Percent Solids	n/a
No. of Extractions	1
Type of Extraction	Rotary
Extraction Fluid	#1
Date Extracted	9/21/2009

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identificati	LCS
Percent Solids	n/a
No. of Extractions	1
Type of Extraction	Rotary
Extraction Fluid	#1
Date Extracted	9/21/2009

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	SP23-Zone3-091509
Percent Solids	55.3
No. of Extractions	1
Type of Extraction	Rotary
Extraction Fluid	#1
Date Extracted	9/21/2009

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	SP23-Zone3-091509 MS
Percent Solids	100
No. of Extractions	1
Type of Extraction	Rotary
Extraction Fluid	#1
Date Extracted	9/21/2009

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identificati	SP23-Zone3-091509 Dup.
Percent Solids	55.3
No. of Extractions	1
Type of Extraction	Rotary
Extraction Fluid	#1
Date Extracted	9/21/2009

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	SP23-Zone3-091509 MSD
Percent Solids	100
No. of Extractions	1
Type of Extraction	Rotary
Extraction Fluid	#1
Date Extracted	9/21/2009

Comments and Explanations: None

Analyst: Z. Froyland
Data reviewed by: R. Lewis

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090915-04

ANALYTICAL RESULTS FOR THE ANALYSIS OF TCLP HEAVY METALS IN SOIL BY EPA METHOD 1311 AND EPA METHOD 6020 A

Sample Identification	Date Analyzed	Lead (Pb)
Chemical Abstract Number (CAS)		7439-92-1
Units		(mg/L)
Method Blank	9/23/2009	nd
SP23-ZONE4-091509	9/23/2009	nd
LCS	9/23/2009	101%
090923-MS	9/23/2009	108%
090923-MSD	9/23/2009	104%
SP23-ZONE4-091509 Dup.	9/23/2009	nd
Method Reporting Limits		0.25

WA-DOE-Laboratory Certification No.: C2013

"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
"MI" indicates Matrix Interference
Sample results based on dry weight.
Comments and Explanations: None

Analyst: Z. Froyland

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090915-04

ANALYTICAL RESULTS FOR THE ANALYSIS OF PCB's IN SOIL BY EPA METHOD 8082

Sample Identification	Date Analyzed	Percent Solids (%)	Aroclor 1016 (mg/kg)	Aroclor 1221 (mg/kg)	Aroclor 1232 (mg/kg)	Aroclor 1242 (mg/kg)	Aroclor 1248 (mg/kg)	Aroclor 1254 (mg/kg)	Aroclor 1260 (mg/kg)	Surrogate Recovery TCMX (%)	Surrogate Recovery DCBP (%)	Data Flags
Method Blank	9/21/2009	n/a	nd	nd	nd	nd	nd	nd	nd	104	75.5	
SP21-ZONE1-091509	9/21/2009	57.8	nd	nd	nd	nd	nd	nd	nd	94.1	65.6	
SP22-ZONE3-091509	9/21/2009	90.5	nd	nd	nd	nd	nd	nd	nd	99.1	70.2	
SP23-ZONE4-091509	9/21/2009	55.3	nd	nd	nd	nd	nd	nd	nd	103	86.6	
SP15-ZONE3-091509	9/21/2009	67.8	nd	nd	nd	nd	nd	nd	nd	102	72.6	
LCS	9/21/2009	n/a	102%	n/a	n/a	n/a	n/a	n/a	82.9%	103	68.4	
090908-MS	9/21/2009	n/a	99.1%	n/a	n/a	n/a	n/a	n/a	103%	108	80.1	
090908-MSD	9/21/2009	n/a	99.0%	n/a	n/a	n/a	n/a	n/a	81.4%	134	133	
SP15-ZONE3-091509 Dup.	9/21/2009	67.8	nd	nd	nd	nd	nd	nd	nd	131	133	
Method Reporting Limits			0.05	0.05	0.05	0.05	0.05	0.05	0.05			

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
All results based on dry weight.

Comments and Explanations: None

Analyst: T. McCall
Data reviewed by: R. Lewis

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www.pacelabs.com

RUSH!

CHAIN-OF-CUSTODY / ~~Analytical Request Document~~

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

See RI Expectations Sent Previously

RUSH!

10112564

Page: 1 of 1

1269210

Section A Required Client Information:

Company: PTC
Address: 2612 Yelm Hwy SE
Olympia WA 98501
Email To: robertsk@ppioneer.com
Phone: 360 570 1700 Fax:
Requested Due Date/TAT: 5day TAT

Section B Required Project Information:

Report To:
Copy To:
Purchase Order No.: Credit Card
Project Name: East Bay IA Stockpiles
Project Number:

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: WA

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes MATRIX / CODE
Drinking Water DW
Water WT
Waste Water WW
Product P
Soil/Solid SL
Oil OL
Wipe WP
Air AR
Tissue TS
Other OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis Filtered (Y/N) Y/N	Analysis Test: Dioxin/Furans 8290	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SP21-Zone1-091509	SL	G				1215		1										X		001
2	SP22-Zone3-091509	SL	G				1300		1										X		002
3	SP23-Zone4-091509	SL	G				1330		1										X		003
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
5day TAT by Email	Kara Roberts	091509		J. Richardson Pace MN	9/16/09	12:15	0.8	Y	Y	Y

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kara Roberts

SIGNATURE of SAMPLER: Kara Roberts DATE Signed (MM/DD/YY): 091509

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Page 4 of 14

Pace Analytical™

www.pacelabs.com

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

Report Prepared for:

Kara Roberts
Pioneer Technologies Corporation
2612 Yelm Highway SE
Olympia WA 98501

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

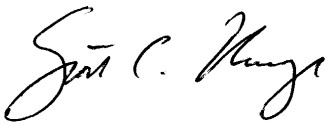
Pace Project #: 10112564
Sample Receipt Date: 09/16/2009
Client Project #: East Bay IA Stockpiles
Client Sub PO #: N/A
State Cert #: C218

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed and prepared by:



Scott Unze, Project Manager
(612) 607-6383
(612) 607-6444 (fax)
scott.unze@pacelabs.com

ACCREDITED IN ACCORDANCE WITH nelac

Report of Laboratory Analysis

Report Prepared Date:
September 23, 2009

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analyses performed on three samples submitted by a representative of Pioneer Technologies Corporation. The samples were analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. Reporting limits were based on signal-to-noise calculations.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extracts ranged from 37-116%. With the exception of one low value, which was flagged "P" on the results table, the labeled standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Since the quantification of the native 2,3,7,8-substituted isomers was based on isotope dilution, the data were automatically corrected for variation in recovery and accurate values were obtained.

In some cases, interfering substances impacted the determinations of PCDD or PCDF congeners. The affected values were flagged "I" where incorrect isotope ratios were obtained.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to contain trace levels of selected congeners. These were below the calibration range of the method. The levels reported for the affected congeners in the field samples were higher than the corresponding blank levels two or more orders of magnitude. These results indicate that the sample processing steps did not contribute significantly to the levels reported for the field samples.

Laboratory and matrix spike samples were also prepared with the sample batch using clean sand or sample matrix that had been fortified with native standards. The results show that the spiked native compounds were generally recovered at 75-135%, with relative percent differences of 0.4-24.7%. The recovery value obtained for OCDD in LCS-21464 was above the 70-130% target range and was flagged "P" on the results table; this may indicate a high bias for this congener in these determinations. Also, somewhat variable background-subtracted values were obtained for selected congeners in the matrix spike samples, due to the levels of these compounds in the sample material.

Appendix A

Sample Management

1147

Sample Condition Upon Receipt

Pace Analytical

Client Name: PTC **Project #** 10112564

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 8694 3422 1556

Custody Seal on Cooler/Box Present: ☒ yes ☐ no **Seals Intact:** ☒ yes ☐ no

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other _____ **Temp Blank:** Yes ☒ No ☐

Thermometer Used 80344042 or (179425) **Type of Ice:** (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.8° **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C **Comments:**

Date and Initials of person examining contents: 9-16-09

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☑Yes ☐No ☐N/A	7. 5 days
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: SL	☐Yes ☑No ☐N/A	12. There is no date on the coc the sample's say 9-15-09
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	☐Yes ☐No ☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ HCl Samp #
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	Initial when completed / Lot # of added preservative
Exceptions: VOA,Coliform, TOC, Oil and Grease, WI-DRO (water)	☐Yes ☑No	
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☑No ☐N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: **Field Data Required?** Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: (P) **Date:** 09/16/09

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR. Pace Analytical Services, Inc. 1700 Elm Street SE, Suite 200, Minneapolis, MN 55414

F-I213Rev.00, 05Aug2009

9/16/09

Appendix B

Sample Analysis Summary

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP21_ZONE1-091509		
Lab Sample ID	10112564001		
Filename	F90923A_05		
Injected By	SMT		
Total Amount Extracted	13.4 g	Matrix	Solid
% Moisture	6.9	Dilution	NA
Dry Weight Extracted	12.5 g	Collected	09/15/2009 12:15
ICAL ID	F90817	Received	09/16/2009 12:15
CCal Filename(s)	F90922B_14 & F90923A_10	Extracted	09/16/2009 19:15
Method Blank ID	BLANK-21463	Analyzed	09/23/2009 06:01

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	1.00	-----	0.29		2,3,7,8-TCDF-13C	2.00	85
Total TCDF	17.00	-----	0.29		2,3,7,8-TCDD-13C	2.00	84
					1,2,3,7,8-PeCDF-13C	2.00	99
2,3,7,8-TCDD	0.67	-----	0.32	J	2,3,4,7,8-PeCDF-13C	2.00	98
Total TCDD	9.70	-----	0.32		1,2,3,7,8-PeCDD-13C	2.00	112
					1,2,3,4,7,8-HxCDF-13C	2.00	96
1,2,3,7,8-PeCDF	-----	0.50	0.38	I	1,2,3,6,7,8-HxCDF-13C	2.00	62
2,3,4,7,8-PeCDF	2.10	-----	0.25	J	2,3,4,6,7,8-HxCDF-13C	2.00	71
Total PeCDF	25.00	-----	0.31		1,2,3,7,8,9-HxCDF-13C	2.00	76
					1,2,3,4,7,8-HxCDD-13C	2.00	103
1,2,3,7,8-PeCDD	1.10	-----	0.32	J	1,2,3,6,7,8-HxCDD-13C	2.00	64
Total PeCDD	17.00	-----	0.32		1,2,3,4,6,7,8-HpCDF-13C	2.00	60
					1,2,3,4,7,8,9-HpCDF-13C	2.00	59
1,2,3,4,7,8-HxCDF	2.50	-----	0.22	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	61
1,2,3,6,7,8-HxCDF	1.80	-----	0.29	J	OCDD-13C	4.00	53
2,3,4,6,7,8-HxCDF	1.20	-----	0.19	J			
1,2,3,7,8,9-HxCDF	0.88	-----	0.19	J	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	31.00	-----	0.22		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.60	-----	0.55	J	2,3,7,8-TCDD-37Cl4	0.20	91
1,2,3,6,7,8-HxCDD	7.00	-----	0.47				
1,2,3,7,8,9-HxCDD	2.90	-----	0.30	J			
Total HxCDD	61.00	-----	0.44				
1,2,3,4,6,7,8-HpCDF	51.00	-----	0.55		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	3.10	-----	0.91	J	Equivalence: 8.1 ng/Kg		
Total HpCDF	160.00	-----	0.73		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	240.00	-----	0.82				
Total HpCDD	610.00	-----	0.82				
OCDF	170.00	-----	0.66				
OCDD	2600.00	-----	2.50				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.
ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP22_ZONE3-091509		
Lab Sample ID	10112564002		
Filename	F90923A_06		
Injected By	SMT		
Total Amount Extracted	13.8 g	Matrix	Solid
% Moisture	11.7	Dilution	NA
Dry Weight Extracted	12.2 g	Collected	09/15/2009 13:00
ICAL ID	F90817	Received	09/16/2009 12:15
CCal Filename(s)	F90922B_14 & F90923A_10	Extracted	09/16/2009 19:15
Method Blank ID	BLANK-21463	Analyzed	09/23/2009 06:47

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	6.3	-----	0.33		2,3,7,8-TCDF-13C	2.00	80
Total TCDF	89.0	-----	0.33		2,3,7,8-TCDD-13C	2.00	82
					1,2,3,7,8-PeCDF-13C	2.00	94
2,3,7,8-TCDD	2.4	-----	0.32		2,3,4,7,8-PeCDF-13C	2.00	94
Total TCDD	100.0	-----	0.32		1,2,3,7,8-PeCDD-13C	2.00	106
					1,2,3,4,7,8-HxCDF-13C	2.00	91
1,2,3,7,8-PeCDF	4.8	-----	1.10		1,2,3,6,7,8-HxCDF-13C	2.00	57
2,3,4,7,8-PeCDF	8.2	-----	0.66		2,3,4,6,7,8-HxCDF-13C	2.00	68
Total PeCDF	75.0	-----	0.86		1,2,3,7,8,9-HxCDF-13C	2.00	71
					1,2,3,4,7,8-HxCDD-13C	2.00	97
1,2,3,7,8-PeCDD	8.9	-----	0.77		1,2,3,6,7,8-HxCDD-13C	2.00	62
Total PeCDD	100.0	-----	0.77		1,2,3,4,6,7,8-HpCDF-13C	2.00	51
					1,2,3,4,7,8,9-HpCDF-13C	2.00	50
1,2,3,4,7,8-HxCDF	6.0	-----	0.39		1,2,3,4,6,7,8-HpCDD-13C	2.00	54
1,2,3,6,7,8-HxCDF	7.6	-----	0.30		OCDD-13C	4.00	37 P
2,3,4,6,7,8-HxCDF	7.0	-----	0.36				
1,2,3,7,8,9-HxCDF	1.7	-----	0.35	J	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	94.0	-----	0.35		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	6.0	-----	0.50		2,3,7,8-TCDD-37Cl4	0.20	90
1,2,3,6,7,8-HxCDD	15.0	-----	0.69				
1,2,3,7,8,9-HxCDD	8.3	-----	0.48				
Total HxCDD	150.0	-----	0.56				
1,2,3,4,6,7,8-HpCDF	64.0	-----	0.87		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	4.2	-----	0.76		Equivalence: 24 ng/Kg		
Total HpCDF	190.0	-----	0.82		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	270.0	-----	1.00				
Total HpCDD	550.0	-----	1.00				
OCDF	190.0	-----	0.75				
OCDD	2400.0	-----	1.70				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
P = Recovery outside target range

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP23_ZONE4-091509		
Lab Sample ID	10112564003		
Filename	F90923A_07		
Injected By	SMT		
Total Amount Extracted	13.2 g	Matrix	Solid
% Moisture	12.6	Dilution	NA
Dry Weight Extracted	11.5 g	Collected	09/15/2009 13:30
ICAL ID	F90817	Received	09/16/2009 12:15
CCal Filename(s)	F90922B_14 & F90923A_10	Extracted	09/16/2009 19:15
Method Blank ID	BLANK-21463	Analyzed	09/23/2009 07:34

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.54	-----	0.15	J	2,3,7,8-TCDF-13C	2.00	85
Total TCDF	6.80	-----	0.15		2,3,7,8-TCDD-13C	2.00	87
					1,2,3,7,8-PeCDF-13C	2.00	102
2,3,7,8-TCDD	ND	-----	0.19		2,3,4,7,8-PeCDF-13C	2.00	104
Total TCDD	4.10	-----	0.19		1,2,3,7,8-PeCDD-13C	2.00	116
					1,2,3,4,7,8-HxCDF-13C	2.00	91
1,2,3,7,8-PeCDF	0.33	-----	0.19	J	1,2,3,6,7,8-HxCDF-13C	2.00	65
2,3,4,7,8-PeCDF	1.30	-----	0.24	J	2,3,4,6,7,8-HxCDF-13C	2.00	73
Total PeCDF	15.00	-----	0.21		1,2,3,7,8,9-HxCDF-13C	2.00	77
					1,2,3,4,7,8-HxCDD-13C	2.00	100
1,2,3,7,8-PeCDD	0.62	-----	0.26	J	1,2,3,6,7,8-HxCDD-13C	2.00	69
Total PeCDD	8.60	-----	0.26		1,2,3,4,6,7,8-HpCDF-13C	2.00	59
					1,2,3,4,7,8,9-HpCDF-13C	2.00	61
1,2,3,4,7,8-HxCDF	1.40	-----	0.17	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	61
1,2,3,6,7,8-HxCDF	0.73	-----	0.24	J	OCDD-13C	4.00	51
2,3,4,6,7,8-HxCDF	0.56	-----	0.20	J			
1,2,3,7,8,9-HxCDF	0.42	-----	0.24	J	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	14.00	-----	0.21		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	0.74	-----	0.22	J	2,3,7,8-TCDD-37Cl4	0.20	93
1,2,3,6,7,8-HxCDD	2.70	-----	0.30	J			
1,2,3,7,8,9-HxCDD	1.20	-----	0.20	J			
Total HxCDD	19.00	-----	0.24				
1,2,3,4,6,7,8-HpCDF	14.00	-----	0.29		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	1.10	-----	0.30	J	Equivalence: 2.8 ng/Kg		
Total HpCDF	49.00	-----	0.30		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	54.00	-----	0.39				
Total HpCDD	93.00	-----	0.39				
OCDF	68.00	-----	0.31				
OCDD	430.00	-----	0.53				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
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ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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Method 8290 Blank Analysis Results

Lab Sample ID	BLANK-21463	Matrix	Solid
Filename	F90922B_08	Dilution	NA
Total Amount Extracted	10.3 g	Extracted	09/16/2009 19:15
ICAL ID	F90817	Analyzed	09/22/2009 21:31
CCal Filename(s)	F90922B_01 & F90922B_14	Injected By	SMT

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.071		2,3,7,8-TCDF-13C	2.00	70
Total TCDF	ND	-----	0.071		2,3,7,8-TCDD-13C	2.00	68
					1,2,3,7,8-PeCDF-13C	2.00	91
2,3,7,8-TCDD	ND	-----	0.120		2,3,4,7,8-PeCDF-13C	2.00	93
Total TCDD	ND	-----	0.120		1,2,3,7,8-PeCDD-13C	2.00	107
					1,2,3,4,7,8-HxCDF-13C	2.00	78
1,2,3,7,8-PeCDF	ND	-----	0.085		1,2,3,6,7,8-HxCDF-13C	2.00	65
2,3,4,7,8-PeCDF	ND	-----	0.120		2,3,4,6,7,8-HxCDF-13C	2.00	70
Total PeCDF	ND	-----	0.100		1,2,3,7,8,9-HxCDF-13C	2.00	75
					1,2,3,4,7,8-HxCDD-13C	2.00	87
1,2,3,7,8-PeCDD	ND	-----	0.120		1,2,3,6,7,8-HxCDD-13C	2.00	71
Total PeCDD	ND	-----	0.120		1,2,3,4,6,7,8-HpCDF-13C	2.00	62
					1,2,3,4,7,8,9-HpCDF-13C	2.00	62
1,2,3,4,7,8-HxCDF	ND	-----	0.074		1,2,3,4,6,7,8-HpCDD-13C	2.00	66
1,2,3,6,7,8-HxCDF	ND	-----	0.083		OCDD-13C	4.00	60
2,3,4,6,7,8-HxCDF	ND	-----	0.060				
1,2,3,7,8,9-HxCDF	ND	-----	0.084		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.075		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.100		2,3,7,8-TCDD-37Cl4	0.20	79
1,2,3,6,7,8-HxCDD	ND	-----	0.110				
1,2,3,7,8,9-HxCDD	ND	-----	0.088				
Total HxCDD	ND	-----	0.100				
1,2,3,4,6,7,8-HpCDF	ND	-----	0.089		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.140		Equivalence: 0.17 ng/Kg		
Total HpCDF	ND	-----	0.120		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	-----	0.25	0.110	I			
Total HpCDD	ND	-----	0.110				
OCDF	0.32	-----	0.110	J			
OCDD	2.40	-----	0.220	J			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

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J = Value below calibration range
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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Minneapolis, MN 55414

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Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-21464		
Filename	F90922B_04	Matrix	Solid
Total Amount Extracted	10.9 g	Dilution	NA
ICAL ID	F90817	Extracted	09/16/2009 19:15
CCal Filename(s)	F90922B_01 & F90922B_14	Analyzed	09/22/2009 18:25
Method Blank ID	LCS-21464	Injected By	SMT

