



October 27, 2009

Mr. Brad Hill  
City of Flint Water Pollution  
Water Pollution Control Facilities  
G4652 Beecher Rd.  
Flint, MI, 48532

*Subject: Discharge Permit Submittal– July 2009 through September 2009  
Permit No.: 6-08-04-04-GMLI*

Dear Mr. Hill:

In accordance with requirements of the above referenced discharge permit, we are providing you with the following discharge information for the period July 1, 2009 to September 30, 2009 for the Coldwater Road facility, located at 6220 Horton Avenue, Flint, Michigan.

- Periodic Report on Continued Compliance, certification.
- Periodic Report on Continued Compliance (Table 1).
- Daily Discharge Summary Table (Table 2).
- Analytical Report provided by Merit Laboratories, Inc. for samples from the on-site, above ground collection tank collected on August 19, 2009.
- Copy of Chain-of-Custody forms.

The laboratory analytical results indicate concentrations for copper and amenable cyanide above their respective Sewer Use Permit limits; therefore, the water was disposed off-site by Dynecol, and the accumulation tank was cleaned and emptied at the same time. Therefore, no water was discharged to the POTW during the discharge period. A copy of the manifest is attached for your records.

Please call me at 248-477-5701 if you have any questions.

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.

A handwritten signature in black ink, reading 'Clifford Scott Yantz', is written in a cursive style.

Clifford Yantz  
Technical Associate

Enclosures

cc: Mr. Anthony Nowiski – Beecher Metropolitan District, Flint, MI  
Mr. Ken Richards – Motors Liquidation Co.  
Ms. Marianne Secrest – O'Brien & Gere

37000 Grand River Avenue, Farmington Hills, MI 48335  
(248) 477-5701 / FAX (248) 477-5962 ■ <http://www.obg.com>

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# City of Flint Industrial Pretreatment Program

## Periodic Report on Continued Compliance

Company Name: General Motors, Coldwater Road  
Street Address: 6220 Horton Avenue, Flint, Michigan  
Permit Number: 6-08-04-04-GML1  
Outfall Number: 001

Reporting Period: July 1, 2009 through September 30, 2009

Average Volume of Daily Discharge (during reporting period): zero gallons per day.  
(0 days)

Complete the following:

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

Name of Authorized Representative: Clifford Yantz

Title of Authorized Representative: Technical Associate, O'Brien & Gere Engineers, Inc.  
As agent for Motors Liquidation Company (MLC)

Signature of Authorized Representative: \_\_\_\_\_

Date Signed by Authorized Representative: \_\_\_\_\_

If required to implement a Toxic Organics Management Plan (TOMP), complete the following:

"Based on my inquiry of the person or persons directly responsible for managing compliance with the pretreatment standard for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing of the last Periodic Report on Continued Compliance. I further certify that, this facility is implementing the toxic organic management plan submitted to the control authority."

Name of Authorized Representative: \_\_\_\_\_ N/A

Title of Authorized Representative: \_\_\_\_\_ N/A

Signature of Authorized Representative: \_\_\_\_\_ N/A

Date Signed by Authorized Representative: \_\_\_\_\_ N/A

**Table 1**  
**REALM - Coldwater Road Landfill**  
**Periodic Report on Continued Compliance**  
**Laboratory Analytical Summary**  
**6-08-04-GML1**

Analytical Parameter	BOD	COD	TKN	TP	TSS	FOG
Unit of Measure	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Limitation	811	n/a	107	15	571	216
Test Result	20	208	11.3	0.12	53	1
Test Method	EPA 10360	EPA 410.4	EPA 4500	EPA 4500	EPA 2540	1664A
Test Date	8/20/2009	8/20/2009	8/26/2009	8/24/2009	8/25/2009	8/24/2009
Sample Date	8/19/2009	8/19/2009	8/19/2009	8/19/2009	8/19/2009	8/19/2009
Sample Type	Grab	Grab	Grab	Grab	Grab	Grab

Analytical Parameter	pH at 25°C	As, T	Cr, T	Cu, T	Hg, T	Ni, T
Unit of Measure	S.U.	mg/L	mg/L	mg/L	mg/L	mg/L
Limitation	6.0-10.5	2.3	24	1.0	No discharge	0.86
Test Result	8.64	0.023	0.097	1.49	< 0.0002	0.315
Test Method	EPA 4500	200.8	200.8	200.8	245.1	200.8
Test Date	8/19/2009	8/25/2009	8/25/2009	8/25/2009	8/25/2009	8/25/2009
Sample Date	8/19/2009	8/19/2009	8/19/2009	8/19/2009	8/19/2009	8/19/2009
Sample Type	Grab	Grab	Grab	Grab	Grab	Grab

Analytical Parameter	Zn, T	Cyanide, A	Phenol	BTEX	TTO	
Unit of Measure	mg/L	mg/L	mg/L	mg/L	mg/L	
Limitation	6.4	0.065	20	0.020	No limitation	
Test Result	0.034	0.070	< 0.01	<0.006	Not Detected	
Test Method(s)	200.8	EPA 4500-CN-G	EPA 420.1	624	624, 625, 608	
Test Date	8/25/2009	8/28/2009	8/26/2009	8/24/2009	8/20/09, 8/24/09, 8/25/09	
Sample Date	8/19/2009	8/19/2009	8/19/2009	8/19/2009	8/19/2009	
Sample Type	Grab	Grab	Grab	Grab	Grab	

     Exceeds Sewer Use Permit Limit

**Table 2**  
**REALM - Coldwater Road Landfill**  
**Daily Discharge Summary Table**  
**Third Quarter - 2009**  
**6-08-04-04-GML1**

Date	Beginning Flow Meter Reading	End Flow Meter Reading	Gallons Discharged	Begin Time of Discharge	End Time of Discharge	Average Flow (gal/min)	Temperature at Discharge		pH
							(C)	(F)	
9/4/2009	433,805	433,805	0	13:45	15:00	0.0	N/A	N/A	N/A

**Total Discharge Volume: 0**  
**Average Volume per Discharge: 0**

NOTES : 3,263 gallons were removed from the accumulation tank, transported and disposed off-site on 9/4/09 by Dynecol because of exceedances of the Sewer Use Permit limits for copper and amenable cyanide.



## MERIT LABORATORIES, INC.

2680 EAST LANSING DRIVE  
PHONE: 517-332-0167  
FULL SERVICE ANALYTICAL TESTING

EAST LANSING • MICHIGAN • 48823  
FAX: 517-332-6333  
FIELD SERVICES • CONSULTING • TRAINING

### CASE NARRATIVE

**CLIENT: O'BRIEN & GERE INC. OF NORTH AMERICA**

**PROJECT: COLDWATER ROAD LANDFILL**

**SSOW# R006008**

**Merit ID: S41676.01**

- Field Sampling:** Stephen Dehring performed the fieldwork.
- Analytical Bottles:** All bottles were sent with the appropriate preservation in it. Please see the bottle list attached.
- Sample Receiving:** All samples were received by the laboratory on ice (08/19/2009). Dates and signatures can be found on the Chain of Custody Records. The sample receipts specify the actual tags and bottles received and logged into the laboratory "vlims" system.

### ANALYSES

- PCBs:** The organic method utilized for this SDG was 608 (GC/ECD). The QC requirements were followed for this specific project and method-specified criteria were met. *Outlier: None*
- Semivolatile Organics:** The organic method utilized for this SDG was 625M (GC/MS). The QC requirements were followed for this specific project and method-specified criteria were met.
- Outliers:* The blank associated with the prep-batch SF090821W01 contained 0.9 ug/l of di-n-butyl phthalate, no samples contained a reportable amount of di-n-butyl phthalate.
- Volatile Organics:** The organic method utilized for this SDG was 624 (GC/MS). The QC requirements were followed for this specific project and method-specified criteria were met. *Outliers: none*
- Mercury:** All mercury QC requirements were met according to the specifications in Methods 245.1M (liquid and soil). *Outliers: None*
- Metals:** All metal analyses were performed according to Method 200.8. The metal digestion was performed according to Method 3015A. The QC requirements were followed for this specific project and method-specified criteria were met. *Outliers: None*



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**Oil & Grease n-Hexane Extract.:** The method used for this test was 1664A. The QC requirements were followed for this specific project and method-specified criteria were met. *Outliers:* none

**Total Suspended Solids:** All total suspended solids QC requirements were met according to the specifications in Method 2540 D. *Outliers:* None

**BOD:** The Biological Oxygen Demand analyses were performed according to Method 5210B. The QC requirements were followed for this specific project and method-specified criteria were met. *Outliers:* None

**Amenable Cyanide:** All amenable cyanide QC requirements were met according to the specifications in Methods 335.4 Lachat and 4500-CN-G. *Outliers:* None

**TKN:** The Total Kjeldahl Nitrogen analyses were performed according to Method 4500-N(org)B for digestion and method 4855-NH3 D for analysis. The QC requirements were followed for this specific project and method-specified criteria were met. *Outliers:* None

**COD:** The Chemical Oxygen Content analyses were performed according to Method 410.4. The QC requirements were followed for this specific project and method-specified criteria were met. *Outliers:* None

**Phenols:** All Phenols QC requirements were met according to the specifications in Method 420.1.

*Note:* The duplicate sample associated with the batch PHL090826-W1 had a high RPD due to low sample concentration.

**Total Phosphorus:** All Phosphorus QC requirements were met according to the specifications in Method 4500-PE. *Outliers:* None

### Data Reporting:

The analytical reports are reflective of what is on a given Chain-of-Custody record (COC). Merit's IDs were assigned to the samples as they were delivered and accepted by our log-in staff.

This data has been reviewed and validated by Maya V. Murshak, Merit Laboratories, Inc.'s QA/QC Director.

Maya V. Murshak  
Chemical Engineer/QA Director

08/28/09

Date



# Analytical Laboratory Report

Report ID: S41676.01(01)  
Generated on 08/28/2009

Report to

Attention: Clifford Yantz/Marianne Secrest  
O'Brien & Gere Engineers, Inc.  
33469 West 14 Mile Road Suite 150  
Farmington Hills, MI 48331

Phone: 248-477-5701 FAX: 248-661-4057  
Email: YantzCS@obg.com/SecresME@obg.com

Report produced by

Merit Laboratories  
2680 East Lansing Drive  
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S41676.01  
Project: Coldwater Road Landfill SOW# R006008  
Collected Date: 08/19/2009  
Submitted Date/Time: 08/19/2009 16:10  
Sampled by: Stephen Dehring  
P.O. #: 4018541

Report Notes

Results relate only to items tested as received by the laboratory.  
Methods may be modified for improved performance.  
Results reported on a dry weight basis where applicable.  
""Not detected"" indicates that parameter was not found at a level equal to or greater than the RL.  
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Violetta F. Murshak  
Laboratory Director



# Analytical Laboratory Report

## Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S41676.01	03-PRCC-09	Wastewater	08/19/2009 11:00



# Analytical Laboratory Report

Lab Sample ID: S41676.01  
 Sample Tag: 03-PRCC-09  
 Collected Date/Time: 08/19/2009 11:00  
 Matrix: Wastewater  
 COC Reference: 04250

## Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40 ml Glass	HCL	Yes	4.2	IR
1	32 oz Glass	HCL	Yes	4.2	IR
1	125ml Plastic	NaOH	Yes	4.2	IR
1	125ml Plastic	HNO3	Yes	4.2	IR
2	250ml Plastic	H2SO4	Yes	4.2	IR
3	1 L Amber	None	Yes	4.2	IR
1	1L Plastic	None	Yes	4.2	IR
1	125ml Amber	H2SO4	Yes	4.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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### Extraction / Prep.

