May 10, 2013

NPDES Compliance Coordinator
Nevada Division of Environmental Protection
Bureau of Water Pollution Control
901 South Stewart Street, Suite 4001
Carson City, Nevada 89701-5249

Re: Report of Sludge Release from Fluidized Bed Reactor (FBR) Filter Press
Nevada Environmental Response Trust Site; Henderson, NV
NPDES Permit NV0023060

Dear NPDES Compliance Coordinator:

The Nevada Environmental Response Trust (NERT) maintains NPDES Permit NV0023060 for discharge of treated water to the Las Vegas Wash, as part of their on-going effort to capture and treat groundwater containing perchlorate and chromium in the Henderson area. Per Section II.A.3., *Noncompliance, Unauthorized Discharge, Bypassing and Upset*, of the permit, ENVIRON International Corporation (ENVIRON), on behalf of NERT, called the NDEP Spill Reporting Hotline on March 22, 2013 to report a release of sludge that is generated in the Fluidized Bed Reactor (FBR) process, a component part of the treatment plant designed to biologically remove perchlorate. The release occurred on Friday, March 22, 2013 during dewatering (via filter press) of the sludge in preparation for off-site disposal. The sludge flowed north out of the D-1 building on to soil and pavement in the vicinity of the E Hut. Sludge was removed from the inside of the D-1 building using a vacuum truck and from outside paved areas using shovels, a pressure washer, and a shop vacuum. Sludge was removed from soil with shovels (no soil excavation was conducted). The sludge removed from inside the D-1 building and the ground surface was placed in a bin for off-site disposal at Republic Services Apex Landfill. This correspondence serves as written notification of the leak, which is detailed below.

Per Section II.A.3.b. of the permit, the written report shall include the following information:

i. Time and date of discharge

At approximately 2:30 AM on Friday March 22, 2013, an operator for Veolia Water North America (Veolia) started dewatering of approximately 5,000 gallons of sludge from one of the FBR unit's filter presses in the D-1 Building. The operator returned at 3:20 AM after collecting the daily treated effluent sample and observed the sludge coming out of the D-1 Building.

ii. Exact location and estimated amount of discharge

The sludge release occurred at the southeast corner of the D-1 Building and flowed north toward the E Hut at the NERT site in Henderson, Nevada. The location and extent of the leak is shown on the attached map (Figure 1). Most of the sludge was contained in a bin and concrete containment area, but a portion of the volume, estimated at 500 to 700 gallons, was released to soil and pavement.

ENVIRON International Corp. 2200 Powell Street, Suite 700, Emeryville, CA 94608
V +1 510.655.7400 F +1 510.655.9517

environcorp.com

iii. Flow path and any bodies of water which the discharge reached

The leaked sludge flowed on asphalt and then on an unpaved surface for approximately 400 feet to the north of the D-1 building (Figure 1). On the unpaved surfaces, water from the sludge infiltrated into the ground surface and sludge solids accumulated on soil in the area west and north of the E Hut. The pavement outside of the D-1 Building was stained as a result of the release. The discharge entered a rip rap channel that drains to the northeastern retention basin, but did not flow onto any roadway or into any body of water. The leaked sludge remained on NERT property.

iv. The specific cause of the discharge

The sludge release was caused when the operator closed the door of the filter press unit after beginning dewatering, but failed to ensure that the door was secure. The cause of the release was operator error, not malfunctioning equipment.

v. The preventive and/or corrective actions taken.

A sample of the sludge was collected and sent to a laboratory for analysis of the constituents listed in Table 4 of the NERT Site Management Plan (SMP), with the exception of asbestos. The analytical laboratory reports are provided on a CD with this report. The sample results were screened against NDEP's Basic Comparison Levels (BCLs) and site-specific values, collectively called the Soil Remediation Goals (SRGs). In addition, the sample results were compared to sludge data from the current quarter and previous two quarters (collected per the NPDES permit) (Table 1). A limited number of the analytes were detected above the screening levels. Arsenic was detected in the sample of sludge that leaked from the filter press at 320 milligrams per kilogram (mg/kg), which exceeds the site-specific value of 7.2 mg/kg, but is consistent with historical sludge results (range of 160 to 560 mg/kg). All results of Toxicity Characteristic Leaching Procedure (TCLP) analysis on NPDES quarterly samples from the past 3 quarters, including arsenic, were below hazardous waste screening criteria (Table 2). In addition, two polyaromatic hydrocarbon (PAH) constituents, benzo(a)pyrene and dibenz(a,h)anthracene, were detected at concentrations slightly above their respective BCLs. A number of other volatile and semi-volatile organic compounds, PAHs, dioxins/furans, pesticides, metals, and salts were detected in the sludge sample; however, none were above screening criteria.

Based on the sludge analytical results, additional soil sampling is warranted to evaluate potential impacts to shallow soil in the area of the sludge release. The proposed additional sampling would include collection of shallow (less than 6 inches deep) soil samples from five locations along the path of the release (Figure 1). Additional vertical (deeper) samples will be collected concurrently. Shallow soil samples will be analyzed for the compounds detected in the sludge above screening criteria (i.e., arsenic, benzo(a)pyrene, and dibenz(a,h)anthracene). The results will be compared to each compound's respective SRG. If any reported concentrations for the shallow samples exceed a SRG, the deeper sample at that location will be analyzed to further vertically delineate the soil contamination. If all reported concentrations for the shallow samples are

below the SRGs, the deeper samples will not be analyzed. A small portion of the sludge release area overlaps with excavation control areas (ECAs) to the west/northwest of the E Hut. All work associated with the sludge release will be conducted in conformance with the SMP. The results of this investigation will be submitted to Mr. Weiquan Dong of the NDEP Bureau of Corrective Actions for review.

Future preventative action will include inspection of the filter press during dewatering prior to leaving the building.

Should you have any questions concerning this correspondence, please contact Kimberly Kuwabara at (510) 420-2525 or kkuwabara@environcorp.com. Thank you.

Sincerely,

John M. Pekala, PG
Senior Manager
Nevada CEM 2347, exp. 9/20/2014

Kimberly Kuwabara, MS
Senior Manager
Nevada CEM 2353, exp. 3/20/2015

cc. Cliff Lawson, Bureau of Water Pollution Control, NDEP
Joe Maez, Bureau of Water Pollution Control, NDEP
Greg Lovato, Bureau of Corrective Actions, NDEP
Shannon Harbour, Bureau of Corrective Actions, NDEP
James Dotchin, Bureau of Corrective Actions, NDEP
Weiquan Dong, Bureau of Corrective Actions, NDEP
Nevada Environmental Response Trust
Tanya O'Neill, Foley and Lardner LLP
Sachin Chawla, Veolia Water North America
Steve Kubacki, Veolia Water North America
Allan DeLorme, ENVIRON International Corporation

Attachments

Table 1: Select FBR Biosolids Sample Results Compared to Soil Remediation Goals (SRGs)[1]					
Constituents[2]	**Sludge Release Sample (3/22/2013)**	**2nd Quarter 2013 (04/15/2013)**	**1st Quarter 2013 (01/07/2013)**	**4th Quarter 2012 (10/01/2012)**	**SRGs**
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
VOCs					
2-Butanone	7.1	NA	NA	NA	34,092
2-Hexanone	0.045	NA	NA	NA	1,930
4-Methyl-2-pentanone	0.074	NA	NA	NA	17,196
Acetone	24	NA	NA	NA	100,000
Carbon disulfide	2	NA	NA	NA	721
Ethylbenzene	0.038	NA	NA	NA	19.6
Tetrachloroethene	0.027	NA	NA	NA	3.28
Toluene	0.033	NA	NA	NA	521
Trichloroethene	8.8J	NA	NA	NA	5.49
1,2,3-Trichloropropane	ND**	NA	NA	NA	0.106
Naphthalene	ND<0.005	NA	NA	NA	15.6
m/p xylenes	0.15	NA	NA	NA	214
o-xylene	0.043	NA	NA	NA	282
Total xylenes	0.19	NA	NA	NA	214
SVOCS					
4-methylphenol*	15	NA	NA	NA	3,420
PAHs					
Benzo(b)fluoranthene	0.31	NA	NA	NA	2.34
Anthracene	0.16	NA	NA	NA	9,060
Benzo(a)anthracene	0.073	NA	NA	NA	2.344
Benzo(a)pyrene	**0.27**	NA	NA	NA	0.234
Benzo(g,h,i)perylene	1.20	NA	NA	NA	34,100
Benzo(k)fluoranthene	0.23	NA	NA	NA	23
Chrysene	0.056J	NA	NA	NA	234
Dibenz(a,h)anthracene	**0.41**	NA	NA	NA	0.234
Fluoranthene	0.08	NA	NA	NA	24,400
Indeno(1,2,3,c,d)pyrene	0.61	NA	NA	NA	2
Phenathrene	0.07	NA	NA	NA	25
Pyrene	0.10	NA	NA	NA	19,300
Dioxins/Furans					
TCDD TEQ[3]	0.0000014	NA	NA	NA	0.0027 [a]
Pesticides					
Alpha-BHC	0.23	ND<0.074	0.17	0.29	270
Beta-BHC	0.25	ND<0.074	0.31	0.49	54
Delta-BHC	0.13	ND<0.074	0.38	0.18	270
Gamma-Chlordane	0.11	ND<0.074	0.013	0.028	No BCL
Endosulfan I	ND<0.086	75 J	ND<0.0045	ND<0.0045	4,104
Metals					
Arsenic	**320**	**160**	**560**	**440**	7.2 [a]
Barium	32.2	NA	NA	NA	100,000
Chromium	350	180	790	600	100,000
Cobalt	76.3	NA	NA	NA	337
Copper	200	120	250	220	42,200
Lead	0.450J	ND<1.2	ND<1.5	ND<1.5	800 [a]
Magnesium	1,880	NA	NA	NA	100,000
Manganese	56.1	NA	NA	NA	24,900
Molybdenum	920	590	1,800	1,900	5,680
Nickel	35	16	53	47	21,800
Selenium	86	44	110	89	5,680
Zinc	300	170	600	420	100,000
Other					
Ammonia by N	4,300	NA	NA	NA	100,000
Chloride	5,300	NA	NA	NA	No BCL
Fluoride	30	NA	NA	NA	41,000
Nitrate as N	2.5J	NA	NA	NA	100,000
Sulfate	11,000	NA	NA	NA	No BCL

Table 1: Select FBR Biosolids Sample Results Compared to Soil Remediation Goals (SRGs)[1]					
Constituents[2]	**Sludge Release Sample (3/22/2013)**	**2nd Quarter 2013 (04/15/2013)**	**1st Quarter 2013 (01/07/2013)**	**4th Quarter 2012 (10/01/2012)**	**SRGs**
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**

Notes:

The sludge spill sample was also analyzed for PCBs, hexavalent chromium, mercury, cyanide, perchlorate, and sulfide. All results were ND. Only detected results for VOCs, SVOCs, PAHs, dioxins/furans, and OCPs are provided (non-detects not shown).