Native Isomers	**Qs** (ng)	**Qm** (ng)	% Rec.	**Internal Standards**	**ng's Added**	**Percent Recovery**
2,3,7,8-TCDF	0.20	0.20	101	2,3,7,8-TCDF-13C	2.00	72
Total TCDF				2,3,7,8-TCDD-13C	2.00	70
				1,2,3,7,8-PeCDF-13C	2.00	90
2,3,7,8-TCDD	0.20	0.22	111	2,3,4,7,8-PeCDF-13C	2.00	89
Total TCDD				1,2,3,7,8-PeCDD-13C	2.00	106
				1,2,3,4,7,8-HxCDF-13C	2.00	76
1,2,3,7,8-PeCDF	1.00	1.01	101	1,2,3,6,7,8-HxCDF-13C	2.00	64
2,3,4,7,8-PeCDF	1.00	0.97	97	2,3,4,6,7,8-HxCDF-13C	2.00	69
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.00	77
				1,2,3,4,7,8-HxCDD-13C	2.00	86
1,2,3,7,8-PeCDD	1.00	0.91	91	1,2,3,6,7,8-HxCDD-13C	2.00	69
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.00	62
				1,2,3,4,7,8,9-HpCDF-13C	2.00	64
1,2,3,4,7,8-HxCDF	1.00	0.98	98	1,2,3,4,6,7,8-HpCDD-13C	2.00	68
1,2,3,6,7,8-HxCDF	1.00	1.01	101	OCDD-13C	4.00	60
2,3,4,6,7,8-HxCDF	1.00	0.99	99			
1,2,3,7,8,9-HxCDF	1.00	1.00	100	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.00	0.94	94	2,3,7,8-TCDD-37Cl4	0.20	77
1,2,3,6,7,8-HxCDD	1.00	0.98	98			
1,2,3,7,8,9-HxCDD	1.00	0.98	98			
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.00	1.13	113			
1,2,3,4,7,8,9-HpCDF	1.00	1.11	111			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.00	1.03	103			
Total HpCDD						
OCDF	2.00	2.18	109			
OCDD	2.00	2.69	135 P			

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
P = Recovery outside of target range
X = Background subtracted value
Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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Minneapolis, MN 55414

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Method 8290 Spiked Sample Report

Client - Pioneer Technologies Corporation

Client's Sample ID	SP21_ZONE1-091509-MS		
Lab Sample ID	10112564001-MS		
Filename	F90923A_01	Matrix	Solid
Total Amount Extracted	13.4 g	Dilution	NA
ICAL ID	F90817	Extracted	09/16/2009 19:15
CCal Filename(s)	F90922B_14 & F90923A_10	Analyzed	09/23/2009 02:55
Method Blank ID	BLANK-21463	Injected By	SMT

Native Isomers	**Qs** (ng)	**Qm** (ng)	% Rec.	**Internal Standards**	**ng's Added**	**Percent Recovery**
2,3,7,8-TCDF	0.20	0.23	115	2,3,7,8-TCDF-13C	2.00	80
				2,3,7,8-TCDD-13C	2.00	77
				1,2,3,7,8-PeCDF-13C	2.00	85
2,3,7,8-TCDD	0.20	0.23	115	2,3,4,7,8-PeCDF-13C	2.00	80
				1,2,3,7,8-PeCDD-13C	2.00	91
				1,2,3,4,7,8-HxCDF-13C	2.00	92
1,2,3,7,8-PeCDF	1.00	1.24	124	1,2,3,6,7,8-HxCDF-13C	2.00	73
2,3,4,7,8-PeCDF	1.00	0.99	99	2,3,4,6,7,8-HxCDF-13C	2.00	73
				1,2,3,7,8,9-HxCDF-13C	2.00	80
				1,2,3,4,7,8-HxCDD-13C	2.00	100
1,2,3,7,8-PeCDD	1.00	0.95	95	1,2,3,6,7,8-HxCDD-13C	2.00	77
				1,2,3,4,6,7,8-HpCDF-13C	2.00	57
				1,2,3,4,7,8,9-HpCDF-13C	2.00	53
1,2,3,4,7,8-HxCDF	1.00	1.06	106	1,2,3,4,6,7,8-HpCDD-13C	2.00	60
1,2,3,6,7,8-HxCDF	1.00	1.05	105	OCDD-13C	4.00	42
2,3,4,6,7,8-HxCDF	1.00	1.07	107			
1,2,3,7,8,9-HxCDF	1.00	1.04	104	1,2,3,4-TCDD-13C	2.00	NA
				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.00	1.00	100	2,3,7,8-TCDD-37Cl4	0.20	87
1,2,3,6,7,8-HxCDD	1.00	1.07	107			
1,2,3,7,8,9-HxCDD	1.00	0.87	87			
1,2,3,4,6,7,8-HpCDF	1.00	2.12	212			
1,2,3,4,7,8,9-HpCDF	1.00	1.18	118			
1,2,3,4,6,7,8-HpCDD	1.00	4.70	470			
OCDF	2.00	5.01	250			
OCDD	2.00	50.37	2519			

Qs = Quantity Spiked Qm = Quantity Measured Rec. = Recovery (Expressed as Percent)

Results reported on a dry weight basis and are valid to no more than 2 significant figures.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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Method 8290 Spiked Sample Report

Client - Pioneer Technologies Corporation

Client's Sample ID	SP21_ZONE1-091509-MSD		
Lab Sample ID	10112564001-MSD		
Filename	F90923A_02	Matrix	Solid
Total Amount Extracted	13.5 g	Dilution	NA
ICAL ID	F90817	Extracted	09/16/2009 19:15
CCal Filename(s)	F90922B_14 & F90923A_10	Analyzed	09/23/2009 03:42
Method Blank ID	BLANK-21463	Injected By	SMT

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.20	0.23	116	2,3,7,8-TCDF-13C	2.00	83
				2,3,7,8-TCDD-13C	2.00	81
				1,2,3,7,8-PeCDF-13C	2.00	108
2,3,7,8-TCDD	0.20	0.24	119	2,3,4,7,8-PeCDF-13C	2.00	102
				1,2,3,7,8-PeCDD-13C	2.00	101
				1,2,3,4,7,8-HxCDF-13C	2.00	106
1,2,3,7,8-PeCDF	1.00	1.22	122	1,2,3,6,7,8-HxCDF-13C	2.00	80
2,3,4,7,8-PeCDF	1.00	1.00	100	2,3,4,6,7,8-HxCDF-13C	2.00	83
				1,2,3,7,8,9-HxCDF-13C	2.00	92
				1,2,3,4,7,8-HxCDD-13C	2.00	116
1,2,3,7,8-PeCDD	1.00	0.94	94	1,2,3,6,7,8-HxCDD-13C	2.00	86
				1,2,3,4,6,7,8-HpCDF-13C	2.00	61
				1,2,3,4,7,8,9-HpCDF-13C	2.00	68
1,2,3,4,7,8-HxCDF	1.00	1.05	105	1,2,3,4,6,7,8-HpCDD-13C	2.00	75
1,2,3,6,7,8-HxCDF	1.00	1.06	106	OCDD-13C	4.00	64
2,3,4,6,7,8-HxCDF	1.00	1.04	104			
1,2,3,7,8,9-HxCDF	1.00	1.03	103	1,2,3,4-TCDD-13C	2.00	NA
				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.00	0.95	95	2,3,7,8-TCDD-37Cl4	0.20	95
1,2,3,6,7,8-HxCDD	1.00	1.07	107			
1,2,3,7,8,9-HxCDD	1.00	0.78	78			
1,2,3,4,6,7,8-HpCDF	1.00	1.99	199			
1,2,3,4,7,8,9-HpCDF	1.00	1.15	115			
1,2,3,4,6,7,8-HpCDD	1.00	4.42	442			
OCDF	2.00	4.98	249			
OCDD	2.00	39.31	1966			

Qs = Quantity Spiked Qm = Quantity Measured Rec. = Recovery (Expressed as Percent)

Results reported on a dry weight basis and are valid to no more than 2 significant figures.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Spike Sample Results

Client - Pioneer Technologies Corporation

Client Sample ID	SP21_ZONE1-091509			Dry Weights	
Lab Sample ID	10112564001	Sample Filename	F90923A_05	Sample Amount	12.5 g
MS ID	10112564001-MS	MS Filename	F90923A_01	MS Amount	12.4 g
MSD ID	10112564001-MSD	MSD Filename	F90923A_02	MSD Amount	12.6 g

Analyte	Sample Conc. ng/Kg	MS/MSD Qs (ng)	MS Qm (ng)	MSD Qm (ng)	RPD	Background Subtracted MS % Rec.	MSD % Rec.	RPD
2,3,7,8-TCDF	1.034	0.20	0.23	0.23	1.2	108	110	1.1
2,3,7,8-TCDD	0.669	0.20	0.23	0.24	3.5	111	115	3.6
1,2,3,7,8-PeCDF	0.000	1.00	1.24	1.22	1.2	123	122	1.2
2,3,4,7,8-PeCDF	2.130	1.00	0.99	1.00	1.5	96	98	1.5
1,2,3,7,8-PeCDD	1.141	1.00	0.95	0.94	0.6	93	93	0.7
1,2,3,4,7,8-HxCDF	2.546	1.00	1.06	1.05	1.2	103	102	1.3
1,2,3,6,7,8-HxCDF	1.790	1.00	1.05	1.06	0.6	103	103	0.6
2,3,4,6,7,8-HxCDF	1.197	1.00	1.07	1.04	2.8	105	102	2.9
1,2,3,7,8,9-HxCDF	0.885	1.00	1.04	1.03	1.1	103	102	1.1
1,2,3,4,7,8-HxCDD	1.642	1.00	1.00	0.95	5.2	98	93	5.3
1,2,3,6,7,8-HxCDD	7.019	1.00	1.07	1.07	0.4	98	99	0.3
1,2,3,7,8,9-HxCDD	2.857	1.00	0.87	0.78	9.8	83	75	10.3
1,2,3,4,6,7,8-HpCDF	51.220	1.00	2.12	1.99	6.2	148	135	9.5
1,2,3,4,7,8,9-HpCDF	3.114	1.00	1.18	1.15	2.1	114	111	2.2
1,2,3,4,6,7,8-HpCDD	236.861	1.00	4.70	4.42	6.3	176	143	20.2
OCDF	174.045	2.00	5.01	4.98	0.5	142	140	1.8
OCDD	2566.892	2.00	50.37	39.31	24.7	922	350	89.9

Definitions

MS = Matrix Spike
MSD = Matrix Spike Duplicate
Qm = Quantity Measured
Qs = Quantity Spiked
% Rec. = Percent Recovery
RPD = Relative Percent Difference
NA = Not Applicable
NC = Not Calculated

CDD = Chlorinated dibenzo-p-dioxin
CDF = Chlorinated dibenzo-p-furan
T = Tetra
Pe = Penta
Hx = Hexa
Hp = Hepta
O = Octa

DRAGON
Analytical Laboratory

RCRA CHAIN OF CUSTODY RECORD

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Phone: (360) 866-0543 Fax: (360) 866-0556
Email: DragonLab@comcast.net
Website: dragonlaboratory.com

Page ____ of ____

Samples Collected By: KR
Contact Number: 360 570 1700

Client: PTC
Address: 2612 Yelm Hwy SE Olympia WA 98501

Phone: 360 570 1700
Fax: ____
Email: robertst@uspioneer.com

Project Name: East Bay IA stockpile
Project Location: ____
Project Number: ____

Project P.O.: ____
Contact Person: ____
DAL Project No.: 090923-03

Matrix Code:
WW = wastewater **GW** = groundwater **S** = soil or solid
SL = sludge **V** = vapor **O** = other

Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Container Type	MTBE/BTEX (EPA 8021b)	Gasoline (NWTPH-Gx)	Diesel (NWTPH-Dx)	Diesel & Oil (NWTPH-Dx)	Fuel Scan (NWTPH-HCID)	VOC's (EPA 8021b)	Organochlorine Pesticides (EPA 8081)	PCB's (EPA 8082)	Volatiles (EPA 8260)	PAH's (EPA 8100 or 8270/8270SIM)	Semi-Volatiles (EPA 8270)	Ignitability (EPA 1010)	Oil and Grease (EPA 1664 HEM)	pH (EPA 9040/9045)	Specific Conductance (EPA 9050)	Paint Filter Test (EPA 9095)	Heavy Metals* (EPA 7000 Series)	Biogenic Gases (EPA 3C)	Natural Attenuation Indicators	Gross Alpha Radioactivity (EPA 900)	Gross Beta Radioactivity (EPA 900)	TCLP Lead
SP24-Zone2-092309-1	S	092309	900	3 Encore & 4oz	X	X		X				X		X							X					
SP24-Zone2-092309-2	S		1145	G	X	X		X				X		X							X					
SP25-Zone4-092309-1	S		1200	G	X	X		X				X		X							X					
SP25-Zone4-092309-2	S		1230	G	X	X		X				X		X							X					
SP25-Zone4-092309-3	S		1245	G	X	X		X				X		X							X					
SP25-Zone4-092309-Comp	S		1230	G																					X	
SP26-Zone1-092309	S		1430	G	X	X		X				X		X							X					
				3 Encore 2 4oz																						

Relinquished by (Signature): Kara Robertson — Date/Time: 092309
Received by (Signature): ____ — Date/Time: 09/23/09 1545
Relinquished by (Signature): ____ — Date/Time: ____
Received by (Signature): ____ — Date/Time: ____

Sample Disposal Instructions: ☐ DAL Disposal @ $2.50 per Container ☐ Return ☐ Pickup

Turn-Around-Time
☐ Same Day
☐ 24 Hour
☐ 48 Hour
☒ 5 Day Email
☐ 10 Day
☐ Other: ____

***Heavy Metals**: Please circle the desired analytes.

Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - Total
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - Dissolved
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - TCLP

DRAGON ANALYTICAL LABORATORY

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Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090923-03

ANALYTICAL RESULTS FOR THE ANALYSIS OF FUEL IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Diesel Fuel #2 NWTPH-Dx (mg/kg)	Heavy Oil NWTPH-Dx (mg/kg)	Surrogate Recovery 2-FBP (%)	Data Flags
Method Blank	10/1/2009	n/a	nd	nd	92.0	
SP24-ZONE2-092309-1	10/1/2009	89.5	nd	nd	127	
SP24-ZONE2-092309-2	10/1/2009	93.0	nd	**287**	123	
SP25-ZONE4-092309-1	10/1/2009	93.3	nd	nd	96.6	
SP25-ZONE4-092309-2	10/1/2009	95.0	nd	nd	86.2	
SP25-ZONE4-092309-3	10/1/2009	89.7	nd	nd	133	
SP26-ZONE1-092309	10/1/2009	88.7	nd	nd	82.3	
LCS	10/1/2009	n/a	92.0%	n/a	n/a	
091001-MS	10/1/2009	n/a	99.6%	n/a	n/a	
091001-MSD	10/1/2009	n/a	105%	n/a	n/a	
Method Reporting Limits			25	100		

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by: R Lewis

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Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090923-03

ANALYTICAL RESULTS FOR THE ANALYSIS OF GASOLINE RANGE ORGANICS IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Benzene EPA 8021B (mg/kg)	Toluene EPA 8021B (mg/kg)	Ethylbenzene EPA 8021B (mg/kg)	m&p-Xylene EPA 8021B (mg/kg)	o-Xylene EPA 8021B (mg/kg)	Gasoline NWTPH-Gx (mg/kg)	Surrogate Recovery BFB (%)	Data Flags
Method Blank	10/1/2009	n/a	nd	nd	nd	nd	nd	nd	77.8	
SP24-ZONE2-092309-1	10/1/2009	89.5	nd	nd	nd	nd	nd	nd	129	
SP24-ZONE2-092309-2	10/1/2009	93.0	nd	nd	nd	nd	nd	nd	103	
SP25-ZONE4-092309-1	10/1/2009	93.3	nd	nd	nd	nd	nd	nd	72.7	
SP25-ZONE4-092309-2	10/1/2009	95.0	nd	nd	nd	nd	nd	nd	79.7	
SP25-ZONE4-092309-3	10/1/2009	89.7	nd	nd	nd	nd	nd	nd	101	
SP26-ZONE1-092309	10/1/2009	88.7	nd	nd	nd	nd	nd	nd	111	
LCS	10/1/2009	n/a	n/a	92.0%	n/a	n/a	n/a	n/a	n/a	
LCS	10/2/2009	n/a	99.3%	n/a	n/a	n/a	n/a	n/a	n/a	
091001-MS	10/1/2009	n/a	n/a	99.6%	n/a	n/a	n/a	n/a	n/a	
091002-MS	10/2/2009	n/a	110%	n/a	n/a	n/a	n/a	n/a	n/a	
091001-MSD	10/1/2009	n/a	n/a	105%	n/a	n/a	n/a	n/a	n/a	
091002-MSD	10/2/2009	n/a	97%	n/a	n/a	n/a	n/a	n/a	n/a	
Method Reporting Limits			0.05	0.10	0.10	0.10	0.10	5.0		

WA-DOE-Laboratory Certification No.: C2013

"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.

"n/a" indicates not applicable

Sample results based on dry weight.

Comments and Explanations: None

Analyst: T. McCall

Data reviewed by: R Lewis

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Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090923-03

ANALYTICAL RESULTS FOR THE ANALYSIS OF HEAVY METALS IN SOIL BY EPA METHOD 6020 A

Sample Identification	Date Analyzed	Percent Solids	Arsenic (As)	Cadmium (Cd)	Lead (Pb)
Chemical Abstract Number (CAS)			7440-38-2	7440-43-9	7439-92-1
Units		(%)	(mg/kg)	(mg/kg)	(mg/kg)
Method Blank	9/30/2009	n/a	nd	nd	nd
SP24-ZONE2-092309-1	9/30/2009	89.5	**3.53**	nd	**9.82**
SP24-ZONE2-092309-2	9/30/2009	93.0	**6.32**	**0.41**	**95.2**
SP25-ZONE4-092309-1	9/30/2009	93.3	**2.08**	nd	**2.74**
SP25-ZONE4-092309-2	9/30/2009	95.0	**4.44**	nd	**24.4**
SP25-ZONE4-092309-3	9/30/2009	89.7	**2.38**	nd	**3.95**
SP26-ZONE1-092309	9/30/2009	88.7	**4.05**	**0.28**	**17.4**
LCS	9/30/2009	n/a	101%	103%	105%
090930-MS	9/30/2009	n/a	MI	MI	MI
090930-MSD	9/30/2009	n/a	MI	MI	MI
SP24-ZONE2-092309-2 Dup.	9/30/2009	93.0	**6.32**	**0.40**	**94.7**
Method Reporting Limits			0.25	0.25	0.25

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
"MI" indicates Matrix Interference
Sample results based on dry weight.
Comments and Explanations: None

Analyst: Z. Froyland
Data reviewed by:

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Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090923-03

ANALYTICAL RESULTS FOR THE ANALYSIS OF SEMI-VOLATILE COMPOUNDS IN SOIL BY EPA METHOD 8270

Sample Identification			Blank	SP24-ZONE2-092309-1	SP24-ZONE2-092309-2	SP25-ZONE4-092309-1	SP25-ZONE4-092309-2	SP25-ZONE4-092309-3	SP26-ZONE1-091509	LCS	090928-MS	090928-MSD	SP25-ZONE4-092309-3 Dup.
Percent Solids (%)			n/a	89.5	93.0	93.3	95.0	89.7	88.7	n/a	n/a	n/a	89.7
Date Extracted	CAS	MRL	9/28/2009	9/28/2009	9/28/2009	9/28/2009	9/28/2009	9/28/2009	9/28/2009	9/28/2009	9/28/2009	9/28/2009	9/28/2009
Date Anlayzed	Number	(mg/kg)	9/28/2009	9/28/2009	9/28/2009	9/28/2009	9/28/2009	9/28/2009	9/28/2009	9/28/2009	9/28/2009	9/28/2009	9/28/2009
Benzo(a)anthracene	56-55-3	0.01	nd	**0.02**	**10.4**	**0.02**	**0.04**	**0.02**	**0.06**	86.5%	84.6%	85.3%	**0.02**
Benzo(a)pyrene	50-32-8	0.01	nd	**0.01**	**7.83**	nd	**0.01**	nd	**0.05**	n/a	n/a	n/a	nd
Benzo(b)fluoranthene	205-99-2	0.01	nd	nd	**8.52**	nd	nd	nd	**0.05**	n/a	n/a	n/a	nd
Benzo(k)fluoranthene	207-08-9	0.01	nd	nd	**3.03**	nd	**0.03**	nd	nd	n/a	n/a	n/a	nd
Chrysene	218-01-9	0.01	nd	**0.02**	**9.41**	**0.01**	**0.02**	nd	**0.06**	80.1%	78.0%	77.7%	**0.01**
Dibenzo(a,h)anthracene	53-70-3	0.01	nd	nd	**0.89**	nd	nd	nd	nd	n/a	n/a	n/a	nd
Ideno(1,2,3-cd)pyrene	193-39-5	0.01	nd	nd	**3.42**	nd	nd	nd	nd	58.5%	61.8%	56.2%	nd
1-Methylnaphthalene	90-12-0	0.01	nd	**0.01**	**1.42**	nd	nd	nd	**0.01**	n/a	n/a	n/a	nd
2-Methylnaphthalene	91-57-6	0.01	nd	**0.01**	**1.59**	nd	nd	nd	**0.01**	n/a	n/a	n/a	nd
Naphthalene	91-20-3	0.01	nd	**0.01**	**0.81**	nd	**0.01**	nd	**0.02**	n/a	n/a	n/a	nd
Surrogate Recovery (%)													
2-Fluorophenol			87.3	34.1	72.6	80.7	81.1	107	92.3	72.1	54.7	55.2	104
Phenol-d6			98.6	62.8	108	108	97.4	107	108	107	81.1	80.5	103
Nitrobenzene-d5			67.0	89.5	47.6	87.2	79.8	106	49.7	50.3	88.9	88.8	105
2-Fluorobiphenol			82.7	97.6	72.0	93.3	91.8	96.1	76.1	77.8	94.6	94.6	96.8
2,4,6-Tribromophenol			47.1	44.5	58.7	65.7	53.6	51.9	54.8	68.0	61.8	62.7	50.5
Terphenyl-d14			103	102	73.9	90.2	85.1	85.5	76.7	62.2	79.4	80.6	85.6
Data Flags													

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.
Comments and Explanations: None
Analyst: T. McCall
Data reviewed by:

DRAGON ANALYTICAL LABORATORY

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Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090923-03

ANALYTICAL RESULTS FOR THE ANALYSIS OF PCB's IN SOIL BY EPA METHOD 8082

Sample Identification	Date Analyzed	Percent Solids (%)	Aroclor 1016 (mg/kg)	Aroclor 1221 (mg/kg)	Aroclor 1232 (mg/kg)	Aroclor 1242 (mg/kg)	Aroclor 1248 (mg/kg)	Aroclor 1254 (mg/kg)	Aroclor 1260 (mg/kg)	Surrogate Recovery TCMX (%)	Surrogate Recovery DCBP (%)	Data Flags
Method Blank	10/1/2009	n/a	nd	nd	nd	nd	nd	nd	nd	117	104	
SP24-ZONE2-092309-1	10/1/2009	89.5	nd	nd	nd	nd	nd	nd	nd	101	82.6	
SP24-ZONE2-092309-2	10/1/2009	93.0	nd	nd	nd	nd	nd	nd	nd	102	89.1	
SP25-ZONE4-092309-1	10/1/2009	93.3	nd	nd	nd	nd	nd	nd	nd	104	87.6	
SP25-ZONE4-092309-2	10/1/2009	95.0	nd	nd	nd	nd	nd	nd	nd	105	94.4	
SP25-ZONE4-092309-3	10/1/2009	89.7	nd	nd	nd	nd	nd	nd	nd	99.6	81.8	
SP26-ZONE1-092309	10/1/2009	88.7	nd	nd	nd	nd	nd	nd	nd	99.1	96.9	
LCS	10/1/2009	n/a	108%	n/a	n/a	n/a	n/a	n/a	87.9%	103	92.0	
090917-MS	10/1/2009	n/a	110%	n/a	n/a	n/a	n/a	n/a	84.8%	97.5	77.5	
090917-MSD	10/1/2009	n/a	101%	n/a	n/a	n/a	n/a	n/a	103%	126	128	
SP25-ZONE4-092309-1Dup.	10/1/2009	93.3	nd	nd	nd	nd	nd	nd	nd	130	119	
Method Reporting Limits			0.05	0.05	0.05	0.05	0.05	0.05	0.05			

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
All results based on dry weight.

