January 30, 2009



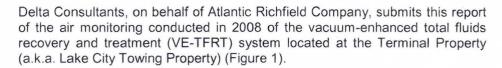
Ms. Rhonda O'Leary Wisconsin Department of Natural Resources - Air Management Bureau Northern Region, Superior Area Office 1401 Tower Avenue, Superior, WI 54880

Subject:

Report of 2008 Air Emissions from VE-TFRT System Terminal Property at the Former Amoco Terminal #406 2904 Winter Street, Superior, WI 54880

Delta Project No. G006N BRRTS No. 02-16-000331

Dear Ms. O'Leary,



Based on the 2008 data, emission rates did not exceed the 5.7 pounds per hour for volatile organic compound (VOCs) and 300 pounds per year for benzene thresholds established by NR 407 and NR 445, respectively. Therefore, the exemption from operating permits set forth NR 407.03(1)(sm)2 will continue to be applied to this site.

Total estimated VOC (THC-gas) emissions, from both the soil vacuum extraction and air stripping discharges, averaged between 0.08 and 0.82 pounds per hour during 2008. The combined total benzene emitted in 2008 was estimated at 28 pounds (Tables 1 and 2).

As agreed upon between Delta and WDNR in October 2004, emissions resulting from remedial efforts at this site are reported and managed separately from the recovery systems at the former Barge Dock Property (BRRTS Nos. 02-16-297993, 02-16-117873, and 0216-284811) located north across Winter Street due to separate releases and different property owners.

Emissions monitoring and sampling of the VE-TFRT system will be performed on a quarterly basis in 2009.



Ms. Rhonda O'Leary Wisconsin Department of Natural Resources - Air Management Bureau January 30, 2009 Page 2

Please contact me at 262-794-8578 with any questions or comments.

Sincerely,

DELTA CONSULTANTS

Nathan Johnson Project Specialist

njohnson@deltaenv.com

C:

Diane Diks, Atlantic Richfield

Jared Otto, Delta Chris Saari, WDNR

Enclosures:

Figure 1 – Site Map

Table 1 – SVE Emission Summary

Table 2 - Air Stripping Emission Summary

Pace Analytical Reports 1066482, 1071290, 1077842, and 1082042

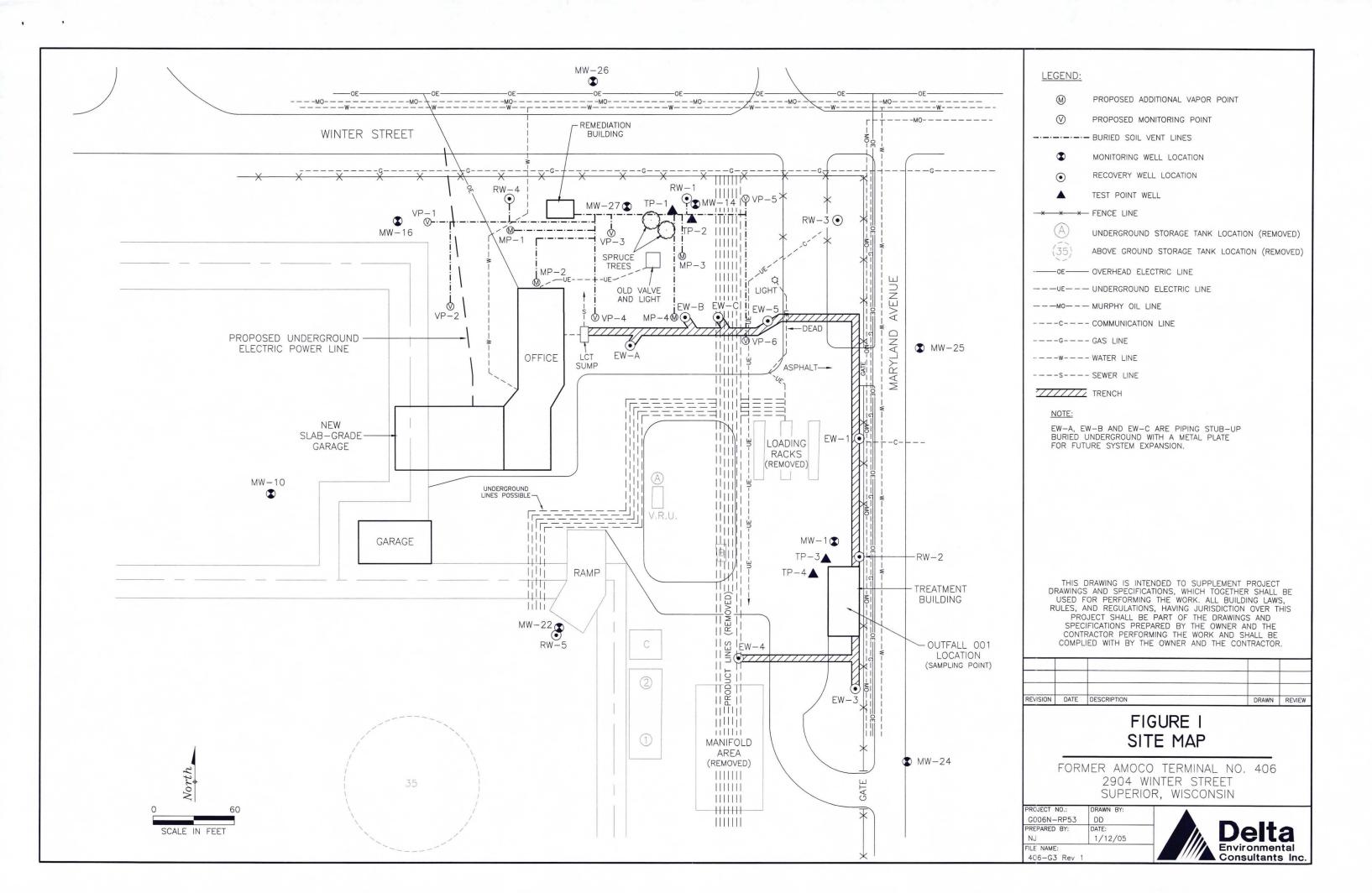


Table 1 SVE Emission Summary

VE-TFRT System

Terminal Property at Former Amoco Superior Terminal No. 406 2904 Winter Street, Superior, Wisconsin Delta Project No. G006N

Year	Quarter	Date Monitored	% SVE Running	Total Hours in Quarter	Process Air Flow (outlet)	THC-G	Benzene	THC-G Emission Rate (SVE THC-G Recovery Rate)	Cumulative Annual Benzene Emitted
			(%)	(hours)	(SCFM)	(ppmV)	(ppmV)	(lb/hr)	(lb)
Sta	artup	1/4/2005			0	0	0	0	0
2005		1/11/2005			274	63.8	3.2	0.26	
	Qtr 1	1/24/2005	88.5%	2160	274	60	0	0.25	9
		2/23/2005			274	223	1.2	0.92	
	Qtrs 2 & 3	4/11/2005	96.1%	4392	274	39.4	1.3	0.16	28
	Qtr 4	10/12/2005	75.8%	2208	232	44.7	1.0	0.16	33
2006	Qtr 1	1/7/2006	91.5%	2160	272	44.1	0.91	0.18	6
	Qtr 2	4/12/2006	98.2%	2184	248	39.0	1.0	0.15	13
	Qtr 3	7/20/2006	73.2%	2208	262	19	0.48	0.07	15
	Qtr 4	10/18/2006	84.4%	2208	270	152	3.4	0.62	36
2007	Qtr 1	1/17/2007	93.7%	2160	294	111	2.9	0.49	21
	Qtr 2	4/17/2007	89.6%	2184	274	56.6	0	0.23	21
	Qtr 3	7/11/2007	97.0%	2208	264	9.2	0	0.04	21
	Qtr 4	10/4/2007	76.4%	2208	271	81.6	1.5	0.33	30
2008	Qtr 1	1/15/2008	87.4%	2184	295	184.0	1.4	0.82	10
	Qtr 2	4/10/2008	14.9%	2184	268	56.6	3.4	0.23	13
	Qtr 3	7/28/2008	77.5%	2208	270	17.5	1.1	0.07	20
	Qtr 4	10/6/2008	98.7%	2208	270	25.6	0.93	0.10	26

Notes:

All emissions values are estimations based on system operational data and air bag sample analyses.