NA = Not analyzed

ND = Not detected

J = The analyte was either detected at or greater than the SQL and less than the MRL, or did not meet any of the required QC criteria.

[1] SRGs consist of NDEP worker BCLs, or modified site-specific remediation goals.

[2] Detected in at least one sample. Results in bold exceed the SRGs.

[3] TEQ = Toxicity Equivalent Quantity, based on WHO 2005 TEFs for the 17 dioxin and furan congeners.

[a] Indicates a site-specific value.

* Cannot be separated from 3-methylphenol

**Laboratory reported that the VOC 1,2,3-trichloropropane was not detected, although the result was semi-quantitative.

Table 2: Historical Toxicity Characteristic Leaching Procedure (TCLP) FBR Biosolids Sample Results				
TCLP	**Sludge Spill Sample (3/22/2013)**	**2nd Quarter 2013 (04/03/2013)[a]**	**1st Quarter 2013 (01/07/2013)[a]**	**4th Quarter 2012 (10/01/2012)[a]**
	mg/L	**mg/L**	**mg/L**	**mg/L**
Arsenic	NA	0.80	ND<0.05	0.06
Barium	NA	0.02	0.03	0.05
Cadmium	NA	ND<0.01	0.01	0.05
Chromium	NA	0.02	0.03	0.04
Lead	NA	0.41	ND<0.05	ND<0.05
Selenium	NA	ND<0.05	ND<0.05	ND<0.05
Silver	NA	ND<0.05	ND<0.05	ND<0.05
Mercury	NA	ND<0.001	ND<0.002	ND<0.002

NA = Not analyzed

ND = Not detected

[a] Samples for TCLP analysis were collected separately from standard quarterly sludge samples and were analyzed by Silver State Laboratories.

ENVIRON

2200 Powell St., Suite 700, Emeryville, CA 94608

Location of Sludge Release and Proposed Soil Sampling Locations

Nevada Environmental Response Trust Site, Henderson, Nevada

Figure **1**

Drafter: EA/RS Date: 4/24/2013 Contract Number: 21-32100FA Approved by: Revised:

Path: H:\LePetomane\NERT\GIS\21321 00FA-F11\21321 00FA-F11-PropSoilMap1.mxd

eurofins | Eaton Analytical
formerly MWH Laboratories

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

Laboratory Report

for

Environ International Corp.
1702 E. Highland Ave.
Suite 412
Phoenix, AZ 85016
Attention: John M. Pekala, P.G.
Fax: 602.734.7701

Date of Issue
04/17/2013

Linda Geddes
EUROFINS EATON ANALYTICAL

LXG: Linda Geddes
Project Manager

NELAP ACCREDITED TNI LABORATORY
01114CA

Report: 429486
Project: CWA-RCRA
Group: TABLE 4 FBR SOLIDS

Laboratory certifies that the test results meet all **TNI NELAP** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Hits Reports, Comments, QC Summary, QC Report and Regulatory Forms. This report shall not be reproduced except in full, without the written approval of the laboratory.

STATE CERTIFICATION LIST

State	Certification Number	State	Certification Number
Alabama	41060	**Mississippi**	Certified
Alaska	CA00006	**Montana**	Cert 0035
Arizona	AZ0778	**Nevada**	CA00006-2012-1
Arkansas	Certified	**New Hampshire**	2959-11
California – NELAP	01114CA	**New Jersey**	CA 008
California – ELAP	1422	**New Mexico**	Certified
Colorado	Certified	**New York**	11320
Connecticut	PH-0107	**North Carolina**	06701
Delaware	CA 006	**North Dakota**	R-009
Florida	E871024	**Oregon**	CA 200003-011
Georgia	947	**Pennsylvania**	68-565
Guam	12-006r	**Rhode Island**	LAO00326
Hawaii	Certified	**South Carolina**	87016001
Idaho	Certified	**South Dakota**	Certified
Illinois	200033	**Tennessee**	TN02839
Indiana	C-CA-01	**Texas**	T104704230-12-4
Kansas	E-10268	**Utah**	Mont-1
Kentucky	90107	**Vermont**	VT0114
Louisiana	LA130008	**Virginia**	00210
Maine	CA0006	**Washington**	C383
Maryland	224	**West Virginia**	9943 C
Commonwealth of Northern Marianas Is.	MP0004	**Wisconsin**	998316660
Massachusetts	M-CA006	**Wyoming**	8TMS-L
Michigan	9906	**EPA Region 5**	Certified

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formerly MWH Laboratories

Acknowledgement of Samples Received

Addr: **Environ International Corp.**
1702 E. Highland Ave.
Suite 412
Phoenix, AZ 85016

Attn: John M. Pekala, P.G.
Phone: 602.734.7710

Client ID: ENVIRON-NVTRUST
Folder #: 429486
Project: CWA-RCRA
Sample Group: TABLE 4 FBR SOLIDS

Project Manager: Linda Geddes
Phone: (626) 386-1163

The following samples were received from you on **March 27, 2013**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using Eurofins Eaton Analytical.

Sample #	Sample ID	Sample Date
201303270294	FBR BIOLOGICAL SOLIDS	03/22/2013 1036

@PCB	@PEST	Arsenic Subbed
Cadmium Subbed	Chromium Subbed	Copper Subbed
Mercury Subbed	Molybdenum Subbed	Nickel Subbed
Percent Moisture	Selenium Subbed	Silver Subbed
Zinc Subbed	@7199	@8260EDD
@8270_SIM_Solid	@8270EDD	@8290_Solid_PM
@ANIONS BY IC_Subbed	Ammonia-N Solid_Emax	Perchlorate Solid Subbed
PH Solid Subbed	Sulfide (Subcontracted)	Total Cyanide

Test Description

@PCB -- PCBs by 8082

@PEST -- Pesticides by 8081A

@7199 -- Hexavalent Chromium

@8260EDD -- Volatile Organic Compounds by EPA 8260B

@8270EDD -- 8270

@8290_Solid_PM -- Dioxin/Furan - MDL and RL reporting

@ANIONS BY IC_Subbed -- @ANIONS BY IC_Subbed

eurofins | Eaton Analytical

CHAIN OF CUSTODY RECORD

429486 ~~429470~~ MWD 3-27-13

750 Royal Oaks Drive, Suite 100
Monrovia, CA 91016-3629
(626) 386-1100 (800) 566-5227

MWLABS USE ONLY:

LOGIN COMMENTS: _____ SAMPLES CHECKED/LOGGED IN BY: JS/JS 4 containers

TO BE COMPLETED BY SAMPLER:

BLUE ICE: FROZEN ___ / PARTIALLY FROZEN ___ THAWED ___

COMPANY / PROJECT NAME	PROJECT JOB # / P.O.#
Nevada Environmental Response Trust	

REFER TO ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes)

ANALYSES REQUIRED (mark an 'X' in all tests required for each sample line)

Sampler Signature: Steve Kabacki

John Pekala 602-734-7710

Nevada Environmental Response Trust
35 East Wacker Suite 1550
Chicago, IL 60606

TIME	DATE	LOCATION	IDENTIFIER, STATE ID#	MATRIX *	GRAB	COMP	See Attachment	SAMPLER COMMENTS
10:36 AM	3/22/2013		FBR SLUDGE				X	

Shf:
Grp: SAMPLE PREP. / S Wgt: 10.15 LBS
Date: 27Mar13
DV:
Svcs: STANDARD OVERNIGHT
TRCK: 4294 2887 7441

SHIPPING:	14.40
SPECIAL:	1.58
HANDLING:	0.00
0.00 TOTAL:	15.98

* MATRIX TYPES:

Reported by Volume:
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
RGW = Raw Ground Water
RSW = Raw Surface Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
SW = Storm Water

Reported by Weight:
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:	(STEVE KABACKI)	Steve Kabacki	Veolia Water for Nevada Environmental Response Trust	3/22/2013	12:00 PM
RECEIVED BY:		JOE Sanders	EKO	3/23/13	14:14
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# _____

PAGE 1 of 1

Analytical Parameters for FBR SLUDGE Sample

Metals by EPA Methods 6010 and 6020
Mercury by EPA Method 7470/7471A
Hexavalent chromium by EPA Method 7196A or 7199/3060A
Cyanide by EPA Method 9012
Perchlorate by EPA Method 314.0 or 6850
VOC's by EPA Method 8260
SVOC's (incl. Hexachlolobenze and Benzo(a)Pyrene) by EPA Method 8270
PAHs by EPA Method 8310 or 8270
Dioxins/Furans by EPA Method 8290
PCBs by EPA Method 8082
OCPs by EPA Method 8081A
pH by EPA Method 9045
Inorganic Anions (bromide, chloride, Fluoride, nitrate as nitrate, sulfate, nitrite as N, nitrate as N, and orthophosphate as phosphate) by EPA Method 9056
Sulfide by EPA Method 9034

From: (702) 566-6001
Russell Speckin
Veolia Water NA West LLC
510 Fourth St.

Henderson, NV 89015

Origin ID: LASA

FedEx Express

J13111302120326

Ship Date: 22MAR13
ActWgt: 9.0 LB
CAD: 5135271/INET3370

Delivery Address Bar Code

SHIP TO: (626) 568-6400

BILL SENDER

Linda Geddes
Eurofins Eaton Analytical
750 ROYAL OAKS DR
STE 100
MONROVIA, CA 91016

Ref # FBR SLUDGE
Invoice #
PO #
Dept #

SATURDAY 12:00P
PRIORITY OVERNIGHT

TRK# 7993 4989 8082
0201

X0 WHPA

91016
CA-US
BUR

518G2/DCF8/93AB

April 17, 2013

John M. Pekala, P.G.
Environ International Corp.
1702 E. Highland Ave.
Suite 412
Phoenix, AZ 85016

Sample receipt: The samples arrived at Eurofins Eaton Analytical, Monrovia, CA 91016 on March 27, 2013 with proper chain of custody. All containers were received without any visible signs of tampering or breakage at proper temperature. Samples are identified on the acknowledgement, which is part of the report package, along with the chain of custody.