Comments and Explanations: None

Analyst: T. McCall
Data reviewed by: R. Lewis

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Project: East Bay IA Stockpiles

DAL Number: 090923-03

QUALITY CONTROL RESULTS FOR THE ANALYSIS OF TCLP HEAVY METALS IN SOIL BY EPA METHOD 1311 AND EPA METHOD 6020 A

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	Method Blank
Percent Solids	n/a
No. of Extractions	1
Type of Extraction	Rotary
Extraction Fluid	#1
Date Extracted	9/29/2009

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	LCS
Percent Solids	n/a
No. of Extractions	1
Type of Extraction	Rotary
Extraction Fluid	#1
Date Extracted	9/29/2009

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	SP25-Zone4-092309-COMP
Percent Solids	92.1
No. of Extractions	1
Type of Extraction	Rotary
Extraction Fluid	#1
Date Extracted	9/29/2009

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	SP25-Zone4-092309-COMP MS
Percent Solids	100
No. of Extractions	1
Type of Extraction	Rotary
Extraction Fluid	#1
Date Extracted	9/29/2009

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	SP25-Zone4-092309-COMP Dup
Percent Solids	92.1
No. of Extractions	1
Type of Extraction	Rotary
Extraction Fluid	#1
Date Extracted	9/29/2009

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	SP25-Zone4-092309-COMP MSD
Percent Solids	100
No. of Extractions	1
Type of Extraction	Rotary
Extraction Fluid	#1
Date Extracted	9/29/2009

Comments and Explanations: None

Analyst: Z. Froyland
Data reviewed by: R. Lewis

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Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 090923-03

ANALYTICAL RESULTS FOR THE ANALYSIS OF TCLP HEAVY METALS IN SOIL BY EPA METHOD 1311 AND EPA METHOD 6020 A

Sample Identification	Date Analyzed	Lead (Pb)
Chemical Abstract Number (CAS)		7439-92-1
Units		(mg/L)
Method Blank	10/1/2009	nd
SP25-ZONE4-092309-COMP	10/1/2009	nd
LCS	10/1/2009	104%
091001-MS	10/1/2009	106%
091001-MSD	10/1/2009	107%
SP25-ZONE4-092309-COMP Dup.	10/1/2009	nd
Method Reporting Limits		0.25

WA-DOE-Laboratory Certification No.: C2013

"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
"MI" indicates Matrix Interference
Sample results based on dry weight.
Comments and Explanations: None

Analyst: Z. Froyland
Data reviewed by: R Lewis

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

robertsk@pioneer.com

See RT Expectations sent previously

10113236

Page: of

1269219

Section A Required Client Information:

Company: PTC
Address: 2612 Yelm Hwy SE
Olympia, WA 98501
Email To: ~~kara~~ @pioneer.com
Phone: 360.570.1700 Fax:
Requested Due Date/TAT: 5 day-soil 10 day-GW

Section B Required Project Information:

Report To:
Copy To:
Purchase Order No.: credit card
Project Name: East Bay IA Stockpile ← soil
Project Number: East Bay Sept 2009 Groundwater Monitoring ← groundwater

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

RUSH!

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE:

Section D Required Client Information

Matrix Codes MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Y/N	Analysis Test: PAH 8270	Dioxin/Furans 8290	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW18-092309	DW				092309	900		2										X			001
2	SP24-Zone2-092309-1	SL	G			092309	1145		1											X		002
3	SP24-Zone2-092309-2	SL	G			092309	1200		1											X		003
4	SP25-Zone4-092309-1	SL	G			092309	1230		1											X		004
5	SP25-Zone4-092309-2	SL	G			092309	1245		1											X		005
6	SP25-Zone4-092309-3	SL	G			092309	1300		1											X		006
7	SP26-Zone1-092309	SL	G			092309	1430		1											X		
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Soil TAT 5 day	Kara Roberts / PTC	092309	1630	Richardson-Pace MN	9/24/09	09:48	8.8	Y	N	Y
GW TAT 10 day										

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kara Roberts

SIGNATURE of SAMPLER: Kara Roberts

DATE Signed (MM/DD/YY): 092309

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

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Pace Analytical™
www.pacelabs.com

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

Report Prepared for:

Troy Bussey
Pioneer Technologies Corporation
2612 Yelm Highway S.E.
Suite B
Olympia WA 98501-4826

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

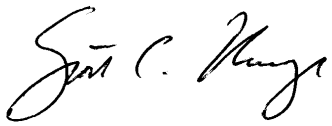
Pace Project #: 10113236
Sample Receipt Date: 09/24/2009
Client Project #: East Bay IA Stockpile
Client Sub PO #: N/A
State Cert #: C218

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed and prepared by:



Scott Unze, Project Manager
(612) 607-6383
(612) 607-6444 (fax)
scott.unze@pacelabs.com

ACCREDITED IN ACCORDANCE WITH nelac

Report of Laboratory Analysis

Report Prepared Date:
October 1, 2009

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analyses performed on six samples submitted by a representative of Pioneer Technologies Corporation. The samples were analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. Reporting limits were based on signal-to-noise calculations. The samples were received above the recommended temperature range of 0-6 degrees Celsius.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extracts ranged from 32-106%. With the exception of one low value, which was flagged "P" on the results table, the labeled standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Since the quantification of the native 2,3,7,8-substituted isomers was based on isotope dilution, the data were automatically corrected for variation in recovery and accurate values were obtained.

In some cases, interfering substances impacted the determinations of PCDD or PCDF congeners. The affected values were flagged "I" where incorrect isotope ratios were obtained, or "E" where polychlorinated diphenyl ethers were present.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to contain background levels of selected congeners. With the exception of the OCDD, these were below the calibration range of the method. The levels reported for the affected congeners in the field samples were higher than the corresponding blank levels by one or more orders of magnitude. These results indicate that the sample processing steps did not contribute significantly to the levels reported for the field samples.

Laboratory and matrix spike samples were also prepared with the sample batch using clean sand or sample matrix that had been fortified with native standards. The results show that the spiked native compounds were generally recovered at 87-127%, with relative percent differences generally from 0.3-19.0%. Somewhat variable results were obtained for HpCDD and OCDD in the matrix spike samples, due to the levels of these compounds in the sample material.

Appendix A

Sample Management

1130

Pace Analytical

Sample Condition Upon Receipt

Client Name: PTC **Project #** 10113236

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: _____

Options
Proj. Due Date:
Proj. Name:

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals Intact: ☐ yes ☐ no

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other _____ Temp Blank: Yes ✓ No _____

Thermometer Used 80344042 or (179425) **Type of Ice:** (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 8.8 **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C **Comments:**

Date and Initials of person examining contents: JR 9-24-09

Chain of Custody Present:	☑Yes	☐No	☐N/A
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A
Sufficient Volume:	☑Yes	☐No	☐N/A
Correct Containers Used:	☑Yes	☐No	☐N/A
-Pace Containers Used:	☑Yes	☐No	☐N/A
Containers Intact:	☑Yes	☐No	☐N/A
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A
Sample Labels match COC:	☑Yes	☐No	☐N/A
-Includes date/time/ID/Analysis Matrix: WT & SL			
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	☐Yes	☐No	☑N/A
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☐No	☑N/A
Exceptions: VOA,Coliform, TOC, Oil and Grease, WI-DRO (water)	☐Yes	☑No	
Samples checked for dechlorination:	☐Yes	☐No	☑N/A
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A
Trip Blank Present:	☐Yes	☑No	☐N/A
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A
Pace Trip Blank Lot # (if purchased): _____			

1.
2.
3.
4.
5.
6. 5day water 10day SL
7.
8.
9.
10.
11.
12. Some of the Sample's were on the top of the ice.
13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ HCl
Samp #

Initial when completed	Lot # of added preservative

14.
15.
16.

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Kara Date/Time: 09/24/09

Comments/ Resolution: Waived temp req.

Project Manager Review: JV **Date:** 09/24/09

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR.

Pace Analytical Services, Inc.
1700 Elm Street SE, Suite 200, Minneapolis, MN 55414

Appendix B

Sample Analysis Summary

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP24-ZONE2-092309-1		
Lab Sample ID	10113236001		
Filename	U90930A_05		
Injected By	SMT		
Total Amount Extracted	11.3 g	Matrix	Solid
% Moisture	10.4	Dilution	NA
Dry Weight Extracted	10.1 g	Collected	09/23/2009 11:45
ICAL ID	U90911	Received	09/24/2009 09:48
CCal Filename(s)	U90929B_15 & U90930A_17	Extracted	09/25/2009 15:30
Method Blank ID	BLANK-21632	Analyzed	09/30/2009 17:55

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery	
2,3,7,8-TCDF	ND	-----	0.67		2,3,7,8-TCDF-13C	2.00	73	
Total TCDF	4.30	-----	0.67		2,3,7,8-TCDD-13C	2.00	80	
					1,2,3,7,8-PeCDF-13C	2.00	77	
2,3,7,8-TCDD	ND	-----	0.49		2,3,4,7,8-PeCDF-13C	2.00	76	
Total TCDD	5.30	-----	0.49		1,2,3,7,8-PeCDD-13C	2.00	89	
					1,2,3,4,7,8-HxCDF-13C	2.00	91	
1,2,3,7,8-PeCDF	ND	-----	0.50		1,2,3,6,7,8-HxCDF-13C	2.00	80	
2,3,4,7,8-PeCDF	-----	1.30	0.55	I	2,3,4,6,7,8-HxCDF-13C	2.00	82	
Total PeCDF	10.00	-----	0.53		1,2,3,7,8,9-HxCDF-13C	2.00	77	
					1,2,3,4,7,8-HxCDD-13C	2.00	94	
1,2,3,7,8-PeCDD	ND	-----	0.48		1,2,3,6,7,8-HxCDD-13C	2.00	85	
Total PeCDD	4.20	-----	0.48	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	64	
					1,2,3,4,7,8,9-HpCDF-13C	2.00	57	
1,2,3,4,7,8-HxCDF	-----	2.90	1.00	E	1,2,3,4,6,7,8-HpCDD-13C	2.00	56	
1,2,3,6,7,8-HxCDF	ND	-----	0.75		OCDD-13C	4.00	54	Y
2,3,4,6,7,8-HxCDF	0.88	-----	0.79	J				
1,2,3,7,8,9-HxCDF	ND	-----	0.84		1,2,3,4-TCDD-13C	2.00	NA	
Total HxCDF	22.00	-----	0.85		1,2,3,7,8,9-HxCDD-13C	2.00	NA	
1,2,3,4,7,8-HxCDD	-----	0.92	0.67	I	2,3,7,8-TCDD-37Cl4	0.20	84	
1,2,3,6,7,8-HxCDD	3.40	-----	0.84	J				
1,2,3,7,8,9-HxCDD	-----	0.94	0.83	I				
Total HxCDD	32.00	-----	0.78					
1,2,3,4,6,7,8-HpCDF	13.00	-----	1.20		Total 2,3,7,8-TCDD			
1,2,3,4,7,8,9-HpCDF	ND	-----	1.30		Equivalence: 3.5 ng/Kg			
Total HpCDF	52.00	-----	1.20		(Using 2005 WHO Factors - Using PRL/2 where ND)			
1,2,3,4,6,7,8-HpCDD	160.00	-----	1.80					
Total HpCDD	540.00	-----	1.80					
OCDF	54.00	-----	1.80					
OCDD	1600.00	-----	2.50					

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
E = PCDE Interference
I = Interference present
Y = Calculated using average of daily RFs

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP24-ZONE2-092309-2		
Lab Sample ID	10113236002		
Filename	U90930A_04		
Injected By	SMT		
Total Amount Extracted	11.3 g	Matrix	Solid
% Moisture	6.9	Dilution	NA
Dry Weight Extracted	10.5 g	Collected	09/23/2009 12:00
ICAL ID	U90911	Received	09/24/2009 09:48
CCal Filename(s)	U90929B_15 & U90930A_17	Extracted	09/25/2009 15:30
Method Blank ID	BLANK-21632	Analyzed	09/30/2009 17:06

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery	
2,3,7,8-TCDF	4.5	-----	0.85		2,3,7,8-TCDF-13C	2.00	72	
Total TCDF	130.0	-----	0.85		2,3,7,8-TCDD-13C	2.00	81	
					1,2,3,7,8-PeCDF-13C	2.00	69	
2,3,7,8-TCDD	1.6	-----	0.82		2,3,4,7,8-PeCDF-13C	2.00	66	
Total TCDD	100.0	-----	0.82		1,2,3,7,8-PeCDD-13C	2.00	76	
					1,2,3,4,7,8-HxCDF-13C	2.00	106	
1,2,3,7,8-PeCDF	-----	11	0.75	E	1,2,3,6,7,8-HxCDF-13C	2.00	91	
2,3,4,7,8-PeCDF	-----	21	1.10	E	2,3,4,6,7,8-HxCDF-13C	2.00	70	
Total PeCDF	150.0	-----	0.91		1,2,3,7,8,9-HxCDF-13C	2.00	78	
					1,2,3,4,7,8-HxCDD-13C	2.00	84	
1,2,3,7,8-PeCDD	8.0	-----	1.70		1,2,3,6,7,8-HxCDD-13C	2.00	65	
Total PeCDD	130.0	-----	1.70		1,2,3,4,6,7,8-HpCDF-13C	2.00	51	
					1,2,3,4,7,8,9-HpCDF-13C	2.00	42	
1,2,3,4,7,8-HxCDF	16.0	-----	1.40		1,2,3,4,6,7,8-HpCDD-13C	2.00	46	
1,2,3,6,7,8-HxCDF	12.0	-----	1.10		OCDD-13C	4.00	48	Y
2,3,4,6,7,8-HxCDF	21.0	-----	1.70					
1,2,3,7,8,9-HxCDF	5.4	-----	1.60		1,2,3,4-TCDD-13C	2.00	NA	
Total HxCDF	570.0	-----	1.50		1,2,3,7,8,9-HxCDD-13C	2.00	NA	
1,2,3,4,7,8-HxCDD	11.0	-----	2.40		2,3,7,8-TCDD-37Cl4	0.20	85	
1,2,3,6,7,8-HxCDD	64.0	-----	3.10					
1,2,3,7,8,9-HxCDD	24.0	-----	1.50					
Total HxCDD	500.0	-----	2.30					
1,2,3,4,6,7,8-HpCDF	430.0	-----	3.80		Total 2,3,7,8-TCDD			
1,2,3,4,7,8,9-HpCDF	17.0	-----	4.50		Equivalence: 51 ng/Kg			
Total HpCDF	1600.0	-----	4.10		(Using 2005 WHO Factors - Using PRL/2 where ND)			
1,2,3,4,6,7,8-HpCDD	1600.0	-----	6.30					
Total HpCDD	3500.0	-----	6.30					
OCDF	2000.0	-----	4.50					
OCDD	16000.0	-----	4.80					

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
E = PCDE Interference
Y = Calculated using average of daily RFs

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP25-ZONE4-092309-1		
Lab Sample ID	10113236003		
Filename	U90930A_06		
Injected By	SMT		
Total Amount Extracted	11.0 g	Matrix	Solid
% Moisture	6.6	Dilution	NA
Dry Weight Extracted	10.3 g	Collected	09/23/2009 12:30
ICAL ID	U90911	Received	09/24/2009 09:48
CCal Filename(s)	U90929B_15 & U90930A_17	Extracted	09/25/2009 15:30
Method Blank ID	BLANK-21632	Analyzed	09/30/2009 18:44

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery	
2,3,7,8-TCDF	ND	-----	0.36		2,3,7,8-TCDF-13C	2.00	74	
Total TCDF	ND	-----	0.36		2,3,7,8-TCDD-13C	2.00	83	
					1,2,3,7,8-PeCDF-13C	2.00	83	
2,3,7,8-TCDD	ND	-----	0.30		2,3,4,7,8-PeCDF-13C	2.00	81	
Total TCDD	ND	-----	0.30		1,2,3,7,8-PeCDD-13C	2.00	95	
					1,2,3,4,7,8-HxCDF-13C	2.00	92	
1,2,3,7,8-PeCDF	ND	-----	0.34		1,2,3,6,7,8-HxCDF-13C	2.00	81	
2,3,4,7,8-PeCDF	-----	0.33	0.27	I	2,3,4,6,7,8-HxCDF-13C	2.00	82	
Total PeCDF	0.94	-----	0.30	J	1,2,3,7,8,9-HxCDF-13C	2.00	82	
					1,2,3,4,7,8-HxCDD-13C	2.00	97	
1,2,3,7,8-PeCDD	ND	-----	0.20		1,2,3,6,7,8-HxCDD-13C	2.00	85	
Total PeCDD	ND	-----	0.20		1,2,3,4,6,7,8-HpCDF-13C	2.00	69	
					1,2,3,4,7,8,9-HpCDF-13C	2.00	62	
1,2,3,4,7,8-HxCDF	-----	1.40	0.41	E	1,2,3,4,6,7,8-HpCDD-13C	2.00	61	
1,2,3,6,7,8-HxCDF	ND	-----	0.39		OCDD-13C	4.00	54	Y
2,3,4,6,7,8-HxCDF	ND	-----	0.47					
1,2,3,7,8,9-HxCDF	ND	-----	0.43		1,2,3,4-TCDD-13C	2.00	NA	
Total HxCDF	4.10	-----	0.43	J	1,2,3,7,8,9-HxCDD-13C	2.00	NA	
1,2,3,4,7,8-HxCDD	ND	-----	0.33		2,3,7,8-TCDD-37Cl4	0.20	85	
1,2,3,6,7,8-HxCDD	-----	0.49	0.36	I				
1,2,3,7,8,9-HxCDD	ND	-----	0.37					
Total HxCDD	3.20	-----	0.35	J				
1,2,3,4,6,7,8-HpCDF	3.70	-----	0.72	J	Total 2,3,7,8-TCDD			
1,2,3,4,7,8,9-HpCDF	ND	-----	1.10		Equivalence: 0.65 ng/Kg			
Total HpCDF	16.00	-----	0.89		(Using 2005 WHO Factors - Using PRL/2 where ND)			
1,2,3,4,6,7,8-HpCDD	13.00	-----	0.71					
Total HpCDD	28.00	-----	0.71					
OCDF	14.00	-----	1.70					
OCDD	87.00	-----	1.60					

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
E = PCDE Interference
I = Interference present
Y = Calculated using average of daily RFs