SCFM = Based on measured air velocity pressure and temperature correlation

THC Emission Rate = (SCFM)(THC-G ppmV)(60 min/hr)(MW)/(1,000,000)(379 scf/mole)

where MW = 95 lb/lb-mole for molecular weight of gasoline

Cumulative Benzene Emitted = (% SVE Running)(Total Qtr Hours)(SCFM)(Benzene ppmV)(60 min/hr)(MW)/(1,000,000)(379 scf/mole) where MW = 78.11 lb/lb-mole for molecular weight of gasoline

THC-G = Total Hydrocarbons as Gasoline in parts per million - volume (ppmV)

% SVE Running from Motor Download Report

Table 2 Air Stripping Emission Summary

VE-TFRT System

Terminal Property at Former Amoco Superior Terminal No. 406 2904 Winter Street, Superior, Wisconsin Delta Project No. G006N

Year	Quarter	Date Monitored	% Air Stripper Running	Total Hours in Quarter	Process Air Flow (outlet)	THC-G	Benzene	THC-G Emission Rate (Air Stripper THC-G Recovery Rate)	Cumulative Annual Benzene Emitted
			(%)	(hours)	(SCFM)	(ppmV)	(ppmV)	(lb/hr)	(lb)
Sta	artup	1/4/2005			0	0	0	0	0.0
2005		1/11/2005			372	24.4	1.2	0.14	
	Qtr 1	1/24/2005	12.4%	2160	376	8.2	0.0	0.05	0.5
		2/23/2005			388	3.3	0.0	0.02	
	Qtrs 2 & 3	4/11/2005	15.9%	4392	376	0.0	0.0	0.00	0.5
	Qtr 4	10/12/2005	15.0%	2208	365	2.9	0.0	0.02	0.5
2006	Qtr 1	1/7/2006	7.6%	2160	374	3.7	0.0	0.02	0.0
	Qtr 2	4/12/2006	12.8%	2184	366	6.1	0.0	0.03	0.0
	Qtr 3	7/20/2006	12.0%	2208	359	17	0.0	0.09	0.0
	Qtr 4	10/18/2006	13.7%	2208	368	14.1	0.0	0.08	0.0
2007	Qtr 1	1/17/2007	12.9%	2160	374	0.0	0.0	0.00	0.0
	Qtr 2	4/17/2007	15.0%	2184	365	0.0	0.0	0.00	0.0
	Qtr 3	7/11/2007	16.8%	2208	351	3.1	0.12	0.02	0.2
	Qtr 4	10/4/2007	12.4%	2208	331	3.7	0.8	0.02	1.1
2008	Qtr 1	1/15/2008	14.3%	2184	347	0.41	0.14	0.00	0.2
	Qtr 2	4/10/2008	3.2%	2184	316	0.22	0.0	0.00	0.2
	Qtr 3	7/28/2008	16.4%	2208	350	1.4	0.0	0.01	0.2
	Qtr 4	10/6/2008	19.3%	2208	350	5.1	0.64	0.03	1.4

Notes:

All emissions values are estimations based on system operational data and air bag sample analyses.

SCFM = Based on measured air velocity pressure and temperature correlation

THC Emission Rate = (SCFM)(THC-G ppmV)(60 min/hr)(MW)/(1,000,000)(379 scf/mole)

where MW = 95 lb/lb-mole for molecular weight of gasoline

Cumulative Benzene Emitted = (% AS Running)(Total Qtr Hours)(SCFM)(Benzene ppmV)(60 min/hr)(MW)/(1,000,000)(379 scf/mole) where MW = 78.11 lb/lb-mole for molecular weight of gasoline

THC-G = Total Hydrocarbons as Gasoline in parts per million - volume (ppmV)

% AS Running from Motor Download Report



January 28, 2008

Mr. Jared Otto BP-Delta-Minnesota c/o Delta Environmental 5910 Rice Creek Parkway Shoreview, MN 55126

RE: Project: BP-DELTA SS # 406

Pace Project No.: 1066482

Dear Mr. Otto:

Enclosed are the analytical results for sample(s) received by the laboratory on January 16, 2008. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Colin Schuft

colin.schuft@pacelabs.com Project Manager

Colin Jehoft

Florida (Nelap) Certification #: E87605 Illinois Certification #: 200011 Iowa Certification #: 368 Minnesota Certification #: 027-053-137 Wisconsin Certification #: 999407970

Enclosures





SAMPLE SUMMARY

Project:

BP-DELTA SS # 406

Pace Project No.:

1066482

Lab ID	Sample ID	Matrix	Date Collected	Date Received
1066482001	AIR DISCHARGE STRIPPER	Air	01/15/08 14:30	01/16/08 09:40
1066482002	AIR DISCHARGE-SVE	Air	01/15/08 14:35	01/16/08 09:40





SAMPLE ANALYTE COUNT

Project:

BP-DELTA SS # 406

Pace Project No.:

1066482

Lab ID	Sample ID	Method	Analysts	Analytes Reported
1066482001	AIR DISCHARGE STRIPPER	TO-3 Air	AEP	7
1066482002	AIR DISCHARGE-SVE	TO-3 Air	AEP	8





ANALYTICAL RESULTS

Project:

BP-DELTA SS # 406

Pace Project No.:

1066482

Sample: AIR DISCHARGE STRIPPER	Lab ID: 106	6482001	Collected: 01/15/0	08 14:30	Received: 0	01/16/08 09:40 N	Matrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qua
TO3 GCV AIR BTEX BAG	Analytical Met	hod: TO-3 A	ir					
Benzene	0.14 pp	omv	0.10	1		01/17/08 11:59	71-43-2	СН
Ethylbenzene	0.11 pp	omv	0.10	1		01/17/08 11:59	100-41-4	
THC as Gas	ND pp	omv	1.0	1		01/17/08 11:59		CL
Toluene	0.16 pp	omv	0.10	1		01/17/08 11:59	108-88-3	CH
m&p-Xylene	ND pp	omv	0.20	1		01/17/08 11:59	1330-20-7	
o-Xylene	ND pp	omv	0.10	1		01/17/08 11:59	95-47-6	
a,a,a-Trifluorotoluene (S)	91 %		50-150	1		01/17/08 11:59	98-08-8	
Sample: AIR DISCHARGE-SVE	Lab ID: 106	6482002	Collected: 01/15/0	08 14:35	Received: 0	01/16/08 09:40	Matrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qua
TO3 GCV AIR BTEX BAG	Analytical Met	hod: TO-3 A	sir					
Benzene	1.4 pp	omv	0.10	1		01/17/08 12:16	71-43-2	СН
Ethylbenzene	ND pp	omv	0.10	1		01/17/08 12:16	100-41-4	
THC as Gas	184 pp	omv	10.0	10		01/22/08 14:22		
Toluene	7.7 pp	omv	0.10	1		01/17/08 12:16	108-88-3	CH
m&p-Xylene	9.7 pr	omv	0.20	1		01/17/08 12:16	1330-20-7	
o-Xylene	9.1 pp	omv	0.10	1		01/17/08 12:16	95-47-6	
a,a,a-Trifluorotoluene (S)	285 %		50-150	1		01/17/08 12:16	98-08-8	S0
TO3 GCV AIR Meth, Ethane, Ethene	Analytical Met	hod: TO-3 A	sir					
Methane	148 pp	omv	5.0	5		01/16/08 14:55	74-82-8	

Date: 01/28/2008 03:23 PM

REPORT OF LABORATORY ANALYSIS

Page 4 of 7







QUALITY CONTROL DATA

Project:

BP-DELTA SS # 406

Pace Project No.:

1066482

QC Batch:

AIR/6465

TO-3 Air

Analysis Method:

TO-3 Air

QC Batch Method:

Associated Lab Samples: 1066482002 Analysis Description:

TO3 GCV AIR METH, ETHANE, ETHENE

METHOD BLANK: 434879

Associated Lab Samples:

1066482002

Blank

Reporting

Parameter

Units

Units

Result

Limit

Qualifiers

Methane

ppmv

ND

1.0

LABORATORY CONTROL SAMPLE:

Parameter

434880

Spike Conc.

LCS Result

LCS % Rec

% Rec Limits

Qualifiers

Methane

ppmv

10

7.9

79

70-130

SAMPLE DUPLICATE: 435021

Parameter

Units

1066127001

220

Dup Result

RPD

Max RPD

Qualifiers

Methane

ppmv

Result

217

30





QUALITY CONTROL DATA

Project:

BP-DELTA SS # 406

Pace Project No.:

1066482

QC Batch:

AIR/6468

Analysis Method:

TO-3 Air

QC Batch Method:

TO-3 Air

Analysis Description:

TO3 GCV AIR BTEX CAN

Associated Lab Samples:

1066482001, 1066482002

METHOD BLANK: 435205

Associated Lab Samples:

1066482001, 1066482002

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Benzene	ppmv	ND	0.10	
Ethylbenzene	ppmv	ND	0.10	
m&p-Xylene	ppmv	ND	0.20	
o-Xylene	ppmv	ND	0.10	
THC as Gas	ppmv	ND	1.0	
Toluene	ppmv	ND	0.10	
a,a,a-Trifluorotoluene (S)	%	95	50-150	

LABORATORY CONTROL SA	MPLE & LCSD: 435206		43	38078						
		Spike	LCS	LCSD	LCS	LCSD	% Rec		Max	
Parameter	Units	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qualifiers
Benzene	ppmv	1	1.2	1.0	119	103	70-130	14	30	
Ethylbenzene	ppmv	1	1.1	0.93	110	93	70-130	17	30	
m&p-Xylene	ppmv	2	2.1	1.8	106	92	70-130	15	30	
o-Xylene	ppmv	1	0.96	0.84	96	84	70-130	14	30	
THC as Gas	ppmv	10	9.4	7.9	94	79	70-130	17	30	
Toluene	ppmv	1	0.97	0.92	97	92	70-130	6	30	
a,a,a-Trifluorotoluene (S)	%				112	97	50-150			





QUALIFIERS

Project:

BP-DELTA SS # 406

Pace Project No.:

1066482

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

ANALYTE QUALIFIERS

Date: 01/28/2008 03:23 PM

CH The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.