Case Narrative:
For the Eurofins Eaton Analytical data the following issues were observed:

Report revised to include J flags, corrected 8290 results as well as changing units for benzo(b)fluoranthene and correcting the hexavalent chromium data. The original hexavalent chromium data was a spike result, not the sample result.

LXG 04/17/13

Other Observations:

There were no other observations on this sample set.

Sincerely,

Linda Geddes
Project Manager

eurofins | Eaton Analytical
formerly MWH Laboratories

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

Environ International Corp.
John M. Pekala, P.G.
1702 E. Highland Ave.
Suite 412
Phoenix, AZ 85016

Folder Comments

Analytical results for PCDDs and PCDFs by 8290 are submitted by Pace Analytical Services, Minneapolis, MN
Analytical results for Metals, Moisture, 8260, 8270 SIM, 8270, Anions, Metals, Perchlorate, Sulfide and Cyanide are submitted by Emax Laboratories, Inc. Torrance, CA
- 2-Butanone, Acetone and Carbon Disulfide in 8260 was analyzed on 4/1/13 with a 45 fold dilution

Report revised to include J flags, corrected 8290 results as well as changing units for benzo(b)fluoranthene and correcting the hexavalent chromium data. The original hexavalent chromium data was a spike result, not the sample result.

LXG 04/17/13

The Comments Report may be blank if there are no comments for this report.

eurofins | Eaton Analytical
formerly MWH Laboratories

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

Laboratory Data
Report: 429486

Environ International Corp.
John M. Pekala, P.G.
1702 E. Highland Ave.
Suite 412
Phoenix, AZ 85016

Samples Received on:
03/27/2013

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MDL	MRL	SQL	Dilution
FBR BIOLOGICAL SOLIDS (201303270294)								**Sampled on 03/22/2013 1036**		
			SM 4500-S-2 F - Sulfide Subcontracted							
	03/29/2013	17:03	(SM 4500-S-2 F)	Sulfide (Subcontracted)	ND	mg/kg	1.0	43	1.0	1
			EPA 8260 - Volatile Organic Compounds by EPA 8260B							
3/29/2013	03/29/2013	13:56	(EPA 8260)	1,1,1-Trichloroethane	ND	ug/kg		20		1
3/29/2013	03/29/2013	13:56	(EPA 8260)	1,1,2,2-Tetrachloroethane	ND	ug/kg		20		1
3/29/2013	03/29/2013	13:56	(EPA 8260)	1,1,2-Trichloroethane	ND	ug/kg		20		1
3/29/2013	03/29/2013	13:56	(EPA 8260)	1,1-Dichloroethane	ND	ug/kg		20		1
3/29/2013	03/29/2013	13:56	(EPA 8260)	1,1-Dichloroethene	ND	ug/kg		20		1
3/29/2013	03/29/2013	13:56	(EPA 8260)	1,2-Dichloroethane	ND	ug/kg		20		1
3/29/2013	03/29/2013	13:56	(EPA 8260)	1,2-Dichloropropane	ND	ug/kg		20		1
3/29/2013	03/29/2013	13:56	(EPA 8260)	2-Butanone (MEK)	7100	ug/kg		1899		45
3/29/2013	03/29/2013	13:56	(EPA 8260)	2-Hexanone	45	ug/kg		41		1
3/29/2013	03/29/2013	13:56	(EPA 8260)	4-methyl-2-Pentanone	74	ug/kg		41		1
3/29/2013	03/29/2013	13:56	(EPA 8260)	Acetone	24000	ug/kg		1899		45
3/29/2013	03/29/2013	13:56	(EPA 8260)	Benzene	ND	ug/kg		20		1
3/29/2013	03/29/2013	13:56	(EPA 8260)	Bromodichloromethane	ND	ug/kg		20		1
3/29/2013	03/29/2013	13:56	(EPA 8260)	Bromoform	ND	ug/kg		20		1
3/29/2013	03/29/2013	13:56	(EPA 8260)	Bromomethane	ND	ug/kg		41		1
3/29/2013	03/29/2013	13:56	(EPA 8260)	Carbon disulfide	2000	ug/kg		968		45
3/29/2013	03/29/2013	13:56	(EPA 8260)	Carbon Tetrachloride	ND	ug/kg		20		1
3/29/2013	03/29/2013	13:56	(EPA 8260)	Chlorobenzene	ND	ug/kg		20		1
3/29/2013	03/29/2013	13:56	(EPA 8260)	Chloroethane	ND	ug/kg		20		1
3/29/2013	03/29/2013	13:56	(EPA 8260)	Chloroform	ND	ug/kg		20		1
3/29/2013	03/29/2013	13:56	(EPA 8260)	Chloromethane	ND	ug/kg		41		1
3/29/2013	03/29/2013	13:56	(EPA 8260)	cis-1,2-Dichloroethene	ND	ug/kg		20		1
3/29/2013	03/29/2013	13:56	(EPA 8260)	cis-1,3-Dichloropropene	ND	ug/kg		20		1
3/29/2013	03/29/2013	13:56	(EPA 8260)	Dibromochloromethane	ND	ug/kg		20		1
3/29/2013	03/29/2013	13:56	(EPA 8260)	Ethylbenzene	38	ug/kg		20		1
3/29/2013	03/29/2013	13:56	(EPA 8260)	m,p-Xylenes	150	ug/kg		41		1
3/29/2013	03/29/2013	13:56	(EPA 8260)	Methyl Tert-butyl ether (MTBE)	ND	ug/kg		20		1
3/29/2013	03/29/2013	13:56	(EPA 8260)	Methylene chloride	ND	ug/kg		41		1
3/29/2013	03/29/2013	13:56	(EPA 8260)	o-Xylene	43	ug/kg		20		1
3/29/2013	03/29/2013	13:56	(EPA 8260)	Styrene	ND	ug/kg		20		1
3/29/2013	03/29/2013	13:56	(EPA 8260)	Tetrachloroethene	27	ug/kg		20		1

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Laboratory Data
Report: 429486

Environ International Corp.
John M. Pekala, P.G.
1702 E. Highland Ave.
Suite 412
Phoenix, AZ 85016

Samples Received on:
03/27/2013

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MDL	MRL	SQL	Dilution
3/29/2013	03/29/2013 13:56		(EPA 8260)	Toluene	33	ug/kg		20		1
3/29/2013	03/29/2013 13:56		(EPA 8260)	Total xylenes	190	ug/kg		41		1
3/29/2013	03/29/2013 13:56		(EPA 8260)	trans-1,2-Dichloroethene	ND	ug/kg		20		1
3/29/2013	03/29/2013 13:56		(EPA 8260)	trans-1,3-Dichloropropene	ND	ug/kg		20		1
3/29/2013	03/29/2013 13:56		(EPA 8260)	Trichloroethene	8.8J	ug/kg		20		1
3/29/2013	03/29/2013 13:56		(EPA 8260)	Vinyl chloride	ND	ug/kg		20		1
3/29/2013	03/29/2013 13:56		(EPA 8260)	1,2-Dichloroethane-d4	96	%				1
3/29/2013	03/29/2013 13:56		(EPA 8260)	4-Bromofluorobenzene	145	%				1
3/29/2013	03/29/2013 13:56		(EPA 8260)	Toluene-d8	120	%				1
	EPA 8270C - 8270									
3/29/2013	03/30/2013 13:26		(EPA 8270C)	1,2,4-Trichlorobenzene	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	1,2-Dichlorobenzene	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	1,3-Dichlorobenzene	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	1,4-Dichlorobenzene	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	2,4,5-Trichlorophenol	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	2,4,6-Trichlorophenol	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	2,4-Dichlorophenol	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	2,4-Dimethylphenol	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	2,4-Dinitrophenol	ND	ug/kg	5.0	8500	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	2,4-Dinitrotoluene	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	2,6-Dinitrotoluene	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	2-chloronaphthalene	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	2-chlorophenol	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	2-methylnaphthalene	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	2-methylphenol	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	2-nitroaniline	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	2-nitrophenol	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	3,3-Dichlorobenzidine	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	3-nitroaniline	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	4,6-Dinitro-2-methylphenol	ND	ug/kg	5.0	8500	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	4-Bromophenylphenylether	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	4-Chloro-3-methylphenol	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	4-Chloroaniline	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	4-Chlorophenylphenylether	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	4-methylphenol	15000	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	4-Nitroaniline	ND	ug/kg	5.0	4267	15	3

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3/29/2013	03/30/2013 13:26		(EPA 8270C)	4-Nitrophenol	ND	ug/kg	5.0	8500	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	acenaphthene	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	acenaphthylene	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	anthracene	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	benzo(a)anthracene	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	benzo(a)pyrene	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	benzo(b)fluoranthene	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	benzo(ghi)perylene	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	benzo(k)fluoranthene	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	bis(2-Chloroethoxy)methane	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	bis(2-chloroethyl)ether	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	bis(2-Chloroisopropyl)ether	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	bis(2-ethylhexyl)phthalate	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	Butylbenzylphthalate	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	Chrysene	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	dibenzo(a.h)anthracene	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	dibenzofuran	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	Diethylphthalate	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	Dimethylphthalate	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	Di-N-butylphthalate	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	Di-N-octylphthalate	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	Fluoranthene	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	Fluorene	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	Hexachlorobenzene	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	Hexachlorobutadiene	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	Hexachlorocyclopentadiene	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	Hexachloroethane	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	Indeno(1,2,3,c,d)Pyrene	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	Isophorone	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	Naphthalene	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	Nitrobenzene	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	N-nitroso-di-n-propylamine	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	N-nitroso-diphenylamine	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	pentachlorophenol	ND	ug/kg	5.0	8500	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	Phenanthrene	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	Phenol	ND	ug/kg	5.0	4300	15	3