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP25-ZONE4-092309-2		
Lab Sample ID	10113236004		
Filename	U90930A_07		
Injected By	SMT		
Total Amount Extracted	10.6 g	Matrix	Solid
% Moisture	6.8	Dilution	NA
Dry Weight Extracted	9.87 g	Collected	09/23/2009 12:45
ICAL ID	U90911	Received	09/24/2009 09:48
CCal Filename(s)	U90929B_15 & U90930A_17	Extracted	09/25/2009 15:30
Method Blank ID	BLANK-21632	Analyzed	09/30/2009 19:33

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery	
2,3,7,8-TCDF	1.5	-----	0.33		2,3,7,8-TCDF-13C	2.00	74	
Total TCDF	19.0	-----	0.33		2,3,7,8-TCDD-13C	2.00	84	
					1,2,3,7,8-PeCDF-13C	2.00	79	
2,3,7,8-TCDD	ND	-----	0.32		2,3,4,7,8-PeCDF-13C	2.00	77	
Total TCDD	23.0	-----	0.32		1,2,3,7,8-PeCDD-13C	2.00	91	
					1,2,3,4,7,8-HxCDF-13C	2.00	88	
1,2,3,7,8-PeCDF	2.6	-----	0.54	J	1,2,3,6,7,8-HxCDF-13C	2.00	77	
2,3,4,7,8-PeCDF	5.2	-----	0.50		2,3,4,6,7,8-HxCDF-13C	2.00	77	
Total PeCDF	63.0	-----	0.52		1,2,3,7,8,9-HxCDF-13C	2.00	75	
					1,2,3,4,7,8-HxCDD-13C	2.00	92	
1,2,3,7,8-PeCDD	1.2	-----	0.43	J	1,2,3,6,7,8-HxCDD-13C	2.00	82	
Total PeCDD	30.0	-----	0.43		1,2,3,4,6,7,8-HpCDF-13C	2.00	61	
					1,2,3,4,7,8,9-HpCDF-13C	2.00	58	
1,2,3,4,7,8-HxCDF	-----	31.0	0.66	E	1,2,3,4,6,7,8-HpCDD-13C	2.00	55	
1,2,3,6,7,8-HxCDF	3.0	-----	0.56	J	OCDD-13C	4.00	48	Y
2,3,4,6,7,8-HxCDF	5.5	-----	0.49					
1,2,3,7,8,9-HxCDF	-----	2.7	0.54	I	1,2,3,4-TCDD-13C	2.00	NA	
Total HxCDF	220.0	-----	0.56		1,2,3,7,8,9-HxCDD-13C	2.00	NA	
1,2,3,4,7,8-HxCDD	1.8	-----	0.64	J	2,3,7,8-TCDD-37Cl4	0.20	85	
1,2,3,6,7,8-HxCDD	10.0	-----	0.74					
1,2,3,7,8,9-HxCDD	3.6	-----	0.63	J				
Total HxCDD	100.0	-----	0.67					
1,2,3,4,6,7,8-HpCDF	110.0	-----	0.84		Total 2,3,7,8-TCDD			
1,2,3,4,7,8,9-HpCDF	9.8	-----	1.20		Equivalence: 11 ng/Kg			
Total HpCDF	490.0	-----	1.00		(Using 2005 WHO Factors - Using PRL/2 where ND)			
1,2,3,4,6,7,8-HpCDD	320.0	-----	1.50					
Total HpCDD	620.0	-----	1.50					
OCDF	540.0	-----	2.30					
OCDD	2500.0	-----	2.00					

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
E = PCDE Interference
I = Interference present
Y = Calculated using average of daily RFs

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP25-ZONE4-092309-3		
Lab Sample ID	10113236005		
Filename	U90930A_08		
Injected By	SMT		
Total Amount Extracted	12.0 g	Matrix	Solid
% Moisture	6.1	Dilution	NA
Dry Weight Extracted	11.3 g	Collected	09/23/2009 13:00
ICAL ID	U90911	Received	09/24/2009 09:48
CCal Filename(s)	U90929B_15 & U90930A_17	Extracted	09/25/2009 15:30
Method Blank ID	BLANK-21632	Analyzed	09/30/2009 20:22

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery	
2,3,7,8-TCDF	0.38	-----	0.23	J	2,3,7,8-TCDF-13C	2.00	71	
Total TCDF	2.40	-----	0.23		2,3,7,8-TCDD-13C	2.00	81	
					1,2,3,7,8-PeCDF-13C	2.00	76	
2,3,7,8-TCDD	ND	-----	0.29		2,3,4,7,8-PeCDF-13C	2.00	74	
Total TCDD	ND	-----	0.29		1,2,3,7,8-PeCDD-13C	2.00	85	
					1,2,3,4,7,8-HxCDF-13C	2.00	93	
1,2,3,7,8-PeCDF	ND	-----	0.26		1,2,3,6,7,8-HxCDF-13C	2.00	84	
2,3,4,7,8-PeCDF	-----	0.65	0.22	I	2,3,4,6,7,8-HxCDF-13C	2.00	82	
Total PeCDF	3.90	-----	0.24	J	1,2,3,7,8,9-HxCDF-13C	2.00	77	
					1,2,3,4,7,8-HxCDD-13C	2.00	96	
1,2,3,7,8-PeCDD	0.30	-----	0.26	J	1,2,3,6,7,8-HxCDD-13C	2.00	86	
Total PeCDD	2.50	-----	0.26	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	60	
					1,2,3,4,7,8,9-HpCDF-13C	2.00	48	
1,2,3,4,7,8-HxCDF	-----	2.30	0.29	E	1,2,3,4,6,7,8-HpCDD-13C	2.00	50	
1,2,3,6,7,8-HxCDF	ND	-----	0.28		OCDD-13C	4.00	32	PY
2,3,4,6,7,8-HxCDF	-----	0.30	0.22	I				
1,2,3,7,8,9-HxCDF	ND	-----	0.22		1,2,3,4-TCDD-13C	2.00	NA	
Total HxCDF	13.00	-----	0.25		1,2,3,7,8,9-HxCDD-13C	2.00	NA	
1,2,3,4,7,8-HxCDD	0.33	-----	0.29	J	2,3,7,8-TCDD-37Cl4	0.20	83	
1,2,3,6,7,8-HxCDD	0.96	-----	0.29	J				
1,2,3,7,8,9-HxCDD	0.53	-----	0.23	J				
Total HxCDD	4.40	-----	0.27	J				
1,2,3,4,6,7,8-HpCDF	6.80	-----	0.80		Total 2,3,7,8-TCDD			
1,2,3,4,7,8,9-HpCDF	ND	-----	1.30		Equivalence: 1.1 ng/Kg			
Total HpCDF	28.00	-----	1.00		(Using 2005 WHO Factors - Using PRL/2 where ND)			
1,2,3,4,6,7,8-HpCDD	24.00	-----	0.88					
Total HpCDD	48.00	-----	0.88					
OCDF	24.00	-----	1.70					
OCDD	180.00	-----	2.10					

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
P = Recovery outside target range
E = PCDE Interference
I = Interference present
Y = Calculated using average of daily RFs

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP26-ZONE1-092309		
Lab Sample ID	10113236006		
Filename	U90930A_09		
Injected By	SMT		
Total Amount Extracted	12.7 g	Matrix	Solid
% Moisture	11.3	Dilution	NA
Dry Weight Extracted	11.3 g	Collected	09/23/2009 14:30
ICAL ID	U90911	Received	09/24/2009 09:48
CCal Filename(s)	U90929B_15 & U90930A_17	Extracted	09/25/2009 15:30
Method Blank ID	BLANK-21632	Analyzed	09/30/2009 21:11

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	2.9	-----	0.41		2,3,7,8-TCDF-13C	2.00	72
Total TCDF	37.0	-----	0.41		2,3,7,8-TCDD-13C	2.00	80
					1,2,3,7,8-PeCDF-13C	2.00	76
2,3,7,8-TCDD	1.2	-----	0.30		2,3,4,7,8-PeCDF-13C	2.00	75
Total TCDD	44.0	-----	0.30		1,2,3,7,8-PeCDD-13C	2.00	86
					1,2,3,4,7,8-HxCDF-13C	2.00	90
1,2,3,7,8-PeCDF	4.2	-----	0.27	J	1,2,3,6,7,8-HxCDF-13C	2.00	74
2,3,4,7,8-PeCDF	8.1	-----	0.98		2,3,4,6,7,8-HxCDF-13C	2.00	76
Total PeCDF	83.0	-----	0.62		1,2,3,7,8,9-HxCDF-13C	2.00	75
					1,2,3,4,7,8-HxCDD-13C	2.00	96
1,2,3,7,8-PeCDD	5.2	-----	0.73		1,2,3,6,7,8-HxCDD-13C	2.00	76
Total PeCDD	57.0	-----	0.73		1,2,3,4,6,7,8-HpCDF-13C	2.00	60
					1,2,3,4,7,8,9-HpCDF-13C	2.00	56
1,2,3,4,7,8-HxCDF	-----	26	0.57	E	1,2,3,4,6,7,8-HpCDD-13C	2.00	55
1,2,3,6,7,8-HxCDF	7.7	-----	0.51		OCDD-13C	4.00	52 Y
2,3,4,6,7,8-HxCDF	8.9	-----	0.71				
1,2,3,7,8,9-HxCDF	4.7	-----	0.56		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	130.0	-----	0.59		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	8.4	-----	0.84		2,3,7,8-TCDD-37Cl4	0.20	82
1,2,3,6,7,8-HxCDD	47.0	-----	0.83				
1,2,3,7,8,9-HxCDD	18.0	-----	0.92				
Total HxCDD	340.0	-----	0.86				
1,2,3,4,6,7,8-HpCDF	160.0	-----	0.78		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	8.5	-----	1.00		Equivalence: 40 ng/Kg		
Total HpCDF	400.0	-----	0.91		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	1600.0	-----	2.90				
Total HpCDD	3700.0	-----	2.90				
OCDF	360.0	-----	1.60				
OCDD	12000.0	-----	0.68				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.
ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
E = PCDE Interference
Y = Calculated using average of daily RFs

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
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Method 8290 Blank Analysis Results

Lab Sample ID	BLANK-21632	Matrix	Solid
Filename	U90929B_06	Dilution	NA
Total Amount Extracted	20.1 g	Extracted	09/25/2009 15:30
ICAL ID	U90911	Analyzed	09/30/2009 05:57
CCal Filename(s)	U90929A_16 & U90929B_15	Injected By	SMT

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.093		2,3,7,8-TCDF-13C	2.00	68
Total TCDF	ND	-----	0.093		2,3,7,8-TCDD-13C	2.00	80
					1,2,3,7,8-PeCDF-13C	2.00	78
2,3,7,8-TCDD	ND	-----	0.150		2,3,4,7,8-PeCDF-13C	2.00	79
Total TCDD	ND	-----	0.150		1,2,3,7,8-PeCDD-13C	2.00	93
					1,2,3,4,7,8-HxCDF-13C	2.00	91
1,2,3,7,8-PeCDF	ND	-----	0.130		1,2,3,6,7,8-HxCDF-13C	2.00	84
2,3,4,7,8-PeCDF	ND	-----	0.083		2,3,4,6,7,8-HxCDF-13C	2.00	85
Total PeCDF	ND	-----	0.110		1,2,3,7,8,9-HxCDF-13C	2.00	83
					1,2,3,4,7,8-HxCDD-13C	2.00	96
1,2,3,7,8-PeCDD	ND	-----	0.086		1,2,3,6,7,8-HxCDD-13C	2.00	85
Total PeCDD	ND	-----	0.086		1,2,3,4,6,7,8-HpCDF-13C	2.00	78
					1,2,3,4,7,8,9-HpCDF-13C	2.00	74
1,2,3,4,7,8-HxCDF	ND	-----	0.093		1,2,3,4,6,7,8-HpCDD-13C	2.00	70
1,2,3,6,7,8-HxCDF	ND	-----	0.083		OCDD-13C	4.00	57
2,3,4,6,7,8-HxCDF	ND	-----	0.100				
1,2,3,7,8,9-HxCDF	ND	-----	0.100		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.095		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.110		2,3,7,8-TCDD-37Cl4	0.20	81
1,2,3,6,7,8-HxCDD	ND	-----	0.097				
1,2,3,7,8,9-HxCDD	ND	-----	0.100				
Total HxCDD	ND	-----	0.100				
1,2,3,4,6,7,8-HpCDF	ND	-----	0.110		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.170		Equivalence: 0.18 ng/Kg		
Total HpCDF	0.34	-----	0.140	J	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	-----	0.43	0.200	I			
Total HpCDD	ND	-----	0.200				
OCDF	0.38	-----	0.260	J			
OCDD	6.80	-----	0.320				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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Minneapolis, MN 55414

Tel: 612-607-1700
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Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-21633		
Filename	U90929B_01	Matrix	Solid
Total Amount Extracted	20.3 g	Dilution	NA
ICAL ID	U90911	Extracted	09/25/2009 15:30
CCal Filename(s)	U90929A_16 & U90929B_15	Analyzed	09/30/2009 01:52
Method Blank ID	BLANK-21632	Injected By	SMT

Native Isomers	**Qs** (ng)	**Qm** (ng)	% Rec.	**Internal Standards**	**ng's Added**	**Percent Recovery**
2,3,7,8-TCDF	0.20	0.21	106	2,3,7,8-TCDF-13C	2.00	69
Total TCDF				2,3,7,8-TCDD-13C	2.00	79
				1,2,3,7,8-PeCDF-13C	2.00	77
2,3,7,8-TCDD	0.20	0.19	94	2,3,4,7,8-PeCDF-13C	2.00	77
Total TCDD				1,2,3,7,8-PeCDD-13C	2.00	92
				1,2,3,4,7,8-HxCDF-13C	2.00	88
1,2,3,7,8-PeCDF	1.00	1.02	102	1,2,3,6,7,8-HxCDF-13C	2.00	83
2,3,4,7,8-PeCDF	1.00	0.98	98	2,3,4,6,7,8-HxCDF-13C	2.00	84
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.00	81
				1,2,3,4,7,8-HxCDD-13C	2.00	92
1,2,3,7,8-PeCDD	1.00	0.88	88	1,2,3,6,7,8-HxCDD-13C	2.00	90
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.00	77
				1,2,3,4,7,8,9-HpCDF-13C	2.00	69
1,2,3,4,7,8-HxCDF	1.00	1.01	101	1,2,3,4,6,7,8-HpCDD-13C	2.00	69
1,2,3,6,7,8-HxCDF	1.00	1.02	102	OCDD-13C	4.00	49
2,3,4,6,7,8-HxCDF	1.00	1.01	101			
1,2,3,7,8,9-HxCDF	1.00	0.99	99	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.00	0.99	99	2,3,7,8-TCDD-37Cl4	0.20	80
1,2,3,6,7,8-HxCDD	1.00	0.94	94			
1,2,3,7,8,9-HxCDD	1.00	0.94	94			
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.00	0.98	98			
1,2,3,4,7,8,9-HpCDF	1.00	0.98	98			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.00	1.01	101			
Total HpCDD						
OCDF	2.00	1.80	90			
OCDD	2.00	2.03	102			

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
P = Recovery outside of target range
X = Background subtracted value
Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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Minneapolis, MN 55414

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Method 8290 Spiked Sample Report

Client - Pioneer Technologies Corporation

Client's Sample ID	SP24-ZONE2-092309-1-MS		
Lab Sample ID	10113236001-MS		
Filename	F90930B_17	Matrix	Solid
Total Amount Extracted	11.7 g	Dilution	NA
ICAL ID	F90817	Extracted	09/25/2009 15:30
CCal Filename(s)	F90930B_04 & F90930B_20	Analyzed	10/01/2009 04:46
Method Blank ID	BLANK-21632	Injected By	BAL

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.20	0.21	104	2,3,7,8-TCDF-13C	2.00	91
				2,3,7,8-TCDD-13C	2.00	90
				1,2,3,7,8-PeCDF-13C	2.00	97
2,3,7,8-TCDD	0.20	0.22	110	2,3,4,7,8-PeCDF-13C	2.00	98
				1,2,3,7,8-PeCDD-13C	2.00	112
				1,2,3,4,7,8-HxCDF-13C	2.00	82
1,2,3,7,8-PeCDF	1.00	0.98	98	1,2,3,6,7,8-HxCDF-13C	2.00	68
2,3,4,7,8-PeCDF	1.00	0.95	95	2,3,4,6,7,8-HxCDF-13C	2.00	75
				1,2,3,7,8,9-HxCDF-13C	2.00	80
				1,2,3,4,7,8-HxCDD-13C	2.00	98
1,2,3,7,8-PeCDD	1.00	0.91	91	1,2,3,6,7,8-HxCDD-13C	2.00	74
				1,2,3,4,6,7,8-HpCDF-13C	2.00	66
				1,2,3,4,7,8,9-HpCDF-13C	2.00	74
1,2,3,4,7,8-HxCDF	1.00	0.97	97	1,2,3,4,6,7,8-HpCDD-13C	2.00	73
1,2,3,6,7,8-HxCDF	1.00	1.02	102	OCDD-13C	4.00	68
2,3,4,6,7,8-HxCDF	1.00	0.98	98			
1,2,3,7,8,9-HxCDF	1.00	0.99	99	1,2,3,4-TCDD-13C	2.00	NA
				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.00	0.92	92	2,3,7,8-TCDD-37Cl4	0.20	100
1,2,3,6,7,8-HxCDD	1.00	0.99	99			
1,2,3,7,8,9-HxCDD	1.00	0.94	94			
1,2,3,4,6,7,8-HpCDF	1.00	1.31	131			
1,2,3,4,7,8,9-HpCDF	1.00	1.08	108			
1,2,3,4,6,7,8-HpCDD	1.00	3.22	322			
OCDF	2.00	3.11	155			
OCDD	2.00	31.88	1594			

Qs = Quantity Spiked Qm = Quantity Measured Rec. = Recovery (Expressed as Percent)

Results reported on a dry weight basis and are valid to no more than 2 significant figures.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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Method 8290 Spiked Sample Report

Client - Pioneer Technologies Corporation

Client's Sample ID	SP24-ZONE2-092309-1-MSD		
Lab Sample ID	10113236001-MSD		
Filename	F90930B_18	Matrix	Solid
Total Amount Extracted	11.6 g	Dilution	NA
ICAL ID	F90817	Extracted	09/25/2009 15:30
CCal Filename(s)	F90930B_04 & F90930B_20	Analyzed	10/01/2009 05:32
Method Blank ID	BLANK-21632	Injected By	BAL

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.20	0.20	99	2,3,7,8-TCDF-13C	2.00	96
				2,3,7,8-TCDD-13C	2.00	92
				1,2,3,7,8-PeCDF-13C	2.00	102
2,3,7,8-TCDD	0.20	0.21	106	2,3,4,7,8-PeCDF-13C	2.00	101
				1,2,3,7,8-PeCDD-13C	2.00	113
				1,2,3,4,7,8-HxCDF-13C	2.00	87
1,2,3,7,8-PeCDF	1.00	1.00	100	1,2,3,6,7,8-HxCDF-13C	2.00	67
2,3,4,7,8-PeCDF	1.00	0.90	90	2,3,4,6,7,8-HxCDF-13C	2.00	76
				1,2,3,7,8,9-HxCDF-13C	2.00	80
				1,2,3,4,7,8-HxCDD-13C	2.00	104
1,2,3,7,8-PeCDD	1.00	0.88	88	1,2,3,6,7,8-HxCDD-13C	2.00	67
				1,2,3,4,6,7,8-HpCDF-13C	2.00	59
				1,2,3,4,7,8,9-HpCDF-13C	2.00	56
1,2,3,4,7,8-HxCDF	1.00	0.95	95	1,2,3,4,6,7,8-HpCDD-13C	2.00	63
1,2,3,6,7,8-HxCDF	1.00	0.95	95	OCDD-13C	4.00	56
2,3,4,6,7,8-HxCDF	1.00	0.94	94			
1,2,3,7,8,9-HxCDF	1.00	0.95	95	1,2,3,4-TCDD-13C	2.00	NA
				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.00	0.88	88	2,3,7,8-TCDD-37Cl4	0.20	98
1,2,3,6,7,8-HxCDD	1.00	0.95	95			
1,2,3,7,8,9-HxCDD	1.00	0.94	94			
1,2,3,4,6,7,8-HpCDF	1.00	1.22	122			
1,2,3,4,7,8,9-HpCDF	1.00	1.02	102			
1,2,3,4,6,7,8-HpCDD	1.00	2.09	209			
OCDF	2.00	2.57	128			
OCDD	2.00	15.65	782			

Qs = Quantity Spiked Qm = Quantity Measured Rec. = Recovery (Expressed as Percent)

Results reported on a dry weight basis and are valid to no more than 2 significant figures.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Spike Sample Results

Client - Pioneer Technologies Corporation

Client Sample ID	SP24-ZONE2-092309-1			Dry Weights	
Lab Sample ID	10113236001	Sample Filename	U90930A_05	Sample Amount	10.1 g
MS ID	10113236001-MS	MS Filename	F90930B_17	MS Amount	10.5 g
MSD ID	10113236001-MSD	MSD Filename	F90930B_18	MSD Amount	10.4 g