BNA Extraction	Completed			3510C	08/21/09 16:58	EMR		
Extraction, PCB	Completed			3510C	08/19/09 18:06	ADB		
Mercury Digestion	Completed			7471A	08/25/09 11:30	JRT		
Metal Digestion	Completed			3015A	08/24/09 12:00	SLS		
Oil & Grease n-Hexane Extract.	1	mg/L	1	1664A	08/24/09 15:15	DJS		
Pesticides Extraction	Completed			3510C	08/19/09 18:06	ADB		

### Inorganics

Amenable Cyanide	0.070	mg/L	0.005	335.4/4500-CN-G	08/28/09 11:08	JDP	57-12-5AM	
COD	208	mg/L	1	410.4	08/20/09 13:00	MJC		
Field pH	8.64	STD Units	0.01	4500-H+ B	08/19/09 11:00	OBG		
Phenols	Not detected	mg/L	0.01	420.1	08/26/09 14:30	JKB		
TBOD5	20	mg/L	1	10360	08/20/09 10:54-08/25/09	DJS		
Total Kjeldahl Nitrogen	11.3	mg/L	0.1	4500-N(org)/NH3	08/26/09 12:00	MJC		
Total Phosphorus	0.12	mg/L	0.01	4500-PE	08/24/09 12:00	MJC	7723-14-0	
Total Suspended Solids	53	mg/L	1	2540 D	08/25/09 18:00	DJS		

### Metals

Arsenic	0.023	mg/L	0.001	200.8	08/25/09 13:52	SLS	7440-38-2	
Chromium	0.097	mg/L	0.005	200.8	08/25/09 13:52	SLS	7440-47-3	
Copper	1.49	mg/L	0.001	200.8	08/25/09 13:52	SLS	7440-50-8	
Mercury	Not detected	mg/L	0.0002	245.1	08/25/09 14:51	JRT	7439-97-6	
Nickel	0.315	mg/L	0.005	200.8	08/25/09 13:52	SLS	7440-02-0	
Zinc	0.034	mg/L	0.005	200.8	08/25/09 13:52	SLS	7440-66-6	

### Organics - PCBs/Pesticides

#### Pesticides and PCBs, TTO

Aldrin	Not detected	ug/L	0.02	608	08/20/09 15:04	JANB	309-00-2	
a-BHC	Not detected	ug/L	0.02	608	08/20/09 15:04	JANB	319-84-6	
b-BHC	Not detected	ug/L	0.02	608	08/20/09 15:04	JANB	319-85-7	
d-BHC	Not detected	ug/L	0.02	608	08/20/09 15:04	JANB	319-86-8	
g-BHC	Not detected	ug/L	0.02	608	08/20/09 15:04	JANB	58-89-9	
Chlordane	Not detected	ug/L	0.02	608	08/20/09 15:04	JANB	57-74-9	
4,4'-DDD	Not detected	ug/L	0.02	608	08/20/09 15:04	JANB	72-54-8	
4,4'-DDE	Not detected	ug/L	0.02	608	08/20/09 15:04	JANB	72-55-9	
4,4'-DDT	Not detected	ug/L	0.02	608	08/20/09 15:04	JANB	50-29-3	



# Analytical Laboratory Report

Lab Sample ID: S41676.01 (continued)

Sample Tag: 03-PRCC-09

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
<b>Organics - PCBs/Pesticides (continued)</b>								
<b>Pesticides and PCBs, TTO (continued)</b>								
Dieldrin	Not detected	ug/L	0.02	608	08/20/09 15:04	JANB	60-57-1	
Endosulfan I	Not detected	ug/L	0.02	608	08/20/09 15:04	JANB	959-98-8	
Endosulfan II	Not detected	ug/L	0.02	608	08/20/09 15:04	JANB	33213-65-9	
Endosulfan sulfate	Not detected	ug/L	0.02	608	08/20/09 15:04	JANB	1031-07-8	
Endrin	Not detected	ug/L	0.02	608	08/20/09 15:04	JANB	72-20-8	
Endrin aldehyde	Not detected	ug/L	0.02	608	08/20/09 15:04	JANB	7421-93-4	
Heptachlor	Not detected	ug/L	0.02	608	08/20/09 15:04	JANB	76-44-8	
Heptachlor epoxide	Not detected	ug/L	0.02	608	08/20/09 15:04	JANB	1024-57-3	
Toxaphene	Not detected	ug/L	1	608	08/20/09 15:04	JANB	8001-35-2	
PCB-1016	Not detected	ug/L	0.1	608	08/20/09 15:04	JANB	12674-11-2	
PCB-1221	Not detected	ug/L	0.1	608	08/20/09 15:04	JANB	11104-28-2	
PCB-1232	Not detected	ug/L	0.1	608	08/20/09 15:04	JANB	11141-16-5	
PCB-1248	Not detected	ug/L	0.1	608	08/20/09 15:04	JANB	12672-29-6	
PCB-1254	Not detected	ug/L	0.1	608	08/20/09 15:04	JANB	11097-69-1	
PCB-1260	Not detected	ug/L	0.1	608	08/20/09 15:04	JANB	11096-82-5	
PCB-1242	Not detected	ug/L	0.1	608	08/20/09 15:04	JANB	53469-21-9	
Total PCBs	Not detected	ug/L	0.1	608	08/20/09 15:04	JANB	1336-36-3	
<b>Organics - Semi-Volatiles</b>								
<b>SVOCs, TTO List</b>								
Acenaphthene	Not detected	ug/L	10	625M	08/25/09 16:34	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	10	625M	08/25/09 16:34	PL	208-96-8	
Anthracene	Not detected	ug/L	10	625M	08/25/09 16:34	PL	120-12-7	
Benzidine	Not detected	ug/L	10	625M	08/25/09 16:34	PL	92-87-5	
Benzo(a)anthracene	Not detected	ug/L	10	625M	08/25/09 16:34	PL	56-55-3	
Benzo(b)fluoranthene	Not detected	ug/L	10	625M	08/25/09 16:34	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/L	10	625M	08/25/09 16:34	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/L	10	625M	08/25/09 16:34	PL	191-24-2	
Benzo(a)pyrene	Not detected	ug/L	10	625M	08/25/09 16:34	PL	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	10	625M	08/25/09 16:34	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	10	625M	08/25/09 16:34	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	10	625M	08/25/09 16:34	PL	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	10	625M	08/25/09 16:34	PL	117-81-7	
4-Bromophenyl phenyl ether	Not detected	ug/L	10	625M	08/25/09 16:34	PL	101-55-3	
Butyl benzyl phthalate	Not detected	ug/L	10	625M	08/25/09 16:34	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	10	625M	08/25/09 16:34	PL	91-58-7	
4-Chloro-3-methylphenol	Not detected	ug/L	10	625M	08/25/09 16:34	PL	59-50-7	
2-Chlorophenol	Not detected	ug/L	10	625M	08/25/09 16:34	PL	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	10	625M	08/25/09 16:34	PL	7005-72-3	
Chrysene	Not detected	ug/L	10	625M	08/25/09 16:34	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/L	10	625M	08/25/09 16:34	PL	53-70-3	
di-n-Butyl phthalate	Not detected	ug/L	10	625M	08/25/09 16:34	PL	84-74-2	
1,2-Dichlorobenzene	Not detected	ug/L	10	625M	08/25/09 16:34	PL	95-50-1	
1,3-Dichlorobenzene	Not detected	ug/L	10	625M	08/25/09 16:34	PL	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	10	625M	08/25/09 16:34	PL	106-46-7	
3,3'-Dichlorobenzidine	Not detected	ug/L	10	625M	08/25/09 16:34	PL	91-94-1	
2,4-Dichlorophenol	Not detected	ug/L	10	625M	08/25/09 16:34	PL	120-83-2	
Diethyl phthalate	Not detected	ug/L	10	625M	08/25/09 16:34	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	10	625M	08/25/09 16:34	PL	131-11-3	



# Analytical Laboratory Report

Lab Sample ID: S41676.01 (continued)

Sample Tag: 03-PRCC-09

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
<b>Organics - Semi-Volatiles (continued)</b>								
<b>SVOCs, TTO List (continued)</b>								
2,4-Dimethylphenol	Not detected	ug/L	10	625M	08/25/09 16:34	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	10	625M	08/25/09 16:34	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	10	625M	08/25/09 16:34	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	10	625M	08/25/09 16:34	PL	606-20-2	
di-n-Octyl phthalate	Not detected	ug/L	10	625M	08/25/09 16:34	PL	117-84-0	
1,2-Diphenylhydrazine	Not detected	ug/L	10	625M	08/25/09 16:34	PL	122-66-7	
Fluoranthene	Not detected	ug/L	10	625M	08/25/09 16:34	PL	206-44-0	
Fluorene	Not detected	ug/L	10	625M	08/25/09 16:34	PL	86-73-7	
Hexachlorobenzene	Not detected	ug/L	10	625M	08/25/09 16:34	PL	118-74-1	
Hexachlorobutadiene	Not detected	ug/L	10	625M	08/25/09 16:34	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	10	625M	08/25/09 16:34	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	10	625M	08/25/09 16:34	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	10	625M	08/25/09 16:34	PL	193-39-5	
Isophorone	Not detected	ug/L	10	625M	08/25/09 16:34	PL	78-59-1	
Naphthalene	Not detected	ug/L	10	625M	08/25/09 16:34	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	10	625M	08/25/09 16:34	PL	98-95-3	
2-Nitrophenol	Not detected	ug/L	10	625M	08/25/09 16:34	PL	88-75-5	
4-Nitrophenol	Not detected	ug/L	10	625M	08/25/09 16:34	PL	100-02-7	
N-Nitrosodimethylamine	Not detected	ug/L	10	625M	08/25/09 16:34	PL	62-75-9	
N-Nitrosodiphenylamine	Not detected	ug/L	10	625M	08/25/09 16:34	PL	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	ug/L	10	625M	08/25/09 16:34	PL	621-64-7	
Pentachlorophenol	Not detected	ug/L	10	625M	08/25/09 16:34	PL	87-86-5	
2-Methyl-4,6-dinitrophenol	Not detected	ug/L	10	625M	08/25/09 16:34	PL	534-52-1	
Phenol	Not detected	ug/L	10	625M	08/25/09 16:34	PL	108-95-2	
Pyrene	Not detected	ug/L	10	625M	08/25/09 16:34	PL	129-00-0	
1,2,4-Trichlorobenzene	Not detected	ug/L	10	625M	08/25/09 16:34	PL	120-82-1	
2,4,6-Trichlorophenol	Not detected	ug/L	10	625M	08/25/09 16:34	PL	88-06-2	
Phenanthrene	Not detected	ug/L	10	625M	08/25/09 16:34	PL	85-01-8	
TCDD	Not detected	ug/L	10	625M	08/25/09 16:34	PL	1746-01-6	
<b>Organics - Volatiles</b>								
<b>BTEX with total</b>								
Benzene	Not detected	ug/L	1	624	08/24/09 16:20	JGH	71-43-2	
Toluene	Not detected	ug/L	1	624	08/24/09 16:20	JGH	108-88-3	
Ethylbenzene	Not detected	ug/L	1	624	08/24/09 16:20	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	1	624	08/24/09 16:20	JGH		
o-Xylene	Not detected	ug/L	1	624	08/24/09 16:20	JGH	95-47-6	
Total BTEX	Not detected	ug/L	6	624	08/24/09 16:20	JGH		
<b>VOCs, TTO List</b>								
Acrolein	Not detected	ug/L	10	624	08/24/09 16:20	JGH	107-02-8	
Acrylonitrile	Not detected	ug/L	1	624	08/24/09 16:20	JGH	107-13-1	
Benzene	Not detected	ug/L	1	624	08/24/09 16:20	JGH	71-43-2	
Bromodichloromethane	Not detected	ug/L	1	624	08/24/09 16:20	JGH	75-27-4	
Bromoform	Not detected	ug/L	1	624	08/24/09 16:20	JGH	75-25-2	
Bromomethane	Not detected	ug/L	1	624	08/24/09 16:20	JGH	74-83-9	
Carbon tetrachloride	Not detected	ug/L	1	624	08/24/09 16:20	JGH	56-23-5	
Chlorobenzene	Not detected	ug/L	1	624	08/24/09 16:20	JGH	108-90-7	
Chloroethane	Not detected	ug/L	1	624	08/24/09 16:20	JGH	75-00-3	



# Analytical Laboratory Report

Lab Sample ID: S41676.01 (continued)

Sample Tag: 03-PRCC-09

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
<b>Organics - Volatiles (continued)</b>								
<b>VOCs, TTO List (continued)</b>								
2-Chloroethylvinyl ether	Not detected	ug/L	1	624	08/24/09 16:20	JGH	110-75-8	
Chloroform	Not detected	ug/L	1	624	08/24/09 16:20	JGH	67-66-3	
Chloromethane	Not detected	ug/L	1	624	08/24/09 16:20	JGH	74-87-3	
Dibromochloromethane	Not detected	ug/L	1	624	08/24/09 16:20	JGH	124-48-1	
1,1-Dichloroethane	Not detected	ug/L	1	624	08/24/09 16:20	JGH	75-34-3	
1,2-Dichloroethane	Not detected	ug/L	1	624	08/24/09 16:20	JGH	107-06-2	
1,1-Dichloroethene	Not detected	ug/L	1	624	08/24/09 16:20	JGH	75-35-4	
trans-1,2-Dichloroethene	Not detected	ug/L	1	624	08/24/09 16:20	JGH	156-60-5	
1,2-Dichloropropane	Not detected	ug/L	1	624	08/24/09 16:20	JGH	78-87-5	
cis-1,3-Dichloropropene	Not detected	ug/L	1	624	08/24/09 16:20	JGH	10061-01-5	
trans-1,3-Dichloropropene	Not detected	ug/L	1	624	08/24/09 16:20	JGH	10061-02-6	
Ethylbenzene	Not detected	ug/L	1	624	08/24/09 16:20	JGH	100-41-4	
Methylene chloride	Not detected	ug/L	5	624	08/24/09 16:20	JGH	75-09-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	624	08/24/09 16:20	JGH	79-34-5	
Tetrachloroethene	Not detected	ug/L	1	624	08/24/09 16:20	JGH	127-18-4	
Toluene	Not detected	ug/L	1	624	08/24/09 16:20	JGH	108-88-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	624	08/24/09 16:20	JGH	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	624	08/24/09 16:20	JGH	79-00-5	
Trichloroethene	Not detected	ug/L	1	624	08/24/09 16:20	JGH	79-01-6	
Vinyl chloride	Not detected	ug/L	1	624	08/24/09 16:20	JGH	75-01-4	



## Quality Control Cover Page

Report ID: S41676.01(01)

Report Date: 08/28/2009

Project: Coldwater Road Landfill SSOW# R006008

Lab Sample ID(s): S41676.01

Report to:

Attention: Clifford Yantz/Marianne Secret

O'Brien & Gere Engineers, Inc.