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Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MDL	MRL	SQL	Dilution
3/29/2013	03/30/2013 13:26		(EPA 8270C)	Pyrene	ND	ug/kg	5.0	4300	15	3
3/29/2013	03/30/2013 13:26		(EPA 8270C)	2,4,6-Tribromophenol	64	%				1
3/29/2013	03/30/2013 13:26		(EPA 8270C)	2-Fluorobiphenyl	44	%				1
3/29/2013	03/30/2013 13:26		(EPA 8270C)	2-Fluorophenol	34	%				1
3/29/2013	03/30/2013 13:26		(EPA 8270C)	Nitrobenzene-d5	44	%				1
3/29/2013	03/30/2013 13:26		(EPA 8270C)	Phenol-d5	41	%				1
3/29/2013	03/30/2013 13:26		(EPA 8270C)	Terphenyl-d14	71	%				1
	EPA 8081A - Pesticides by 8081A									
	04/02/2013 05:45		(EPA 8081A)	4,4-DDD	ND	ug/kg		170		10
	04/02/2013 05:45		(EPA 8081A)	4,4-DDE	ND	ug/kg		170		10
	04/02/2013 05:45		(EPA 8081A)	4,4-DDT	ND	ug/kg		170		10
	04/02/2013 05:45		(EPA 8081A)	Aldrin	ND	ug/kg		86		10
	04/02/2013 05:45		(EPA 8081A)	Alpha-BHC	230	ug/kg		86		10
	04/02/2013 05:45		(EPA 8081A)	Alpha-Chlordane	ND	ug/kg		86		10
	04/02/2013 05:45		(EPA 8081A)	Beta-BHC	250	ug/kg		86		10
	04/02/2013 05:45		(EPA 8081A)	Delta-BHC	130	ug/kg		86		10
	04/02/2013 05:45		(EPA 8081A)	Dieldrin	ND	ug/kg		170		10
	04/02/2013 05:45		(EPA 8081A)	Endosulfan I	ND	ug/kg		86		10
	04/02/2013 05:45		(EPA 8081A)	Endosulfan II	ND	ug/kg		170		10
	04/02/2013 05:45		(EPA 8081A)	Endosulfan sulfate	ND	ug/kg		170		10
	04/02/2013 05:45		(EPA 8081A)	Endrin	ND	ug/kg		170		10
	04/02/2013 05:45		(EPA 8081A)	Endrin Aldehyde	ND	ug/kg		170		10
	04/02/2013 05:45		(EPA 8081A)	Endrin Ketone	ND	ug/kg		170		10
	04/02/2013 05:45		(EPA 8081A)	Gamma-BHC	ND	ug/kg		86		10
	04/02/2013 05:45		(EPA 8081A)	Gamma-Chlordane	110	ug/kg		86		10
	04/02/2013 05:45		(EPA 8081A)	Heptachlor	ND	ug/kg		86		10
	04/02/2013 05:45		(EPA 8081A)	Heptachlor Epoxide	ND	ug/kg		86		10
	04/02/2013 05:45		(EPA 8081A)	Methoxychlor	ND	ug/kg		860		10
	04/02/2013 05:45		(EPA 8081A)	Toxaphene	ND	ug/kg		2200		10
	04/02/2013 05:45		(EPA 8081A)	Decachlorobiphenyl	50	%				1
	04/02/2013 05:45		(EPA 8081A)	Tetrachloro-m-xylene	124	%				1
	EPA 6010 - Arsenic Subbed									
	04/02/2013 16:25		(EPA 6010)	Arsenic Subbed	320	mg/kg	2.2	0.46	2.0	1
	EPA 6010 - Cadmium Subbed									
	04/02/2013 16:25		(EPA 6010)	Cadmium Subbed	ND	mg/kg	0.55	0.46	0.50	1

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			EPA 6010 - Chromium Subbed							
	04/02/2013 16:25		(EPA 6010)	Chromium Subbed	350	mg/kg	1.1	0.46	1.0	1
			EPA 6010 - Copper Subbed							
	04/02/2013 16:25		(EPA 6010)	Copper Subbed	200	mg/kg	1.1	0.46	1.0	1
			EPA 6010 - Molybdenum Subbed							
	04/02/2013 16:25		(EPA 6010)	Molybdenum Subbed	920	mg/kg	2.8	0.46	2.6	1
			EPA 6010 - Nickel Subbed							
	04/02/2013 16:25		(EPA 6010)	Nickel Subbed	35	mg/kg	1.1	0.46	1.0	1
			EPA 6010 - Selenium Subbed							
	04/02/2013 16:25		(EPA 6010)	Selenium Subbed	86	mg/kg	2.8	0.46	2.6	1
			EPA 6010 - Silver Subbed							
	04/02/2013 16:25		(EPA 6010)	Silver Subbed	ND	mg/kg	1.4	0.49	1.4	1
			EPA 6010 - Zinc Subbed							
	04/02/2013 16:25		(EPA 6010)	Zinc Subbed	300	mg/kg	2.8	1.8	2.6	1
			EPA 7471A - Mercury Subbed							
	04/03/2013 16:37		(EPA 7471A)	Mercury Subbed	ND	mg/kg	0.19	2.1	0.93	5
			Misc subcontracted work - Percent Moisture							
	04/02/2013 16:25		(Misc subcontracted work)	Percent Moisture	77	%	1.0			1
			EPA 7199 - Hexavalent Chromium							
	04/02/2013 15:53		(EPA 7199)	@7199	ND	mg/kg		768		100
			EPA 9014 - Total Cyanide Solid Subbed							
	04/01/2013 18:56		(EPA 9014)	Total Cyanide	ND	mg/kg		4.3		1
			9045C - PH Solid							
	03/28/2013 13:42		(9045C)	pH	5.86	pH				1
			EPA 8082 - PCBs by 8082							
	04/01/2013 11:38		(EPA 8082)	PCB 1016	ND	ug/kg	20	220	20	1
	04/01/2013 11:38		(EPA 8082)	PCB 1016 Aroclor	ND	ug/kg	20	220	20	1
	04/01/2013 11:38		(EPA 8082)	PCB 1221 Aroclor	ND	ug/kg	20	220	20	1
	04/01/2013 11:38		(EPA 8082)	PCB 1232 Aroclor	ND	ug/kg	20	220	20	1
	04/01/2013 11:38		(EPA 8082)	PCB 1242 Aroclor	ND	ug/kg	20	220	20	1
	04/01/2013 11:38		(EPA 8082)	PCB 1248 Aroclor	ND	ug/kg	20	220	20	1
	04/01/2013 11:38		(EPA 8082)	PCB 1254 Aroclor	ND	ug/kg	20	220	20	1

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	04/01/2013 11:38		(EPA 8082)	PCB 1260 Aroclor	ND	ug/kg	20	220	20	1
	04/01/2013 11:38		(EPA 8082)	Decachlorobiphenyl	96	%				1
	04/01/2013 11:38		(EPA 8082)	Tetrachlorometaxylene	115	%				1
	EPA8290 - Dioxin/Furan - MDL and RL reporting									
	04/02/2013 14:10		(EPA8290)	1,2,3,4,6,7,8-HpCDD	ND	ng/kg	1.0	5	1.0	1
	04/02/2013 14:10		(EPA8290)	1,2,3,4,6,7,8-HpCDF	6.9	ng/kg	0.64	5	0.64	1
	04/02/2013 14:10		(EPA8290)	1,2,3,4,7,8,9-HpCDF	2.7J	ng/kg	0.65	5	0.65	1
	04/02/2013 14:10		(EPA8290)	1,2,3,4,7,8-HxCDD	ND	ng/kg	0.83	5	0.83	1
	04/02/2013 14:10		(EPA8290)	1,2,3,4,7,8-HxCDF	2.4J	ng/kg	0.34	5	0.34	1
	04/02/2013 14:10		(EPA8290)	1,2,3,6,7,8-HxCDD	ND	ng/kg	0.56	5	0.56	1
	04/02/2013 14:10		(EPA8290)	1,2,3,6,7,8-HxCDF	1.6J	ng/kg	0.48	5	0.48	1
	04/02/2013 14:10		(EPA8290)	1,2,3,7,8,9-HxCDD	ND	ng/kg	0.58	5	0.58	1
	04/02/2013 14:10		(EPA8290)	1,2,3,7,8,9-HxCDF	ND	ng/kg	0.79	5	0.79	1
	04/02/2013 14:10		(EPA8290)	1,2,3,7,8-PeCDD	ND	ng/kg	0.32	5	0.32	1
	04/02/2013 14:10		(EPA8290)	1,2,3,7,8-PeCDF	1.6J	ng/kg	0.64	5	0.64	1
	04/02/2013 14:10		(EPA8290)	2,3,4,6,7,8-HxCDF	0.79J	ng/kg	0.51	5	0.51	1
	04/02/2013 14:10		(EPA8290)	2,3,4,7,8-PeCDF	1.1J	ng/kg	0.47	5	0.47	1
	04/02/2013 14:10		(EPA8290)	2,3,7,8-TCDD	ND	ng/kg	0.49	1	0.49	1
	04/02/2013 14:10		(EPA8290)	2,3,7,8-TCDF	1.6	ng/kg	0.31	1	0.31	1
	04/02/2013 14:10		(EPA8290)	OCDD	4.5J	ng/kg	1.6	10	1.6	1
	04/02/2013 14:10		(EPA8290)	OCDF	60	ng/kg	1.9	10	1.9	1
	04/02/2013 14:10		(EPA8290)	Total HpCDD	2.0J	ng/kg	1.0	5	1.0	1
	04/02/2013 14:10		(EPA8290)	Total HpCDF	11	ng/kg	0.65	5	0.65	1
	04/02/2013 14:10		(EPA8290)	Total HxCDD	ND	ng/kg	0.83	5	0.83	1
	04/02/2013 14:10		(EPA8290)	Total HxCDF	9.8	ng/kg	0.79	5	0.79	1
	04/02/2013 14:10		(EPA8290)	Total PeCDD	0.64J	ng/kg	0.32	5	0.32	1
	04/02/2013 14:10		(EPA8290)	Total PeCDF	13	ng/kg	0.64	5	0.64	1
	04/02/2013 14:10		(EPA8290)	Total TCDD	ND	ng/kg	0.49	1	0.49	1
	04/02/2013 14:10		(EPA8290)	Total TCDF	23	ng/kg	0.31	1	0.31	1
	EPA8270 -									
	03/30/2013 01:21		(EPA8270)	acenaphthylene	ND	ug/kg	2.5	65	7.5	3
	03/30/2013 01:21		(EPA8270)	Acenapthene	ND	ug/kg	2.5	65	7.5	3
	03/30/2013 01:21		(EPA8270)	anthracene	160	ug/kg	2.5	65	7.5	3
	03/30/2013 01:21		(EPA8270)	benzo(a)anthracene	73	ug/kg	2.5	65	7.5	3
	03/30/2013 01:21		(EPA8270)	benzo(a)pyrene	270	ug/kg	2.5	65	7.5	3
	03/30/2013 01:21		(EPA8270)	benzo(b)fluoranthene	310	ug/kg	2.5	65	7.5	3

Sample Quantitation Limit (SQL) = MDL * Dilution Factor.
Rounding on totals after summation.
(c) - Indicates calculated results.
J - The analyte was either detected at or greater than the SQL and less than the MRL, or did not meet any one of the required QC criteria.