Analyte	Sample Conc. ng/Kg	MS/MSD Qs (ng)	MS Qm (ng)	MSD Qm (ng)	RPD	Background Subtracted MS % Rec.	MSD % Rec.	RPD
2,3,7,8-TCDF	0.000	0.20	0.21	0.20	4.5	104	99	4.5
2,3,7,8-TCDD	0.000	0.20	0.22	0.21	3.8	110	106	3.8
1,2,3,7,8-PeCDF	0.000	1.00	0.98	1.00	1.6	98	100	1.6
2,3,4,7,8-PeCDF	0.000	1.00	0.95	0.90	5.8	94	89	5.9
1,2,3,7,8-PeCDD	0.000	1.00	0.91	0.88	4.1	91	88	4.1
1,2,3,4,7,8-HxCDF	0.000	1.00	0.97	0.95	2.6	94	92	2.6
1,2,3,6,7,8-HxCDF	0.000	1.00	1.02	0.95	7.3	102	95	7.3
2,3,4,6,7,8-HxCDF	0.880	1.00	0.98	0.94	4.2	97	93	4.2
1,2,3,7,8,9-HxCDF	0.000	1.00	0.99	0.95	3.3	99	95	3.3
1,2,3,4,7,8-HxCDD	0.000	1.00	0.92	0.88	5.4	92	87	5.5
1,2,3,6,7,8-HxCDD	3.420	1.00	0.99	0.95	4.6	96	91	4.8
1,2,3,7,8,9-HxCDD	0.000	1.00	0.94	0.94	0.3	93	93	0.3
1,2,3,4,6,7,8-HpCDF	13.200	1.00	1.31	1.22	7.2	117	108	8.0
1,2,3,4,7,8,9-HpCDF	0.000	1.00	1.08	1.02	5.1	108	102	5.1
1,2,3,4,6,7,8-HpCDD	159.000	1.00	3.22	2.09	42.3	156	45	110.5
OCDF	54.300	2.00	3.11	2.57	19.0	127	100	23.5
OCDD	1570.000	2.00	31.88	15.65	68.3	772	0	200.0

Definitions

MS = Matrix Spike
MSD = Matrix Spike Duplicate
Qm = Quantity Measured
Qs = Quantity Spiked
% Rec. = Percent Recovery
RPD = Relative Percent Difference
NA = Not Applicable
NC = Not Calculated

CDD = Chlorinated dibenzo-p-dioxin
CDF = Chlorinated dibenzo-p-furan
T = Tetra
Pe = Penta
Hx = Hexa
Hp = Hepta
O = Octa

DRAGON
Analytical Laboratory

RCRA CHAIN OF CUSTODY RECORD

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Phone: (360) 866-0543 Fax: (360) 866-0556
Email: DragonLab@comcast.net
Website: dragonlaboratory.com

Page ____ of ____

Samples Collected By: KR
Contact Number: 360 570 1706

Client: PTC
Address: 2612 Yelm Hwy SE Olympia WA 98501
Phone: ____
Fax: ____
Email: robertsk@wspioneer.com
Project Name: East Bay IA Stockpiles
Project Location: ____
Project Number: ____
Project P.O.: ____
Contact Person: ____
DAL Project No.: 091015-09

Matrix Code:
WW = wastewater **GW** = groundwater **S** = soil or solid
SL = sludge **V** = vapor **O** = other

Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Container Type	~~MTBE~~/BTEX (EPA 8021b)	Gasoline (NWTPH-Gx)	Diesel (NWTPH-Dx)	Diesel & Oil (NWTPH-Dx)	Fuel Scan (NWTPH-HCID)	VOC's (EPA 8021b)	Organochlorine Pesticides (EPA 8081)	PCB's (EPA 8082)	Volatiles (EPA 8260)	PAH's (EPA 8100 or 8270/8270SIM)	Semi-Volatiles (EPA 8270)	Ignitability (EPA 1010)	Oil and Grease (EPA 1664 HEM)	pH (EPA 9040/9045)	Specific Conductance (EPA 9050)	Paint Filter Test (EPA 9095)	Heavy Metals* (EPA 7000 Series)	Biogenic Gases (EPA 3C)	Natural Attenuation Indicators	Gross Alpha Radioactivity (EPA 900)	Gross Beta Radioactivity (EPA 900)
SP27-Zone3-101509	S	101509	1330	3Encore 2402	X	X		X				X		X							X				
SP28-Zone2-101509	↓	↓	1400	↓	X	X		X				X		X							X				
SP29-Zone4-101509-1	↓	↓	1500	↓	X	X		X				X		X							X				
SP29-Zone4-101509-2	↓	↓	1530	↓	X	X		X				X		X							X				
*Note: Zone 4 samples were single grab not composit.																									

Relinquished by (Signature): Kara Robert — Date/Time: 101509 — Received by (Signature): Mista Rsoth — Date/Time: 150CT09 1707
Relinquished by (Signature) — Date/Time — Received by (Signature) — Date/Time

Sample Disposal Instructions: ☐ DAL Disposal @ $2.50 per Container ☐ Return ☐ Pickup

Turn-Around-Time
☐ Same Day
☐ 24 Hour
☐ 48 Hour
☒ 5 Day Email
☐ 10 Day
☐ Other: ____

***Heavy Metals**: Please circle the desired analytes.

Ag Al (As) Ba Be (Cd) Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni (Pb) Sb Se Tl V Zn - Total
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - Dissolved
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - TCLP

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 091015-09

ANALYTICAL RESULTS FOR THE ANALYSIS OF GASOLINE RANGE ORGANICS IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Benzene EPA 8021B (mg/kg)	Toluene EPA 8021B (mg/kg)	Ethylbenzene EPA 8021B (mg/kg)	m&p-Xylene EPA 8021B (mg/kg)	o-Xylene EPA 8021B (mg/kg)	Gasoline NWTPH-Gx (mg/kg)	Surrogate Recovery BFB (%)	Data Flags
Method Blank	10/20/2009	n/a	nd	nd	nd	nd	nd	nd	95.2	
SP27-ZONE3-101509	10/20/2009	91.6	nd	nd	nd	nd	nd	nd	74.0	
SP28-ZONE2-101509	10/20/2009	91.8	nd	nd	nd	nd	nd	nd	81.3	
SP29-ZONE4-101509-1	10/20/2009	80.1	nd	nd	nd	nd	nd	nd	80.74	
SP29-ZONE4-101509-2	10/20/2009	92.8	nd	nd	nd	nd	nd	nd	88	
LCS	10/21/2009	n/a	105.0%	97.2%	95.1%	82.1%	97.7%	121%	n/a	
102009-MS	10/21/2009	n/a	109%	103%	105.0%	91.7%	99%	99.3%	n/a	
Method Reporting Limits			0.05	0.10	0.10	0.10	0.10	5.0		

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.

Comments and Explanations: None

Analyst: J. Thomas
Data Reviewed by: RL

DRAGON ANALYTICAL LABORATORY

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Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 091015-09

ANALYTICAL RESULTS FOR THE ANALYSIS OF FUEL IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Diesel Fuel #2 NWTPH-Dx (mg/kg)	Heavy Oil NWTPH-Dx (mg/kg)	Surrogate Recovery 2-FBP (%)	Data Flags
Method Blank	10/20/2009	n/a	nd	nd	72.5	
SP27-ZONE3-101509	10/20/2009	91.6	nd	nd	89.3	
SP28-ZONE2-101509	10/20/2009	91.8	nd	nd	116	
SP29-ZONE4-101509-1	10/20/2009	80.1	nd	nd	169	
SP29-ZONE4-101509-2	10/20/2009	92.8	nd	nd	96.6	
LCS	10/20/2009	n/a	117%	n/a	n/a	
102009-MS	10/20/2009	n/a	125%	n/a	n/a	
Method Reporting Limits			25	100		

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by: RL

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
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Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 091015-09

ANALYTICAL RESULTS FOR THE ANALYSIS OF PCB's IN SOIL BY EPA METHOD 8082

Sample Identification	Date Analyzed	Percent Solids (%)	Aroclor 1016 (mg/kg)	Aroclor 1221 (mg/kg)	Aroclor 1232 (mg/kg)	Aroclor 1242 (mg/kg)	Aroclor 1248 (mg/kg)	Aroclor 1254 (mg/kg)	Aroclor 1260 (mg/kg)	Surrogate Recovery TCMX (%)	Surrogate Recovery DCBP (%)	Data Flags
Method Blank	10/21/2009	n/a	nd	nd	nd	nd	nd	nd	nd	108	134	
SP27-Zone3-101509	10/21/2009	91.6	nd	nd	nd	nd	nd	nd	nd	92.6	124	
SP28-Zone2-101509	10/21/2009	91.8	nd	nd	nd	nd	nd	nd	nd	96.1	129	
SP29-Zone4-101509-1	10/21/2009	80.1	nd	nd	nd	nd	nd	nd	nd	100	77.3	
SP29-Zone4-101509-2	10/21/2009	92.8	nd	nd	nd	nd	nd	nd	nd	111	87.9	
LCS	10/21/2009	n/a	121%	n/a	n/a	n/a	n/a	n/a	122%	104	133	
091021-MS	10/21/2009	n/a	79.2%	n/a	n/a	n/a	n/a	n/a	69.6%	104	80.0	
091021-MSD	10/21/2009	n/a	87.0%	n/a	n/a	n/a	n/a	n/a	83.2%	88.6	119	
SP29-Zone4-101509-1	10/21/2009	80.1	nd	nd	nd	nd	nd	nd	nd	95.7	123	
Method Reporting Limits			0.05	0.05	0.05	0.05	0.05	0.05	0.05			

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
All results based on dry weight.

Comments and Explanations: None

Analyst: T. McCall

Data reviewed by: RL

DRAGON ANALYTICAL LABORATORY

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(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 091015-09

ANALYTICAL RESULTS FOR THE ANALYSIS OF SEMI-VOLATILE COMPOUNDS IN SOIL BY EPA METHOD 8270

Sample Identification			Blank	**SP27-Zone3-101509**	**SP28-Zone2-101509**	**SP29-Zone4-101509-1**	**SP29-Zone4-101509-2**	LCS	091020-MS	091020-MSD	SP29-Zone4-101509-1 Dup.
Percent Solids (%)			n/a	91.6	91.8	80.1	92.8	n/a	n/a	n/a	80.1
Date Extracted	CAS	MRL	10/19/2009	10/19/2009	10/19/2009	10/19/2009	10/19/2009	10/19/2009	10/19/2009	10/19/2009	10/19/2009
Date Anlayzed	Number	(mg/kg)	10/19/2009	10/19/2009	10/19/2009	10/19/2009	10/19/2009	10/19/2009	10/19/2009	10/19/2009	10/19/2009
Benzo(a)anthracene	56-55-3	0.01	nd	**0.04**	**0.12**	nd	**0.02**	104%	104%	104%	nd
Benzo(a)pyrene	50-32-8	0.01	nd	nd	nd	nd	nd	n/a	n/a	n/a	nd
Benzo(b)fluoranthene	205-99-2	0.01	nd	nd	nd	nd	nd	n/a	n/a	n/a	nd
Benzo(k)fluoranthene	207-08-9	0.01	nd	nd	**0.16**	nd	**0.03**	n/a	n/a	n/a	nd
Chrysene	218-01-9	0.01	nd	**0.02**	**0.17**	nd	**0.03**	106%	106%	107%	nd
Dibenzo(a,h)anthracene	53-70-3	0.01	nd	nd	nd	nd	nd	n/a	n/a	n/a	nd
Ideno(1,2,3-cd)pyrene	193-39-5	0.01	nd	nd	nd	nd	nd	92.3%	74.3%	85.3%	nd
1-Methylnaphthalene	90-12-0	0.01	nd	**0.02**	**0.03**	nd	nd	n/a	n/a	n/a	nd
2-Methylnaphthalene	91-57-6	0.01	nd	**0.02**	**0.03**	nd	nd	n/a	n/a	n/a	nd
Naphthalene	91-20-3	0.01	nd	**0.02**	**0.03**	nd	nd	n/a	n/a	n/a	nd
Surrogate Recovery (%)											
2-Fluorophenol			36.3	33.7	62.9	53.3	82.3	64.2	41.9	40.6	53.7
Phenol-d6			40.9	38.0	70.9	59.0	92.5	70.1	58.4	58.1	59.9
Nitrobenzene-d5			64.5	70.2	81.8	59.3	65.8	77.4	71.8	73.2	59.7
2-Fluorobiphenol			87.3	88.7	108	83.0	91.1	85.8	85.5	84.0	82.9
2,4,6-Tribromophenol			32.8	26.4	66.4	43.0	74.4	58.6	67.6	66.9	42.2
Terphenyl-d14			108	97.1	108	105	81.8	81.1	86.0	86.8	111
Data Flags											

WA-DOE-Laboratory Certification No.: C2013

"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.

"n/a" indicates not applicable

Sample results based on dry weight.

Comments and Explanations: None

Analyst: T. McCall

Data reviewed by: RL

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
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Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 091015-09

ANALYTICAL RESULTS FOR THE ANALYSIS OF HEAVY METALS IN SOIL BY EPA METHOD 6020 A

Sample Identification	Date Analyzed	Percent Solids	Arsenic (As)	Cadmium (Cd)	Lead (Pb)
Chemical Abstract Number (CAS)			7440-38-2	7440-43-9	7439-92-1
Units		(%)	(mg/kg)	(mg/kg)	(mg/kg)
Method Blank	10/16/2009	n/a	nd	nd	nd
SP27-Zone3-101509	10/16/2009	91.6	**3.08**	nd	**4.61**
SP28-Zone2-101509	10/16/2009	91.8	**8.44**	nd	**28.5**
SP29-Zone4-101509-1	10/16/2009	80.1	**4.37**	nd	**13.5**
SP29-Zone4-101509-2	10/16/2009	92.8	**3.03**	nd	**15.3**
LCS	10/16/2009	n/a	88.9%	95.6%	96.1%
091016-MS	10/16/2009	n/a	DO	DO	DO
091016-MSD	10/16/2009	n/a	DO	DO	DO
SP29-Zone4-101509-1	10/16/2009	80.1	4.33	nd	13.7
Method Reporting Limits			0.25	0.25	0.25

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.

"n/a" indicates not applicable
"MI" indicates Matrix Interference
Sample results based on dry weight.
Comments and Explanations: None

Analyst: Z. Froyland
Data reviewed by: RL

Pace Analytical®
www.pacelabs.com

1150

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

See RI Expectations Sent Previously

10114819

Page: of

1269211

Section A Required Client Information:
Company: PTC
Address: 2612 Yelm Hwy SE Olympia WA 98501
Email To: robertsk@uspioneer.com
Phone: 360 570 1700 Fax:
Requested Due Date/TAT: 5day

Section B Required Project Information:
Report To:
Copy To:
Purchase Order No.: Credit Card
Project Name:
Project Number:

Section C Invoice Information:
Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: Scott Unze
Pace Profile #:

REGULATORY AGENCY
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER ______
Site Location
STATE:

Section D Required Client Information

Matrix Codes MATRIX / CODE: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Tissue TS, Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N): N

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start DATE	COLLECTED Composite Start TIME	COLLECTED Composite End/Grab DATE	COLLECTED Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test	Dioxin/Furans 8290												Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SP27-Zone3-101509	SL	G			101509	1330		1										X													001
2	SP28-Zone2-101509	↓	↓			↓	1400		1										X													002
3	SP29-Zone4-101509-1	↓	↓			↓	1500		1										X													003
4	SP29-Zone4-101509-2	↓	↓			↓	1530		1										X													004
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
5day TAT by Email	Kara Roberts PTC	101509	4:30	A Hunter / Pace	10/16/09	955	28	Y	Y	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Kara Roberts
SIGNATURE of SAMPLER: Kara Roberts
DATE Signed (MM/DD/YY): 101509

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical™
www.pacelabs.com

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

Report Prepared for:

Troy Bussey
Pioneer Technologies Corporation
2612 Yelm Highway S.E.
Suite B
Olympia WA 98501-4826

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Prepared Date:
October 23, 2009

Report Information:

Pace Project #: 10114819
Sample Receipt Date: 10/16/2009
Client Project #: East Bay IA Stockpile
Client Sub PO #: N/A
State Cert #: C755

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed by:

October 23, 2009

Scott Unze, Project Manager
(612) 607-6383
(612) 607-6444 (fax)
scott.unze@pacelabs.com

ACCREDITED IN ACCORDANCE WITH nelac

Report of Laboratory Analysis

The results relate only to the samples included in this report.

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analyses performed on four samples submitted by a representative of Pioneer Technologies Corporation. The samples were analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. Reporting limits were based on signal-to-noise calculations.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extracts ranged from 57-94%. All of the labeled standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Since the quantification of the native 2,3,7,8-substituted isomers was based on isotope dilution, the data were automatically corrected for variation in recovery and accurate values were obtained.

In some cases, interfering substances impacted the determinations of PCDD or PCDF congeners; the affected values were flagged "I" where incorrect isotope ratios were obtained, or "P" where polychlorinated diphenyl ethers were present. Also, the OCDD concentration reported for sample "SP-28_ZONE2_101509" was above the calibration range; the value was flagged "E" and should be regarded as an estimate.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to contain trace levels of selected congeners. These were below the calibration range of the method. Sample levels similar to the corresponding blank levels were flagged "B" on the results tables and may be, at least partially, attributed to the background. It should be noted that levels less than ten times the background are not generally considered to be statistically different from the background.

A laboratory spike sample was also prepared with the sample batch using clean sand that had been fortified with native standard materials. The results show that the spiked native compounds were recovered at 89-106%. These results indicate a high degree of accuracy for these determinations. Matrix spikes were prepared with the sample batch using sample material from a separate project; results from these analyses will be provided upon request.

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
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Tel: 612-607-1700
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Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
Alabama	40770	Montana	92
Alaska	MN00064	Nebraska	
Arizona	AZ0014	Nevada	MN00064_2000
Arkansas	88-0680	New Jersey (NE	MN002
California	01155CA	New Mexico	MN00064
Colorado	MN00064	New York (NEL	11647
Connecticut	PH-0256	North Carolina	27700
EPA Region 5	WD-15J	North Dakota	R-036
EPA Region 8	8TMS-Q	Ohio	4150
Florida (NELAP	E87605	Ohio VAP	CL101
Georgia (DNR)	959	Oklahoma	D9922
Guam	08-004r	Oregon (ELAP)	MN200001-005
Hawaii	SLD	Oregon (OREL	MN200001-005
Idaho	MN00064	Pennsylvania	68-00563
Illinois	200012	Saipan	MP0003
Indiana		South Carolina	74003001
Indiana	C-MN-01	Tennesee	2818
Iowa	368	Tennessee	02818
Kansas	E-10167	Texas	T104704192-08
Kentucky	90062	Utah (NELAP)	PAM
Louisiana	LA0900016	Virginia	00251
Maine	2007029	Washington	C755
Maryland	322	West Virginia	9952C
Michigan	9909	Wisconsin	999407970
Minnesota	027-053-137	Wyoming	8TMS-Q
Mississippi	MN00064		

REPORT OF LABORATORY ANALYSIS

Appendix A

Sample Management

Pace Analytical

Sample Condition Upon Receipt

10114819

Client Name: Pioneer Tech Project #

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other

Tracking #: 8392 2231 5253

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals Intact: ☐ yes ☐ no

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other Temp Blank: Yes ____ No ✓

Thermometer Used: 80344042 or 179425 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature: 2.8 Biological Tissue is Frozen: Yes No

Date and initials of person examining contents: 10/16/09 SL

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☐No ☐N/A	7. 5 day TAT
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☐N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: SL		
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	☐Yes ☐No ☐N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ HCl
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☐N/A	Samp #
Exceptions: VOA,Coliform, TOC, Oil and Grease, WI-DRO (water)	☐Yes ☐No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☐N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☐N/A	15.
Trip Blank Present:	☐Yes ☐No ☐N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:** 10/16/09

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR.