33469 West 14 Mile Road Suite 150

Farmington Hills, MI 48331

Sample ID	Sample Tag	Collected	Matrix	Analysis Departments
S41676.01	03-PRCC-09	08/19/2009 11:00	Wastewater	Extraction / Prep., Inorganics, Metals,

This QC package, to the best of my knowledge, is in compliance with all technical and administrative requirements. If you have any questions, please do not hesitate to contact me at 517-332-0167 (ext. 14) or email me at [mayamurshak@meritlabs.com](mailto:mayamurshak@meritlabs.com).

Sincerely,

Maya Murshak  
Technical Director



# Quality Control Report

Report ID: QC-S41676.01(01)

Generated on 08/28/2009

Report to

Attention: Clifford Yantz/Marianne Secrest  
O'Brien & Gere Engineers, Inc.  
33469 West 14 Mile Road Suite 150  
Farmington Hills, MI 48331

Phone: 248-477-5701 FAX: 248-661-4057

Report Produced by

Merit Laboratories  
2680 East Lansing Drive  
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S41676.01  
Project: Coldwater Road Landfill  
Submitted Date/Time: 08/19/2009 16:10  
Sampled by: Stephen Dehring  
P.O. #: 4018541

Report Sections

Cover Page (Page 1)  
Analysis Summary (Page 2)  
Prep Batch Summary (Pages 3-4)  
Surrogates per Lab Sample (Page 5)  
Surrogates per QC Sample (Pages 6-8)  
Batch QC Results (Pages 9-22)

Report Flag Descriptions

\*: QC result is outside of indicated control limits  
W: Surrogate result not applicable due to sample dilution

Report Notes

Results relate only to items tested as received by the laboratory.  
Methods may be modified for improved performance.  
Results reported on a dry weight basis where applicable.  
"Not detected" indicates that parameter was not found at a level equal to or greater than the RDL.  
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Violetta F. Murshak  
Laboratory Director

## QC Report - Analysis Summary

**Lab Sample ID: S41676.01**

Sample Tag: 03-PRCC-09

Collected Date/Time: 08/19/2009 11:00

Matrix: Wastewater

COC Reference: 04250

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
<b>Extraction / Prep.</b>						
Oil & Grease n-Hexane Extract.	1664A	08/24/09 15:15	OGHEX090824W01	OGHEX090824W01	No	BLK/LCS
<b>Inorganics</b>						
Amenable Cyanide	335.4/4500-CN-G	08/28/09 11:08	CN090828-W1	CN090828-W1	No	BLK/LCS/MS/MSD/DUP
COD	410.4	08/20/09 13:00	COD090820	COD090820	No	BLK/LCS/MS/DUP
Phenols	420.1	08/26/09 14:30	PHL090826-W1	PHL090826-W1	No	BLK/LCS/MS/DUP
Total Kjeldahl Nitrogen	4500-N(org)/NH3	08/26/09 12:00	TKN090826	TKN090826	No	BLK/LCS/MS/DUP
Total Phosphorus	4500-PE	08/24/09 12:00	PHS090824	PHS090824	No	BLK/LCS/MS/DUP
Total Suspended Solids	2540 D	08/25/09 18:00	TSS090825	TSS090825	No	BLK/LCS/DUP
<b>Metals</b>						
Arsenic	200.8	08/25/09 13:52	MT3-09-0825A	MTD-082409-2	No	LCS/BLK/MS/MSD
Chromium	200.8	08/25/09 13:52	MT3-09-0825A	MTD-082409-2	No	LCS/BLK/MS/MSD
Copper	200.8	08/25/09 13:52	MT3-09-0825A	MTD-082409-2	No	LCS/BLK/MS/MSD
Mercury	245.1	08/25/09 14:51	HG2-09-0825A	HGD-082509-1	No	LCS/BLK/MS/MSD
Nickel	200.8	08/25/09 13:52	MT3-09-0825A	MTD-082409-2	No	LCS/BLK/MS/MSD
Zinc	200.8	08/25/09 13:52	MT3-09-0825A	MTD-082409-2	No	LCS/BLK/MS/MSD
<b>Organics - PCBs/Pesticides</b>						
Pesticides and PCBs, TTO	608	08/20/09 15:04	F090820	PA090819W01	Yes	LCS/BLK/LCSD
<b>Organics - Semi-Volatiles</b>						
SVOCs, TTO List	625M	08/25/09 16:34	Z090825	SF090821W01	Yes	LCS/BLK/LCSD
<b>Organics - Volatiles</b>						
BTEX with total	624	08/24/09 16:20	090824A3	VF090824W2	Yes	LCS/BLK/LCSD
VOCs, TTO List	624	08/24/09 16:20	090824A3	VF090824W2	Yes	LCS/BLK/LCSD

## QC Report - Prep Batch Summary

### Extraction / Prep., Prep Batch ID: OGHEX090824W01

Surrogates: No, QC Types: BLK/LCS

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S41676.01	Oil & Grease n-Hexane Extract.	1664A	08/24/09 15:15	OGHEX090824W01

### Inorganics, Prep Batch ID: CN090828-W1

Surrogates: No, QC Types: BLK/LCS/MS/MSD/DUP

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S41676.01	Amenable Cyanide	335.4/4500-CN-G	08/28/09 11:08	CN090828-W1

### Inorganics, Prep Batch ID: COD090820

Surrogates: No, QC Types: BLK/LCS/MS/DUP

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S41676.01	COD	410.4	08/20/09 13:00	COD090820

### Inorganics, Prep Batch ID: PHL090826-W1

Surrogates: No, QC Types: BLK/LCS/MS/DUP

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S41676.01	Phenols	420.1	08/26/09 14:30	PHL090826-W1

### Inorganics, Prep Batch ID: PHS090824

Surrogates: No, QC Types: BLK/LCS/MS/DUP

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S41676.01	Total Phosphorus	4500-PE	08/24/09 12:00	PHS090824

### Inorganics, Prep Batch ID: TKN090826

Surrogates: No, QC Types: BLK/LCS/MS/DUP

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S41676.01	Total Kjeldahl Nitrogen	4500-N(org)/NH3	08/26/09 12:00	TKN090826

### Inorganics, Prep Batch ID: TSS090825

Surrogates: No, QC Types: BLK/LCS/DUP

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S41676.01	Total Suspended Solids	2540 D	08/25/09 18:00	TSS090825

### Metals, Prep Batch ID: HGD-082509-1

Surrogates: No, QC Types: LCS/BLK/MS/MSD

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S41676.01	Mercury	245.1	08/25/09 14:51	HG2-09-0825A

### Metals, Prep Batch ID: MTD-082409-2

Surrogates: No, QC Types: LCS/BLK/MS/MSD

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S41676.01	Arsenic	200.8	08/25/09 13:52	MT3-09-0825A
S41676.01	Chromium	200.8	08/25/09 13:52	MT3-09-0825A
S41676.01	Copper	200.8	08/25/09 13:52	MT3-09-0825A
S41676.01	Nickel	200.8	08/25/09 13:52	MT3-09-0825A
S41676.01	Zinc	200.8	08/25/09 13:52	MT3-09-0825A

### Organics - PCBs/Pesticides, Prep Batch ID: PA090819W01

Surrogates: Yes, QC Types: LCS/BLK/LCSD

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S41676.01	Pesticides and PCBs, TTO	608	08/20/09 15:04	F090820

## QC Report - Prep Batch Summary

### Organics - Semi-Volatiles, Prep Batch ID: SF090821W01

Surrogates: Yes, QC Types: LCS/BLK/LCSD

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S41676.01	SVOCs, TTO List	625M	08/25/09 16:34	Z090825

### Organics - Volatiles, Prep Batch ID: VF090824W2

Surrogates: Yes, QC Types: LCS/BLK/LCSD

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S41676.01	BTEX with total	624	08/24/09 16:20	090824A3
S41676.01	VOCs, TTO List	624	08/24/09 16:20	090824A3

## QC Report - Surrogates per Lab Sample

### Lab Sample ID: S41676.01

Sample Tag: 03-PRCC-09

Collected Date/Time: 08/19/2009 11:00

Matrix: Wastewater

COC Reference: 04250

### Organics - PCBs/Pesticides, Analysis: Pesticides and PCBs, TTO

Run in Batch: F090820, Run Date: 08/20/2009 15:04, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
TCX		<b>71.50</b>	34.1	137.1
DCB2		<b>92.60</b>	30.0	138.6

### Organics - Semi-Volatiles, Analysis: SVOCs, TTO List

Run in Batch: Z090825, Run Date: 08/25/2009 16:34, Matrix: WW, Dilution: 10

Surrogate	Flags	%Rec	LCL	UCL
2-Fluorophenol		<b>48.00</b>	10.0	110.0
2-Fluorobiphenyl		<b>71.30</b>	10.0	116.0
Nitrobenzene-D5		<b>66.30</b>	10.0	114.0
Phenol-D5		<b>40.00</b>	10.0	110.0
2,4,6-Tribromophenol		<b>63.90</b>	10.0	123.0
Terphenyl-D14		<b>76.20</b>	10.0	141.0

### Organics - Volatiles, Analysis: BTEX with total

### Organics - Volatiles, Analysis: VOCs, TTO List

Run in Batch: 090824A3, Run Date: 08/24/2009 16:20, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
4-Bromofluorobenzene		<b>99.10</b>	78.4	119.6
1,2-Dichloroethane-D4		<b>90.50</b>	66.4	124.8
Toluene-D8		<b>96.90</b>	82.5	118.4

## QC Report - Surrogates per QC Sample

### Organics - PCBs/Pesticides, Prep Batch ID: PA090819W01

Surrogates: Yes, QC Types: LCS/BLK/LCSD

#### Laboratory Control Sample (LCS)

Lab Sample ID: f09081910.slcs-w.01

Run in Batch: F090819, Run Date: 08/19/2009 12:16, Prep Date: 08/19/2009, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
TCX		<b>87.30</b>	34.1	137.1
DCB2		<b>90.80</b>	30.0	138.6

#### Blank (BLK)

Lab Sample ID: f09081909.sblk-w.01

Run in Batch: F090819, Run Date: 08/19/2009 12:05, Prep Date: 08/19/2009, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
TCX		<b>82.10</b>	34.1	137.1
DCB2		<b>87.90</b>	30.0	138.6

#### Laboratory Control Sample Duplicate (LCSD)

Lab Sample ID: f09081911.slcs-w.01d, Parent Sample ID: f09081910.slcs-w.01

Run in Batch: F090819, Run Date: 08/19/2009 12:27, Prep Date: 08/19/2009, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
TCX		<b>78.40</b>	34.1	137.1
DCB2		<b>86.60</b>	30.0	138.6

## QC Report - Surrogates per QC Sample

### Organics - Semi-Volatiles, Prep Batch ID: SF090821W01

Surrogates: Yes, QC Types: LCS/BLK/LCSD

#### Laboratory Control Sample (LCS)

Lab Sample ID: z090825.lcsw25a

Run in Batch: Z090825, Run Date: 08/25/2009 13:09, Prep Date: 08/21/2009, Matrix: WW, Dilution: 2

Surrogate	Flags	%Rec	LCL	UCL
2-Fluorophenol		<b>51.10</b>	10.0	110.0
2-Fluorobiphenyl		<b>74.30</b>	10.0	116.0
Nitrobenzene-D5		<b>71.80</b>	10.0	114.0
Phenol-D5		<b>43.20</b>	10.0	110.0
2,4,6-Tribromophenol		<b>72.90</b>	10.0	123.0
Terphenyl-D14		<b>88.10</b>	10.0	141.0

#### Blank (BLK)

Lab Sample ID: z090825.blkw25a

Run in Batch: Z090825, Run Date: 08/25/2009 12:01, Prep Date: 08/21/2009, Matrix: WW, Dilution: 2

Surrogate	Flags	%Rec	LCL	UCL
2-Fluorophenol		<b>46.90</b>	10.0	110.0
2-Fluorobiphenyl		<b>65.90</b>	10.0	116.0
Nitrobenzene-D5		<b>64.60</b>	10.0	114.0
Phenol-D5		<b>39.70</b>	10.0	110.0
2,4,6-Tribromophenol		<b>59.90</b>	10.0	123.0
Terphenyl-D14		<b>78.10</b>	10.0	141.0

#### Laboratory Control Sample Duplicate (LCSD)

Lab Sample ID: z090825.lcsdw25a, Parent Sample ID: z090825.lcsw25a

Run in Batch: Z090825, Run Date: 08/25/2009 13:43, Prep Date: 08/21/2009, Matrix: WW, Dilution: 2