CL The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased

low.

S0 Surrogate recovery outside laboratory control limits.



A	lantic lichfield ompany
Co	ompany
	A BP affiliated company

Chain of Custody Record

Project Name: Superior Former Amoco Terminal No. 406

BP BU/AR Region/Enfos Segment: Mid-Continent BU / Retail

State or Lead Regulatory Agency: Wisconsin

Requested Due Date (mm/dd/yy): Standard TAT

On-site	Time:	14:20	Temp:	23	
			Temp:		
77. 10			Dii		
Wind Sp	eed:		Direction	1:	

Lab Name:		Pace An	alytical Service	es			BP/AR Facility No.	:						40)6				Cons	ulta	nt/Co	ntrac	ctor:		Delta Consultants		
Address:		1700 Elr	n St., Ste. 200),			BP/AR Facility Add	iress					2904	Win	ter S	treet			Addı	ess:				5910	Rice Creek Parkway, S	uite 100	
		Minnear	olis, MN 554	114			Site Lat/Long:																	Sho	rview, MN 55126		
Lab PM:		Michelle	Kruse				California Global II	D No	.:										Cons	ulta	nt/Co	ntra	ctor I	Projec	ct No.: G006N-RP	31-1	
Tele/Fax:		612-607	-6382 / 612-6	07-6	5444		Enfos Project No.:						G	0061	1-003	35			Cons	sulta	nt/Co	ntra	ctor I	PM:	Jared Otto		
BP/AR EB	M:	Diane D					Provision or OOC	(circ	e one	e)			I	Prov	ision				Tele	Fax:				651	-697-5232 / 651-639-94	73	
Address:		28	100 Torch Pa	rkwa	ay, Suite	200	Phase/WBS:							0	3				Repo	ort T	ype &	& QC	Lev	el:	BP Level 1		
			Warre	nvil	le, IL. 6	0555	Sub Phase/Task:							0	3				-				_	-	eltaenv.com / njohnson@	-	
Tele/Fax:		630-836	-7106 / 630-8				Cost Element:							0	5						-		ltant	or Bl	P or Atlantic Richfield C	o. (circle	e one)
Lab Bottle	Order No:				Matri					P	reser	vati	ve)	Requ	estec	l An	alysi	s					
Item No.	Sample Description	Time	Date	Soil/Solid	Water/Liquid		Laboratory No.	No. of Containers	Unpreserved	H ₂ SO ₄	HNO ₃	нсі	Methanol		BTEX TO-3	THC TO-3	Methane TO-3								Sample Point Lat/Lo	ng and C	omments
1	AIR DISCHARGE - STRIPPP	ER /4:30	1/15/2008		X			1		Π					X	X						Г	Г	Π	AIR STR	IPPER	001
2	AIR DISCHARGE - SVE	14:35			X	_		2			П		П				x								SVE SYS		002
3					11	\top		1	▮														T		2,222		
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Sampler's	Name:	Ed Hey	tens			-	Relin	quish	ed By	/Afi	filiatio	n			D	ate	T	ime				Acc	epted	By /	Affiliation	Date	Time
Sampler's	Company:	Delta (Consultants								_				Г				U	· 17	<u></u>	h	2	2	200	1/16/08	09:40
Shipment	Date:								/	\sim		1							10							, ,	
Shipment	Method:	Fed Ex					Ed Heytens	1		K	1	h			1-0	58	15	300	V								
Shipment	Tracking No:									1																	
Special In	structions:																							***************************************			
																			,_								
	Custody Seals In Place Yes	/No	Temp Blan	nk: `	Yes/	0	Cooler Temp	on]	Rece	ipt:	And	°F/	C		Trip	Bla	nk: `	Yes /	(No)		N	AS/N	ASD	San	ple Submitted: Yes /	No)	

Sample Condition Upon Receipt

Project # 1066482 Client Name: 0 Courler: Fed Ex UPS USPS Client Commercial Pace Other Tracking #: 8626 0968 2695 **Custody Seal on Cooler/Box Present:** Seals intact: Ves no Packing Material: Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other Thermometer Used 230194010, 72310129 Type of Ice: Wet Blue/ None Samples on ice, cooling process has begun Date and initials of person examining Biological Tissue is Frozen: Yes No **Cooler Temperature** contents: Temp should be above freezing to 6°C Comments: DYES DNO □N/A 1. Chain of Custody Present: Yes DNo Chain of Custody Filled Out: □N/A ØYes □No Chain of Custody Relinquished: □N/A Yes . No Sampler Name & Signature on COC: □N/A Samples Arrived within Hold Time: TYES DNo □N/A TYES DNo □N/A Short Hold Time Analysis (<72hr): ☐Yes ☑No □N/A Rush Turn Around Time Requested: PYes DNo □N/A Sufficient Volume: Yes DNo Correct Containers Used: □N/A PYes DNo -Pace Containers Used: MN/A ØYes □No □N/A Containers Intact: □Yes □No DN/A Filtered volume received for Dissolved tests Yes Do Sample Labels match COC: -Includes date/time/ID/Analysis All containers needing preservation have been checked. □Yes □No All containers needing preservation are found to be in ☐Yes ☐No ÆN/A compliance with EPA recommendation. Initial when □Yes ZNo exceptions: VOA, coliform, TOC, O&G, WI-DRO (water) completed preservative □Yes □No IN/A 14. Samples checked for dechlorination: □Yes □No ☑N/A Headspace in VOA Vials (>6mm): □Yes □No ØN/A Trip Blank Present: Trip Blank Custody Seals Present □Yes □No ØN/A Pace Trip Blank Lot # (if purchased): Client Notification/ Resolution: Field Data Required? Person Contacted: Date/Time: Comments/ Resolution: Date: **Project Manager Review:**

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)





April 24, 2008

Mr. Jared Otto BP-Delta-Minnesota c/o Delta Environmental 5910 Rice Creek Parkway Shoreview, MN 55126

RE: Project: BP-DELTA-WI SS#406

Pace Project No.: 1071290

Dear Mr. Otto:

Enclosed are the analytical results for sample(s) received by the laboratory on April 11, 2008. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Colin Schuft

colin.schuft@pacelabs.com Project Manager

Colin Jehoft

Florida (Nelap) Certification #: E87605 Illinois Certification #: 200011 Iowa Certification #: 368 Minnesota Certification #: 027-053-137

Wisconsin Certification #: 999407970

Enclosures





SAMPLE SUMMARY

Project:

BP-DELTA-WI SS#406

Pace Project No.:

1071290

Lab ID	Sample ID	Matrix	Date Collected	Date Received
1071290001	AIR DISCHARGE-STRIPPER	Air	04/10/08 13:15	04/11/08 10:00
1071290002	AIR DISCHARGE-SVE	Air	04/10/08 13:05	04/11/08 10:00





SAMPLE ANALYTE COUNT

Project:

BP-DELTA-WI SS#406

Pace Project No.:

1071290

Lab ID	Sample ID	Method	Analysts	Analytes Reported
1071290001	AIR DISCHARGE-STRIPPER	TO-3 Air	AEP	7
1071290002	AIR DISCHARGE-SVE	TO-3 Air	AEP	10



ANALYTICAL RESULTS

Project:

BP-DELTA-WI SS#406

Pace Project No.:

1071290

Sample: AIR DISCHARGE- STRIPPER	Lab ID: 1071290001	Collected: 04/10/0	08 13:15	Received: 04	4/11/08 10:00 M	atrix: Air	
Parameters	Results Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO3 GCV AIR BTEX BAG	Analytical Method: TO-3 Ai	r					
Benzene	ND ppmv	0.19	1.86		04/23/08 10:34	71-43-2	1M
Ethylbenzene	ND ppmv	0.19	1.86		04/23/08 10:34	100-41-4	
THC as Gas	ND ppmv	1.9	1.86		04/23/08 10:34		
Toluene	0.22 ppmv	0.19	1.86		04/23/08 10:34	108-88-3	
m&p-Xylene	ND ppmv	0.37	1.86		04/23/08 10:34	1330-20-7	
o-Xylene	ND ppmv	0.19	1.86		04/23/08 10:34	95-47-6	
a,a,a-Trifluorotoluene (S)	79 %	50-150	1.86		04/23/08 10:34	98-08-8	
Sample: AIR DISCHARGE-SVE	Lab ID: 1071290002	Collected: 04/10/0	08 13:05	Received: 04	4/11/08 10:00 M	atrix: Air	
Parameters	Results Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qua
TO3 GCV AIR BTEX BAG	Analytical Method: TO-3 Ai						
	raidiyada Medida. 10 074						
Benzene	3.4 ppmv	0.34	3.35		04/23/08 10:51	71-43-2	1M
	,		3.35 3.35		04/23/08 10:51 04/23/08 10:51		1M
Benzene	3.4 ppmv	0.34					1M
Benzene Ethylbenzene	3.4 ppmv ND ppmv 56.6 ppmv	0.34 0.34	3.35		04/23/08 10:51	100-41-4	1M
Benzene Ethylbenzene THC as Gas Toluene	3.4 ppmv ND ppmv	0.34 0.34 3.4	3.35 3.35		04/23/08 10:51 04/23/08 10:51	100-41-4 108-88-3	1M
Benzene Ethylbenzene THC as Gas Toluene m&p-Xylene	3.4 ppmv ND ppmv 56.6 ppmv 3.8 ppmv 0.79 ppmv	0.34 0.34 3.4 0.34	3.35 3.35 3.35		04/23/08 10:51 04/23/08 10:51 04/23/08 10:51	100-41-4 108-88-3 1330-20-7	1M
Benzene Ethylbenzene THC as Gas Toluene	3.4 ppmv ND ppmv 56.6 ppmv 3.8 ppmv	0.34 0.34 3.4 0.34 0.67	3.35 3.35 3.35 3.35		04/23/08 10:51 04/23/08 10:51 04/23/08 10:51 04/23/08 10:51	100-41-4 108-88-3 1330-20-7 95-47-6	1M
Benzene Ethylbenzene THC as Gas Toluene m&p-Xylene o-Xylene	3.4 ppmv ND ppmv 56.6 ppmv 3.8 ppmv 0.79 ppmv ND ppmv	0.34 0.34 3.4 0.34 0.67 0.34 50-150	3.35 3.35 3.35 3.35 3.35		04/23/08 10:51 04/23/08 10:51 04/23/08 10:51 04/23/08 10:51 04/23/08 10:51	100-41-4 108-88-3 1330-20-7 95-47-6	1M
Benzene Ethylbenzene THC as Gas Toluene m&p-Xylene o-Xylene a,a,a-Trifluorotoluene (S)	3.4 ppmv ND ppmv 56.6 ppmv 3.8 ppmv 0.79 ppmv ND ppmv 112 %	0.34 0.34 3.4 0.34 0.67 0.34 50-150	3.35 3.35 3.35 3.35 3.35		04/23/08 10:51 04/23/08 10:51 04/23/08 10:51 04/23/08 10:51 04/23/08 10:51	100-41-4 108-88-3 1330-20-7 95-47-6 98-08-8	1M
Benzene Ethylbenzene THC as Gas Toluene m&p-Xylene o-Xylene a,a,a-Trifluorotoluene (S) TO3 GCV AIR Meth,Ethane,Ethene	3.4 ppmv ND ppmv 56.6 ppmv 3.8 ppmv 0.79 ppmv ND ppmv 112 % Analytical Method: TO-3 Ai	0.34 0.34 3.4 0.34 0.67 0.34 50-150	3.35 3.35 3.35 3.35 3.35 3.35		04/23/08 10:51 04/23/08 10:51 04/23/08 10:51 04/23/08 10:51 04/23/08 10:51 04/23/08 10:51	100-41-4 108-88-3 1330-20-7 95-47-6 98-08-8	1M

Date: 04/24/2008 04:21 PM





QUALITY CONTROL DATA

Project:

Ethane Ethene Methane BP-DELTA-WI SS#406

Pace Project No.:

1071290

QC Batch:

AIR/6828

Analysis Method:

TO-3 Air

QC Batch Method:

TO-3 Air

Analysis Description:

TO3 GCV AIR METH, ETHANE, ETHENE

Associated Lab Samples:

METHOD BLANK: 467137

Associated Lab Samples:

1071290002

1071290002

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
	ppmv	ND	1.0	
	ppmv	ND	1.0	
	ppmv	, ND	1.0	

LABORATORY CONTROL SAM	MPLE & LCSD: 467138		46	67139						
		Spike	LCS	LCSD	LCS	LCSD	% Rec		Max	
Parameter	Units	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qualifiers
Ethane	ppmv	10	9.4	9.3	94	93	70-130	1	30	
Ethene	ppmv	10	9.5	9.5	95	95	70-130	.7	30	
Methane	ppmv	10	9.3	8.9	93	89	70-130	5	30	





QUALITY CONTROL DATA

Project:

BP-DELTA-WI SS#406

Pace Project No.:

1071290

QC Batch:

AIR/6846

Analysis Method:

TO-3 Air

QC Batch Method:

TO-3 Air

Analysis Description:

TO3 GCV AIR BTEX CAN

Associated Lab Samples:

1071290001, 1071290002

METHOD BLANK: 468407

Associated Lab Samples:

1071290001, 1071290002

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Benzene	ppmv	ND	0.10	
Ethylbenzene	ppmv	ND	0.10	
m&p-Xylene	ppmv	ND	0.20	
o-Xylene	ppmv	ND	0.10	
THC as Gas	ppmv	ND	1.0	
Toluene	ppmv	ND	0.10	
a,a,a-Trifluorotoluene (S)	%	82	50-150	

LABORATORY CONTROL SAM	PLE & LCSD: 468408		46	68409						
		Spike	LCS	LCSD	LCS	LCSD	% Rec		Max	
Parameter	Units	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qualifiers
Benzene	ppmv	1	1.1	1.1	112	107	70-130	4	30	
Ethylbenzene	ppmv	1	0.99	0.98	99	98	70-130	.7	30	
m&p-Xylene	ppmv	2	2.0	1.9	101	96	70-130	4	30	
o-Xylene	ppmv	1	0.93	0.88	93	88	70-130	5	30	
THC as Gas	ppmv	10	10.0	10.4	100	104	70-130	4	30	
Toluene	ppmv	1	0.94	0.89	94	89	70-130	6	30	
a,a,a-Trifluorotoluene (S)	%				88	88	50-150			





QUALIFIERS

Project:

BP-DELTA-WI SS#406

Pace Project No.:

1071290

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

ANALYTE QUALIFIERS

1M Sample was transferred from a Tedlar bag into a Summa Canister within 72 hours of collection.

A4 Sample was transferred from a Tedlar bag into a Summa Canister within 48 hours of collection.



Atlantic Richfield Company

A BP affiliated company

Chain of Custody Record

Project Name:

Superior Former Amoco Terminal No. 406

BP BU/AR Region/Enfos Segment:

Mid-Continent BU / Retail

State or Lead Regulatory Agency:

Wisconsin Dept of Natural Resources te (mm/dd/yy): Standard TAT

Requested Due Date (mm/dd/yy):

On-site Time: Temp:
Off-site Time: Temp:
Sky Conditions:
Meteorological Events:

Wind Speed:

Page 1 of 1

Direction:

Lab N	ame:	Pace An	alytical	Serv	ices,	Inc.	BP/AR Facility No	.;		406									Con	sult	ant/(Cont	acto	r:			D	elta Co	nsultants		
Addre	ss:	1700 El	m St.				BP/AR Facility Ad	dress	:	290	4 Wi	inter S	Street						Add	iress	:						59	10 Rice C	reck Parkwa	y, Suit	e 100
		Minnea	polis, Mi	N 55	5414		Site Lat/Long:																				SI	norview	, MN 551	26	
Lab P	M:	Michelle	e Kruse				California Global I	D No	.;										Con	sult	ant/(Cont	acto	r Pro	oject	No.:	G	006N-I	P81-1		
Tele/F	ax:	612-607	-6323 / 6	612-	607-6	5444	Enfos Project No.:			G00	6N-	0036							Con	sult	ant/(Cont	racto	r PM	1:		Ja	red Ott	0		
BP/A	R EBM:	Diane D	iks				Provision or OCC	(circ	e on	e)									Tele	/Fa	x:						6.5	1-697-	5232 / 63	9-947	13
Addre	ss:	28100 T	orch Par	kwa	y		Phase/WBS:			03 (0&1	VI)							Rep	ort '	Гуре	& (C Le	evel:			N.	Α			
		Warmer	ville, IL	605	55		Sub Phase/Task:			03 (Ana	lytica	1)						E-m	ail l	EDD	To:	nic	ohns	on@	deltae	env.co	n/jotto@	deltaenv	com	
Tele/I	ax:	630-836	-7106/	630-	836-	1195	Cost Element:			05 (Subo	contra	ctor)							-			ultar	nt or	BP	or Atla	antic F	Cichfiel	d Co. (cir	cle o	ne)
Lab E	Sottle Order No:				Ma	trix				P	rese	rvati	ve				I	Requ	este	d A	naly	sis									
Item No.	Sample Description	Time	Date	Soil/Solid	Water/Liquid	Air	Laboratory No.	No. of Containers	Unpreserved	H ₂ SO ₄	HNO ₃	нсі	Methanol		BTEX TO-3	THC TO-3	Methane TO-3								S	Sample	e Poin	t Lat/I	ong and	Com	ments
	AIR DISCHARGE-STRIPPPER	13:15	4/10/08			x		1			T	T			X	х				T	T	T	T	T			A	IR ST	RIPPER	N	2/
2	AIR DISCHARGE-SVE	13:05				X		1		\vdash		\vdash	\vdash	\neg	X		Х				+	+	+	+	1				STEM	N	3
	AIR DISCHARUE-SVE	1300	4/10/08		Н	^ -		-	-	-	\vdash	\vdash	1	\dashv	<u>^</u>	^-	^	_	_	\vdash	╁	+	+	+	╬		3	VESI	STEW	U,	
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Samp	ler's Name:	Ed Hey	tens				Reling	uishe	d By	/ Aft	iliatio	on			D	ate	Ti	me		Ī		Ac	cepte	d By	/Af	filiatjo	n		Date		lime
Samp	ler's Company:	Delta C	Consulta	nts			Ed Heytens		,						4,	10/08				C.	A	11				14	21		4-1108	111	100
Shipn	nent Date:							1	7	Z							H:	00		1	,	,									
Shipn	nent Method:	3485 /	FED.	FX			21	7	7	U																					
Ship	nent Tracking No:								/																						
Specia	al Instructions: Work Release 1	39618																													
																						7									
	Custody Seals In Place Yes	No	Tem	p B	lank:	Yes	No Cooler	Tem	p on	Rec	eipt	M	S°F/	/C	I	Tr	ip B	lank	: Ye	s/I	No	2	M	IS/M	ISD	Sam	ple St	ıbmitte	d: Yes /	No	

Pace Analytical Client Name	: BP.	DEL	7A-WI	Project #	107/290
Courier: 1 Fed Ex UPS USPS CILITRACKING #: 8640 4474 9860					
		_		no a	
Packing Material: Bubble Wrap Bubb	le Bags 💢	None	Other		
Thermometer Used <u>-230104010, 72310120</u> -	Type of ic	e: We	t Blue None		cooling process has begun
Temp should be above freezing to 6°C	Biologica	i Tissue	Comments:	contents:	tials of person examining
Chain of Custody Present:	VZIVee DA	lo DN/A	1.		
Chain of Custody Filled Out:	VZÝes □N	lo DNA	2.		
Chain of Custody Relinquished:	Yes ON	io DNA	3.		
Sampler Name & Signature on COC:	Yes DN	lo ONA	4.		
Samples Arrived within Hold Time:	DAY OS DA		5.		
Short Hold Time Analysis (<72hr):	Xyes DN	O DNA	6.703		
Rush Turn Around Time Requested:	□Yes XIN	O DNA	7.		
Sufficient Volume:	SS □N	lo 🗆 N/A	8.		
Correct Containers Used:	Ores ON	IO DINA	9.		
-Pace Containers Used:	Yes DN	lo DN/A			
Containers Intact:	WYee ON	lo 🗆 N/A	10.		
Fittered volume received for Dissolved tests	□Yes □N	O ANA	11.		
Sample Labels match COC:	MY DN	O BINA	12.		
-Includes date/time/ID/Analysis Matrix:	HACOK	6/			
All containers needing preservation have been checked.	□Yes □N	o DANA	13.		
All containers needing preservation are found to be in compliance with EPA recommendation.	□Yes □N	o jana		T	
exceptions: VOA, collionn, TOC, O&G, WI-DRO (water)	□Yes □N	lo	initial when completed	Lot # of added preservative	
Samples checked for dechlorination:	□Yes □N	o DNA	14.		
Headspace in VOA Vials (>6mm):	□Yes □N	o DNA	15.		
Trip Blank Present:	□Yes □N	o DONA	16.		
Trip Blank Custody Seals Present	□Yes □N	. Jana			
Pace Trip Blank Lot # (if purchased):	_	<u> </u>			
Client Notification/ Resolution:				Field Data Requir	ad? Y / N
Person Contacted:		Date/	Time:	•	
Comments/ Resolution:					
	/	3	10		
Project Manager Review:	(1)	<u>' . </u>	fl.	Date:	411/08
Note: Whenever there is a discrepancy affecting North (Carolina com	ollance sa	mples, a copy of this form	will be sent to the N	orth Carolina DEHNR

Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Sample Condition Upon Receipt

F-ALLC003rev.3, 11September2006



August 08, 2008

Mr. Jared Otto BP-Delta-Minnesota c/o Delta Environmental 5910 Rice Creek Parkway Shoreview, MN 55126

RE: Project: BP-DELTA-WI SS#406

Pace Project No.: 1077842

Dear Mr. Otto:

Enclosed are the analytical results for sample(s) received by the laboratory on July 29, 2008. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Daryl Peterson for

Day Peter

Colin Schuft

colin.schuft@pacelabs.com

Project Manager

Florida (Nelap) Certification #: E87605 Illinois Certification #: 200011 Iowa Certification #: 368

Minnesota Certification #: 027-053-137 Wisconsin Certification #: 999407970

Enclosures





SAMPLE SUMMARY

Project:

BP-DELTA-WI SS#406

Pace Project No.:

1077842

Lab ID	Sample ID	Matrix	Date Collected	Date Received	
1077842001	AIR DISCHARGE-SVE	Air	07/28/08 14:40	07/29/08 15:15	
1077842002	AIR DISCHARGE-STRIPPER	Air	07/28/08 14:45	07/29/08 15:15	





SAMPLE ANALYTE COUNT

Project:

BP-DELTA-WI SS#406

Pace Project No.: 1077842

Lab ID	Sample ID	Method	Analysts	Analytes Reported
1077842001	AIR DISCHARGE-SVE	TO-3 Air	AH	8
1077842002	AIR DISCHARGE-STRIPPER	TO-3 Air	AH	7



ANALYTICAL RESULTS

Project:

BP-DELTA-WI SS#406

Pace Project No.: 1077842

Sample: AIR DISCHARGE-SVE	Lab ID: 107	7842001	Collected: 07/28/0	8 14:40	Received: 0	7/29/08 15:15 N	Matrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qua
TO3 GCV AIR BTEX BAG	Analytical Met	hod: TO-3 A	ir					
Benzene	1.1 pp	omv	0.10	1		07/30/08 11:03	71-43-2	
Ethylbenzene	ND pp	omv	0.10	1		07/30/08 11:03	100-41-4	
THC as Gas	17.5 pp	omv	1.0	1		07/30/08 11:03		
Toluene	1.2 pp	omv	0.10	1		07/30/08 11:03	108-88-3	
m&p-Xylene	0.27 pp	omv	0.20	1		07/30/08 11:03	1330-20-7	
o-Xylene	ND pr	omv	0.10	1		07/30/08 11:03	95-47-6	
a,a,a-Trifluorotoluene (S)	82 %		50-150	1		07/30/08 11:03	98-08-8	
TO3 GCV AIR Meth, Ethane, Ethene	Analytical Met	hod: TO-3 A	ir					
Methane	129 pp	omv	5.0	5		08/04/08 11:04	74-82-8	1M,A2
Sample: AIR DISCHARGE- STRIPPER	Lab ID: 107	7842002	Collected: 07/28/0	8 14:45	Received: 0	7/29/08 15:15 N	Matrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qua
90 year Control Control Control	Results Analytical Met			DF	Prepared	Analyzed	CAS No.	Qua
TO3 GCV AIR BTEX BAG		hod: TO-3 A		DF 1	Prepared	Analyzed 07/30/08 11:21	CAS No.	Qua
TO3 GCV AIR BTEX BAG Benzene	Analytical Met	hod: TO-3 A	ir	37.00	Prepared		VIOLES - MESTA - MESTA - VIOLENCE	Qua
TO3 GCV AIR BTEX BAG Benzene Ethylbenzene	Analytical Met	hod: TO-3 A omv omv	ir 0.10	1	Prepared	07/30/08 11:21	71-43-2	Qua
TO3 GCV AIR BTEX BAG Benzene Ethylbenzene THC as Gas	Analytical Met ND pp ND pp	hod: TO-3 A omv omv	0.10 0.10	1 1	Prepared	07/30/08 11:21 07/30/08 11:21	71-43-2	Qua
Parameters TO3 GCV AIR BTEX BAG Benzene Ethylbenzene THC as Gas Toluene m&p-Xylene	Analytical Met ND pp ND pp 1.4 pp	hod: TO-3 A omv omv omv omv	0.10 0.10 1.0	1 1 1	Prepared	07/30/08 11:21 07/30/08 11:21 07/30/08 11:21	71-43-2 100-41-4	Qua
TO3 GCV AIR BTEX BAG Benzene Ethylbenzene THC as Gas Toluene	Analytical Met ND pp ND pp 1.4 pp ND pp	hod: TO-3 A omv omv omv omv	0.10 0.10 1.0 0.10	1 1 1	Prepared	07/30/08 11:21 07/30/08 11:21 07/30/08 11:21 07/30/08 11:21	71-43-2 100-41-4 108-88-3	Qua