Pace Analytical Services, Inc.
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Reporting Flags

A = Reporting Limit based on signal to noise

B = Less than 10x higher than method blank level

C = Result obtained from confirmation analysis

D = Result obtained from analysis of diluted sample

E = Exceeds calibration range

I = Interference present

J = Estimated value

Nn = Value obtained from additional analysis

P = PCDE Interference

R = Recovery outside target range

S = Peak saturated

U = Analyte not detected

V = Result verified by confirmation analysis

X = %D Exceeds limits

Y = Calculated using average of daily RFs

* = See Discussion

Appendix B

Sample Analysis Summary

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP-27_ZONE3_101509		
Lab Sample ID	10114819001		
Filename	F91023A_05		
Injected By	BAL		
Total Amount Extracted	11.0 g	Matrix	Solid
% Moisture	7.9	Dilution	NA
Dry Weight Extracted	10.1 g	Collected	10/15/2009 13:30
ICAL ID	F91021	Received	10/16/2009 09:55
CCal Filename(s)	F91022B_13 & F91023A_16	Extracted	10/20/2009 15:30
Method Blank ID	BLANK-22071	Analyzed	10/23/2009 04:04

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.36	-----	0.110	J	2,3,7,8-TCDF-13C	2.00	71
Total TCDF	1.90	-----	0.110		2,3,7,8-TCDD-13C	2.00	81
					1,2,3,7,8-PeCDF-13C	2.00	63
2,3,7,8-TCDD	ND	-----	0.130		2,3,4,7,8-PeCDF-13C	2.00	67
Total TCDD	2.50	-----	0.130		1,2,3,7,8-PeCDD-13C	2.00	74
					1,2,3,4,7,8-HxCDF-13C	2.00	89
1,2,3,7,8-PeCDF	-----	0.52	0.150	I	1,2,3,6,7,8-HxCDF-13C	2.00	79
2,3,4,7,8-PeCDF	1.50	-----	0.110	J	2,3,4,6,7,8-HxCDF-13C	2.00	79
Total PeCDF	15.00	-----	0.130		1,2,3,7,8,9-HxCDF-13C	2.00	71
					1,2,3,4,7,8-HxCDD-13C	2.00	94
1,2,3,7,8-PeCDD	-----	0.24	0.190	I	1,2,3,6,7,8-HxCDD-13C	2.00	79
Total PeCDD	2.40	-----	0.190	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	60
					1,2,3,4,7,8,9-HpCDF-13C	2.00	59
1,2,3,4,7,8-HxCDF	-----	4.20	0.250	P	1,2,3,4,6,7,8-HpCDD-13C	2.00	70
1,2,3,6,7,8-HxCDF	0.81	-----	0.210	J	OCDD-13C	4.00	57
2,3,4,6,7,8-HxCDF	1.00	-----	0.240	J			
1,2,3,7,8,9-HxCDF	-----	0.74	0.230	I	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	48.00	-----	0.230		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	0.49	-----	0.160	J	2,3,7,8-TCDD-37Cl4	0.20	81
1,2,3,6,7,8-HxCDD	1.80	-----	0.180	J			
1,2,3,7,8,9-HxCDD	0.74	-----	0.094	J			
Total HxCDD	14.00	-----	0.140				
1,2,3,4,6,7,8-HpCDF	21.00	-----	0.270		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	1.60	-----	0.810	J	Equivalence: 2.1 ng/Kg		
Total HpCDF	91.00	-----	0.540		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	53.00	-----	0.390				
Total HpCDD	98.00	-----	0.390				
OCDF	67.00	-----	0.320				
OCDD	530.00	-----	0.380				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
P = PCDE Interference
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP-28_ZONE2_101509		
Lab Sample ID	10114819002		
Filename	F91023A_06		
Injected By	BAL		
Total Amount Extracted	11.0 g	Matrix	Solid
% Moisture	8.0	Dilution	NA
Dry Weight Extracted	10.1 g	Collected	10/15/2009 14:00
ICAL ID	F91021	Received	10/16/2009 09:55
CCal Filename(s)	F91022B_13 & F91023A_16	Extracted	10/20/2009 15:30
Method Blank ID	BLANK-22071	Analyzed	10/23/2009 04:53

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	2.80	-----	0.130		2,3,7,8-TCDF-13C	2.00	72
Total TCDF	40.00	-----	0.130		2,3,7,8-TCDD-13C	2.00	78
					1,2,3,7,8-PeCDF-13C	2.00	62
2,3,7,8-TCDD	0.97	-----	0.093	J	2,3,4,7,8-PeCDF-13C	2.00	63
Total TCDD	34.00	-----	0.093		1,2,3,7,8-PeCDD-13C	2.00	69
					1,2,3,4,7,8-HxCDF-13C	2.00	88
1,2,3,7,8-PeCDF	3.50	-----	0.170	J	1,2,3,6,7,8-HxCDF-13C	2.00	70
2,3,4,7,8-PeCDF	7.80	-----	0.150		2,3,4,6,7,8-HxCDF-13C	2.00	75
Total PeCDF	140.00	-----	0.160		1,2,3,7,8,9-HxCDF-13C	2.00	72
					1,2,3,4,7,8-HxCDD-13C	2.00	89
1,2,3,7,8-PeCDD	6.20	-----	0.510		1,2,3,6,7,8-HxCDD-13C	2.00	73
Total PeCDD	50.00	-----	0.510		1,2,3,4,6,7,8-HpCDF-13C	2.00	58
					1,2,3,4,7,8,9-HpCDF-13C	2.00	60
1,2,3,4,7,8-HxCDF	-----	14	0.210	P	1,2,3,4,6,7,8-HpCDD-13C	2.00	69
1,2,3,6,7,8-HxCDF	7.60	-----	0.400		OCDD-13C	4.00	60
2,3,4,6,7,8-HxCDF	11.00	-----	0.420				
1,2,3,7,8,9-HxCDF	4.10	-----	0.340	J	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	290.00	-----	0.340		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	18.00	-----	0.590		2,3,7,8-TCDD-37Cl4	0.20	75
1,2,3,6,7,8-HxCDD	68.00	-----	0.570				
1,2,3,7,8,9-HxCDD	23.00	-----	0.710				
Total HxCDD	330.00	-----	0.620				
1,2,3,4,6,7,8-HpCDF	170.00	-----	0.670		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	7.60	-----	1.500		Equivalence: 42 ng/Kg		
Total HpCDF	500.00	-----	1.100		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	1400.00	-----	5.100				
Total HpCDD	2600.00	-----	5.100				
OCDF	400.00	-----	0.780				
OCDD	12000.00	-----	0.600	E			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
P = PCDE Interference
E = Exceeds calibration range

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP-29_ZONE4_101509_1		
Lab Sample ID	10114819003		
Filename	F91023A_07		
Injected By	BAL		
Total Amount Extracted	13.2 g	Matrix	Solid
% Moisture	19.6	Dilution	NA
Dry Weight Extracted	10.6 g	Collected	10/15/2009 15:00
ICAL ID	F91021	Received	10/16/2009 09:55
CCal Filename(s)	F91022B_13 & F91023A_16	Extracted	10/20/2009 15:30
Method Blank ID	BLANK-22071	Analyzed	10/23/2009 05:41

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.57	-----	0.16	J	2,3,7,8-TCDF-13C	2.00	59
Total TCDF	3.40	-----	0.16		2,3,7,8-TCDD-13C	2.00	65
					1,2,3,7,8-PeCDF-13C	2.00	58
2,3,7,8-TCDD	ND	-----	0.17		2,3,4,7,8-PeCDF-13C	2.00	67
Total TCDD	1.60	-----	0.17		1,2,3,7,8-PeCDD-13C	2.00	76
					1,2,3,4,7,8-HxCDF-13C	2.00	83
1,2,3,7,8-PeCDF	0.22	-----	0.11	J	1,2,3,6,7,8-HxCDF-13C	2.00	86
2,3,4,7,8-PeCDF	0.30	-----	0.12	J	2,3,4,6,7,8-HxCDF-13C	2.00	83
Total PeCDF	3.20	-----	0.11	J	1,2,3,7,8,9-HxCDF-13C	2.00	81
					1,2,3,4,7,8-HxCDD-13C	2.00	90
1,2,3,7,8-PeCDD	ND	-----	0.19		1,2,3,6,7,8-HxCDD-13C	2.00	93
Total PeCDD	1.40	-----	0.19	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	71
					1,2,3,4,7,8,9-HpCDF-13C	2.00	68
1,2,3,4,7,8-HxCDF	ND	-----	0.22		1,2,3,4,6,7,8-HpCDD-13C	2.00	84
1,2,3,6,7,8-HxCDF	-----	0.29	0.13	I	OCDD-13C	4.00	69
2,3,4,6,7,8-HxCDF	-----	0.46	0.19	I			
1,2,3,7,8,9-HxCDF	ND	-----	0.20		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	1.30	-----	0.19	J	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.25		2,3,7,8-TCDD-37Cl4	0.20	64
1,2,3,6,7,8-HxCDD	0.49	-----	0.20	J			
1,2,3,7,8,9-HxCDD	-----	0.30	0.18	I			
Total HxCDD	4.50	-----	0.21	J			
1,2,3,4,6,7,8-HpCDF	1.30	-----	0.26	BJ	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.17		Equivalence: 0.55 ng/Kg		
Total HpCDF	3.50	-----	0.22	J	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	7.00	-----	0.27				
Total HpCDD	15.00	-----	0.27				
OCDF	2.70	-----	0.30	J			
OCDD	66.00	-----	0.24				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
B = Less than 10x higher than method blank level
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP-29_ZONE4_101509_2		
Lab Sample ID	10114819004		
Filename	F91023A_08		
Injected By	BAL		
Total Amount Extracted	11.2 g	Matrix	Solid
% Moisture	6.8	Dilution	NA
Dry Weight Extracted	10.4 g	Collected	10/15/2009 15:30
ICAL ID	F91021	Received	10/16/2009 09:55
CCal Filename(s)	F91022B_13 & F91023A_16	Extracted	10/20/2009 15:30
Method Blank ID	BLANK-22071	Analyzed	10/23/2009 06:30

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	1.50	-----	0.068		2,3,7,8-TCDF-13C	2.00	69
Total TCDF	25.00	-----	0.068		2,3,7,8-TCDD-13C	2.00	78
					1,2,3,7,8-PeCDF-13C	2.00	61
2,3,7,8-TCDD	0.48	-----	0.087	J	2,3,4,7,8-PeCDF-13C	2.00	67
Total TCDD	23.00	-----	0.087		1,2,3,7,8-PeCDD-13C	2.00	74
					1,2,3,4,7,8-HxCDF-13C	2.00	82
1,2,3,7,8-PeCDF	1.40	-----	0.170	J	1,2,3,6,7,8-HxCDF-13C	2.00	82
2,3,4,7,8-PeCDF	3.00	-----	0.082	J	2,3,4,6,7,8-HxCDF-13C	2.00	78
Total PeCDF	39.00	-----	0.120		1,2,3,7,8,9-HxCDF-13C	2.00	72
					1,2,3,4,7,8-HxCDD-13C	2.00	85
1,2,3,7,8-PeCDD	1.80	-----	0.140	J	1,2,3,6,7,8-HxCDD-13C	2.00	81
Total PeCDD	24.00	-----	0.140		1,2,3,4,6,7,8-HpCDF-13C	2.00	61
					1,2,3,4,7,8,9-HpCDF-13C	2.00	62
1,2,3,4,7,8-HxCDF	-----	4.8	0.280	P	1,2,3,4,6,7,8-HpCDD-13C	2.00	73
1,2,3,6,7,8-HxCDF	2.40	-----	0.300	J	OCDD-13C	4.00	61
2,3,4,6,7,8-HxCDF	2.10	-----	0.300	J			
1,2,3,7,8,9-HxCDF	0.77	-----	0.440	J	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	54.00	-----	0.330		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.60	-----	0.260	J	2,3,7,8-TCDD-37Cl4	0.20	78
1,2,3,6,7,8-HxCDD	5.40	-----	0.240				
1,2,3,7,8,9-HxCDD	2.00	-----	0.240	J			
Total HxCDD	63.00	-----	0.250				
1,2,3,4,6,7,8-HpCDF	33.00	-----	0.460		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	2.50	-----	0.510	J	Equivalence: 8.2 ng/Kg		
Total HpCDF	160.00	-----	0.490		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	220.00	-----	1.300				
Total HpCDD	650.00	-----	1.300				
OCDF	180.00	-----	0.310				
OCDD	2700.00	-----	0.360				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
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NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
P = PCDE Interference

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Blank Analysis Results

Lab Sample ID	BLANK-22071	Matrix	Solid
Filename	F91023A_04	Dilution	NA
Total Amount Extracted	10.2 g	Extracted	10/20/2009 15:30
ICAL ID	F91021	Analyzed	10/23/2009 03:16
CCal Filename(s)	F91022B_13 & F91023A_16	Injected By	BAL

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.083		2,3,7,8-TCDF-13C	2.00	58
Total TCDF	ND	-----	0.083		2,3,7,8-TCDD-13C	2.00	68
					1,2,3,7,8-PeCDF-13C	2.00	60
2,3,7,8-TCDD	ND	-----	0.067		2,3,4,7,8-PeCDF-13C	2.00	70
Total TCDD	ND	-----	0.067		1,2,3,7,8-PeCDD-13C	2.00	78
					1,2,3,4,7,8-HxCDF-13C	2.00	75
1,2,3,7,8-PeCDF	ND	-----	0.076		1,2,3,6,7,8-HxCDF-13C	2.00	82
2,3,4,7,8-PeCDF	ND	-----	0.070		2,3,4,6,7,8-HxCDF-13C	2.00	82
Total PeCDF	ND	-----	0.073		1,2,3,7,8,9-HxCDF-13C	2.00	76
					1,2,3,4,7,8-HxCDD-13C	2.00	90
1,2,3,7,8-PeCDD	ND	-----	0.100		1,2,3,6,7,8-HxCDD-13C	2.00	86
Total PeCDD	ND	-----	0.100		1,2,3,4,6,7,8-HpCDF-13C	2.00	68
					1,2,3,4,7,8,9-HpCDF-13C	2.00	62
1,2,3,4,7,8-HxCDF	ND	-----	0.170		1,2,3,4,6,7,8-HpCDD-13C	2.00	78
1,2,3,6,7,8-HxCDF	ND	-----	0.110		OCDD-13C	4.00	59
2,3,4,6,7,8-HxCDF	ND	-----	0.120				
1,2,3,7,8,9-HxCDF	ND	-----	0.150		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.140		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.170		2,3,7,8-TCDD-37Cl4	0.20	66
1,2,3,6,7,8-HxCDD	ND	-----	0.140				
1,2,3,7,8,9-HxCDD	ND	-----	0.140				
Total HxCDD	ND	-----	0.150				
1,2,3,4,6,7,8-HpCDF	0.24	-----	0.210	J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.250		Equivalence: 0.16 ng/Kg		
Total HpCDF	0.24	-----	0.230	J	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	0.34	-----	0.150	J			
Total HpCDD	0.80	-----	0.150	J			
OCDF	ND	-----	0.480				
OCDD	2.40	-----	0.460	J			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-22072		
Filename	F91023A_01	Matrix	Solid
Total Amount Extracted	10.0 g	Dilution	NA
ICAL ID	F91021	Extracted	10/20/2009 15:30
CCal Filename(s)	F91022B_13 & F91023A_16	Analyzed	10/23/2009 00:50
Method Blank ID	BLANK-22071	Injected By	BAL

Native Isomers	**Qs** (ng)	**Qm** (ng)	% Rec.	**Internal Standards**	**ng's Added**	**Percent Recovery**
2,3,7,8-TCDF	0.20	0.20	100	2,3,7,8-TCDF-13C	2.00	70
Total TCDF				2,3,7,8-TCDD-13C	2.00	79
				1,2,3,7,8-PeCDF-13C	2.00	69
2,3,7,8-TCDD	0.20	0.20	99	2,3,4,7,8-PeCDF-13C	2.00	75
Total TCDD				1,2,3,7,8-PeCDD-13C	2.00	87
				1,2,3,4,7,8-HxCDF-13C	2.00	79
1,2,3,7,8-PeCDF	1.00	1.05	105	1,2,3,6,7,8-HxCDF-13C	2.00	80
2,3,4,7,8-PeCDF	1.00	0.99	99	2,3,4,6,7,8-HxCDF-13C	2.00	81
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.00	77
				1,2,3,4,7,8-HxCDD-13C	2.00	94
1,2,3,7,8-PeCDD	1.00	0.91	91	1,2,3,6,7,8-HxCDD-13C	2.00	84
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.00	71
				1,2,3,4,7,8,9-HpCDF-13C	2.00	65
1,2,3,4,7,8-HxCDF	1.00	0.98	98	1,2,3,4,6,7,8-HpCDD-13C	2.00	80
1,2,3,6,7,8-HxCDF	1.00	1.02	102	OCDD-13C	4.00	60
2,3,4,6,7,8-HxCDF	1.00	1.01	101			
1,2,3,7,8,9-HxCDF	1.00	0.98	98	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.00	0.89	89	2,3,7,8-TCDD-37Cl4	0.20	78
1,2,3,6,7,8-HxCDD	1.00	1.06	106			
1,2,3,7,8,9-HxCDD	1.00	0.94	94			
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.00	0.99	99			
1,2,3,4,7,8,9-HpCDF	1.00	1.00	100			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.00	0.92	92			
Total HpCDD						
OCDF	2.00	1.85	93			
OCDD	2.00	2.12	106			

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
R = Recovery outside of target range
Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

DRAGON
Analytical Laboratory

RCRA CHAIN OF CUSTODY RECORD

2818 Madrona Beach Rd. NW, Olympia, WA 98502
Phone: (360) 866-0543 Fax: (360) 866-0556
Email: DragonLab@comcast.net

Samples Collected By: KR
Contact Number:

Client: PTC
Address: 2612 Yelm Hwy SE Olympia WA 98501

Phone: 576-1700
Fax:
Email: robertskraus pioneer.com

Project Name: Eastbay IA Stockpiles
Project Location:
Project Number:

Project P.O.:
Contact Person:
DAL Project No.: 091214-04

Matrix Code:
WW = wastewater **GW** = groundwater **S** = soil or solid
SL = sludge **V** = vapor **O** = other

Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Container Type	MtBE/BTEX (EPA 8021b)	Gasoline (NWTPH-Gx)	Diesel (NWTPH-Dx)	Diesel & Oil (NWTPH-Dx)	Fuel Scan (NWTPH-HCID)	VOC's (EPA 8021b)	Organochlorine Pesticides (EPA 8081)	PCB's (EPA 8082)	Volatiles (EPA 8260)	PAH's (EPA 8100 or 8270/8270SIM)	Semi-Volatiles (EPA 8270)	Ignitability (EPA 1010)	Oil and Grease (EPA 1664 HEM)	pH (EPA 9040/9045)	Specific Conductance (EPA 9050)	Paint Filter Test (EPA 9095)	Heavy Metals* (EPA 7000 Series)	Biogenic Gases (EPA 3C)	Natural Attenuation Indicators	Gross Alpha Radioactivity (EPA 900)	Gross Beta Radioactivity (EPA 900)	TCLP Pb
SP33-Zone4_121409_comp	S	12/14/09	0945																							X
SP25-Zone4-121409_comp1		12/14/09	1015																							X
SP25_Zone4_121409_comp2			1030																							X
SP30-Zone4_121409_comp			1145																							X
SP29_Zone4_121409_comp			1000																							X
SP35_Zone4_121409_comp			1530																							X
SP30_Zone4_121409			1130		X	X		X				X		X							X					
SP31_Zone2_121409			1200		X	X		X				X		X							X					
SP32_Zone3_121409			1330		X	X		X				X		X							X					
SP33_Zone3_121409			1400		X	X		X				X		X							X					
SP34_Zone3_121409			1415		X	X		X				X		X							X					
SP35_Zone4_121409	↓	↓	1530		X	X		X				X		X							X					

Hold all samples per TB 12/15/09 1700

EMAIL 12-18-09 T. Bussey for ANAL. of SP-33 and SP 34

Relinquished by (Signature) Melody Finn Date/Time 12/14/09/400 Received by (Signature) Date/Time 12/14/09 16:25

Relinquished by (Signature) Date/Time Received by (Signature) Date/Time

Sample Disposal Instructions: ☐ DAL Disposal @ $2.50 per Container ☐ Return ☐ Pickup

Turn-Around-Time
☐ Same Day
☐ 24 Hour
☐ 48 Hour
☒ 5 Day
☐ 10 Day
X 3 day for TCLP
☐ Other:

*Heavy Metals: Please circle the desired analytes.

Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - Total
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - Dissolved
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - TCLP

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DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 091214-04

ANALYTICAL RESULTS FOR THE ANALYSIS OF FUEL IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Diesel Fuel #2 NWTPH-Dx (mg/kg)	Heavy Oil NWTPH-Dx (mg/kg)	Surrogate Recovery 2-FBP (%)	Data Flags
Method Blank	12/28/2009	n/a	nd	nd	103	
SP33-ZONE3-121409	12/28/2009	90.1	nd	nd	107	
SP34-ZONE3-121409	12/28/2009	87.9	nd	nd	78.5	
LCS	12/28/2009	n/a	113%	n/a	n/a	
091001-MS	12/28/2009	n/a	67.0%	n/a	n/a	
Method Reporting Limits			25	100		

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.
Comments and Explanations: None

Analyst: J. Thomas
Data reviewed by: RL

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 091214-04

ANALYTICAL RESULTS FOR THE ANALYSIS OF GASOLINE RANGE ORGANICS IN SOIL

Sample Identification	Date Analyzed	Percent Solids (%)	Benzene EPA 8021B (mg/kg)	Toluene EPA 8021B (mg/kg)	Ethylbenzene EPA 8021B (mg/kg)	m&p-Xylene EPA 8021B (mg/kg)	o-Xylene EPA 8021B (mg/kg)	Gasoline NWTPH-Gx (mg/kg)	Surrogate Recovery BFB (%)	Data Flags
Method Blank	12/29/2009	n/a	nd	nd	nd	nd	nd	nd	95.6	
SP33-ZONE3-121409	12/29/2009	90.1	nd	nd	nd	nd	nd	nd	111	
SP34-ZONE3-121409	12/29/2009	87.9	nd	nd	nd	nd	nd	nd	124	
LCS	12/29/2009	n/a	79.4%	84.2%	n/a	n/a	n/a	87.0%	n/a	
091229-MS	12/29/2009	n/a	113%	102%	170%	134%	151%	87.0%	n/a	
Method Reporting Limits			0.05	0.10	0.10	0.10	0.10	5.0		

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.