Surrogate	Flags	%Rec	LCL	UCL
2-Fluorophenol		<b>53.20</b>	10.0	110.0
2-Fluorobiphenyl		<b>75.70</b>	10.0	116.0
Nitrobenzene-D5		<b>75.00</b>	10.0	114.0
Phenol-D5		<b>44.50</b>	10.0	110.0
2,4,6-Tribromophenol		<b>73.00</b>	10.0	123.0
Terphenyl-D14		<b>86.50</b>	10.0	141.0

## QC Report - Surrogates per QC Sample

### Organics - Volatiles, Prep Batch ID: VF090824W2

Surrogates: Yes, QC Types: LCS/BLK/LCSD

#### Laboratory Control Sample (LCS)

Lab Sample ID: 090824a3.lcsw24a

Run in Batch: 090824A3, Run Date: 08/24/2009 13:36, Prep Date: 08/24/2009, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
4-Bromofluorobenzene		99.80	78.4	119.6
1,2-Dichloroethane-D4		95.60	66.4	124.8
Toluene-D8		96.90	82.5	118.4

#### Blank (BLK)

Lab Sample ID: 090824a3.blkw24a

Run in Batch: 090824A3, Run Date: 08/24/2009 15:07, Prep Date: 08/24/2009, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
4-Bromofluorobenzene		99.30	78.4	119.6
1,2-Dichloroethane-D4		95.30	66.4	124.8
Toluene-D8		96.80	82.5	118.4

#### Laboratory Control Sample Duplicate (LCSD)

Lab Sample ID: 090824a3.lcsw24b, Parent Sample ID: 090824a3.lcsw24a

Run in Batch: 090824A3, Run Date: 08/24/2009 13:55, Prep Date: 08/24/2009, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
4-Bromofluorobenzene		99.40	78.4	119.6
1,2-Dichloroethane-D4		94.90	66.4	124.8
Toluene-D8		97.30	82.5	118.4

## QC Report - Batch QC Results

Extraction / Prep., Prep Batch ID: OGHEX090824W01

Surrogates: No, QC Types: BLK/LCS

### Blank (BLK)

Lab Sample ID: OGHEX090824W01.LRB1

Run in Batch: OGHEX090824W01, Run Date: 08/24/2009 15:16, Prep Date: 08/24/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Oil & Grease n-Hexane Extract.		ND	1	mg/L

### Laboratory Control Sample (LCS)

Lab Sample ID: OGHEX090824W01.LCS1

Run in Batch: OGHEX090824W01, Run Date: 08/24/2009 15:16, Prep Date: 08/24/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Oil & Grease n-Hexane Extract.		84	78	114

### Laboratory Control Sample (LCS)

Lab Sample ID: OGHEX090824W01.LCS2

Run in Batch: OGHEX090824W01, Run Date: 08/24/2009 15:16, Prep Date: 08/24/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Oil & Grease n-Hexane Extract.		84	78	114

## QC Report - Batch QC Results

### Inorganics, Prep Batch ID: CN090828-W1

Surrogates: No, QC Types: BLK/LCS/MS/MSD/DUP

#### Blank (BLK)

Lab Sample ID: CN090828-W1.LRB1

Run in Batch: CN090828-W1, Run Date: 08/28/2009 11:00, Prep Date: 08/28/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Amenable Cyanide		ND	0.005	mg/L

#### Blank (BLK)

Lab Sample ID: CN090828-W1.LRB2

Run in Batch: CN090828-W1, Run Date: 08/28/2009 13:00, Prep Date: 08/28/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Amenable Cyanide		ND	0.005	mg/L

#### Laboratory Control Sample (LCS)

Lab Sample ID: CN090828-W1.LCS1

Run in Batch: CN090828-W1, Run Date: 08/28/2009 11:06, Prep Date: 08/28/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Amenable Cyanide		95	90	110

#### Matrix Spike (MS)

Lab Sample ID: CN090828-W1.MS1, Parent Sample ID: S41676.01

Run in Batch: CN090828-W1, Run Date: 08/28/2009 11:12, Prep Date: 08/28/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Amenable Cyanide		91	80	120

#### Matrix Spike Duplicate (MSD)

Lab Sample ID: CN090828-W1.MSD1, Parent Sample ID: CN090828-W1.MS1

Run in Batch: CN090828-W1, Run Date: 08/28/2009 11:14, Prep Date: 08/28/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
Amenable Cyanide		90	80	120	1	15

#### Duplicate (DUP)

Lab Sample ID: CN090828-W1.DP1, Parent Sample ID: S41676.01

Run in Batch: CN090828-W1, Run Date: 08/28/2009 11:10, Prep Date: 08/28/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	RPD	RPD CL
Amenable Cyanide		1	15

#### Duplicate (DUP)

Lab Sample ID: CN090828-W1.DP2, Parent Sample ID: S41679.01

Run in Batch: CN090828-W1, Run Date: 08/28/2009 13:06, Prep Date: 08/28/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	RPD	RPD CL
Amenable Cyanide		<1	15

## QC Report - Batch QC Results

### Inorganics, Prep Batch ID: COD090820

Surrogates: No, QC Types: BLK/LCS/MS/DUP

#### Blank (BLK)

Lab Sample ID: COD090820.LRB1

Run in Batch: COD090820, Run Date: 08/20/2009 13:00, Prep Date: 08/20/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
COD		ND	1	mg/L

#### Laboratory Control Sample (LCS)

Lab Sample ID: COD090820.LCS1

Run in Batch: COD090820, Run Date: 08/20/2009 13:00, Prep Date: 08/20/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
COD		106	90	110

#### Matrix Spike (MS)

Lab Sample ID: COD090820.MS1, Parent Sample ID: S41608.03

Run in Batch: COD090820, Run Date: 08/20/2009 13:00, Prep Date: 08/20/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
COD		102	80	120

#### Duplicate (DUP)

Lab Sample ID: COD090820.DP1, Parent Sample ID: S41608.01

Run in Batch: COD090820, Run Date: 08/20/2009 13:00, Prep Date: 08/20/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	RPD	RPD CL
COD		1.1	20

## QC Report - Batch QC Results

### Inorganics, Prep Batch ID: PHL090826-W1

Surrogates: No, QC Types: BLK/LCS/MS/DUP

#### Blank (BLK)

Lab Sample ID: PHL090826-W1.LRB1

Run in Batch: PHL090826-W1, Run Date: 08/26/2009 14:00, Prep Date: 08/26/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Phenols		ND	0.01	mg/L

#### Laboratory Control Sample (LCS)

Lab Sample ID: PHL090826-W1.LCS1

Run in Batch: PHL090826-W1, Run Date: 08/26/2009 14:15, Prep Date: 08/26/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Phenols		109	90	110

#### Matrix Spike (MS)

Lab Sample ID: PHL090826-W1.MS1, Parent Sample ID: S41676.01

Run in Batch: PHL090826-W1, Run Date: 08/26/2009 14:35, Prep Date: 08/26/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Phenols		105	90	110

#### Duplicate (DUP)

Lab Sample ID: PHL090826-W1.DP1, Parent Sample ID: S41669.01

Run in Batch: PHL090826-W1, Run Date: 08/26/2009 14:25, Prep Date: 08/26/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	RPD	RPD CL
Phenols	*	50	15

## QC Report - Batch QC Results

### Inorganics, Prep Batch ID: PHS090824

Surrogates: No, QC Types: BLK/LCS/MS/DUP

#### Blank (BLK)

Lab Sample ID: PHS090824.LRB1

Run in Batch: PHS090824, Run Date: 08/24/2009 12:00, Prep Date: 08/24/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Total Phosphorus		ND	0.01	mg/L

#### Blank (BLK)

Lab Sample ID: PHS090824.LRB2

Run in Batch: PHS090824, Run Date: 08/24/2009 12:00, Prep Date: 08/24/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Total Phosphorus		ND	0.01	mg/L

#### Laboratory Control Sample (LCS)

Lab Sample ID: PHS090824.LCS1

Run in Batch: PHS090824, Run Date: 08/24/2009 12:00, Prep Date: 08/24/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Total Phosphorus		93	90	110

#### Matrix Spike (MS)

Lab Sample ID: PHS090824.MS1, Parent Sample ID: S41642.01

Run in Batch: PHS090824, Run Date: 08/24/2009 12:00, Prep Date: 08/24/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Total Phosphorus		81	80	120

#### Duplicate (DUP)

Lab Sample ID: PHS090824.DP1, Parent Sample ID: S41655.01

Run in Batch: PHS090824, Run Date: 08/24/2009 12:00, Prep Date: 08/24/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	RPD	RPD CL
Total Phosphorus		2.2	20

## QC Report - Batch QC Results

### Inorganics, Prep Batch ID: TKN090826

Surrogates: No, QC Types: BLK/LCS/MS/DUP

#### Blank (BLK)

Lab Sample ID: TKN090826.LRB1

Run in Batch: TKN090826, Run Date: 08/26/2009 12:00, Prep Date: 08/26/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Total Kjeldahl Nitrogen		ND	0.02	mg/L

#### Blank (BLK)

Lab Sample ID: TKN090826.LRB2

Run in Batch: TKN090826, Run Date: 08/26/2009 12:00, Prep Date: 08/26/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Total Kjeldahl Nitrogen		ND	0.1	mg/L

#### Laboratory Control Sample (LCS)

Lab Sample ID: TKN090826.LCS1

Run in Batch: TKN090826, Run Date: 08/26/2009 12:00, Prep Date: 08/26/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Total Kjeldahl Nitrogen		104	90	110

#### Matrix Spike (MS)

Lab Sample ID: TKN090826.MS1, Parent Sample ID: S41698.01

Run in Batch: TKN090826, Run Date: 08/26/2009 12:00, Prep Date: 08/26/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Total Kjeldahl Nitrogen		100	80	120

#### Duplicate (DUP)

Lab Sample ID: TKN090826.DP1, Parent Sample ID: S41676.01

Run in Batch: TKN090826, Run Date: 08/26/2009 12:00, Prep Date: 08/26/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	RPD	RPD CL
Total Kjeldahl Nitrogen		0.7	20

## QC Report - Batch QC Results

### Inorganics, Prep Batch ID: TSS090825

Surrogates: No, QC Types: BLK/LCS/DUP

#### Blank (BLK)

Lab Sample ID: TSS090825.LRB1

Run in Batch: TSS090825, Run Date: 08/25/2009 18:00, Prep Date: 08/25/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Total Suspended Solids		1	1	mg/L

#### Laboratory Control Sample (LCS)

Lab Sample ID: TSS090825.LCS1

Run in Batch: TSS090825, Run Date: 08/25/2009 18:00, Prep Date: 08/25/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Total Suspended Solids		96	90	110

#### Duplicate (DUP)

Lab Sample ID: TSS090825.DP1, Parent Sample ID: S41669.01

Run in Batch: TSS090825, Run Date: 08/25/2009 18:00, Prep Date: 08/25/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	RPD	RPD CL
Total Suspended Solids		0	15

## QC Report - Batch QC Results

### Metals, Prep Batch ID: HGD-082509-1

Surrogates: No, QC Types: LCS/BLK/MS/MSD

#### Laboratory Control Sample (LCS)

Lab Sample ID: HG2-09-0825A.009.LCS

Run in Batch: HG2-09-0825A, Run Date: 08/25/2009 14:21, Prep Date: 08/25/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Mercury		89	85	115

#### Blank (BLK)

Lab Sample ID: HG2-09-0825A.015.LRB

Run in Batch: HG2-09-0825A, Run Date: 08/25/2009 14:36, Prep Date: 08/25/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Mercury		ND	0.03	ug/L

#### Matrix Spike (MS)

Lab Sample ID: HG2-09-0825A.024.MS, Parent Sample ID: S41676.01

Run in Batch: HG2-09-0825A, Run Date: 08/25/2009 14:53, Prep Date: 08/25/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Mercury		110	75	125

#### Matrix Spike Duplicate (MSD)

Lab Sample ID: HG2-09-0825A.025.MSD, Parent Sample ID: HG2-09-0825A.024.MS

Run in Batch: HG2-09-0825A, Run Date: 08/25/2009 14:57, Prep Date: 08/25/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
Mercury		112	75	125	2	20

## QC Report - Batch QC Results

### Metals, Prep Batch ID: MTD-082409-2

Surrogates: No, QC Types: LCS/BLK/MS/MSD

### Laboratory Control Sample (LCS)

Lab Sample ID: MT3-09-0825A.011.LCS

Run in Batch: MT3-09-0825A, Run Date: 08/25/2009 13:10, Prep Date: 08/24/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Arsenic		102	85	115
Chromium		104	85	115
Copper		102	85	115
Nickel		100	85	115
Zinc		102	85	115

### Blank (BLK)

Lab Sample ID: MT3-09-0825A.014.LRB

Run in Batch: MT3-09-0825A, Run Date: 08/25/2009 13:23, Prep Date: 08/24/2009, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Arsenic		ND	0.001	mg/L
Chromium		ND	0.005	mg/L
Copper		ND	0.001	mg/L
Nickel		ND	0.005	mg/L
Zinc		ND	0.005	mg/L