eurofins | Eaton Analytical
formerly MWH Laboratories

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

Laboratory Data
Report: 429486

Environ International Corp.
John M. Pekala, P.G.
1702 E. Highland Ave.
Suite 412
Phoenix, AZ 85016

Samples Received on:
03/27/2013

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MDL	MRL	SQL	Dilution
	03/30/2013 01:21		(EPA8270)	Benzo(g,h,i)perylene	1200	ug/kg	2.5	65	7.5	3
	03/30/2013 01:21		(EPA8270)	benzo(k)fluoranthene	230	ug/kg	2.5	65	7.5	3
	03/30/2013 01:21		(EPA8270)	chrysene	56J	ug/kg	2.5	65	7.5	3
	03/30/2013 01:21		(EPA8270)	Dibenz(a,h)Anthracene	410	ug/kg	2.5	65	7.5	3
	03/30/2013 01:21		(EPA8270)	fluoranthene	82	ug/kg	2.5	65	7.5	3
	03/30/2013 01:21		(EPA8270)	fluorene	ND	ug/kg	2.5	65	7.5	3
	03/30/2013 01:21		(EPA8270)	Indeno(1,2,3,c,d)Pyrene	610	ug/kg	2.5	65	7.5	3
	03/30/2013 01:21		(EPA8270)	naphthalene	ND	ug/kg	2.5	65	7.5	3
	03/30/2013 01:21		(EPA8270)	phenanthrene	67	ug/kg	2.5	65	7.5	3
	03/30/2013 01:21		(EPA8270)	pyrene	98	ug/kg	2.5	65	7.5	3
	03/30/2013 01:21		(EPA8270)	Terphenyl-d14	65	%				1
	SM 4500 NH3 F - Ammonia-N Solid_Emax									
	04/02/2013 19:40		(SM 4500 NH3 F)	Ammonia by N	4300	mg/kg	2.6	948	570	220
	6850 - Perchlorate Solid Subbed									
	04/02/2013 12:47		(6850)	Perchlorate	ND	ug/kg	4.3	8.6	4.3	1
	9056 - @ANIONS BY IC_Subbed									
	04/02/2013 15:54		(9056)	Bromide	ND	mg/kg	11	22	11	1
	04/02/2013 15:54		(9056)	Chloride	5300	mg/kg	4.3	431	220	50
	04/02/2013 15:54		(9056)	Fluoride	30	mg/kg	2.2	4.3	2.2	1
	04/02/2013 15:54		(9056)	Nitrate-N	2.5J	mg/kg	2.2	4.3	2.2	1
	04/02/2013 15:54		(9056)	Nitrite-N	ND	mg/kg	2.2	4.3	2.2	1
	04/02/2013 15:54		(9056)	Orthophosphate-P	ND	mg/kg	11	22	11	1
	04/02/2013 15:54		(9056)	Sulfate	11000	mg/kg	11	22	11	1

Sample Quantitation Limit (SQL) = MDL * Dilution Factor.
Rounding on totals after summation.
(c) - Indicates calculated results.
J - The analyte was either detected at or greater than the SQL and less than the MRL, or did not meet any one of the required QC criteria.

Tel:
Fax:

QC Ref # -

Analysis Date:

Analyzed by:

eurofins | Eaton Analytical
formerly MWH Laboratories

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

Laboratory QC
Report: 429486

Environ International Corp.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%

QC Ref# - by **Analysis Date:**

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
(I) - Indicates internal standard compound.

TABLE OF CONTENTS

CLIENT: **EUROFINS EATON ANALYTICAL**

PROJECT: **429486**

SDG: **13C207**

** - Not Requested

LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 04-05-2013
EMAX Batch No.: 13C207

Attn: Jackie Contreras

Eurofins Eaton Analytical
750 Royal Oaks Dr., Suite 100
Monrovia, CA 91016-3629

Subject: Laboratory Report
Project: 429486

Enclosed is the Laboratory report for samples received on 03/28/13.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
FBR SLUDGE	C207-01	03/22/13	SOIL	PAH BY 8270C SIM
				ORTHO-PHOSPHATE-P
				PH
				ANIONS BY IC
				TOTAL SULFIDE BY STD METHOD
				AMMONIA-N BY SM4500-NH3 F
				PERCHLORATE BY 6850
				TOTAL CYANIDE
				CHROMIUM HEXAVALENT
				TOTAL METALS BY ICP-MS
				MERCURY
				VOLATILE ORGANICS BY GC/MS
				SEMIVOLATILE ORGANICS BY GCMS
				POLYCHLORINATED BIPHENYLS (PCBS)
				PESTICIDES ORGANOCHLORINE

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning
these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

eurofins | Eaton Analytical

CHAIN OF CUSTODY RECORD 13C207 429486

750 Royal Oaks Drive, Suite 100
Monrovia, CA 91016-3629

Phone: 626 386 1100
Fax: 626 386 1101

800 566 LABS (800 566 5227)

Website: www.EatonAnalytical.com

EUROFINS EATON ANALYTICAL USE ONLY:

LOGIN COMMENTS: _____

SAMPLES CHECKED AGAINST COC BY: _____

SAMPLES LOGGED IN BY: _____

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

SAMPLE TEMP RECEIVED AT:

☐ Colton / No. California / Arizona _____ ℃ (Compliance: 4 ± 2 ℃)

☐ Monrovia _____ ℃ (Compliance: 4 ± 2 ℃)

CONDITION OF BLUE ICE: Frozen _____ Partially Frozen _____ Thawed _____ Wet Ice _____ No Ice _____

METHOD OF SHIPMENT: Pick-Up / Walk-In / FedEx / UPS / DHL / Area Fast / Top Line / Other: _____

TO BE COMPLETED BY SAMPLER:

COMPANY/AGENCY NAME:	**PROJECT CODE:**
EEA CLIENT CODE: / **COC ID:**	**SAMPLE GROUP:**

TAT requested: rush by adv notice only STD ___ 1 wk ___ 3 day ___ 2 day ___ 1 day ___

COMPLIANCE SAMPLES ☐ (check for yes) - Requires state forms ☐

NON-COMPLIANCE SAMPLES ☐ (check for yes)

REGULATION INVOLVED: _____

Type of samples (circle one): **ROUTINE SPECIAL CONFIRMATION** (eg. SDWA, Phase V, NPDES, FDA....)

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), *OR*

list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

	SAMPLE DATE	SAMPLE TIME	SAMPLE ID	CLIENT LAB ID	MATRIX *	FIELD DATA	FIELD DATA	SAMPLER COMMENTS
1	3/22/13	@ 10:36 AM	FBR Sludge (sample goes to EMAX					see attachment for test lists

* **MATRIX TYPES:** **RSW** = Raw Surface Water; **RGW** = Raw Ground Water; **CFW** = Chlor(am)inated Finished Water; **FW** = Other Finished Water; **SEAW** = Sea Water; **WW** = Waste Water; **BW** = Bottled Water; **SW** = Storm Water; **SO** = Soil; **SL** = Sludge; **O** = Other - Please Identify

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
SAMPLED BY:					
RELINQUISHED BY:	[signature]	Jaclyn Contreras	Eurofins Eaton Analytical	3/27/13	15:20
RECEIVED BY:	[signature]	Cecilia Chavez	EMAX	3/28/13	09:15
RELINQUISHED BY:					
RECEIVED BY:					

temp 4.5°

PAGE ___ OF ___

SAMPLE RECEIPT FORM 1

EMAX LABORATORIES, INC.

Type of Delivery	Airbill / Tracking Number	ECN 136207
☒ Fedex ☐ UPS ☐ GSO ☐ Others	429425877441	Recipient Olivarez
☐ EMAX Courier ☐ Client Delivery		Date 3/28/13 Time 09:15

COC Inspection

☒ Client Name	☐ Client PM/FC	☐ Sampler Name	☒ Sampling Date/Time/Location	☐ Sample ID	☐ Matrix
☒ Address	☐ Tel # / Fax #	☐ Courier Signature	☒ Analysis Required	☐ Preservative (if any)	☒ TAT
Safety Issues (if any)	☐ High concentrations expected		☐ Superfund Site samples	☐ Rad screening required	

Comments:

Packaging Inspection

Container	☒ Cooler	☐ Box	☐ Other		
Condition	☒ Custody Seal	☒ Intact	☐ Damaged	☒ Sufficient	☐
Packaging	☐ Bubble Pack	☐ Styrofoam	☐ Popcorn		
Temperatures (Cool, =6 °C but not frozen)	☒ Cooler 1 4.5 °C	☐ Cooler 2_____ °C	☐ Cooler 3_____ °C	☐ Cooler 4_____ °C	☐ Cooler 5_____ °C
	☐ Cooler 6_____ °C	☐ Cooler 7_____ °C	☐ Cooler 8_____ °C	☐ Cooler 9_____ °C	☐ Cooler 10_____ °C
Thermometer:	A - S/N 101541371	B - S/N 101541382	C - S/N 122091701	D - S/N 122091758	

Comments: ☐ Temperature is out of range. PM was informed IMMEDIATELY.

Note: pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.

DISCREPANCIES

LSID	LSCID	Description Code	Sample Label ID / Information	Corrective Action Code

RLS

☐ Continue to next page.

REVIEWS

Sample Labeling _____ Date 3/27/13 3/27/13

SRF _____ Date 3/28/13

PM RLS Date 3/28/13

LEGEND:

Code	Description- Sample Management
A1	Analysis is not indicated in COC.
A2	Analysis is not indicated in label.
A3	Analysis is inconsistent in COC vis-à-vis label.
B1	Sample ID is not indicated in COC.
B2	Sample ID is not indicated in label.
B3	Sample ID is inconsistent in COC vis-à-vis label.
C1	Improper container
C2	Broken container
C3	Leaking container
D1	Date and/or time is not indicated in COC.
D2	Date and/or time is not indicated in label.
D3	Date and/or time is inconsistent in COC vis-à-vis label.
F1	Improper preservation
F2	Insufficient Sample
F3	Bubble is > 6mm. Use vial with smallest bubble first.
F4	Bubble is > 6mm in all vials.
F5	>20 % solid particle
F6	Out of Holding Time

Code	Description-Sample Management
G1	Sample indicated in COC is not received.
G2	MS/MSD is not indicated in COC.
G3	No identified trip blank, proceed as indicated in COC.
G4	Trip Blank is designated in SDG _____
G5	Trip Blank has no sampling date & time. Log-in with earliest sampling date and 0:00 time.
H1	Limited Volume

Code	Description-Project Management
R1	Hold sample(s); wait for further instructions
R2	Proceed as indicated in COC and inform client.
R3	Refer to attached instruction
R4	Cancel the analysis
R5	Inform client.
R6	Proceed as indicated in COC

Richard Beauvil

From: Jaclyn Contreras [JaclynContreras@eurofinsUS.com]
Sent: Friday, March 29, 2013 8:36 AM
To: Richard Beauvil
Cc: Linda Geddes; #us20_subcontract
Subject: RE: 13C207 sample receipt forms for your review

Hi Richard
At this time, please use the coc that was submitted with the sample. I have to work on some things on our end for this order so the normal sub coc isn't going to work. Please go with PO 99-22842 and EEA folder # 429486.
thanks

From: Richard Beauvil [mailto:RBeauvil@emaxlabs.com]
Sent: Thursday, March 28, 2013 6:42 PM
To: Jaclyn Contreras
Cc: Linda Geddes; #us20_subcontract
Subject: 13C207 sample receipt forms for your review

Hi Jackie,

Please find attached the login for your review. Please send me the sub COC at your earliest convenience.