Comments and Explanations: None

Analyst: J. Thomas
Data reviewed by: RL

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 091214-04

ANALYTICAL RESULTS FOR THE ANALYSIS OF HEAVY METALS IN SOIL BY EPA METHOD 6020 A

Sample Identification	Date Analyzed	Percent Solids	Arsenic (As)	Cadmium (Cd)	Lead (Pb)
Chemical Abstract Number (CAS)			7440-38-2	7440-43-9	7439-92-1
Units		(%)	(mg/kg)	(mg/kg)	(mg/kg)
Method Blank	12/28/2009	n/a	nd	nd	nd
SP33-ZONE3-121409	12/28/2009	90.1	**3.98**	**0.33**	**35.8**
SP34-ZONE3-121409	12/28/2009	87.9	**3.79**	**0.25**	**7.3**
LCS	12/28/2009	n/a	119%	114%	117%
091028-MS	12/28/2009	n/a	MI	MI	MI
091028-MSD	12/28/2009	n/a	MI	MI	MI
Method Reporting Limits			0.25	0.25	0.25

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
"MI" indicates Matrix Interference
Sample results based on dry weight.
Comments and Explanations: None

Analyst: C. Altis
Data reviewed by: RL

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 091214-04

ANALYTICAL RESULTS FOR THE ANALYSIS OF SEMI-VOLATILE COMPOUNDS IN SOIL BY EPA METHOD 8270

Sample Identification			Blank	SP33-ZONE3-121409	SP34-ZONE3-121409	LCS	091223- MS	091223- MSD	SP34-ZONE3-121409 Dup.
Percent Solids (%)			n/a	90.1	87.9	n/a	n/a	n/a	87.9
Date Extracted	CAS	MRL	12/23/2009	12/23/2009	12/23/2009	12/23/2009	12/23/2009	12/23/2009	12/23/2009
Date Anlayzed	Number	(mg/kg)	12/23/2009	12/23/2009	12/23/2009	12/23/2009	12/23/2009	12/23/2009	12/23/2009
Benzo(a)anthracene	56-55-3	0.01	nd	nd	nd	74.0%	n/a	n/a	nd
Benzo(a)pyrene	50-32-8	0.01	nd	nd	nd	72.8%	n/a	n/a	nd
Benzo(b)fluoranthene	205-99-2	0.01	nd	nd	nd	75.8%	n/a	n/a	nd
Benzo(k)fluoranthene	207-08-9	0.01	nd	nd	nd	80.0%	n/a	n/a	nd
Chrysene	218-01-9	0.01	nd	nd	nd	77.6%	n/a	n/a	nd
Dibenzo(a,h)anthracene	53-70-3	0.01	nd	nd	nd	59.4%	n/a	n/a	nd
Ideno(1,2,3-cd)pyrene	193-39-5	0.01	nd	nd	nd	36.3%	n/a	n/a	nd
1-Methylnaphthalene	90-12-0	0.01	nd	nd	nd	87.3%	n/a	n/a	nd
2-Methylnaphthalene	91-57-6	0.01	0.05	nd	nd	94.0%	n/a	n/a	nd
Naphthalene	91-20-3	0.01	nd	nd	nd	79.8%	n/a	n/a	nd
Phenol	108-95-2	0.05	n/a	n/a	n/a	n/a	88.8%	89.6%	n/a
1,4-Dichlorobenzene	106-46-7	0.05	n/a	n/a	n/a	n/a	100%	102%	n/a
n-Nitroso-*di-n*-propylamine	621-64-7	0.05	n/a	n/a	n/a	n/a	82.8%	82.4%	n/a
1,2,4-Trichlorobenzene	120-82-1	0.05	n/a	n/a	n/a	n/a	103%	102%	n/a
3-Methyl-4-chlorophenol	59-50-7	0.05	n/a	n/a	n/a	n/a	97.7%	98.3%	n/a
Acenaphthene	83-32-9	0.05	n/a	n/a	n/a	n/a	73.0%	73.1%	n/a
2,4-Dinitrotoluene	121-14-2	0.05	n/a	n/a	n/a	n/a	98.9%	100%	n/a
4-Nitrophenol	100-07-7	0.05	n/a	n/a	n/a	n/a	99.2%	92.6%	n/a
4-Chlorophenyl phenyl ether	7005-72-3	0.05	n/a	n/a	n/a	n/a	90.4%	90.3%	n/a
Pentachlorophenol	87-86-5	0.05	n/a	n/a	n/a	n/a	94.3%	92.1%	n/a
Pyrene	129-00-0	0.05	n/a	n/a	n/a	n/a	92.0%	93.1%	n/a
Surrogate Recovery (%)									
2-Fluorophenol			59.4	54.9	71.1	81.5	72.3	72.9	69.9
Phenol-d6			63.2	58.8	64	79.9	71.6	72.6	62.1
Nitrobenzene-d5			66.1	71.6	72.2	83.2	80.3	80.7	72.4
2-Fluorobiphenol			97.5	97.7	98.5	93.5	93.4	93.8	96.3
2,4,6-Tribromophenol			67.4	66.1	73.5	91.7	83.8	81.7	74.2
Terphenyl-d14			114	97.2	103	81.7	81.9	82.7	95
Data Flags									

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
Sample results based on dry weight.
Comments and Explanations: None

Analyst: T. McCall
Data reviewed by: RL

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
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Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

Pioneer Technologies Corporation
Project: East Bay IA Stockpiles

DAL Number: 091214-04

ANALYTICAL RESULTS FOR THE ANALYSIS OF PCB's IN SOIL BY EPA METHOD 8082

Sample Identification	Date Analyzed	Percent Solids (%)	Aroclor 1016 (mg/kg)	Aroclor 1221 (mg/kg)	Aroclor 1232 (mg/kg)	Aroclor 1242 (mg/kg)	Aroclor 1248 (mg/kg)	Aroclor 1254 (mg/kg)	Aroclor 1260 (mg/kg)	Surrogate Recovery TCMX (%)	Surrogate Recovery DCBP (%)	Data Flags
Method Blank	12/22/2009	n/a	nd	nd	nd	nd	nd	nd	nd	110	78.2	
SP33-ZONE3-121409	12/22/2009	90.1	nd	nd	nd	nd	nd	nd	nd	104	82.4	
SP34-ZONE3-121409	12/22/2009	87.9	nd	nd	nd	nd	nd	nd	nd	125	126	
LCS	12/22/2009	n/a	105%	n/a	n/a	n/a	n/a	n/a	122%	121	96.9	
091222-MS	12/22/2009	n/a	102%	n/a	n/a	n/a	n/a	n/a	85.5%	98.8	85.2	
SP34-ZONE3-121409 Dup.	12/22/2009	87.9	nd	nd	nd	nd	nd	nd	nd	107	85.8	
Method Reporting Limits			0.05	0.05	0.05	0.05	0.05	0.05	0.05			

WA-DOE-Laboratory Certification No.: C2013
"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.
"n/a" indicates not applicable
All results based on dry weight.

Comments and Explanations: None

Analyst: T. McCall
Data reviewed by: RL

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

PTC
Eastbay IA Stockpiles Project

DAL Project No.: 091214-04

ANALYTICAL RESULTS FOR THE ANALYSIS OF TCLP HEAVY METALS IN SOIL BY EPA METHOD 1311

Sample Identification	Date Analyzed	Lead (Pb)	Data Flags
Chemical Abstract Number (CAS)		7439-92-1	
Analytical Method		EPA 6020	
Units		(mg/L)	
Method Blank	12/16/2009	nd	
SP23-Zone 4-121409 Comp.	12/16/2009	nd	
SP25-Zone 4-121409 Comp. 1	12/16/2009	nd	
SP25-Zone 4-121409 Comp. 2	12/16/2009	nd	
SP30-Zone 4-121409 Comp.	12/16/2009	nd	
SP29-Zone 4-121409 Comp.	12/16/2009	nd	
SP35-Zone 4-121409 Comp.	12/16/2009	nd	
SP25-Zone 4-121409 Comp. 1 Dup.	12/16/2009	nd	
LCS	12/16/2009	97.5%	
SP25-Zone 4-121409 Comp. 1 MS	12/16/2009	106%	
Method Detection Limit (MDL)		0.25	

WA-DOE-Laboratory Certification No.: C2013

"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.

"n/a" indicates not applicable

Comments and Explanations: None

Analyst: T. McCall

Data reviewed by: R. Lewis

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

PTC
Eastbay IA Stockpiles Project

DAL Project No.: 091214-04

QUALITY CONTROL RESULTS FOR THE ANALYSIS OF TCLP HEAVY METALS IN SOIL BY EPA METHOD 1311

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	Method Blank
Percent Solids	100
No. of Extractions	1
Type of Extraction	Rotary
Extraction Fluid	#1
Date Extracted	12/15/2009

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	SP23-Zone 4-121409 Comp.
Percent Solids	91.2
No. of Extractions	1
Type of Extraction	Rotary
Extractiopn Fluid	#1
Date Extracted	12/15/2009

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	SP25-Zone 4-121409 Comp. 1
Percent Solids	91.7
No. of Extractions	1
Type of Extraction	Rotary
Extractiopn Fluid	#1
Date Extracted	12/15/2009

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	SP25-Zone 4-121409 Comp. 2
Percent Solids	91.6
No. of Extractions	1
Type of Extraction	Rotary
Extraction Fluid	#1
Date Extracted	12/15/2009

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	SP30-Zone 4-121409 Comp.
Percent Solids	92.8
No. of Extractions	1
Type of Extraction	Rotary
Extraction Fluid	#1
Date Extracted	12/15/2009

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	SP29-Zone 4-121409 Comp.
Percent Solids	89.2
No. of Extractions	1
Type of Extraction	Rotary
Extraction Fluid	#1
Date Extracted	12/15/2009

Comments and Explanations: None

Analyst: T. McCall
Data reviewed by: R. Lewis

DRAGON ANALYTICAL LABORATORY

2818 Madrona Beach Rd NW, Olympia WA 98502
(360) 866-0543

Hazardous Waste, Microbiology, NPDES, Potable and Non-potable Water
Mobile Environmental Laboratory

PTC
Eastbay IA Stockpiles Project

DAL Project No.: 091214-04

QUALITY CONTROL RESULTS FOR THE ANALYSIS OF TCLP HEAVY METALS IN SOIL BY EPA METHOD 1311

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	SP35-Zone 4-121409 Comp.
Percent Solids	88.9
No. of Extractions	1
Type of Extraction	Rotary
Extraction Fluid	#1
Date Extracted	12/15/2009

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	SP25-Zone 4-121409 Comp. 1 Dup.
Percent Solids	91.2
No. of Extractions	1
Type of Extraction	Rotary
Extractiopn Fluid	#1
Date Extracted	12/15/2009

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	SP25-Zone 4-121409 Comp. 1 MS
Percent Solids	100
No. of Extractions	1
Type of Extraction	Rotary
Extractiopn Fluid	#1
Date Extracted	12/15/2009

Sample Preparation Information for TCLP by EPA Method 1311

Sample Identification	LCS
Percent Solids	100
No. of Extractions	1
Type of Extraction	Rotary
Extraction Fluid	#1
Date Extracted	12/15/2009

Comments and Explanations: None

Analyst: T. McCall
Data reviewed by: R. Lewis

Pace Analytical®
www.pacelabs.com

1130

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

10118817

Page: of

1269214

Section A Required Client Information:

Company: PTC
Address: 2612 Yelm Hwy SE
Olympia, WA 98501
Email To: robertsk@cuspioneer.com
Phone: 360 570 1700 Fax:
Requested Due Date/TAT: 5day

Section B Required Project Information:

Report To:
Copy To:
Purchase Order No.: Credit Card
Project Name: East Bay IA Stockpiles
Project Number:

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: Scott Unze
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: WA

Requested Analysis Filtered (Y/N)

ITEM #	Section D Required Client Information — SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	Matrix Codes (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test ↓ Y/N: Dioxin/Furans 8290	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SP30-Zone4-121409	SL	G			12409	1130		1									X		1
2	SP31-Zone2-121409						1200											X		2
3	SP32-Zone3-121409						1330											X		3
4	SP33-Zone3-121409						1400											X		4
5	SP34-Zone3-121409						1415											X		5
6	SP35-Zone4-121409						1530											X		6
7																				
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
5day TAT by Email	Kara Roberts / PTC	121409	1700	Matt Fin / Pace	12-15-09	1000	1.8° Y Y Y

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kara Roberts

SIGNATURE of SAMPLER: Kara Roberts

DATE Signed (MM/DD/YY): 12/14/09

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

www.pacelabs.com

Report Prepared for:

Troy Bussey
Pioneer Technologies Corporation
2612 Yelm Highway S.E.
Suite B
Olympia WA 98501-4826

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Prepared Date:
January 13, 2010

Report Information:

Pace Project #: 10118817
Sample Receipt Date: 12/15/2009
Client Project #: EAST BAY IA STOCKPILES
Client Sub PO #: N/A
State Cert #: C755

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed by:

January 13, 2010

Scott Unze, Project Manager
(612) 607-6383
(612) 607-6444 (fax)
scott.unze@pacelabs.com

ACCREDITED IN ACCORDANCE WITH nelac

Report of Laboratory Analysis

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analyses performed on two samples submitted by a representative of Pioneer Technologies Corporation. The samples were analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. Reporting limits were based on signal-to-noise calculations.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extracts ranged from 38-102%. With the exceptions of three low values, which were flagged "R" on the results tables, the labeled standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Since the quantification of the native 2,3,7,8-substituted isomers was based on isotope dilution, the data were automatically corrected for variation in recovery and accurate values were obtained.

In some cases, interfering substances impacted the determinations of PCDD or PCDF congeners. The affected values were flagged "I" where incorrect isotope ratios were obtained, or "P" where polychlorinated diphenyl ethers were present.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to be free of PCDDs and PCDFs at the reporting limits.

A laboratory spike sample was also prepared with the sample batch using clean sand that had been fortified with native standard materials. The results show that the spiked native compounds were recovered at 81-104%. These results indicate a high degree of accuracy for these determinations. Matrix spikes were prepared with the sample batch using sample material from a separate project; results from these analyses will be provided upon request.

Pace Analytical Services, Inc.
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Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
Alabama	40770	Montana	92
Alaska	MN00064	Nebraska	
Arizona	AZ0014	Nevada	MN00064_2000
Arkansas	88-0680	New Jersey (NE	MN002
California	01155CA	New Mexico	MN00064
Colorado	MN00064	New York (NEL	11647
Connecticut	PH-0256	North Carolina	27700
EPA Region 5	WD-15J	North Dakota	R-036
EPA Region 8	8TMS-Q	Ohio	4150
Florida (NELAP	E87605	Ohio VAP	CL101
Georgia (DNR)	959	Oklahoma	D9922
Guam	09-019r	Oregon (ELAP)	MN200001-005
Hawaii	SLD	Oregon (OREL	MN200001-005
Idaho	MN00064	Pennsylvania	68-00563
Illinois	200012	Saipan	MP0003
Indiana		South Carolina	74003001
Indiana	C-MN-01	Tennesee	2818
Iowa	368	Tennessee	02818
Kansas	E-10167	Texas	T104704192-08
Kentucky	90062	Utah (NELAP)	PAM
Louisiana	LA0900016	Virginia	00251
Maine	2007029	Washington	C755
Maryland	322	West Virginia	9952C
Michigan	9909	Wisconsin	999407970
Minnesota	027-053-137	Wyoming	8TMS-Q
Mississippi	MN00064		

REPORT OF LABORATORY ANALYSIS

Appendix A

Sample Management

Sample Condition Upon Receipt

Pace Analytical

Client Name: PTC **Project #** 10118817

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 8392 2231 5286

Optional: Proj. Due Date: Proj. Name:

Custody Seal on Cooler/Box Present: ☒ yes ☐ no **Seals intact:** ☒ yes ☐ no

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other _____ **Temp Blank:** Yes X No _____

Thermometer Used 80344042 or 179425 **Type of Ice:** Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 1.8° **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C

Date and initials of person examining contents: 12-15-09 MZ

Comments:

Chain of Custody Present:	☑Yes	☐No	☐N/A
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A
Samples Arrived within Hold Time:	☒Yes	☐No	☐N/A
Short Hold Time Analysis (<72hr):	☐Yes	☒No	☐N/A
Rush Turn Around Time Requested:	☒Yes	☐No	☐N/A
Sufficient Volume:	☑Yes	☐No	☐N/A
Correct Containers Used:	☑Yes	☐No	☐N/A
-Pace Containers Used:	☑Yes	☐No	☐N/A
Containers Intact:	☑Yes	☐No	☐N/A
Filtered volume received for Dissolved tests	☐Yes	☐No	☒N/A
Sample Labels match COC:	☑Yes	☐No	☐N/A
-Includes date/time/ID/Analysis Matrix: SL			
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	☐Yes	☐No	☒N/A
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☐No	☒N/A
Exceptions: VOA,Coliform, TOC, Oil and Grease, WI-DRO (water)	☐Yes	☒No	
Samples checked for dechlorination:	☐Yes	☐No	☒N/A
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☒N/A
Trip Blank Present:	☐Yes	☐No	☒N/A
Trip Blank Custody Seals Present	☐Yes	☐No	☒N/A
Pace Trip Blank Lot # (if purchased): _____			

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.
11.
12.
13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ HCl
Samp #

Initial when completed	Lot # of added preservative

14.
15.
16.

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: [signature] **Date:** 12/15/09

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR.

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Reporting Flags

A = Reporting Limit based on signal to noise

B = Less than 10x higher than method blank level

C = Result obtained from confirmation analysis

D = Result obtained from analysis of diluted sample

E = Exceeds calibration range

I = Interference present

J = Estimated value

Nn = Value obtained from additional analysis

P = PCDE Interference

R = Recovery outside target range

S = Peak saturated

U = Analyte not detected

V = Result verified by confirmation analysis

X = %D Exceeds limits

Y = Calculated using average of daily RFs

* = See Discussion

Appendix B

Sample Analysis Summary

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP33-ZONE3-121409		
Lab Sample ID	10118817004		
Filename	U91226A_12		
Injected By	BAL		
Total Amount Extracted	11.0 g	Matrix	Solid
% Moisture	10.2	Dilution	NA
Dry Weight Extracted	9.92 g	Collected	12/14/2009 14:00
ICAL ID	U91029	Received	12/15/2009 10:00
CCal Filename(s)	U91226A_01 & U91226A_17	Extracted	12/21/2009 21:00
Method Blank ID	BLANK-23102	Analyzed	12/27/2009 02:41

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	2.20	-----	0.37		2,3,7,8-TCDF-13C	2.00	68
Total TCDF	45.00	-----	0.37		2,3,7,8-TCDD-13C	2.00	80
					1,2,3,7,8-PeCDF-13C	2.00	66
2,3,7,8-TCDD	0.80	-----	0.26	J	2,3,4,7,8-PeCDF-13C	2.00	69
Total TCDD	44.00	-----	0.26		1,2,3,7,8-PeCDD-13C	2.00	83
					1,2,3,4,7,8-HxCDF-13C	2.00	95
1,2,3,7,8-PeCDF	2.20	-----	0.81	J	1,2,3,6,7,8-HxCDF-13C	2.00	75
2,3,4,7,8-PeCDF	4.80	-----	0.59	J	2,3,4,6,7,8-HxCDF-13C	2.00	78
Total PeCDF	60.00	-----	0.70		1,2,3,7,8,9-HxCDF-13C	2.00	70
					1,2,3,4,7,8-HxCDD-13C	2.00	102
1,2,3,7,8-PeCDD	2.90	-----	1.10	J	1,2,3,6,7,8-HxCDD-13C	2.00	75
Total PeCDD	49.00	-----	1.10		1,2,3,4,6,7,8-HpCDF-13C	2.00	70
					1,2,3,4,7,8,9-HpCDF-13C	2.00	60
1,2,3,4,7,8-HxCDF	-----	3.4	0.46	I	1,2,3,4,6,7,8-HpCDD-13C	2.00	73
1,2,3,6,7,8-HxCDF	3.20	-----	0.43	J	OCDD-13C	4.00	39 R
2,3,4,6,7,8-HxCDF	2.10	-----	0.48	J			
1,2,3,7,8,9-HxCDF	1.60	-----	0.51	J	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	37.00	-----	0.47		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	2.60	-----	0.73	J	2,3,7,8-TCDD-37Cl4	0.20	80
1,2,3,6,7,8-HxCDD	8.20	-----	0.58				
1,2,3,7,8,9-HxCDD	4.40	-----	0.55	J			
Total HxCDD	91.00	-----	0.62				
1,2,3,4,6,7,8-HpCDF	29.00	-----	0.42		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	2.40	-----	0.67	J	Equivalence: 9.5 ng/Kg		
Total HpCDF	34.00	-----	0.54		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	130.00	-----	0.51				
Total HpCDD	240.00	-----	0.51				
OCDF	130.00	-----	0.78				
OCDD	930.00	-----	0.73				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.
ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
R = Recovery outside target range
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Pioneer Technologies Corporation