### Matrix Spike (MS)

Lab Sample ID: MT3-09-0825A.027.MS, Parent Sample ID: S41693.04

Run in Batch: MT3-09-0825A, Run Date: 08/25/2009 14:16, Prep Date: 08/24/2009, Matrix: Liquid, Dilution: 5

Analyte	Flags	% Rec	LCL	UCL
Arsenic		111	75	125
Chromium		111	75	125
Copper		106	75	125
Nickel		108	75	125
Zinc		109	75	125

### Matrix Spike Duplicate (MSD)

Lab Sample ID: MT3-09-0825A.028.MSD, Parent Sample ID: MT3-09-0825A.027.MS

Run in Batch: MT3-09-0825A, Run Date: 08/25/2009 14:21, Prep Date: 08/24/2009, Matrix: Liquid, Dilution: 5

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
Arsenic		112	75	125	1	20
Chromium		112	75	125	1	20
Copper		108	75	125	1	20
Nickel		108	75	125	0	20
Zinc		109	75	125	0	20

## QC Report - Batch QC Results

### Organics - PCBs/Pesticides, Prep Batch ID: PA090819W01

Surrogates: Yes, QC Types: LCS/BLK/LCSD

#### Laboratory Control Sample (LCS)

Lab Sample ID: f09081910.slcs-w.01

Run in Batch: F090819, Run Date: 08/19/2009 12:16, Prep Date: 08/19/2009, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
PCB-1016/1260		<b>95.04</b>	59.1	123.7

#### Blank (BLK)

Lab Sample ID: f09081909.sblk-w.01

Run in Batch: F090819, Run Date: 08/19/2009 12:05, Prep Date: 08/19/2009, Matrix: WW, Dilution: 1

Analyte	Flags	Conc	RDL	Units
PCB-1016		<b>ND</b>	0.10	ug/L
PCB-1221		<b>ND</b>	0.10	ug/L
PCB-1232		<b>ND</b>	0.10	ug/L
PCB-1248		<b>ND</b>	0.10	ug/L
PCB-1254		<b>ND</b>	0.10	ug/L
PCB-1260		<b>ND</b>	0.10	ug/L
PCB-1242		<b>ND</b>	0.10	ug/L

#### Laboratory Control Sample Duplicate (LCSD)

Lab Sample ID: f09081911.slcs-w.01d, Parent Sample ID: f09081910.slcs-w.01

Run in Batch: F090819, Run Date: 08/19/2009 12:27, Prep Date: 08/19/2009, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
PCB-1016/1260		<b>87.66</b>	59.1	123.7	<b>8.1</b>	20.0

## QC Report - Batch QC Results

### Organics - Semi-Volatiles, Prep Batch ID: SF090821W01

Surrogates: Yes, QC Types: LCS/BLK/LCSD

#### Laboratory Control Sample (LCS)

Lab Sample ID: z090825.lcsw25a

Run in Batch: Z090825, Run Date: 08/25/2009 13:09, Prep Date: 08/21/2009, Matrix: WW, Dilution: 2

Analyte	Flags	% Rec	LCL	UCL
2-Chlorophenol		<b>65.54</b>	14.0	123.0
4-Nitrophenol		<b>55.90</b>	10.0	110.0
Acenaphthene		<b>71.48</b>	26.4	118.0
4-Chloro-3-methylphenol		<b>71.92</b>	20.8	120.7
1,4-Dichlorobenzene		<b>52.46</b>	16.8	110.0
2,4-Dinitrotoluene		<b>75.62</b>	24.0	110.0
N-Nitrosodi-n-propylamine		<b>67.48</b>	31.3	119.6
Pentachlorophenol		<b>62.72</b>	10.0	110.9
Phenol		<b>44.90</b>	10.0	110.0
Pyrene		<b>77.20</b>	23.0	127.5
1,2,4-Trichlorobenzene		<b>57.44</b>	20.5	110.0

#### Blank (BLK)

Lab Sample ID: z090825.blkw25a

Run in Batch: Z090825, Run Date: 08/25/2009 12:01, Prep Date: 08/21/2009, Matrix: WW, Dilution: 2

Analyte	Flags	Conc	RDL	Units
Acenaphthene		<b>ND</b>	1	ug/l
Acenaphthylene		<b>ND</b>	1	ug/l
Anthracene		<b>ND</b>	1	ug/l
Benzidine		<b>ND</b>	1	ug/l
Benzo(a)anthracene		<b>ND</b>	1	ug/l
Benzo(b)fluoranthene		<b>ND</b>	1	ug/l
Benzo(k)fluoranthene		<b>ND</b>	1	ug/l
Benzo(ghi)perylene		<b>ND</b>	1	ug/l
Benzo(a)pyrene		<b>ND</b>	1	ug/l
bis(2-Chloroethoxy)methane		<b>ND</b>	1	ug/l
bis(2-Chloroethyl)ether		<b>ND</b>	1	ug/l
bis(2-Chloroisopropyl)ether		<b>ND</b>	1	ug/l
bis(2-Ethylhexyl)phthalate		<b>ND</b>	1	ug/l
4-Bromophenyl phenyl ether		<b>ND</b>	1	ug/l
Butyl benzyl phthalate		<b>ND</b>	1	ug/l
2-Chloronaphthalene		<b>ND</b>	1	ug/l
4-Chloro-3-methylphenol		<b>ND</b>	1	ug/l
2-Chlorophenol		<b>ND</b>	1	ug/l
4-Chlorophenyl phenyl ether		<b>ND</b>	1	ug/l
Chrysene		<b>ND</b>	1	ug/l
Dibenzo(ah)anthracene		<b>ND</b>	1	ug/l
di-n-Butyl phthalate	*	<b>0.9</b>	1	ug/l
1,2-Dichlorobenzene		<b>ND</b>	1	ug/l
1,3-Dichlorobenzene		<b>ND</b>	1	ug/l
1,4-Dichlorobenzene		<b>ND</b>	1	ug/l
3,3'-Dichlorobenzidine		<b>ND</b>	1	ug/l
2,4-Dichlorophenol		<b>ND</b>	1	ug/l
Diethyl phthalate		<b>ND</b>	1	ug/l
Dimethyl phthalate		<b>ND</b>	1	ug/l
2,4-Dimethylphenol		<b>ND</b>	1	ug/l

## QC Report - Batch QC Results

### Organics - Semi-Volatiles, Prep Batch ID: SF090821W01 (continued)

Surrogates: Yes, QC Types: LCS/BLK/LCSD

### Blank (BLK) (continued)

Lab Sample ID: z090825.blkw25a

Run in Batch: Z090825, Run Date: 08/25/2009 12:01, Prep Date: 08/21/2009, Matrix: WW, Dilution: 2

Analyte	Flags	Conc	RDL	Units
2,4-Dinitrophenol		ND	1	ug/l
2,4-Dinitrotoluene		ND	1	ug/l
2,6-Dinitrotoluene		ND	1	ug/l
1,2-Diphenylhydrazine		ND	1	ug/l
Fluoranthene		ND	1	ug/l
Fluorene		ND	1	ug/l
Hexachlorobenzene		ND	1	ug/l
Hexachlorobutadiene		ND	1	ug/l
Hexachlorocyclopentadiene		ND	1	ug/l
Hexachloroethane		ND	1	ug/l
Indeno(1,2,3-cd)pyrene		ND	1	ug/l
Isophorone		ND	1	ug/l
Naphthalene		ND	1	ug/l
Nitrobenzene		ND	1	ug/l
2-Nitrophenol		ND	1	ug/l
4-Nitrophenol		ND	1	ug/l
N-Nitrosodimethylamine		ND	1	ug/l
N-Nitrosodiphenylamine		ND	1	ug/l
N-Nitrosodi-n-propylamine		ND	1	ug/l
Pentachlorophenol		ND	1	ug/l
Phenol		ND	1	ug/l
Pyrene		ND	1	ug/l
1,2,4-Trichlorobenzene		ND	1	ug/l
2,4,6-Trichlorophenol		ND	1	ug/l
Phenanthrene		ND	1	ug/l

### Laboratory Control Sample Duplicate (LCSD)

Lab Sample ID: z090825.lcsdw25a, Parent Sample ID: z090825.lcsw25a

Run in Batch: Z090825, Run Date: 08/25/2009 13:43, Prep Date: 08/21/2009, Matrix: WW, Dilution: 2

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
2-Chlorophenol		68.40	14.0	123.0	4.3	20.0
4-Nitrophenol		54.06	10.0	110.0	3.3	20.0
Acenaphthene		71.72	26.4	118.0	0.3	20.0
4-Chloro-3-methylphenol		71.92	20.8	120.7	0.0	20.0
1,4-Dichlorobenzene		53.18	16.8	110.0	1.4	20.0
2,4-Dinitrotoluene		74.36	24.0	110.0	1.7	20.0
N-Nitrosodi-n-propylamine		69.68	31.3	119.6	3.2	20.0
Pentachlorophenol		61.60	10.0	110.9	1.8	20.0
Phenol		46.06	10.0	110.0	2.6	20.0
Pyrene		74.96	23.0	127.5	2.9	20.0
1,2,4-Trichlorobenzene		59.68	20.5	110.0	3.8	20.0

## QC Report - Batch QC Results

### Organics - Volatiles, Prep Batch ID: VF090824W2

Surrogates: Yes, QC Types: LCS/BLK/LCSD

#### Laboratory Control Sample (LCS)

Lab Sample ID: 090824a3.lcsw24a

Run in Batch: 090824A3, Run Date: 08/24/2009 13:36, Prep Date: 08/24/2009, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Benzene		<b>88.76</b>	73.7	127.0
Chlorobenzene		<b>84.44</b>	75.0	130.0
1,1-Dichloroethene		<b>89.10</b>	59.9	145.0
Trichloroethene		<b>87.40</b>	71.0	121.2
Toluene		<b>88.96</b>	71.4	127.6

#### Blank (BLK)

Lab Sample ID: 090824a3.blkw24a

Run in Batch: 090824A3, Run Date: 08/24/2009 15:07, Prep Date: 08/24/2009, Matrix: WW, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Acrolein		ND	10	ug/l
Acrylonitrile		ND	1	ug/l
Benzene		ND	1	ug/l
Bromodichloromethane		ND	1	ug/l
Bromoform		ND	1	ug/l
Bromomethane		ND	1	ug/l
2-Chloroethylvinyl ether		ND	1	ug/l
Carbon tetrachloride		ND	1	ug/l
Chlorobenzene		ND	1	ug/l
Chloroethane		ND	1	ug/l
Chloroform		ND	1	ug/l
Chloromethane		ND	1	ug/l
1,1-Dichloroethane		ND	1	ug/l
1,1-Dichloroethene		ND	1	ug/l
1,2-Dichloroethane		ND	1	ug/l
1,2-Dichloropropane		ND	1	ug/l
cis-1,3-Dichloropropene		ND	1	ug/l
Dibromochloromethane		ND	1	ug/l
trans-1,2-Dichloroethene		ND	1	ug/l
trans-1,3-Dichloropropene		ND	1	ug/l
Ethylbenzene		ND	1	ug/l
Methylene chloride		ND	1	ug/l
1,1,1-Trichloroethane		ND	1	ug/l
1,1,1,2-Tetrachloroethane		ND	1	ug/l
1,1,2-Trichloroethane		ND	1	ug/l
Tetrachloroethene		ND	1	ug/l
Toluene		ND	1	ug/l
Trichloroethene		ND	1	ug/l
Vinyl chloride		ND	1	ug/l
o-Xylene		ND	1	ug/l
p,m-Xylene		ND	1	ug/l

## QC Report - Batch QC Results

### Organics - Volatiles, Prep Batch ID: VF090824W2 (continued)

Surrogates: Yes, QC Types: LCS/BLK/LCSD

### Laboratory Control Sample Duplicate (LCSD)

Lab Sample ID: 090824a3.lcsw24b, Parent Sample ID: 090824a3.lcsw24a

Run in Batch: 090824A3, Run Date: 08/24/2009 13:55, Prep Date: 08/24/2009, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
Benzene		<b>96.54</b>	73.7	127.0	<b>8.4</b>	20.0
Chlorobenzene		<b>93.12</b>	75.0	130.0	<b>9.8</b>	20.0
1,1-Dichloroethene		<b>94.28</b>	59.9	145.0	<b>5.6</b>	20.0
Trichloroethene		<b>94.06</b>	71.0	121.2	<b>7.3</b>	20.0
Toluene		<b>97.26</b>	71.4	127.6	<b>8.9</b>	20.0