Thank you.

Richard M. Beauvil
Project Manager/Safety Officer
1835 W. 205th Street
Torrance, CA 90501
Tel: 310-618-8889 X118
rbeauvil@emaxlabs.com

Jaclyn Contreras

From: Richard Beauvil [RBeauvil@emaxlabs.com]
Sent: Wednesday, March 27, 2013 12:38 PM
To: Jaclyn Contreras
Cc: Linda Geddes
Subject: RE: FBR Sludge sample?

Hi Jackie,

We are pretty busy right now. With all these tests,lets shoot for 5 days TAT.

Richard M. Beauvil
Project Manager/Safety Officer
1835 W. 205th Street
Torrance, CA 90501
Tel: 310-618-8889 X118
rbeauvil@emaxlabs.com

-----Original Message-----
From: Jaclyn Contreras [mailto:JaclynContreras@eurofinsus.com]
Sent: Wednesday, March 27, 2013 12:30 PM
To: Richard Beauvil
Cc: Linda Geddes
Subject: FW: FBR Sludge sample?

The client gave us this list as metals by 6010 or 6020. With the list you gave me we should go with 6020 plus the suite of testing we have been discussing. The sample is here and we will ship out today but I need to know how fast you can report. Please confirm. Jackie

Arsenic
Barium
Cadmium
Chromium
Cobalt
Copper
Lead
Magnesium
Manganese
Mercury
Molybdenum
Nickel
Selenium
Silver
Zinc

6020 only

From: Richard Beauvil [mailto:RBeauvil@emaxlabs.com]
Sent: Wednesday, March 27, 2013 9:24 AM
To: Jaclyn Contreras; Linda Geddes
Subject: RE: FBR Sludge sample?

Hi Jackie,

Here's the 8270 standard list. For the metals, I assumed you needed the CAM 17 metal list. Here's a longer list of metals by 6010 and 6020 methods.

Richard M. Beauvil
Project Manager/Safety Officer
1835 W. 205th Street
Torrance, CA 90501
Tel: 310-618-8889 X118
rbeauvil@emaxlabs.com

-----Original Message-----
From: Jaclyn Contreras [mailto:JaclynContreras@eurofinsus.com]
Sent: Wednesday, March 27, 2013 8:45 AM
To: Linda Geddes; Richard Beauvil
Subject: RE: FBR Sludge sample?

Hi Richard
We still need to know if Iron is reported by 6010 plus I still need your standard list for 8270. Is hexachlolobenze and Benzo(a)pyrene included in your standard 8270?

From: Linda Geddes
Sent: Tuesday, March 26, 2013 4:36 PM
To: Richard Beauvil; Jaclyn Contreras
Subject: RE: FBR Sludge sample?

Yes, as long as you have a method reference that is acceptable to regulators.

Linda

Eurofins Eaton Analytical

Please update your address book. The old email is no longer working:
lindageddes@eurofinsUS.com

Linda Geddes
Analytical Services Manager

Phone: +1 626 386 1163

Website: www.EatonAnalytical.com

From: Richard Beauvil [mailto:RBeauvil@emaxlabs.com]
Sent: Tuesday, March 26, 2013 4:34 PM
To: Linda Geddes; Jaclyn Contreras
Subject: RE: FBR Sludge sample?

Hi Linda,

Yes, we can do Ammonia and Phosphate. A lot of these EPA methods are being phased out. Would your client mind for us to use the Standard Method Equivalent. FYI, see attached.

Thank you.

Richard M. Beauvil
Project Manager/Safety Officer
1835 W. 205th Street
Torrance, CA 90501
Tel: 310-618-8889 X118
rbeauvil@emaxlabs.com

-----Original Message-----
From: Linda Geddes [mailto:LindaGeddes@eurofinsUS.com]
Sent: Tuesday, March 26, 2013 4:14 PM
To: Richard Beauvil; Jaclyn Contreras
Subject: RE: FBR Sludge sample?

Ammonia by EPA 350.1 or equivalent, Phosphate by 365.1 or equivalent for solids

---

Eurofins Eaton Analytical

Please update your address book. The old email is no longer working: lindageddes@eurofinsUS.com

Linda Geddes
Analytical Services Manager

Phone: +1 626 386 1163

Website: www.EatonAnalytical.com

From: Richard Beauvil [mailto:RBeauvil@emaxlabs.com]
Sent: Tuesday, March 26, 2013 4:09 PM
To: Jaclyn Contreras
Cc: Linda Geddes
Subject: RE: FBR Sludge sample?

Yes, PAH by 8270SIM. Do you have a method number for Ammonia Phosphate? That may be the only one we don't do.

Richard M. Beauvil
Project Manager/Safety Officer
1835 W. 205th Street
Torrance, CA 90501
Tel: 310-618-8889 X118
rbeauvil@emaxlabs.com

-----Original Message-----
From: Jaclyn Contreras [mailto:JaclynContreras@eurofinsus.com]
Sent: Tuesday, March 26, 2013 3:35 PM
To: Richard Beauvil
Cc: Linda Geddes
Subject: FW: FBR Sludge sample?

Please confirm if the 8270SIM is the PAH test. Plus, would Emax still be able to run the other test requested below:

Cyanide by EPA 9012
Perchlorate by 6860
VOCs 8260
SVOCs (including Hexachlolobenze and Benzo(a)pyrene by 8270
Inorganic anions (bromide, chloride, fluoride, nitrate as nitrate, sulfate, nitrite as N, nitrate as N, and orthophosphate as phosphate) by EPA Method 9056
Sulfide by EPA Method 9034
Ammonia Phosphate
Percent Moisture

I would need your list for these as well except for 8260.

From: Richard Beauvil [mailto:RBeauvil@emaxlabs.com]
Sent: Tuesday, March 26, 2013 3:22 PM
To: Jaclyn Contreras
Cc: Linda Geddes
Subject: RE: FBR Sludge sample?

Hi Jackie,

See RLs/MDLs attached. Open under notepad. On the sample volume a 8 oz jar should be sufficient if its a heavy normal soil. If its a light solid like some of filter cake you sent us in the past maybe a 16oz jar.

Richard M. Beauvil
Project Manager/Safety Officer
1835 W. 205th Street
Torrance, CA 90501
Tel: 310-618-8889 X118
rbeauvil@emaxlabs.com

-----Original Message-----
From: Jaclyn Contreras [mailto:JaclynContreras@eurofinsus.com]
Sent: Tuesday, March 26, 2013 2:58 PM
To: Richard Beauvil
Cc: Linda Geddes
Subject: RE: FBR Sludge sample?

It looks solid to us and it came from the desert. If that helps. Please provide me with your 6020 and 6010 list with RLs and MDLs. Also, I would need to know your list for the PAHs and 8270 list. thanks

From: Richard Beauvil [mailto:RBeauvil@emaxlabs.com]
Sent: Tuesday, March 26, 2013 2:55 PM
To: Jaclyn Contreras
Cc: Linda Geddes
Subject: RE: FBR Sludge sample?

Hi Jackie,

Can you find out what the sample look like? We've received sludge from you that liquid samples and some are filter cake, some ar more solid. It would make a difference in how much volume we would need. Most of these tests we can do but it depends on the matrix. However, we would not recommend any tests as we do not know what your client need.

Richard M. Beauvil
Project Manager/Safety Officer
1835 W. 205th Street
Torrance, CA 90501
Tel: 310-618-8889 X118
rbeauvil@emaxlabs.com

-----Original Message-----
From: Jaclyn Contreras [mailto:JaclynContreras@eurofinsUS.com]
Sent: Tuesday, March 26, 2013 2:37 PM
To: Richard Beauvil
Cc: Linda Geddes
Subject: FBR Sludge sample?

HI Richard
I have a NV client that needs several types of test that are needed on a sludge sample. Please let me know which test are recommended for a sludge sample and how much volume you need to run the sample. Plus, this would be a rush and we would need to know how fast you can report the test. thanks

They are asking for 6010 metals and 6020 metals (please let me know which test to pick)
Mercury by EPA 7470/7471A
Cyanide by EPA 9012
Perchlorate by 6860
VOCs 8260
SVOCs (including Hexachlolobenze and Benzo(a)pyrene by 8270
PAHs by EPA 8310 or 8270
Inorganic anions (bromide, chloride, fluoride, nitrate as nitrate, sulfate, nitrite as N, nitrate as N, and orthophosphate as phosphate) by EPA Method 9056
Sulfide by EPA Method 9034

ORIGIN ID: WHPA (626) 386-1116
JEREMY HAHSEN
EUROFINS EATON ANALYTICAL
750 ROYAL OAKS DR

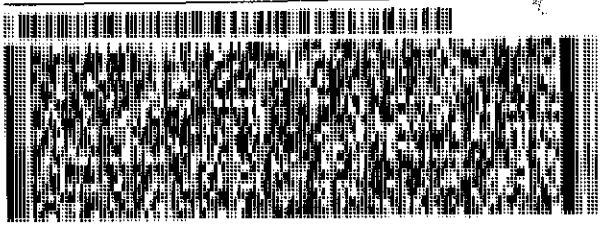
MONROVIA, CA 91016
UNITED STATES US

SHIP DATE [illegible]
ACTWGT: [illegible]
CAD: [illegible]
DIMS: 12x8x10 IN

BILL SENDER

SAMPLE RECEIVING
EMAX LABORATORIES, INC.
1835 205TH STREET

TORRANCE CA 90501
(310) 618-8889 X 118 PO: MLD
DEPT: SAMPLE PREP. / SHIPPING



FedEx Express

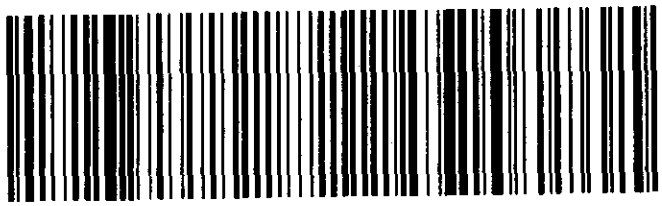
J121312100501 25

THU - 28 MAR 3:00P
STANDARD OVERNIGHT

TRK# 0201 **4294 2887 7441**

92 HHRA

90501
CA-US **LAX**



REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

429486

METHOD 5035/8260B
VOLATILE ORGANICS BY GC/MS

SDG#: 13C207

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project : 429486

SDG : 13C207

METHOD 5035/8260B
VOLATILE ORGANICS BY GC/MS

One (1) soil sample was received on 03/28/13 for Volatile Organics by GC/MS analysis, Method 5035/8260B in accordance with USEPA SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.