Date: 08/08/2008 02:10 PM

REPORT OF LABORATORY ANALYSIS





QUALITY CONTROL DATA

Project:

BP-DELTA-WI SS#406

Pace Project No.:

1077842

QC Batch:

AIR/7214

214 Analysis Method:

TO-3 Air

QC Batch Method: TO-3 Air

Analysis Description:

TO3 GCV AIR BTEX CAN

Associated Lab Samples:

METHOD BLANK: 507157

Associated Lab Samples:

1077842001, 1077842002

1077842001, 1077842002

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Benzene	ppmv	ND	0.10	
Ethylbenzene	ppmv	ND	0.10	
m&p-Xylene	ppmv	ND	0.20	
o-Xylene	ppmv	ND	0.10	
THC as Gas	ppmv	ND	1.0	
Toluene	ppmv	ND	0.10	
a,a,a-Trifluorotoluene (S)	%	55	50-150	

LABORATORY CONTROL SAM	PLE & LCSD: 507158		50	7159						
		Spike	LCS	LCSD	LCS	LCSD	% Rec		Max	
Parameter	Units	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qualifiers
Benzene	ppmv	1	1.2	1.1	117	111	70-130	5	30	
Ethylbenzene	ppmv	1	0.99	0.94	99	94	70-130	5	30	
m&p-Xylene	ppmv	2	2.0	1.9	98	93	70-130	5	30	
o-Xylene	ppmv	1	0.90	0.85	90	85	70-130	6	30	
THC as Gas	ppmv	10	9.2	9.0	92	90	70-130	2	30	
Toluene	ppmv	1	0.94	0.89	94	89	70-130	5	30	
a,a,a-Trifluorotoluene (S)	%				108	103	50-150			



Pace Analytical Services, Inc. 1700 Elm Street Minneapolis, MN 55414 (612)607-1700

QUALITY CONTROL DATA

Project:

BP-DELTA-WI SS#406

Pace Project No.:

1077842

QC Batch:

QC Batch Method:

AIR/7249

TO-3 Air

Analysis Method:

TO-3 Air

Analysis Description:

TO3 GCV AIR METH, ETHANE, ETHENE

METHOD BLANK: 510426

Associated Lab Samples: 1077842001

Associated Lab Samples:

1077842001

Blank

Reporting

Parameter

Units

Result

Spike

Limit

Qualifiers

Methane

ppmv

ND

1.0

LABORATORY CONTROL SAMPLE & LCSD:

Parameter

LCS

510428 LCSD Result Result

LCS

LCSD % Rec % Rec % Rec RPD Limits

Max

Qualifiers

Methane

ppmv

Units Conc.

10

8.6

8.0

86 80 70-130

RPD 30

Date: 08/08/2008 02:10 PM





QUALIFIERS

Project:

BP-DELTA-WI SS#406

Pace Project No.:

1077842

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

ANALYTE QUALIFIERS

1M The closing continuing calibration for this compound is outside of BP acceptance limits.

A2 The tedlar bag analyzed outside 48 hours from collection.



Atla	ntic
Ric	chfield
Con	ntic hfield npany

A BP affiliated company

Chain of Custody Record

Project Name:	Superior Form	ner Amoco Terminal No. 406			
BP BU/AR Region/Enfos Segn	nent:	Mid-Continent BU / Retail			
State or Lead Remilatory Age	mar.	Wicconsin			

Requested Due Date (mm/dd/yy): Standard TAT

	107	77842	Pageof	
On-site		13:00	Temp:	
			Тетр:	
Wind Sp	eed:	- 1	Direction:	

Lao Name.		1 400 711	alytical servi	<u></u>			DITAR Facility No.	-							-00				пошка	1000				Delia Consum	-		
Address:		1700 EI	m St., Ste. 20	0,			BP/AR Facility Add	iress	:				290	4 Wi	nter	Street		Ad	dress:				5910	Rice Creek Pas	kway, S	uite 100	
			polis, MN 55				Site Lat/Long:					L	Shorview, MN 55126														
Lab PM:		Michell	e Kruse				California Global II	D No	.:									Co	nsulta	nt/Co	ntrac	tor P	rojec	t No.: G00	6N-RP8	1-1	
Tele/Fax:		612-607	-6382 / 612-6	507-64	44		Enfos Project No.:						(G006	N-0	036		Co	nsulta	nt/Co	ntrac	ctor P	M:	Jare	d Otto		
BP/AR EB	M:	Diane D	iks				Provision or OOC	(circ	le one	e)				Pro	visio	n,		Te	le/Fax	:			651-	697-5232 / 651-	-639-947	73	
Address:		28	100 Torch Pa	rkway.	, Suit	e 200	Phase/WBS:								03			Re	port T	ype &	¢ QC	Leve	el:	BP	Level 1		
			Warre	nville,	IL. 6	0555	Sub Phase/Task:								03			€-	mail E	DD 1	o:	jotto	@del	ltaenv.com / njo	hnson@	deltaen	v.com
Tele/Fax:		630-836	-7106 / 630-	836-71	95		Cost Element:								05			In	oice t	o: Co	onsu	tant o	or BP	or Atlantic Ric	hfield C	o. (circ	le one)
Lab Bottle	e Order No:			N	Matri	X				P	rese	vati	ve				Requ	estec	Anal	ysis							
Item No.	Sample Description	Time	Date	Soil/Solid	Water/Liquid		Laboratory No.	No. of Containers	Unpreserved	H ₂ SO ₄	HNO3	HCI	Methanol		BTEX TO-3	THC TO-3	Methane TO-3							Sample I	Point La Comme		and
1	AIR DISCHARGE - STRIPPPE	R /4:45	7/28/2008		X			1				Γ	П		x	X	П	T	T					1077	(SFR)	PPER	
2	AIR DISCHARGE - SVE	14:40	7/28/2008		X			2							x	х	X	T							E SYSI		
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10		1			\top	十				1	\vdash			\neg				十	1	1	\vdash		Н				
Sampler's	Name:	Ed He	ytens	B			Relino	uisb	ed By	/ At	filiatio) D		ᅱ		Date	Time	+	1	-	Acce	pted]	By / A	Affiliation		Date	Time
Sampler's	Company:		Consultants						-		1							1	No	M	1	-4	1	PARL	-	29.18	15:19
Shipmen	Date:							7	1	7	1	/						\top	18	1	7.4	4	_	9.7112		TO COLO	13.73
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Shipmen	t Tracking No:						my	7	~	Z						8/06			Fee	1-	2	0				764K	16:00
Special In	structions:								0						/	78.										1 1	
		0				1)											-									
	Custody Seals In Place: Yes	No)	Temp B	lank:	Yes/	No	Cooler Ten	ip or	Rec	eipt	AN	189	F/C		Tr	ip Blan	k: Yes	No	1	MS	S/MS	SD Sa	ampl	e Submitted:	Yes/No)	

Pace Analytical"

WW.Sample Conclute in Upon Receipte ESt Jech Spees

Client Name: BP. DEUTA - WI Project # Courier: X Fed Ex UPS USPS Client Commercial Pace Other Fire Distribution Custody Seal on Cooler/Box Present: ☐ ves ☐ no Seals intact: Packing Material: X Bubble Wrap MBubble Bags None Thermometer Used Blue (None Samples on ice, cooling process has begun Type of Ice: Wet Date and Initials of person examining Biological Tissue is Frozen: Yes Cooler Vemperature contents: 7.29-0 Temp should be above freezing ≤ 6°C Comments: Chain of Custody Present: Nes UNO □N/A Yes DNo □N/A Chain of Custody Filled Out: Chain of Custody Relinquished: Yes DNo □N/A Yes ONO ON/A Sampler Name & Signature on COC: MYes DNo Samples Arrived within Hold Time: □N/A XYOS DNo ON/A 6. Short Hold Time Analysis (<72hr): ☐Yes TXNo Rush Turn Around Time Requested: DNA Sufficient Volume: triple volume provided for 19900 LINO NIA MS/MSD Ves INO □N/A 9. Correct Containers Used: Tres DNo -Pace Containers Used: □N/A Yes DNo DN/A 110. Containers Intact: DYes DNO NINA 11. Fillered volume received for Dissolved tests TYPE DNO DNA 12. Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: All containers needing acid/base preservation have been □Yes □No MNA 13. checked. All containers needing preservation are found to be in □Yes □No XIN/A compliance with EPA recommendation. Lot # of added Initial when completed preservative Per method, VOA pH is checked after analysis □Yes □No WNA 14. Samples checked for dechlorination: □Yes □No 15. Headspace in VOA Vials (>6mm): TYes INO 3 Trip Blanks Present: 16. Trip Blank Custody Seals Present ☐Yes ☐No **Ø**N/A Pace Trip Blank Lot # (if purchased): Client Notification/ Resolution: Field Data Required? Y / N Person Contacted: Date/Time: Comments/ Resolution: Temp Log: Temp must be maintained at <6 C during login, record temp every 20 mins Opened time: Temp: Time: put in cooler Time: Temp: Project Manager Review:

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, alcopy 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)





October 20, 2008

Mr. Jared Otto BP-Delta-Minnesota c/o Delta Environmental 5910 Rice Creek Parkway Shoreview, MN 55126

RE: Project: BP-Delta-WI SS#406

Pace Project No.: 1082042

Dear Mr. Otto:

Enclosed are the analytical results for sample(s) received by the laboratory on October 07, 2008. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Colin Schuft

colin.schuft@pacelabs.com

Colin Jehoft

Project Manager

Enclosures



Pace Analytical Services, Inc. 1700 Elm Street Minneapolis, MN 55414 (612)607-1700

CERTIFICATIONS

Project:

BP-Delta-WI SS#406

Pace Project No.:

1082042

Minnesota Certification IDs

Tennessee Certification #: 02818
Wisconsin Certification #: 999407970
Washington Certification #: C754
Pennsylvania Certification #: 68-00563
Oregon Certification #: MN200001
North Dakota Certification #: R-036
North Carolina Certification #: 530
New York Certification #: 11647
New Jersey Certification #: MN-002

Minnesota Certification #: 027-053-137

Maine Certification #: 2007029 Louisiana Certification #: LA080009 Louisiana Certification #: 03086 Kansas Certification #: E-10167 lowa Certification #: 368 Illinois Certification #: 200011 Florida (Nelap) Certification #: E87605 California Certification #: 01155CA Arizona Certification #: AZ-0014 Alaska Certification #: UST-078







SAMPLE SUMMARY

Project:

BP-Delta-WI SS#406

Pace Project No.:

1082042

Lab ID	Sample ID	Matrix	Date Collected	Date Received
1082042001	AIR DISCHARGE-STRIPPER	Air	10/06/08 15:30	10/07/08 08:03
1082042002	AIR DISCHARGE-SVE	Air	10/06/08 15:40	10/07/08 08:03





SAMPLE ANALYTE COUNT

Project:

BP-Delta-WI SS#406

Pace Project No.:

1082042

Lab ID	Sample ID	Method	Analysts	Analytes Reported
1082042001	AIR DISCHARGE-STRIPPER	TO-3 Air	AH	7
1082042002	AIR DISCHARGE-SVE	TO-3 Air	AH	8



ANALYTICAL RESULTS

Project:

BP-Delta-WI SS#406

Pace Project No.:

1082042

Sample: AIR DISCHARGE- STRIPPER	Lab ID: 10820	042001	Collected: 10/06/0	8 15:30	Received:	10/07/08 08:03	Matrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO3 GCV AIR BTEX BAG	Analytical Metho	od: TO-3 A	ir					
Benzene	0.64 ppm	nv	0.10	1		10/09/08 12:06	71-43-2	1M
Ethylbenzene	ND ppm	nv	0.10	1		10/09/08 12:06	100-41-4	
THC as Gas	5.1 ppm	nv	1.0	1		10/09/08 12:06	6	1M
Toluene	0.44 ppm	nv	0.10	1		10/09/08 12:06	108-88-3	
m&p-Xylene	0.45 ppm	nv	0.20	1		10/09/08 12:06	3 1330-20-7	
o-Xylene	0.32 ppm	nv	0.10	1		10/09/08 12:06	95-47-6	
a,a,a-Trifluorotoluene (S)	80 %		50-150	1		10/09/08 12:06	98-08-8	
Sample: AIR DISCHARGE-SVE	Lab ID: 10820		Collected: 10/06/0	08 15:40		10/07/08 08:03	Matrix: Air	
,		042002 Units			Received:			Qual
Sample: AIR DISCHARGE-SVE Parameters	Lab ID: 10820	Units	Collected: 10/06/0	08 15:40		10/07/08 08:03	Matrix: Air	Qual
Sample: AIR DISCHARGE-SVE Parameters TO3 GCV AIR BTEX BAG	Lab ID: 10820	Units od: TO-3 A	Collected: 10/06/0	08 15:40		10/07/08 08:03	Matrix: Air CAS No.	Qual 1M
Sample: AIR DISCHARGE-SVE Parameters TO3 GCV AIR BTEX BAG Benzene	Lab ID: 10820 Results Analytical Metho	Units od: TO-3 A	Collected: 10/06/0	08 15:40 DF		10/07/08 08:03 Analyzed	Matrix: Air CAS No. 71-43-2	
Sample: AIR DISCHARGE-SVE Parameters TO3 GCV AIR BTEX BAG Benzene Ethylbenzene	Results Analytical Metho	Units od: TO-3 A nv nv	Collected: 10/06/0 Report Limit ir 0.10	08 15:40 DF		10/07/08 08:03 Analyzed 10/09/08 12:50	CAS No. 71-43-2 100-41-4	
Sample: AIR DISCHARGE-SVE Parameters TO3 GCV AIR BTEX BAG Benzene Ethylbenzene THC as Gas	Results Analytical Metho 0.93 ppm 0.11 ppm	Units od: TO-3 A nv nv nv	Collected: 10/06/0 Report Limit ir 0.10 0.10	08 15:40 DF 1		10/07/08 08:03 Analyzed 10/09/08 12:50 10/09/08 12:50	CAS No. 71-43-2 100-41-4	1M
Sample: AIR DISCHARGE-SVE Parameters TO3 GCV AIR BTEX BAG Benzene Ethylbenzene THC as Gas Toluene	Analytical Methor 0.93 ppm 0.11 ppm 25.6 ppm	Units od: TO-3 A nv nv nv nv	Collected: 10/06/0 Report Limit ir 0.10 0.10 1.0	DF 1 1 1 1 1		10/07/08 08:03 Analyzed 10/09/08 12:50 10/09/08 12:50 10/09/08 12:50	Matrix: Air CAS No. 71-43-2 100-41-4 101 108-88-3	1M
Sample: AIR DISCHARGE-SVE	Analytical Methor 0.93 ppm 0.11 ppm 25.6 ppm 1.3 ppm	Units od: TO-3 A nv nv nv nv nv	Collected: 10/06/0 Report Limit ir 0.10 0.10 1.0 0.10	08 15:40 DF 1 1 1 1		10/07/08 08:03 Analyzed 10/09/08 12:5(10/09/08 12:5(10/09/08 12:5(10/09/08 12:5(Matrix: Air CAS No. 71-43-2 0 100-41-4 0 108-88-3 0 1330-20-7	1M

5.0

5

10/20/08 12:09 74-82-8

Analytical Method: TO-3 Air

115 ppmv

Date: 10/20/2008 04:40 PM

TO3 GCV AIR Meth, Ethane, Ethene

Methane

A2







QUALITY CONTROL DATA

Project:

BP-Delta-WI SS#406

Pace Project No.:

1082042

QC Batch:

AIR/7535

Analysis Method:

TO-3 Air

QC Batch Method:

TO-3 Air

Analysis Description:

TO3 GCV AIR BTEX CAN

Associated Lab Samples:

METHOD BLANK: 536955

Matrix: Air

Associated Lab Samples:

1082042001, 1082042002

1082042001, 1082042002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ppmv	ND	0.10	10/09/08 11:00	
Ethylbenzene	ppmv	ND	0.10	10/09/08 11:00	
m&p-Xylene	ppmv	ND	0.20	10/09/08 11:00	
o-Xylene	ppmv	ND	0.10	10/09/08 11:00	
THC as Gas	ppmv	ND	1.0	10/09/08 11:00	
Toluene	ppmv	ND	0.10	10/09/08 11:00	
a,a,a-Trifluorotoluene (S)	%	85	50-150	10/09/08 11:00	

LABORATORY CONTROL SAM	PLE & LCSD: 536956		53	36957						
		Spike	LCS	LCSD	LCS	LCSD	% Rec		Max	
Parameter	Units	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qualifiers
Benzene	ppmv	1	1.1	1.3	113	126	70-130	11	30	
Ethylbenzene	ppmv	1	0.95	1.0	95	102	70-130	8	30	
m&p-Xylene	ppmv	2	2.1	2.2	104	112	70-130	7	30	
o-Xylene	ppmv	1	0.83	0.86	83	86	70-130	4	30	
THC as Gas	ppmv	10	10.1	12.6	101	126	70-130	22	30	
Toluene	ppmv	1	0.97	1.0	97	103	70-130	6	30	
a,a,a-Trifluorotoluene (S)	%				109	100	50-150			