# Form 0: GC/MS injection Log - Volatile Organics

GC Column: VOCOL/L:60m/D:0.53mm  
Instrument ID: vol.03.Merfolk

Analytical Batch: 090824a3.1  
Heated Purge: Yes

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Form 0: GC/MS Injection Log - Volatile Organics	Form 5: Instrument Performance Check (BFB/DFTPP)
Form 1: GC/MS Data Sheet	Form 6: Initial Calibration Data
Form 2: Surrogate Standard Recoveries	Form 7a: System Performance Compounds Check
Form 3a: Duplicate/Matrix Spike Duplicate Summary	Form 7b: Calibration Check Compounds
Form 3b: Matrix Spike Summary	Form 8: Internal Standard Area and Retention Time Summary
Form 4: Method Blank Summary	Supplemental Forms: Chromatographic Data

Filename	Run Time	Sample Comments	Mtx	QC Type	Notes	CA
bfb24a.d	08/24/09 10:46	50n/g bfb [none]	WW	IP		
spcc24a.d	08/24/09 11:22	spcc/ccc [none]	WW	CV		
lcs24a.d	08/24/09 13:36	blankms vf090824w2	WW	MS		
lcs24b.d	08/24/09 13:55	blankmsd vf090824w2	WW	MS		
blkw24a.d	08/24/09 15:07	5ml blank vf090824w2	WW	Bl		
4167301.d	08/24/09 15:26	5ml vf090824w2	WW			
4167302.d	08/24/09 15:44	5ml vf090824w2	WW			
4167303.d	08/24/09 16:02	5ml vf090824w2	WW			
4167601.d	08/24/09 16:20	5ml vf090824w2	WW			
4167901.d	08/24/09 16:39	5cc vf090824w2	WW			
4168201.d	08/24/09 16:57	5ml vf090824w2	WW			
4168202.d	08/24/09 17:15	5ml vf090824w2	WW			
4168203.d	08/24/09 17:33	5ml vf090824w2	WW			
4168204.d	08/24/09 17:51	5ml vf090824w2	WW			
4168205.d	08/24/09 18:10	5ml vf090824w2	WW			
4168206.d	08/24/09 18:28	5ml vf090824w2	WW			
4168207.d	08/24/09 18:46	5ml vf090824w2	WW			
4168208.d	08/24/09 19:04	5ml vf090824w2	WW			
4168209.d	08/24/09 19:22	5ml vf090824w2	WW			
4168507.d	08/24/09 19:40	5ml vf090824w2	WW			
4168508.d	08/24/09 19:59	5ml vf090824w2	WW			
4167101.d	08/24/09 20:17	50ul vf090824w2	WW			
4167110.d	08/24/09 20:35	50ul vf090824w2	WW			
4166418m.d	08/24/09 20:53	5ml ms vf090824w2	WW			
4166419n.d	08/24/09 21:11	5ml msd vf090824w2	WW			

### Matrix (Mtx) Summary

Water Samples:	18	Soil Samples:	0
Water Duplicates:	1	Soil Duplicates:	0
Water Spikes:	2	Soil Spikes:	0
Water Blanks:	1	Soil Blanks:	0

### QC Sample Type Summary

IP: Instrument Performance
CV: Calibration Verification
MS: Matrix Spike/MS Duplicate
Bl: Blank
Dp: Duplicate

### Corrective Action (CA) Summary

E: Estimated Result
R: Reanalyze Sample
S: Surrogate Standard Outlier
C: Concentration Beyond Calibration
T: Exceeds Time Limit
X: Other

### Notes Summary

- 1: Raw Data Included (Form 1 + Chromatograms)
- 2: Surrogate Standard Outliers (Form 2): 0
- 3: Matrix Spike Outliers (Form 3b): 0
- 4: CVM Outliers (Forms 7a and 7b): 0
- 5: Internal Standard Outliers (Form 8): 0

### Batch Comments

[no comments]

# Form 0: GC/MS injection Log - Semi-Volatile Organics

GC Column: DB-5/L:30m/D:0.25mm  
Instrument ID: svol.04.Zeus

Analytical Batch: z090825.1  
Heated Purge: N/A

## Index of Applicable Reporting Forms

Form 0: GC/MS Injection Log - Semi-Volatile Organics	Form 5: Instrument Performance Check (BFB/DFTPP)
Form 1: GC/MS Data Sheet	Form 6: Initial Calibration Data
Form 2: Surrogate Standard Recoveries	Form 7a: System Performance Compounds Check
Form 3a: Duplicate/Matrix Spike Duplicate Summary	Form 7b: Calibration Check Compounds
Form 3b: Matrix Spike Summary	Form 8: Internal Standard Area and Retention Time Summary
Form 4: Method Blank Summary	Supplemental Forms: Chromatographic Data

Filename	Run Time	Sample Comments	Mtx	QC Type	Notes	CA
d25a.d	08/25/09 10:19	dftpp std (090824) [none]	WW	IP		
spcc25a.d	08/25/09 10:53	full std 50 (090804) [none]	WW	CV		
blkw25a.d	08/25/09 12:01	bna-w 1000ml/1ml df:2 sf090821w01	WW	Bl		
blks25a.d	08/25/09 12:35	bna-s 15g/1ml df:2 sf090821s01	SO	Bl	2	
lcs25a.d	08/25/09 13:09	bna-w 1000ml/1ml df:2 sf090821w01	WW	MS		
lcsdw25a.d	08/25/09 13:43	bna-w 1000ml/1ml df:2 sf090821w01	WW	MS		
lcss25a.d	08/25/09 14:17	bna-s 15g/1ml df:2 sf090821s01	SO	MS		
lcsds25a.d	08/25/09 14:52	bna-s 15g/1ml df:2 sf090821s01	SO	MS		
4168610.d	08/25/09 15:26	bna-s 30g/1ml df:6 sf090821s01	SO			
4168616.d	08/25/09 16:00	bna-w 910ml/1ml df:2 sf090821w01	WW		2	
4167601.d	08/25/09 16:34	bna-w 1000ml/1ml df:10 sf090821w01	WW			
4168804.d	08/25/09 17:08	bna-w 820ml/1ml df:10 sf090821w01	WW		2	
4168806.d	08/25/09 17:42	bna-w 960ml/1ml df:10 sf090821w01	WW			
4168805.d	08/25/09 18:16	bna-w 980ml/1ml df:100 sf090821w01	WW			
4169306.d	08/25/09 18:50	bna-w 950ml/2ml df:150 sf090821w01	WW			

### Matrix (Mtx) Summary

Water Samples:	6	Soil Samples:	1
Water Duplicates:	1	Soil Duplicates:	1
Water Spikes:	2	Soil Spikes:	2
Water Blanks:	1	Soil Blanks:	1

### QC Sample Type Summary

IP: Instrument Performance
CV: Calibration Verification
MS: Matrix Spike/MS Duplicate
Bl: Blank
Dp: Duplicate

### Corrective Action (CA) Summary

E: Estimated Result
R: Reanalyze Sample
S: Surrogate Standard Outlier
C: Concentration Beyond Calibration
T: Exceeds Time Limit
X: Other

### Notes Summary

- 1: Raw Data Included (Form 1 + Chromatograms)
- 2: Surrogate Standard Outliers (Form 2): 3
- 3: Matrix Spike Outliers (Form 3b): 0
- 4: CVM Outliers (Forms 7a and 7b): 0
- 5: Internal Standard Outliers (Form 8): 0

### Batch Comments

[no comments]

## Form 8: Internal Standard Area and Retention Time Summary

GC Column: VOCOL/L:60m/D:0.53mm  
Instrument ID: vol.03.Merfolk

Analytical Batch: 090824a3.1  
Heated Purge: Yes

Filename	Run Time	ISD Compound	Area/RT	Area Range	RT Range
spcc24a.d	08/24/09 11:22	Pentafluorobenzene	519668/ 3.76	259834- 1039336	3.26- 4.26
		1,4-Difluorobenzene	668332/ 4.12	334166- 1336664	3.62- 4.62
		Chlorobenzene-D5	337236/ 5.48	168618- 674472	4.98- 5.98
		1,4-Dichlorobenzene-D4	365174/ 6.56	182587- 730348	6.06- 7.06
<b>Total Outliers: N/A</b>					
lcsww24a.d	08/24/09 13:36	Pentafluorobenzene	514446/ 3.76	Ratio: 0.990	Diff.: 0.00
		1,4-Difluorobenzene	657663/ 4.12	Ratio: 0.984	Diff.: 0.00
		Chlorobenzene-D5	318345/ 5.48	Ratio: 0.944	Diff.: 0.00
		1,4-Dichlorobenzene-D4	353698/ 6.56	Ratio: 0.969	Diff.: 0.00
<b>Total Outliers: 0</b>					
lcsww24b.d	08/24/09 13:55	Pentafluorobenzene	528219/ 3.76	Ratio: 1.016	Diff.: 0.00
		1,4-Difluorobenzene	680987/ 4.12	Ratio: 1.019	Diff.: 0.00
		Chlorobenzene-D5	328674/ 5.48	Ratio: 0.975	Diff.: 0.00
		1,4-Dichlorobenzene-D4	353254/ 6.56	Ratio: 0.967	Diff.: 0.00
<b>Total Outliers: 0</b>					
blkw24a.d	08/24/09 15:07	Pentafluorobenzene	513080/ 3.76	Ratio: 0.987	Diff.: 0.00
		1,4-Difluorobenzene	684273/ 4.12	Ratio: 1.024	Diff.: 0.00
		Chlorobenzene-D5	326000/ 5.48	Ratio: 0.967	Diff.: 0.00
		1,4-Dichlorobenzene-D4	351247/ 6.56	Ratio: 0.962	Diff.: 0.00
<b>Total Outliers: 0</b>					
4167301.d	08/24/09 15:26	Pentafluorobenzene	454271/ 3.76	Ratio: 0.874	Diff.: 0.00
		1,4-Difluorobenzene	599561/ 4.12	Ratio: 0.897	Diff.: 0.00
		Chlorobenzene-D5	290587/ 5.48	Ratio: 0.862	Diff.: 0.00
		1,4-Dichlorobenzene-D4	305068/ 6.56	Ratio: 0.835	Diff.: 0.00
<b>Total Outliers: 0</b>					
4167302.d	08/24/09 15:44	Pentafluorobenzene	454956/ 3.76	Ratio: 0.875	Diff.: 0.00
		1,4-Difluorobenzene	600210/ 4.12	Ratio: 0.898	Diff.: 0.00
		Chlorobenzene-D5	291714/ 5.48	Ratio: 0.865	Diff.: 0.00
		1,4-Dichlorobenzene-D4	311003/ 6.56	Ratio: 0.852	Diff.: 0.00
<b>Total Outliers: 0</b>					
4167303.d	08/24/09 16:02	Pentafluorobenzene	455082/ 3.76	Ratio: 0.876	Diff.: 0.00
		1,4-Difluorobenzene	605135/ 4.12	Ratio: 0.905	Diff.: 0.00
		Chlorobenzene-D5	290110/ 5.48	Ratio: 0.860	Diff.: 0.00
		1,4-Dichlorobenzene-D4	319105/ 6.56	Ratio: 0.874	Diff.: 0.00
<b>Total Outliers: 0</b>					
4167601.d	08/24/09 16:20	Pentafluorobenzene	451515/ 3.75	Ratio: 0.869	Diff.: -0.01
		1,4-Difluorobenzene	588561/ 4.12	Ratio: 0.881	Diff.: 0.00
		Chlorobenzene-D5	285536/ 5.48	Ratio: 0.847	Diff.: 0.00
		1,4-Dichlorobenzene-D4	316091/ 6.56	Ratio: 0.866	Diff.: 0.00
<b>Total Outliers: 0</b>					
4167901.d	08/24/09 16:39	Pentafluorobenzene	462765/ 3.76	Ratio: 0.891	Diff.: 0.00
		1,4-Difluorobenzene	634242/ 4.12	Ratio: 0.949	Diff.: 0.00
		Chlorobenzene-D5	312815/ 5.48	Ratio: 0.928	Diff.: 0.00
		1,4-Dichlorobenzene-D4	324674/ 6.56	Ratio: 0.889	Diff.: 0.00
<b>Total Outliers: 0</b>					
4168201.d	08/24/09 16:57	Pentafluorobenzene	530516/ 3.76	Ratio: 1.021	Diff.: 0.00
		1,4-Difluorobenzene	701184/ 4.12	Ratio: 1.049	Diff.: 0.00
		Chlorobenzene-D5	350635/ 5.48	Ratio: 1.040	Diff.: 0.00
		1,4-Dichlorobenzene-D4	371669/ 6.56	Ratio: 1.018	Diff.: 0.00
<b>Total Outliers: 0</b>					
4168202.d	08/24/09 17:15	Pentafluorobenzene	510634/ 3.76	Ratio: 0.983	Diff.: 0.00
		1,4-Difluorobenzene	679995/ 4.12	Ratio: 1.017	Diff.: 0.00
		Chlorobenzene-D5	327202/ 5.48	Ratio: 0.970	Diff.: 0.00
		1,4-Dichlorobenzene-D4	368529/ 6.56	Ratio: 1.009	Diff.: 0.00
<b>Total Outliers: 0</b>					