Holding Time
The sample was analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blanks were analyzed at the frequency required by the project. For this SDG, four (4) method blanks were analyzed with the samples. All results were compliant to project requirement. Refer to QC result summary forms for details.

Lab Control Sample
Two (2) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for VMF4D01L/C were all within QC limits.
Percent recoveries for VSF4C30X/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Surrogate
Surrogates were added on QC and field samples. Surrogate recoveries were within project QC limits. Refer to sample result forms for details.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. Manual integration was applied to Carbon Disulfide in samples C207-01R because of improper integration. Hence, the original chromatograms were retained with the initialed and dated corrected chromatograms. All project requirements were met; otherwise, anomalies were discussed within the associated QC parameter.
One internal standard was out of QC criteria in sample C207-01 initial analysis. However, sample was reanalyzed and reported from methanol extract at dilution to reduce possible matrix interference(sludge) and due to high concentration.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : EUROFINS EATON ANALYTICAL
Project : 429486

SDG NO. : 13C207
Instrument ID : F4

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	VSF4C30B	1	NA	03/29/1308:34	03/29/1308:34	RCN402	RCN199	VSF4C30	Method Blank
LCS1S	VSF4C30X	1	NA	03/29/1309:56	03/29/1309:56	RCN405	RCN199	VSF4C30	Lab Control Sample (LCS)
LCD1S	VSF4C30C	1	NA	03/29/1309:26	03/29/1309:26	RCN404	RCN199	VSF4C30	LCS Duplicate
MBLK2S	VSC010SB	1	NA	03/29/1311:42	03/29/1311:42	RCN409	RCN199	VSF4C30	Method Blank
FBR SLUDGE	C207-01R	0.94	76.8	03/29/1313:56	03/29/1313:56	RCN414	RCN199	VSF4C30	Field Sample
MBLK3S	VMF4D01B	50	NA	04/01/1310:54	04/01/1310:54	RDN007	RCN164	VSF4D01	Method Blank
LCS3S	VMF4D01L	50	NA	04/01/1309:34	04/01/1309:34	RDN004	RCN164	VSF4D01	Lab Control Sample (LCS)
LCD3S	VMF4D01C	50	NA	04/01/1310:01	04/01/1310:01	RDN005	RCN164	VSF4D01	LCS Duplicate
MBLK4S	VSC011SB	50	NA	04/01/1311:20	04/01/1311:20	RDN008	RCN164	VSF4D01	Method Blank
FBR SLUDGEDL	C207-01T	45	76.8	04/01/1313:07	04/01/1313:07	RDN012	RCN164	VSF4D01	Diluted Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 5035/8260B
VOLATILE ORGANICS BY GC/MS

Client : EUROFINS EATON ANALYTICAL
Project : 429486
Batch No. : 13C207
Sample ID: FBR SLUDGE
Lab Samp ID: C207-01R #C207-01T
Lab File ID: RCN414 #RDN012
Ext Btch ID: VSF4C30 #VSF4D01
Calib. Ref.: RCN199 #RCN164

Date Collected: 03/22/13
Date Received: 03/28/13
Date Extracted: 03/29/13 13:56 # 04/01/13 13:07
Date Analyzed: 03/29/13 13:56 # 04/01/13 13:07
Dilution Factor: 0.94 # 45
Matrix : SOIL
% Moisture : 76.8
Instrument ID : TDF4

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	20	8.1
1,1,2,2-TETRACHLOROETHANE	ND	20	8.1
1,1,2-TRICHLOROETHANE	ND	20	8.1
1,1-DICHLOROETHANE	ND	20	8.1
1,1-DICHLOROETHENE	ND	20	8.1
1,2-DICHLOROETHANE	ND	20	8.1
1,2-DICHLOROPROPANE	ND	20	8.1
# 2-BUTANONE	7100	1900	970
2-HEXANONE	45	41	20
4-METHYL-2-PENTANONE	74	41	20
# ACETONE	24000	1900	970
BENZENE	ND	20	8.1
BROMODICHLOROMETHANE	ND	20	8.1
BROMOFORM	ND	20	8.1
BROMOMETHANE	ND	41	8.1
# CARBON DISULFIDE	2000	970	390
CARBON TETRACHLORIDE	ND	20	8.1
CHLOROBENZENE	ND	20	8.1
CHLOROETHANE	ND	20	8.1
CHLOROFORM	ND	20	8.1
CHLOROMETHANE	ND	41	8.1
CIS-1,2-DICHLOROETHENE	ND	20	8.1
CIS-1,3-DICHLOROPROPENE	ND	20	8.1
DIBROMOCHLOROMETHANE	ND	20	8.1
ETHYLBENZENE	38	20	8.1
M/P-XYLENES	150	41	8.1
MTBE	ND	20	8.1
METHYLENE CHLORIDE	ND	41	8.1
O-XYLENE	43	20	8.1
STYRENE	ND	20	8.1
TETRACHLOROETHENE	27	20	8.1
TOLUENE	33	20	8.1
TRANS-1,2-DICHLOROETHENE	ND	20	8.1
TRANS-1,3-DICHLOROPROPENE	ND	20	8.1
TRICHLOROETHENE	8.8J	20	8.1
VINYL CHLORIDE	ND	20	8.1

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	194	202.6	95.6	60-160
4-BROMOFLUOROBENZENE	294	202.6	145	70-150
TOLUENE-D8	243	202.6	120	70-140
# 1,2-DICHLOROETHANE-D4	8370	9698	86.3	60-160
# 4-BROMOFLUOROBENZENE	9770	9698	101	70-150
# TOLUENE-D8	10100	9698	104	70-140

Members of the Associated File

METHOD 5035/8260B
VOLATILE ORGANICS BY GC/MS

Client : EURDFINS EATON ANALYTICAL	Date Collected: 03/22/13
Project : 429486	Date Received: 03/28/13
Batch No. : 13C207	Date Extracted: 03/29/13 13:56
Sample ID: FBR SLUDGE	Date Analyzed: 03/29/13 13:56
Lab Samp ID: C207-01R	Dilution Factor: 0.94
Lab File ID: RCN414	Matrix : SOIL
Ext Btch ID: VSF4C30	% Moisture : 76.8
Calib. Ref.: RCN199	Instrument ID : TOF4

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	20	8.1
1,1,2,2-TETRACHLOROETHANE	ND	20	8.1
1,1,2-TRICHLOROETHANE	ND	20	8.1
1,1-DICHLOROETHANE	ND	20	8.1
1,1-DICHLOROETHENE	ND	20	8.1
1,2-DICHLOROETHANE	ND	20	8.1
1,2-DICHLOROPROPANE	ND	20	8.1
2-BUTANONE	12000E	41	20
2-HEXANONE	45	41	20
4-METHYL-2-PENTANONE	74	41	20
ACETONE	40000E	41	20
BENZENE	ND	20	8.1
BROMODICHLOROMETHANE	ND	20	8.1
BROMOFORM	ND	20	8.1
BROMOMETHANE	ND	41	8.1
CARBON DISULFIDE	3300E	20	8.1
CARBON TETRACHLORIDE	ND	20	8.1
CHLOROBENZENE	ND	20	8.1
CHLOROETHANE	ND	20	8.1
CHLOROFORM	ND	20	8.1
CHLOROMETHANE	ND	41	8.1
CIS-1,2-DICHLOROETHENE	ND	20	8.1
CIS-1,3-DICHLOROPROPENE	ND	20	8.1
DIBROMOCHLOROMETHANE	ND	20	8.1
ETHYLBENZENE	38	20	8.1
M/P-XYLENES	150	41	8.1
MTBE	ND	20	8.1
METHYLENE CHLORIDE	ND	41	8.1
O-XYLENE	43	20	8.1
STYRENE	ND	20	8.1
TETRACHLOROETHENE	27	20	8.1
TOLUENE	33	20	8.1
TRANS-1,2-DICHLOROETHENE	ND	20	8.1
TRANS-1,3-DICHLOROPROPENE	ND	20	8.1
TRICHLOROETHENE	8.8J	20	8.1
VINYL CHLORIDE	ND	20	8.1

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	194	202.6	95.6	60-160
4-BROMOFLUOROBENZENE	294	202.6	145	70-150
TOLUENE-D8	243	202.6	120	70-140

METHOD 5035/8260B
VOLATILE ORGANICS BY GC/MS

Client : EUROFINS EATON ANALYTICAL	Date Collected: 03/22/13
Project : 429486	Date Received: 03/28/13
Batch No. : 13C207	Date Extracted: 04/01/13 13:07
Sample ID: FBR SLUDGEOL	Date Analyzed: 04/01/13 13:07
Lab Samp ID: C207-01T	Dilution Factor: 45
Lab File ID: RON012	Matrix : SOIL
Ext Btch ID: VSF4D01	% Moisture : 76.8
Calib. Ref.: RCN164	Instrument ID : TOF4