Date: 10/20/2008 04:40 PM







QUALITY CONTROL DATA

Project:

BP-Delta-WI SS#406

Pace Project No.:

1082042

QC Batch:

AIR/7587

TO 2 Air

Analysis Method:

TO-3 Air

QC Batch Method: TO-3 Air

Analysis Description:

TO3 GCV AIR METH, ETHANE, ETHENE

Associated Lab Samples:

METHOD BLANK: 540281

Matrix: Air

Associated Lab Samples:

1082042002

1082042002

Blank

Reporting

Parameter

Units

Result

Limit

Analyzed

Qualifiers

Methane

ppmv

ND

1.0 10/20/08 09:23

LABORATORY CONTROL SAMPLE & LCSD: 540283 540282 % Rec LCS LCSD LCS LCSD Spike Max Units % Rec % Rec **RPD RPD** Qualifiers Parameter Conc. Result Result Limits Methane 10 7.3 9.7 73 70-130 29 30 ppmv





Pace Analytical Services, Inc. 1700 Elm Street Minneapolis, MN 55414 (612)607-1700

QUALIFIERS

Project:

BP-Delta-WI SS#406

Pace Project No.:

1082042

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

ANALYTE QUALIFIERS

1M The continuing calibration for this compound is outside of BP acceptance limits.

A2 The tedlar bag analyzed outside 48 hours from collection.

Date: 10/20/2008 04:40 PM



Atlantic
Atlantic Richfield
Company

A BP affiliated company

Chain of Custody Record

	•	
Project Name:		Superior Former Amoco Terminal No. 406
	-	The state of the s

BP BU/AR Region/Enfos Segment: Mid-Continent BU / Retail
State or Lead Regulatory Agency: Wisconsin

Requested Due Date (mm/dd/yy): Standard TAT

	108	2042	Page	of /
On-site	Time:	15:15	Temp:	52
			Temp:	
Wind Spe	ad.		Directio	-

Lab Name:		Pace An	alytical Service	es			BP/AR Facility No.	:							406			Con	sultar	nt/Co	ntrac	tor:		Delta Consul	tants		
Address:		_ 1700 Ela	n St., Ste. 200),			BP/AR Facility Add	iress	:				290	04 W	inter	Street		Add	ress:				5910	Rice Creek I	arkway.	Suite 10	0
		Minneap	olis, MN 55	414			Site Lat/Long:																Shor	rview, MN 5	5126		
Lab PM:		Michelle	Kruse				California Global I	D No	.:									Con	sulta	nt/Co	ntrac	tor P	тојес	t No.: G	006N-R	P81-1	
Tele/Fax:		612-607	-6382 / 612-6	07-64	44		Enfos Project No.:						•	G00	6N-0	036		Con	sulta	nt/Co	ntrac	tor P	M:	Ja	ared Otto	(
BP/AR EB	M:	Diane D				-	Provision or OOC	(circ	le on	e)	,			Pro	ovisio	on		-	/Fax:	_		-	_	697-5232 / 65	51-639-9	473	
Address:		28:	100 Torch Pa	kway,	Suite	200	Phase/WBS:								03			Rep	ort T	ype &	: QC	Leve	el:	В	P Level	1	
			Warre	nville,	IL. 60	555	Sub Phase/Task:								03			_			_	-	-	ltaenv.com/	-	<u> </u>	
Tele/Fax:		630-836	-7106 / 630-8	36-71	95		Cost Element:								95					70-	nsui	tant o	or BP	or Atlantic I	Cichfield	Co. (cir	cle one)
Lab Bottk	e Order No:			N	fatrix					Ì	rese	rvati	ve				Requ	ested	Anal	ysis							
Item No.	Sample Description	Time	Date	Soll/Solid	Water/Liquid Air		Laboratory No.	No. of Containers	Unpreserved	H ₂ SO ₄	HNO3	нсі	Methanol		BTEX TO-3	гнс то-з	Methane TO-3							Sampl	e Point I Comn	Lat/Long nents	and
1	AIR DISCHARGE - STRIPPPE	R /Śrźc	10/6/2008		X	П		1							X	X								A	IR ST	RIPPER	001
2	AIR DISCHARGE - SVE	15:40	10/6/2008	18	X	П		2							X	X	X							S	VE SY	STEM	102
3				2.7														T									
4												Π					ΙТ										
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7				П		П				T	Γ							T									
8				П													П										
9																		T									
10																											
Sampler's	s Name:	Ed Hey	/tens				Reline	uish	ed By	// Af	filiati	on				Date	Time					pted l	By / A	Affiliation		Date	
1	s Company:	Delta C	Consultants						>	_	1	A	_						des	911	7	1	R	- PA		10-70	5080
Shipmen								4	_		Al		-				1		V	A	1	,				101	-
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Special Ir	structions:									_						-									-		
	Custody Seals In Place: Yes	(Nia)	Temp Bl		Zan Ih	To	Cooler		De		. 1/1-	10	D/C		T	D1	la Va-	A C	}	2/0	A 45	De	1	a Culturita	. Var	AV.	
<u> </u>	Custody Seals in Place: Yes	V NO /	1emp Bl	ank:)	es/(I	NO /	Cooler Ten	ıp or	Ke	ceipi	.7//	12	r/C		Į I	rip Blan	K. Yes	[INO	1	WIS	/IVIS	של אל	ampl	le Submitted	. res/	NO	

Condition Upon Receipte.



Client Name	e: <u>r</u>	P	116	1771 - W	I	Proje	ct # 108209
Courier: Fed Ex UPS USPS USPS CI	ent 🗌	Comr	nercia	Pace	Other	AND DESCRIPTION OF THE PERSON	Optional Proj. Due Date:
Custody Seal on Cooler/Box Present: yes	X	no	Sea	ls intact;	yes	no no	Proj. Name:
Packing Material: Bubble Wrap Bubbl	e Bags		None	Other		Temp	Blank: Yes No X
Thermometer Used 80344042, 179425	Туре	of Ice	: We	t Blue	Vone	1	es on ice, cooling process has begun
Cooler Temperature Temp should be above freezing to 6°C	Biolo	gical	Tissu	e is Frozen Commen		Dat	te and Initials of person examining ontents:
Chain of Custody Present:	YlYes	□No	□ _{N//}	1.			
Chain of Custody Filled Out:	Yes	□No	□n//	2.			
Chain of Custody Relinquished:	Eyes	□No	□N//	3.	1		
Sampler Name & Signature on COC:	Wes	□No	□n/A	4.			
Samples Arrived within Hold Time:	Myes	□No	□n#	5.			
Short Hold Time Analysis (<72hr):	Yes	□No	[]N/A	6. TO_	3		
Rush Turn Around Time Requested:			EINA				Makes and the special cost of the state of the special cost of the
Sufficient Volume:	Yes	□No	DNIA	8.	****		BARAN NAMEN OF THE CONTROL OF A STREET AND A
Correct Containers Used:	Vores	□No	□n/A	9.			A TO SEA A STATE OF THE SEA ASSESSMENT OF TH
-Pace Containers Used:	K Ores	□No	□N/A				
Containers Intact:	X Yes	□No	□N/A	10.			SEELANDER LANDING OF THE SEELAND STATE OF THE SEELA
Filtered volume received for Dissolved tests	□Yes	По	MINIA	11.			
Sample Labels match COC:	Yes	No	₽ N/A	12.			MILLER MICHAEL PROPERTY AND ASSESSMENT OF THE STATE OF TH
-Includes date/time/ID/Analysis Matrix:	AGR (346	-)				
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	□Yes	□No	KONIA	13.	A SO OF SHARES & Lawrence		The American Property Constitution of the Cons
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	□No	D IA				
exceptions: VOA,Collform, TOC, Oil and Grease, WI-DRO (water)	□Yes	□No		Initial when completed		Lot # of a	
Samples checked for dechlorination:	□Yes [□No	NIA	14.	-		
leadspace in VOA Vials (>6mm):	□Yes (]No	N/A			arkings, or all an are as her hardways, my gr	
rip Blank Present:	□Yes [DN/A				
rip Blank Custody Seals Present	□Yes [DAN/A				
Pace Trip Blank Lot # (if purchased):			,				
lient Notification/ Resolution:			-		10-12-1	Field Data	a Required? Y / N
Person Contacted:			Date/T	ime:			
Comments/ Resolution:							
		/					
	/						
Project Manager Review:		_	2.	1	0	Da	ate: 10 7 08
ote: Whenever there is a discrepancy affecting North Car ertification Office (i.e. out of hold, incorrect preservative,					f this form v	vilf be sent to	the North Carolina DEHNR

F-ALLC003rev.5, 5Aug2008