Client's Sample ID	SP34-ZONE3-121409		
Lab Sample ID	10118817005		
Filename	U91226A_13		
Injected By	BAL		
Total Amount Extracted	11.1 g	Matrix	Solid
% Moisture	13.8	Dilution	NA
Dry Weight Extracted	9.59 g	Collected	12/14/2009 14:15
ICAL ID	U91029	Received	12/15/2009 10:00
CCal Filename(s)	U91226A_01 & U91226A_17	Extracted	12/21/2009 21:00
Method Blank ID	BLANK-23102	Analyzed	12/27/2009 03:30

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery	
2,3,7,8-TCDF	ND	-----	0.45		2,3,7,8-TCDF-13C	2.00	60	
Total TCDF	4.30	-----	0.45		2,3,7,8-TCDD-13C	2.00	64	
					1,2,3,7,8-PeCDF-13C	2.00	59	
2,3,7,8-TCDD	ND	-----	0.37		2,3,4,7,8-PeCDF-13C	2.00	63	
Total TCDD	5.30	-----	0.37		1,2,3,7,8-PeCDD-13C	2.00	74	
					1,2,3,4,7,8-HxCDF-13C	2.00	82	
1,2,3,7,8-PeCDF	ND	-----	0.62		1,2,3,6,7,8-HxCDF-13C	2.00	75	
2,3,4,7,8-PeCDF	1.10	-----	0.73	J	2,3,4,6,7,8-HxCDF-13C	2.00	70	
Total PeCDF	7.40	-----	0.67		1,2,3,7,8,9-HxCDF-13C	2.00	62	
					1,2,3,4,7,8-HxCDD-13C	2.00	87	
1,2,3,7,8-PeCDD	ND	-----	0.68		1,2,3,6,7,8-HxCDD-13C	2.00	75	
Total PeCDD	5.80	-----	0.68		1,2,3,4,6,7,8-HpCDF-13C	2.00	65	
					1,2,3,4,7,8,9-HpCDF-13C	2.00	55	
1,2,3,4,7,8-HxCDF	-----	1.90	0.37	P	1,2,3,4,6,7,8-HpCDD-13C	2.00	69	
1,2,3,6,7,8-HxCDF	0.76	-----	0.38	J	OCDD-13C	4.00	38	R
2,3,4,6,7,8-HxCDF	-----	0.78	0.33	I				
1,2,3,7,8,9-HxCDF	ND	-----	0.68		1,2,3,4-TCDD-13C	2.00	NA	
Total HxCDF	9.80	-----	0.44		1,2,3,7,8,9-HxCDD-13C	2.00	NA	
1,2,3,4,7,8-HxCDD	ND	-----	0.78		2,3,7,8-TCDD-37Cl4	0.20	64	
1,2,3,6,7,8-HxCDD	3.00	-----	0.76	J				
1,2,3,7,8,9-HxCDD	-----	1.60	0.69	I				
Total HxCDD	28.00	-----	0.75					
1,2,3,4,6,7,8-HpCDF	12.00	-----	0.56		Total 2,3,7,8-TCDD			
1,2,3,4,7,8,9-HpCDF	ND	-----	1.10		Equivalence: 2.9 ng/Kg			
Total HpCDF	38.00	-----	0.82		(Using 2005 WHO Factors - Using PRL/2 where ND)			
1,2,3,4,6,7,8-HpCDD	99.00	-----	0.58					
Total HpCDD	320.00	-----	0.58					
OCDF	52.00	-----	0.73					
OCDD	1200.00	-----	0.82					

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
R = Recovery outside target range
P = PCDE Interference
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Blank Analysis Results

Lab Sample ID	BLANK-23102	Matrix	Solid
Filename	F91224B_06	Dilution	NA
Total Amount Extracted	10.0 g	Extracted	12/21/2009 21:00
ICAL ID	F91217	Analyzed	12/24/2009 13:19
CCal Filename(s)	F91224B_01 & F91224B_08	Injected By	AE

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.140	2,3,7,8-TCDF-13C	2.00	67
Total TCDF	ND	-----	0.140	2,3,7,8-TCDD-13C	2.00	74
				1,2,3,7,8-PeCDF-13C	2.00	65
2,3,7,8-TCDD	ND	-----	0.180	2,3,4,7,8-PeCDF-13C	2.00	68
Total TCDD	ND	-----	0.180	1,2,3,7,8-PeCDD-13C	2.00	91
				1,2,3,4,7,8-HxCDF-13C	2.00	74
1,2,3,7,8-PeCDF	ND	-----	0.100	1,2,3,6,7,8-HxCDF-13C	2.00	81
2,3,4,7,8-PeCDF	ND	-----	0.079	2,3,4,6,7,8-HxCDF-13C	2.00	73
Total PeCDF	ND	-----	0.091	1,2,3,7,8,9-HxCDF-13C	2.00	70
				1,2,3,4,7,8-HxCDD-13C	2.00	80
1,2,3,7,8-PeCDD	ND	-----	0.100	1,2,3,6,7,8-HxCDD-13C	2.00	81
Total PeCDD	ND	-----	0.100	1,2,3,4,6,7,8-HpCDF-13C	2.00	65
				1,2,3,4,7,8,9-HpCDF-13C	2.00	56
1,2,3,4,7,8-HxCDF	ND	-----	0.074	1,2,3,4,6,7,8-HpCDD-13C	2.00	71
1,2,3,6,7,8-HxCDF	ND	-----	0.097	OCDD-13C	4.00	37 R
2,3,4,6,7,8-HxCDF	ND	-----	0.093			
1,2,3,7,8,9-HxCDF	ND	-----	0.083	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.087	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.120	2,3,7,8-TCDD-37Cl4	0.20	74
1,2,3,6,7,8-HxCDD	ND	-----	0.110			
1,2,3,7,8,9-HxCDD	ND	-----	0.120			
Total HxCDD	ND	-----	0.120			
1,2,3,4,6,7,8-HpCDF	ND	-----	0.110	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.130	Equivalence: 0.20 ng/Kg		
Total HpCDF	ND	-----	0.120	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	ND	-----	0.140			
Total HpCDD	ND	-----	0.140			
OCDF	ND	-----	0.340			
OCDD	ND	-----	0.500			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
R = Recovery outside target range

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-23103		
Filename	F91224B_02	Matrix	Solid
Total Amount Extracted	10.0 g	Dilution	NA
ICAL ID	F91217	Extracted	12/21/2009 21:00
CCal Filename(s)	F91224B_01 & F91224B_08	Analyzed	12/24/2009 10:15
Method Blank ID	BLANK-23102	Injected By	AE

Native Isomers	**Qs** (ng)	**Qm** (ng)	% Rec.	**Internal Standards**	**ng's Added**	**Percent Recovery**
2,3,7,8-TCDF	0.20	0.20	100	2,3,7,8-TCDF-13C	2.0	69
Total TCDF				2,3,7,8-TCDD-13C	2.0	72
				1,2,3,7,8-PeCDF-13C	2.0	75
2,3,7,8-TCDD	0.20	0.20	98	2,3,4,7,8-PeCDF-13C	2.0	83
Total TCDD				1,2,3,7,8-PeCDD-13C	2.0	112
				1,2,3,4,7,8-HxCDF-13C	2.0	80
1,2,3,7,8-PeCDF	1.0	1.0	104	1,2,3,6,7,8-HxCDF-13C	2.0	86
2,3,4,7,8-PeCDF	1.0	0.96	96	2,3,4,6,7,8-HxCDF-13C	2.0	76
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.0	66
				1,2,3,4,7,8-HxCDD-13C	2.0	90
1,2,3,7,8-PeCDD	1.0	0.86	86	1,2,3,6,7,8-HxCDD-13C	2.0	97
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.0	72
				1,2,3,4,7,8,9-HpCDF-13C	2.0	63
1,2,3,4,7,8-HxCDF	1.0	0.97	97	1,2,3,4,6,7,8-HpCDD-13C	2.0	78
1,2,3,6,7,8-HxCDF	1.0	0.96	96	OCDD-13C	4.0	40
2,3,4,6,7,8-HxCDF	1.0	1.00	100			
1,2,3,7,8,9-HxCDF	1.0	0.95	95	1,2,3,4-TCDD-13C	2.0	NA
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.0	NA
1,2,3,4,7,8-HxCDD	1.0	0.92	92	2,3,7,8-TCDD-37Cl4	0.20	66
1,2,3,6,7,8-HxCDD	1.0	0.90	90			
1,2,3,7,8,9-HxCDD	1.0	0.81	81			
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.0	1.0	101			
1,2,3,4,7,8,9-HpCDF	1.0	0.93	93			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.0	0.88	88			
Total HpCDD						
OCDF	2.0	1.9	94			
OCDD	2.0	2.0	100			

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
R = Recovery outside of target range

Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

DRAGON
Analytical Laboratory

[illegible] CHAIN OF CUSTODY RECORD

2818 Madrona Beach Rd. NW, Olympia, WA 98502
Phone: (360) 866-0543 Fax: (360) 866-0556
Email: DragonLab@comcast.net
Website: dragonlaboratory.com

[illegible] of [illegible]

Samples Collected By: Melody Coder
Contact Number: 360-570-1700

Client: PTC
Address: 2612 Yelm Hwy SE, Olympia WA 98501
Phone: 360-570-1700
Fax:
Email: robe-isk@uspioneer.com
Project Name: East Bay IA Stockpiles
Project Location: East Bay
Project Number:
Project P.O.:
Contact Person: Lara Roberts
DAL Project No.:

Matrix Code:
WW = wastewater GW = groundwater S = soil or solid
SL = sludge V = vapor O = other

Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Container Type	MtBE/BTEX (EPA 8021b)	Gasoline (NWTPH-Gx)	Diesel (NWTPH-Dx)	Diesel & Oil (NWTPH-Dx)	Fuel Scan (NWTPH-HCID)	VOC's (EPA 8021b)	Organochlorine Pesticides (EPA 8081)	PCB's (EPA 8082)	Volatiles (EPA 8260)	PAH's (EPA 8100 or 8270/8270SIM)	Semi-Volatiles (EPA 8270)	Ignitability (EPA 1010)	Oil and Grease (EPA 1664 HEM)	pH (EPA 9040/9045)	Specific Conductance (EPA 9050)	Paint Filter Test (EPA 9095)	Heavy Metals* (EPA 7000 Series)	Biogenic Gases (EPA 3C)	Natural Attenuation Indicators	Gross Alpha Radioactivity (EPA 900)	Gross Beta Radioactivity (EPA 900)	TCLP Pb
SP36 Zone 4 021210 comp	S	2/12/10	0930	4oz glass																						X

Relinquished by (Signature): Melody Coder | Date/Time: 2/12/10 [illegible]
Received by (Signature): [signature] | Date/Time: 2/12/10 1008
Relinquished by (Signature): | Date/Time:
Received by (Signature): | Date/Time:

Turn-Around Time
☐ Same Day
☐ 24 Hour
☒ 10 Day
☐ Other

*Heavy Metals: Please circle the desired analytes.
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni Pb Sb Se Tl V Zn - Total
Ag Al As Ba Be Cd Cr Cr-VI Co Cu Fe Hg Li Mg Mn Mo Ni (Pb) Sb Se Tl V Zn - TCLP

PTC
Project: East Bay IA Stockpile

DAL Project No.: 100212-01

ANALYTICAL RESULTS FOR THE ANALYSIS OF TCLP HEAVY METALS IN SOIL BY EPA METHOD 1311

Sample Identification	Date Analyzed	Lead (Pb)	Data Flags
Chemical Abstract Number (CAS)		7439-92-1	
Analytical Method		EPA 6020	
Units		(mg/L)	
Method Blank	2/17/2010	nd	
SP36-Zone 4-021210-comp	2/17/2010	nd	
SP36-Zone 4-021210-comp Dup	2/17/2010	nd	
100212-LCS	2/17/2010	104%	
SP36-Zone 4-021210-comp MS	2/17/2010	110%	
SP36-Zone 4-0212310-comp MSD	2/17/2010	109%	
Method Reporting Limit (MRL)		0.25	

WA-DOE-Laboratory Certification No.: C2013

"nd" indicates the analyte was not detected at or above the listed Method Reporting Limit.

"n/a" indicates not applicable

Comments and Explanations: None

Analyst: C. Altis

Data reviewed by: R. Lewis

Data Quality Review
East Bay Redevelopment Site – Interim Action (IA) Soil Stockpile Samples

1. Precision

Precision was assessed via the relative percent difference (RPD) for matrix spike duplicates. As shown in the analytical reports, all documented matrix spike duplicate RPDs were within acceptable ranges listed in the IA Work Plan (PIONEER 2009), with the following exceptions:

- Matrix spike duplicate RPDs for arsenic were either outside the acceptable range listed in the IAWP or were not reported (due to matrix interferences or other issues) for all samples except for the samples associated with SP07 through SP16_2. Matrix spike duplicate RPDs for lead were either outside the acceptable range listed in the IAWP or were not reported (due to matrix interferences or other issues) for all samples except for the samples associated with SP07 through SP08_2 and SP12 through SP16_2. Matrix spike duplicate RPDs for cadmium were either outside the acceptable range listed in the IAWP or were not reported (due to matrix interferences or other issues) for the samples associated with SP20 through SP29_2, SP33, and SP34. A J-flag was added to all of the affected sample results in which the target analyte was detected since the frequency and nature of unacceptable RPDs may be indicative of a larger laboratory issue.
- United States Environmental Protection Agency (USEPA) Method SW846-8021B matrix spike duplicate RPDs for o-xylene analyses associated with the SP09, SP10, SP17, SP18, and SP20 through SP23 samples were outside the acceptable range listed in the IAWP, but the target analyte was not detected in these samples.
- USEPA Method SW846-8290 matrix spike duplicate RPDs for 1,2,3,4,6,7,8,9-octachlorodibenzo-p-dioxin (OCDD) associated with the SP21 through SP26 samples were outside the acceptable range listed in the IAWP. In addition, the matrix spike duplicate RPDs for 1,2,3,4,7,8,9-heptachlorodibenzenofuran associated with the SP24_1 through SP26 samples were outside the acceptable range listed in the IAWP. The associated results were not qualified given the ubiquitous background presence of these congeners.

2. Accuracy

Accuracy was assessed by analysis of laboratory method blanks as well as recoveries in blank spikes, matrix spikes, and surrogates. As shown in the analytical reports, no analytes were detected in laboratory method blanks, and documented recoveries for blank spikes, matrix spikes, and primary sample surrogates were within acceptable ranges listed in the IAWP (PIONEER 2009), with the following exceptions:

- Matrix spike recoveries for arsenic were either outside the acceptable range listed in the IAWP or were not reported (due to matrix interferences or other issues) for all samples except for the samples associated with SP07 through SP08_2 and SP12 through SP16_2. Matrix spike recoveries for lead were either outside the acceptable range listed in the IAWP or were not reported (due to matrix interferences or other issues) for all samples except for the samples associated with SP12 through SP16_2. Matrix spike recoveries for cadmium were either outside the acceptable range listed in the IAWP or were not reported (due to matrix interferences or other issues) for the samples associated with SP07 through SP08_2, SP20 through SP29_2, SP33, and SP34. A J-flag was added to all of the affected sample results in which the target analyte was detected since the frequency and nature of unacceptable recoveries may be indicative of a larger laboratory issue.
- USEPA Method SW846-8021B matrix spike recoveries for ethylbenzene and/or xylenes analyses associated with the SP11, SP33, and SP34 samples were outside the acceptable range listed in the IAWP, but none of the target analytes were detected in these samples.
- USEPA Method SW846-8021B surrogate recoveries associated with the SP12 and SP17 samples were barely outside the acceptable range listed in the IAWP (but not the acceptable range for Washington State Department of Ecology [Ecology] Method NWTPH-G), but none of the target analytes were detected in these samples.

- The analyte 2-methylnapthalene was detected in the method blank for USEPA Method SW846-8270 analyses associated with the SP33 and SP34 samples, but was not detected in these primary samples.
- The surrogate recovery for USEPA Method SW846-8270 associated with the SP18 sample was outside the acceptable range listed in the IAWP, and a J-flag was added to the detected SP18 results. The surrogate recovery for USEPA Method SW846-8270 associated with the SP20 sample was also outside the acceptable range listed in the IAWP, but none of the target analytes were detected in the SP20 sample.
- The surrogate recovery for Ecology Method NWTPH-Dx associated with the SP29_1 sample was outside the acceptable range listed in the IAWP, but none of the target analytes were detected in that sample.
- Trace levels of select congeners were detected in several dioxins/furans method blanks, but corresponding congener results associated with these method blanks were appropriately qualified by the laboratory.
- The matrix spike recoveries for OCDD associated with the USEPA Method SW846-8290 analyses of the SP21 through SP26 samples were outside the acceptable range listed in the IAWP. The associated results were not qualified given the ubiquitous background presence of OCDD.
- The surrogate recoveries for OCDD-carbon 13 associated with the USEPA Method SW846-8290 analyses of the SP13, SP22, SP25_3, SP33, and SP34 samples were outside the acceptable range listed in the IAWP. The associated results were not qualified since the OCDD-carbon 13 surrogates were barely outside the acceptable range and the recoveries for other USEPA Method SW846-8290 surrogates in these samples were acceptable.

3. Representativeness

Representativeness was assessed by evaluating the sample collection, preservation, handling, and analysis procedures. Samples were collected, preserved, handled, and analyzed in accordance with the IAWP (PIONEER 2009), which was designed to obtain representative samples. In addition, all samples were extracted and analyzed within appropriate holding times listed in the IAWP (PIONEER 2009).

4. Comparability

Comparability was assessed by comparing current sample collection and analysis procedures with historical procedures. The samples were collected and analyzed with standard procedures and are comparable with other site data as qualified.

5. Sensitivity

Sensitivity was assessed by comparing actual practical quantitation limits (PQLs) with project-specific PQL expectations. Because the laboratories selected to perform IA analyses were different than the presumptive laboratories at the time the IAWP was prepared, some of the PQL expectations needed to be adjusted from what is listed in the IAWP (PIONEER 2009). Based on personal correspondence with the Ecology Site Manager (Ecology 2009b), some of the IAWP PQL expectations were adjusted prior to the IA by considering Ecology's PQL expectations (Ecology 1995), laboratory capabilities, and IA cleanup levels. As shown in the following table, the laboratories were able to achieve actual PQLs that were equal to or lower than these revised PQL expectations, with the exception of a single dioxins/furans sample.

Constituent Type	IAWP PQL Expectations (PIONEER 2009) (mg/kg)	Revised PQL Expectations (Ecology 2009b) (mg/kg)	Actual PQLs During Interim Action (mg/kg)
Metals	2	0.25	0.25
PAHs [1]	0.1	0.01	0.01
Dioxins/furans [2]	0.000003	0.000005	0.00000026 – 0.0000063 [3]
TPH-D	50	50	25
TPH-HO	100	100	100
TPH-G	10	10	5
BTEX [1]	0.01	0.1	0.05 – 0.1
PCBs [1]	N/A	N/A	0.05

Notes:
BTEX = Benzene, toluene, ethylbenzene, and xylenes
Dioxins/furans = Chlorinated dibenzo-p-dioxins and chlorinated dibenzofurans
IAWP = Interim Action Work Plan (PIONEER 2009)
N/A = Not applicable
PAHs = Polycyclic aromatic hydrocarbons
PCBs = Polychlorinated biphenyls
PQL = Practical quantitation limit
TPH-D = Total petroleum hydrocarbons in the diesel range
TPH-G = Total petroleum hydrocarbons in the gasoline range
TPH-HO = Total petroleum hydrocarbons in the heavy oil range
[1] PQL values shown are for each constituent.
[2] Total PQL calculated using toxicity equivalency factors in Washington Administrative Code 173-340-708(8).
[3] Only one PQL out of 36 PQLs exceeded 0.000005 mg/kg.

6. Completeness

Completeness was assessed by calculating the percentage of useable results to all results. A total of 1,825 sample analyses were performed. All of the analyte results are useable as qualified. Thus, the completeness of the analytical data is 100 percent.

7. Conclusions

This data is deemed acceptable for use as presented by the laboratory, subject to the qualifications noted in this document. No corrective action or additional data qualification is necessary.

References

Ecology 1995. Toxics Cleanup Program Guidance on Sampling and Data Analysis Methods, Publication No. 94-49, January.

Ecology 2009b. Personal correspondence between Steve Teel and Troy Bussey regarding approval of proposed changes to practical quantitation limit expectations listed in IAWP, June 5.

PIONEER Technologies Corporation (PIONEER) 2009. Port of Olympia East Bay Site: Interim Action Work Plan, May.

USEPA 2004. USEPA Contract Laboratory Program National Functional Guidelines for Superfund Inorganic Data Review, October.

USEPA 2005. USEPA Analytical Services Branch (ASB) National Functional Guidelines for Chlorinated Dibenzo-p-Dioxins (CDDs) and Chlorinated Dibenzofurans (CDFs) Data Review, September.

USEPA 2008. USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Method Data Review, July.