## Form 8: Internal Standard Area and Retention Time Summary

GC Column: VOCOL/L:60m/D:0.53mm  
Instrument ID: vol.03.Merfolk

Analytical Batch: 090824a3.1  
Heated Purge: Yes

Filename	Run Time	ISD Compound	Area/RT	Area Range	RT Range
4168203.d	08/24/09 17:33	Pentafluorobenzene	493982/ 3.76	Ratio: 0.951	Diff.: 0.00
		1,4-Difluorobenzene	668874/ 4.12	Ratio: 1.001	Diff.: 0.00
		Chlorobenzene-D5	340972/ 5.48	Ratio: 1.011	Diff.: 0.00
		1,4-Dichlorobenzene-D4	366370/ 6.56	Ratio: 1.003	Diff.: 0.00
					<b>Total Outliers: 0</b>
4168204.d	08/24/09 17:51	Pentafluorobenzene	508024/ 3.76	Ratio: 0.978	Diff.: 0.00
		1,4-Difluorobenzene	693464/ 4.12	Ratio: 1.038	Diff.: 0.00
		Chlorobenzene-D5	348697/ 5.48	Ratio: 1.034	Diff.: 0.00
		1,4-Dichlorobenzene-D4	370421/ 6.56	Ratio: 1.014	Diff.: 0.00
					<b>Total Outliers: 0</b>
4168205.d	08/24/09 18:10	Pentafluorobenzene	510885/ 3.76	Ratio: 0.983	Diff.: 0.00
		1,4-Difluorobenzene	689692/ 4.12	Ratio: 1.032	Diff.: 0.00
		Chlorobenzene-D5	337481/ 5.48	Ratio: 1.001	Diff.: 0.00
		1,4-Dichlorobenzene-D4	363181/ 6.56	Ratio: 0.995	Diff.: 0.00
					<b>Total Outliers: 0</b>
4168206.d	08/24/09 18:28	Pentafluorobenzene	514855/ 3.76	Ratio: 0.991	Diff.: 0.00
		1,4-Difluorobenzene	705867/ 4.12	Ratio: 1.056	Diff.: 0.00
		Chlorobenzene-D5	346681/ 5.48	Ratio: 1.028	Diff.: 0.00
		1,4-Dichlorobenzene-D4	361860/ 6.56	Ratio: 0.991	Diff.: 0.00
					<b>Total Outliers: 0</b>
4168207.d	08/24/09 18:46	Pentafluorobenzene	516984/ 3.76	Ratio: 0.995	Diff.: 0.00
		1,4-Difluorobenzene	706384/ 4.12	Ratio: 1.057	Diff.: 0.00
		Chlorobenzene-D5	344374/ 5.48	Ratio: 1.021	Diff.: 0.00
		1,4-Dichlorobenzene-D4	365514/ 6.56	Ratio: 1.001	Diff.: 0.00
					<b>Total Outliers: 0</b>
4168208.d	08/24/09 19:04	Pentafluorobenzene	527745/ 3.76	Ratio: 1.016	Diff.: 0.00
		1,4-Difluorobenzene	719555/ 4.12	Ratio: 1.077	Diff.: 0.00
		Chlorobenzene-D5	347118/ 5.48	Ratio: 1.029	Diff.: 0.00
		1,4-Dichlorobenzene-D4	355567/ 6.56	Ratio: 0.974	Diff.: 0.00
					<b>Total Outliers: 0</b>
4168209.d	08/24/09 19:22	Pentafluorobenzene	500604/ 3.76	Ratio: 0.963	Diff.: 0.00
		1,4-Difluorobenzene	677755/ 4.12	Ratio: 1.014	Diff.: 0.00
		Chlorobenzene-D5	325332/ 5.48	Ratio: 0.965	Diff.: 0.00
		1,4-Dichlorobenzene-D4	357130/ 6.56	Ratio: 0.978	Diff.: 0.00
					<b>Total Outliers: 0</b>
4168507.d	08/24/09 19:40	Pentafluorobenzene	482378/ 3.76	Ratio: 0.928	Diff.: 0.00
		1,4-Difluorobenzene	658878/ 4.12	Ratio: 0.986	Diff.: 0.00
		Chlorobenzene-D5	320684/ 5.48	Ratio: 0.951	Diff.: 0.00
		1,4-Dichlorobenzene-D4	336397/ 6.56	Ratio: 0.921	Diff.: 0.00
					<b>Total Outliers: 0</b>
4168508.d	08/24/09 19:59	Pentafluorobenzene	445636/ 3.76	Ratio: 0.858	Diff.: 0.00
		1,4-Difluorobenzene	599928/ 4.12	Ratio: 0.898	Diff.: 0.00
		Chlorobenzene-D5	284687/ 5.48	Ratio: 0.844	Diff.: 0.00
		1,4-Dichlorobenzene-D4	310191/ 6.56	Ratio: 0.849	Diff.: 0.00
					<b>Total Outliers: 0</b>
4167101.d	08/24/09 20:17	Pentafluorobenzene	471869/ 3.76	Ratio: 0.908	Diff.: 0.00
		1,4-Difluorobenzene	640431/ 4.12	Ratio: 0.958	Diff.: 0.00
		Chlorobenzene-D5	314418/ 5.48	Ratio: 0.932	Diff.: 0.00
		1,4-Dichlorobenzene-D4	339439/ 6.56	Ratio: 0.930	Diff.: 0.00
					<b>Total Outliers: 0</b>
4167110.d	08/24/09 20:35	Pentafluorobenzene	520644/ 3.76	Ratio: 1.002	Diff.: 0.00
		1,4-Difluorobenzene	715260/ 4.12	Ratio: 1.070	Diff.: 0.00
		Chlorobenzene-D5	346743/ 5.48	Ratio: 1.028	Diff.: 0.00
		1,4-Dichlorobenzene-D4	365020/ 6.56	Ratio: 1.000	Diff.: 0.00
					<b>Total Outliers: 0</b>

## Form 8: Internal Standard Area and Retention Time Summary

GC Column: VOCOL/L:60m/D:0.53mm

Analytical Batch: 090824a3.1

Instrument ID: vol.03.Merfolk

Heated Purge: Yes

Filename	Run Time	ISD Compound	Area/RT	Area Range	RT Range
4166418m.d	08/24/09 20:53	Pentafluorobenzene	496938/ 3.76	Ratio: 0.956	Diff.: 0.00
		1,4-Difluorobenzene	668229/ 4.12	Ratio: 1.000	Diff.: 0.00
		Chlorobenzene-D5	325473/ 5.48	Ratio: 0.965	Diff.: 0.00
		1,4-Dichlorobenzene-D4	352813/ 6.56	Ratio: 0.966	Diff.: 0.00
					<b>Total Outliers: 0</b>
4166419n.d	08/24/09 21:11	Pentafluorobenzene	482232/ 3.76	Ratio: 0.928	Diff.: 0.00
		1,4-Difluorobenzene	652121/ 4.12	Ratio: 0.976	Diff.: 0.00
		Chlorobenzene-D5	318058/ 5.48	Ratio: 0.943	Diff.: 0.00
		1,4-Dichlorobenzene-D4	334043/ 6.56	Ratio: 0.915	Diff.: 0.00
					<b>Total Outliers: 0</b>

### KEY:

[Area/RT]: Absolute area (counts) and absolute retention time (minutes) of internal standard

[Area Range]: 50% to 200% of relative internal standard area

[RT Range]: +/- 0.5 minutes of relative internal standard RT

[Ratio]: Ratio of internal standard areas

[Diff]: Difference in internal standard retention times (minutes)

### CONTROL LIMITS:

Area UCL/LCL = 50% to 200% of internal standard area

RT UCL/LCL = +/- 0.5 minutes of internal standard RT

# Form 8: Internal Standard Area and Retention Time Summary

GC Column: DB-5/L:30m/D:0.25mm

Analytical Batch: z090825.1

Instrument ID: svol.04.Zeus

Heated Purge: N/A

Filename	Run Time	ISD Compound	Area/RT	Area Range	RT Range
spcc25a.d	08/25/09 10:53	1,4-Dichlorobenzene-D4	289419/ 7.07	144710- 578838	6.57- 7.57
		Naphthalene-D8	1186438/ 8.69	593219- 2372876	8.19- 9.19
		Acenaphthalene-D10	266703/10.93	133352- 533406	10.43-11.43
		Phenanthrene-D10	1194389/12.81	597195- 2388778	12.31-13.31
		Chrysene-D12	1557764/17.43	778882- 3115528	16.93-17.93
		Perylene-D12	1440831/20.51	720416- 2881662	20.01-21.01
		<b>Total Outliers: N/A</b>			
blkw25a.d	08/25/09 12:01	1,4-Dichlorobenzene-D4	234028/ 7.08	Ratio: 0.809	Diff.: 0.01
		Naphthalene-D8	913391/ 8.70	Ratio: 0.770	Diff.: 0.01
		Acenaphthalene-D10	197097/10.93	Ratio: 0.739	Diff.: 0.00
		Phenanthrene-D10	857012/12.81	Ratio: 0.718	Diff.: 0.00
		Chrysene-D12	1052546/17.42	Ratio: 0.676	Diff.: -0.01
		Perylene-D12	823742/20.50	Ratio: 0.572	Diff.: -0.01
		<b>Total Outliers: 0</b>			
blks25a.d	08/25/09 12:35	1,4-Dichlorobenzene-D4	208566/ 7.07	Ratio: 0.721	Diff.: 0.00
		Naphthalene-D8	811911/ 8.68	Ratio: 0.684	Diff.: -0.01
		Acenaphthalene-D10	178493/10.92	Ratio: 0.669	Diff.: -0.01
		Phenanthrene-D10	786062/12.80	Ratio: 0.658	Diff.: -0.01
		Chrysene-D12	970110/17.40	Ratio: 0.623	Diff.: -0.03
		Perylene-D12	752132/20.47	Ratio: 0.522	Diff.: -0.04
		<b>Total Outliers: 0</b>			
lcsww25a.d	08/25/09 13:09	1,4-Dichlorobenzene-D4	200761/ 7.07	Ratio: 0.694	Diff.: 0.00
		Naphthalene-D8	784909/ 8.68	Ratio: 0.662	Diff.: -0.01
		Acenaphthalene-D10	170180/10.92	Ratio: 0.638	Diff.: -0.01
		Phenanthrene-D10	748279/12.80	Ratio: 0.626	Diff.: -0.01
		Chrysene-D12	931410/17.40	Ratio: 0.598	Diff.: -0.03
		Perylene-D12	727615/20.47	Ratio: 0.505	Diff.: -0.04
		<b>Total Outliers: 0</b>			
lcsdw25a.d	08/25/09 13:43	1,4-Dichlorobenzene-D4	198468/ 7.06	Ratio: 0.686	Diff.: -0.01
		Naphthalene-D8	775009/ 8.68	Ratio: 0.653	Diff.: -0.01
		Acenaphthalene-D10	169872/10.92	Ratio: 0.637	Diff.: -0.01
		Phenanthrene-D10	743675/12.80	Ratio: 0.623	Diff.: -0.01
		Chrysene-D12	926913/17.40	Ratio: 0.595	Diff.: -0.03
		Perylene-D12	730980/20.47	Ratio: 0.507	Diff.: -0.04
		<b>Total Outliers: 0</b>			
lcss25a.d	08/25/09 14:17	1,4-Dichlorobenzene-D4	196077/ 7.07	Ratio: 0.677	Diff.: 0.00
		Naphthalene-D8	766970/ 8.69	Ratio: 0.646	Diff.: 0.00
		Acenaphthalene-D10	168261/10.92	Ratio: 0.631	Diff.: -0.01
		Phenanthrene-D10	738630/12.80	Ratio: 0.618	Diff.: -0.01
		Chrysene-D12	928633/17.40	Ratio: 0.596	Diff.: -0.03
		Perylene-D12	728922/20.47	Ratio: 0.506	Diff.: -0.04
		<b>Total Outliers: 0</b>			
lcsds25a.d	08/25/09 14:52	1,4-Dichlorobenzene-D4	199010/ 7.07	Ratio: 0.688	Diff.: 0.00
		Naphthalene-D8	778970/ 8.68	Ratio: 0.657	Diff.: -0.01
		Acenaphthalene-D10	170761/10.92	Ratio: 0.640	Diff.: -0.01
		Phenanthrene-D10	758701/12.80	Ratio: 0.635	Diff.: -0.01
		Chrysene-D12	955271/17.40	Ratio: 0.613	Diff.: -0.03
		Perylene-D12	753814/20.47	Ratio: 0.523	Diff.: -0.04
		<b>Total Outliers: 0</b>			
4168610.d	08/25/09 15:26	1,4-Dichlorobenzene-D4	211903/ 7.08	Ratio: 0.732	Diff.: 0.01
		Naphthalene-D8	823716/ 8.70	Ratio: 0.694	Diff.: 0.01
		Acenaphthalene-D10	180130/10.93	Ratio: 0.675	Diff.: 0.00
		Phenanthrene-D10	792249/12.81	Ratio: 0.663	Diff.: 0.00
		Chrysene-D12	1008853/17.42	Ratio: 0.648	Diff.: -0.01
		Perylene-D12	800190/20.50	Ratio: 0.555	Diff.: -0.01
		<b>Total Outliers: 0</b>			

## Form 8: Internal Standard Area and Retention Time Summary

GC Column: DB-5/L:30m/D:0.25mm

Analytical Batch: z090825.1

Instrument ID: svol.04.Zeus

Heated Purge: N/A

Filename	Run Time	ISD Compound	Area/RT	Area Range	RT Range
4168616.d	08/25/09 16:00	1,4-Dichlorobenzene-D4	222374/ 7.08	Ratio: 0.768	Diff.: 0.01
		Naphthalene-D8	869633/ 8.70	Ratio: 0.733	Diff.: 0.01
		Acenaphthalene-D10	190364/10.93	Ratio: 0.714	Diff.: 0.00
		Phenanthrene-D10	837561/12.81	Ratio: 0.701	Diff.: 0.00
		Chrysene-D12	1064499/17.42	Ratio: 0.683	Diff.: -0.01
		Perylene-D12	846732/20.50	Ratio: 0.588	Diff.: -0.01
<b>Total Outliers: 0</b>					
4167601.d	08/25/09 16:34	1,4-Dichlorobenzene-D4	213213/ 7.07	Ratio: 0.737	Diff.: 0.00
		Naphthalene-D8	828127/ 8.68	Ratio: 0.698	Diff.: -0.01
		Acenaphthalene-D10	185248/10.92	Ratio: 0.695	Diff.: -0.01
		Phenanthrene-D10	825860/12.80	Ratio: 0.691	Diff.: -0.01
		Chrysene-D12	1068700/17.40	Ratio: 0.686	Diff.: -0.03
		Perylene-D12	831328/20.48	Ratio: 0.577	Diff.: -0.03
<b>Total Outliers: 0</b>					
4168804.d	08/25/09 17:08	1,4-Dichlorobenzene-D4	210488/ 7.07	Ratio: 0.727	Diff.: 0.00
		Naphthalene-D8	816333/ 8.69	Ratio: 0.688	Diff.: 0.00
		Acenaphthalene-D10	181445/10.92	Ratio: 0.680	Diff.: -0.01
		Phenanthrene-D10	805168/12.80	Ratio: 0.674	Diff.: -0.01
		Chrysene-D12	1040032/17.40	Ratio: 0.668	Diff.: -0.03
		Perylene-D12	814984/20.48	Ratio: 0.566	Diff.: -0.03
<b>Total Outliers: 0</b>					
4168806.d	08/25/09 17:42	1,4-Dichlorobenzene-D4	208962/ 7.08	Ratio: 0.722	Diff.: 0.01
		Naphthalene-D8	817644/ 8.70	Ratio: 0.689	Diff.: 0.01
		Acenaphthalene-D10	181845/10.94	Ratio: 0.682	Diff.: 0.01
		Phenanthrene-D10	811142/12.81	Ratio: 0.679	Diff.: 0.00
		Chrysene-D12	1033451/17.42	Ratio: 0.663	Diff.: -0.01
		Perylene-D12	811080/20.50	Ratio: 0.563	Diff.: -0.01
<b>Total Outliers: 0</b>					
4168805.d	08/25/09 18:16	1,4-Dichlorobenzene-D4	202992/ 7.07	Ratio: 0.701	Diff.: 0.00
		Naphthalene-D8	787347/ 8.69	Ratio: 0.664	Diff.: 0.00
		Acenaphthalene-D10	177587/10.92	Ratio: 0.666	Diff.: -0.01
		Phenanthrene-D10	789390/12.80	Ratio: 0.661	Diff.: -0.01
		Chrysene-D12	1007113/17.40	Ratio: 0.647	Diff.: -0.03
		Perylene-D12	791945/20.48	Ratio: 0.550	Diff.: -0.03
<b>Total Outliers: 0</b>					
4169306.d	08/25/09 18:50	1,4-Dichlorobenzene-D4	206088/ 7.07	Ratio: 0.712	Diff.: 0.00
		Naphthalene-D8	809670/ 8.68	Ratio: 0.682	Diff.: -0.01
		Acenaphthalene-D10	185177/10.92	Ratio: 0.694	Diff.: -0.01
		Phenanthrene-D10	851491/12.80	Ratio: 0.713	Diff.: -0.01
		Chrysene-D12	1091388/17.42	Ratio: 0.701	Diff.: -0.01
		Perylene-D12	802388/20.50	Ratio: 0.557	Diff.: -0.01
<b>Total Outliers: 0</b>					

### KEY:

[Area/RT]: Absolute area (counts) and absolute retention time (minutes) of internal standard  
 [Area Range]: 50% to 200% of relative internal standard area  
 [RT Range]: +/- 0.5 minutes of relative internal standard RT  
 [Ratio]: Ratio of internal standard areas  
 [Diff]: Difference in internal standard retention times (minutes)

### CONTROL LIMITS:

Area UCL/LCL = 50% to 200% of internal standard area  
 RT UCL/LCL = +/- 0.5 minutes of internal standard RT

**Form 0: Sequence Log**

Data Set ID: MT3-09-0825A

Analysis Date: 08/25/09

Instrument ID: HP ICP/MS 2

Analyst: Sarah Schwanik

<i>Filename</i>	<i>Run Time</i>	<i>Sample ID</i>	<i>Matrix</i>	<i>QC Type</i>
001SMPL.D#	Aug 25 2009 12:20 pm	blk	Liquid	
002SMPL.D#	Aug 25 2009 12:24 pm	0.00	Liquid	
003SMPL.D#	Aug 25 2009 12:28 pm	0.0001	Liquid	
004SMPL.D#	Aug 25 2009 12:33 pm	0.0005	Liquid	
005SMPL.D#	Aug 25 2009 12:37 pm	0.005	Liquid	
006SMPL.D#	Aug 25 2009 12:42 pm	0.02	Liquid	
007SMPL.D#	Aug 25 2009 12:47 pm	0.05	Liquid	
008SMPL.D#	Aug 25 2009 12:53 pm	0.20	Liquid	
009SMPL.D#	Aug 25 2009 01:02 pm	ICV-0.10	Liquid	ICV
010SMPL.D#	Aug 25 2009 01:06 pm	ERA-5/1	Liquid	ERA
011SMPL.D#	Aug 25 2009 01:10 pm	08/24 LCS-0.05	Liquid	LCS
012SMPL.D#	Aug 25 2009 01:15 pm	BS-0.01	Liquid	BS
013SMPL.D#	Aug 25 2009 01:19 pm	ICB	Liquid	ICB
014SMPL.D#	Aug 25 2009 01:23 pm	LRB	Liquid	LRB
015SMPL.D#	Aug 25 2009 01:27 pm	BS-0.002	Liquid	BS
016SMPL.D#	Aug 25 2009 01:31 pm	41657.01 dil	Liquid	DIL
017SMPL.D#	Aug 25 2009 01:35 pm	41657.01s	Liquid	S
018SMPL.D#	Aug 25 2009 01:40 pm	41655.01s	Liquid	S
019SMPL.D#	Aug 25 2009 01:44 pm	41669.01s	Liquid	S
020SMPL.D#	Aug 25 2009 01:48 pm	41674.01s	Liquid	S
021SMPL.D#	Aug 25 2009 01:52 pm	41676.01s	Liquid	S
022SMPL.D#	Aug 25 2009 01:56 pm	41677.01s	Liquid	S
023SMPL.D#	Aug 25 2009 02:00 pm	41686.16s	Liquid	S
024SMPL.D#	Aug 25 2009 02:04 pm	41680.01s	Liquid	S
025SMPL.D#	Aug 25 2009 02:08 pm	41680.01s-d	Liquid	S
026SMPL.D#	Aug 25 2009 02:12 pm	41693.04s	Liquid	S
027SMPL.D#	Aug 25 2009 02:16 pm	41693.04 MS-0.05	Liquid	MS
028SMPL.D#	Aug 25 2009 02:21 pm	41693.04 MSD	Liquid	MSD
029SMPL.D#	Aug 25 2009 02:25 pm	CCV1-0.10	Liquid	CCV
030SMPL.D#	Aug 25 2009 02:29 pm	CCB1	Liquid	CCB
031SMPL.D#	Aug 25 2009 02:33 pm	test 1	Liquid	
032SMPL.D#	Aug 25 2009 02:38 pm	test 2	Liquid	
033SMPL.D#	Aug 25 2009 02:42 pm	CCV2-0.10	Liquid	CCV
034SMPL.D#	Aug 25 2009 02:46 pm	CCB2	Liquid	CCB
035SMPL.D#	Aug 25 2009 02:50 pm	Soln-AA	Liquid	AA
036SMPL.D#	Aug 25 2009 02:54 pm	Soln-AB	Liquid	AB

**Form 0: Sequence Log**

Data Set ID: HG2-09-0825A

Analysis Date: 08/25/09

Instrument ID: HG QuickTrace

Analyst: JRT

<i>Filename</i>	<i>Run Time</i>	<i>Sample ID</i>	<i>Matrix</i>	<i>QC Type</i>
001	8/25/2009 2:04:01 PM	Calibration Blank	Liquid	
002	8/25/2009 2:05:51 PM	Standard #1	Liquid	
003	8/25/2009 2:07:40 PM	Standard #2	Liquid	
004	8/25/2009 2:09:29 PM	Standard #3	Liquid	
005	8/25/2009 2:11:17 PM	Standard #4	Liquid	
006	8/25/2009 2:13:05 PM	Standard #5	Liquid	
007	8/25/2009 2:14:51 PM	Standard #6	Liquid	
008	8/25/2009 2:16:37 PM	Standard #7	Liquid	
009	8/25/2009 2:21:21 PM	08/25 LCS1-2.0 ppb	Liquid	LCS
010	8/25/2009 2:23:14 PM	ICV-5.0 ppb	Liquid	ICV
011	8/25/2009 2:25:07 PM	ICB	Liquid	
012	8/25/2009 2:28:52 PM	ICB	Liquid	ICB
013	8/25/2009 2:32:33 PM	ERA P159514 TV=14.1	Liquid	ERA
014	8/25/2009 2:34:25 PM	BS-0.10	Liquid	BS
015	8/25/2009 2:36:21 PM	08/25 LRB1	Liquid	LRB
016	8/25/2009 2:38:07 PM	41662.14s	Liquid	
017	8/25/2009 2:40:59 PM	41662.14s	Liquid	S
018	8/25/2009 2:42:46 PM	41662.15s	Liquid	S
019	8/25/2009 2:44:34 PM	41669.01s	Liquid	S
020	8/25/2009 2:46:22 PM	41686.16s	Liquid	S
021	8/25/2009 2:48:11 PM	41693.04s	Liquid	S
022	8/25/2009 2:50:01 PM	41696.01s	Liquid	S
023	8/25/2009 2:51:48 PM	41676.01s	Liquid	S
024	8/25/2009 2:53:35 PM	41676.01 MS-2.0 ppb	Liquid	MS
025	8/25/2009 2:57:29 PM	41676.01 MSD-2.0 ppb	Liquid	MSD
026	8/25/2009 2:59:23 PM	CCV1-2.0 ppb	Liquid	CCV
027	8/25/2009 3:02:44 PM	CCB1	Liquid	CCB



14774 / 45042  
# 4

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number MTR000000000	2. Page 1 of 1	3. Emergency Response Phone 313-571-7161	4. Manifest Tracking Number 005408736 JJK		
5. Generator's Name and Mailing Address Realin Coldwater Road Landfill 6120 Horton W.Lint, MI 48505				Generator's Site Address (if different than mailing address)			
Generator's Phone: (248) 734-0702							
6. Transporter 1 Company Name DYN Transportation				U.S. EPA ID Number MTR000010004			
7. Transporter 2 Company Name				U.S. EPA ID Number			
8. Designated Facility Name and Site Address Dynamid, Inc. 6520 Georgia Street Detroit, MI 48211				U.S. EPA ID Number			
Facility's Phone: (313) 571-7140				MTR074259566			
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes	
		No.	Type				
1	1. RQ, Hazardous waste, liquid, n.o.s., 9 KA 3082, PG III (P039, R005)	001	TT	3263	G	R005	R005
2							
3							
4							
14. Special Handling Instructions and Additional Information 1. Approval # 1000000 (Landfill Leachate) TLR# 344 BOT SP 11903							
15. GENERATOR/SOFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.							
Generator's/Offorer's Printed/Typed Name Stephen Doboly				Signature [Signature]		Month Day Year 01/04/09	
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Part of entry/exit: Date leaving U.S.:							
17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name: MIKE FLINT Signature: [Signature] Month Day Year: 01/04/09 Transporter 2 Printed/Typed Name: Signature: Month Day Year:							
18. Discrepancy 18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection							
18b. Alternate Facility (or Generator) Manifest Reference Number: U.S. EPA ID Number:							
Facility's Phone: 18c. Signature of Alternate Facility (or Generator) Month Day Year:							
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems) 1. H141 2. 3. 4.							
20. Designated Facility Owner or Operator. Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a Printed/Typed Name: MARK Casson Signature: [Signature] Month Day Year: 9/9/09							