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	970	390
1,1,2,2-TETRACHLOROETHANE	ND	970	390
1,1,2-TRICHLOROETHANE	ND	970	390
1,1-DICHLOROETHANE	ND	970	390
1,1-DICHLOROETHENE	ND	970	390
1,2-DICHLOROETHANE	ND	970	390
1,2-DICHLOROPROPANE	ND	970	390
2-BUTANONE	7100	1900	970
2-HEXANONE	ND	1900	970
4-METHYL-2-PENTANONE	ND	1900	970
ACETONE	24000	1900	970
BENZENE	ND	970	390
BROMODICHLOROMETHANE	ND	970	390
BROMOFORM	ND	970	390
BROMOMETHANE	ND	1900	390
CARBON DISULFIDE	2000	970	390
CARBON TETRACHLORIDE	ND	970	390
CHLOROBENZENE	ND	970	390
CHLOROETHANE	ND	970	390
CHLOROFORM	ND	970	390
CHLOROMETHANE	ND	1900	390
CIS-1,2-DICHLOROETHENE	ND	970	390
CIS-1,3-DICHLOROPROPENE	ND	970	390
DIBROMOCHLOROMETHANE	ND	970	390
ETHYLBENZENE	ND	970	390
M/P-XYLENES	ND	1900	390
MTBE	ND	970	390
METHYLENE CHLORIDE	ND	1900	390
O-XYLENE	ND	970	390
STYRENE	ND	970	390
TETRACHLOROETHENE	ND	970	390
TOLUENE	ND	970	390
TRANS-1,2-DICHLOROETHENE	ND	970	390
TRANS-1,3-DICHLOROPROPENE	ND	970	390
TRICHLOROETHENE	ND	970	390
VINYL CHLORIDE	ND	970	390

SURROGATE PARAMETERS	RESULTS	SPK AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	8370	9698	86.3	60-160
4-BROMOFLUOROBENZENE	9770	9698	101	70-150
TOLUENE-D8	10100	9698	104	70-140

QC SUMMARIES

METHOD 5035/8260B
VOLATILE ORGANICS BY GC/MS

Client : EUROFINS EATON ANALYTICAL	Date Collected: NA
Project : 429486	Date Received: 03/29/13
Batch No. : 13C207	Date Extracted: 03/29/13 08:34
Sample ID: MBLK1S	Date Analyzed: 03/29/13 08:34
Lab Samp ID: VSF4C30B	Dilution Factor: 1
Lab File ID: RCN402	Matrix : SOIL
Ext Btch ID: VSF4C30	% Moisture : NA
Calib. Ref.: RCN199	Instrument ID : TOF4

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.0	2.0
1,1,2,2-TETRACHLOROETHANE	ND	5.0	2.0
1,1,2-TRICHLOROETHANE	ND	5.0	2.0
1,1-DICHLOROETHANE	ND	5.0	2.0
1,1-DICHLOROETHENE	ND	5.0	2.0
1,2-DICHLOROETHANE	ND	5.0	2.0
1,2-DICHLOROPROPANE	ND	5.0	2.0
2-BUTANONE	ND	10	5.0
2-HEXANONE	ND	10	5.0
4-METHYL-2-PENTANONE	ND	10	5.0
ACETONE	ND	10	5.0
BENZENE	ND	5.0	2.0
BROMODICHLOROMETHANE	ND	5.0	2.0
BROMOFORM	ND	5.0	2.0
BROMOMETHANE	ND	10	2.0
CARBON DISULFIDE	ND	5.0	2.0
CARBON TETRACHLORIDE	ND	5.0	2.0
CHLOROBENZENE	ND	5.0	2.0
CHLOROETHANE	ND	5.0	2.0
CHLOROFORM	ND	5.0	2.0
CHLOROMETHANE	ND	10	2.0
CIS-1,2-DICHLOROETHENE	ND	5.0	2.0
CIS-1,3-DICHLOROPROPENE	ND	5.0	2.0
DIBROMOCHLOROMETHANE	ND	5.0	2.0
ETHYLBENZENE	ND	5.0	2.0
M/P-XYLENES	ND	10	2.0
MTBE	ND	5.0	2.0
METHYLENE CHLORIDE	ND	10	2.0
O-XYLENE	ND	5.0	2.0
STYRENE	ND	5.0	2.0
TETRACHLOROETHENE	ND	5.0	2.0
TOLUENE	ND	5.0	2.0
TRANS-1,2-DICHLOROETHENE	ND	5.0	2.0
TRANS-1,3-DICHLOROPROPENE	ND	5.0	2.0
TRICHLOROETHENE	ND	5.0	2.0
VINYL CHLORIDE	ND	5.0	2.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	45.7	50.00	91.5	70-140
4-BROMOFLUOROBENZENE	48.2	50.00	96.5	70-130
TOLUENE-D8	50.6	50.00	101	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 429486
BATCH NO.: 13C207
METHOD: SW 5035/8260B

MATRIX: SOIL % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	VSF4C30B	VSF4C30X	VSF4C30C		
LAB FILE ID:	RCN402	RCN405	RCN404		
DATE EXTRACTED:	03/29/1308:34	03/29/1309:56	03/29/1309:26	DATE COLLECTED:	NA
DATE ANALYZED:	03/29/1308:34	03/29/1309:56	03/29/1309:26	DATE RECEIVED:	03/29/13
PREP. BATCH:	VSF4C30	VSF4C30	VSF4C30		
CALIB. REF:	RCN199	RCN199	RCN199		

ACCESSION:

PARAMETER	BLNK RSLT (ug/kg)	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	50.0	51.7	103	50.0	50.8	102	2	60-130	50
Benzene	ND	50.0	50.0	100	50.0	50.2	100	0	70-130	50
Chlorobenzene	ND	50.0	51.2	102	50.0	51.2	102	0	70-130	50
Toluene	ND	50.0	50.6	101	50.0	50.8	102	0	70-130	50
Trichloroethene	ND	50.0	52.8	106	50.0	52.3	105	1	70-130	50

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	50.0	45.1	90	50.0	45.3	91	70-140
4-Bromofluorobenzene	50.0	47.8	96	50.0	47.5	95	70-130
Toluene-d8	50.0	50.0	100	50.0	50.1	100	70-130

METHOD 5035/B260B
VOLATILE ORGANICS BY GC/MS

Client : EUROFINS EATON ANALYTICAL	Date Collected: NA
Project : 429486	Date Received: 03/29/13
Batch No. : 13C207	Date Extracted: 03/29/13 11:42
Sample ID: MBLK2S	Date Analyzed: 03/29/13 11:42
Lab Samp ID: VSC010SB	Dilution Factor: 1
Lab File ID: RCN409	Matrix : SDIL
Ext Btch ID: VSF4C30	% Moisture : NA
Calib. Ref.: RCN199	Instrument ID : TOF4

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.0	2.0
1,1,2,2-TETRACHLORDETHANE	ND	5.0	2.0
1,1,2-TRICHLOROETHANE	ND	5.0	2.0
1,1-DICHLOROETHANE	ND	5.0	2.0
1,1-DICHLOROETHENE	ND	5.0	2.0
1,2-DICHLOROETHANE	ND	5.0	2.0
1,2-DICHLOROPROPANE	ND	5.0	2.0
2-BUTANONE	ND	10	5.0
2-HEXANONE	ND	10	5.0
4-METHYL-2-PENTANONE	ND	10	5.0
ACETONE	ND	10	5.0
BENZENE	ND	5.0	2.0
BROMODICHLOROMETHANE	ND	5.0	2.0
BROMOFORM	ND	5.0	2.0
BROMOMETHANE	ND	10	2.0
CARBON DISULFIDE	ND	5.0	2.0
CARBON TETRACHLORIDE	ND	5.0	2.0
CHLOROBENZENE	ND	5.0	2.0
CHLOROETHANE	ND	5.0	2.0
CHLOROFORM	ND	5.0	2.0
CHLOROMETHANE	ND	10	2.0
CIS-1,2-DICHLOROETHENE	ND	5.0	2.0
CIS-1,3-DICHLOROPROPENE	ND	5.0	2.0
DIBROMOCHLOROMETHANE	ND	5.0	2.0
ETHYLBENZENE	ND	5.0	2.0
M/P-XYLENES	ND	10	2.0
MTBE	ND	5.0	2.0
METHYLENE CHLORIDE	ND	10	2.0
O-XYLENE	ND	5.0	2.0
STYRENE	ND	5.0	2.0
TETRACHLOROETHENE	ND	5.0	2.0
TOLUENE	ND	5.0	2.0
TRANS-1,2-DICHLOROETHENE	ND	5.0	2.0
TRANS-1,3-DICHLOROPROPENE	ND	5.0	2.0
TRICHLOROETHENE	ND	5.0	2.0
VINYL CHLORIDE	ND	5.0	2.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	47.8	50.00	95.6	70-140
4-BROMOFLUDROBENZENE	47.4	50.00	94.8	70-130
TOLUENE-D8	50.3	50.00	101	70-130

METHOD 5035/8260B
VOLATILE ORGANICS BY GC/MS

Client : EUROFINS EATON ANALYTICAL	Date Collected: NA
Project : 429486	Date Received: 04/01/13
Batch No. : 13C207	Date Extracted: 04/01/13 10:54
Sample ID: MBLK3S	Date Analyzed: 04/01/13 10:54
Lab Samp ID: VMF4D01B	Dilution Factor: 50
Lab File ID: RDN007	Matrix : SOIL
Ext Btch ID: VSF4D01	% Moisture : NA
Calib. Ref.: RCN164	Instrument ID : TOF4

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	250	100
1,1,2,2-TETRACHLOROETHANE	ND	250	100
1,1,2-TRICHLOROETHANE	ND	250	100
1,1-DICHLOROETHANE	ND	250	100
1,1-DICHLOROETHENE	ND	250	100
1,2-DICHLOROETHANE	ND	250	100
1,2-DICHLOROPROPANE	ND	250	100
2-BUTANONE	ND	500	250
2-HEXANONE	ND	500	250
4-METHYL-2-PENTANONE	ND	500	250
ACETONE	ND	500	250
BENZENE	ND	250	100
BROMODICHLORDMETHANE	ND	250	100
BROMOFORM	ND	250	100
BROMOMETHANE	ND	500	100
CARBON DISULFIDE	ND	250	100
CARBON TETRACHLORIDE	ND	250	100
CHLOROBENZENE	ND	250	100
CHLOROETHANE	ND	250	100
CHLOROFORM	ND	250	100
CHLOROMETHANE	ND	500	100
CIS-1,2-DICHLOROETHENE	ND	250	100
CIS-1,3-DICHLOROPROPENE	ND	250	100
DIBROMOCHLORDMETHANE	ND	250	100
ETHYLBENZENE	ND	250	100
M/P-XYLENES	ND	500	100
MTBE	ND	250	100
METHYLENE CHLORIDE	ND	500	100
O-XYLENE	ND	250	100
STYRENE	ND	250	100
TETRACHLOROETHENE	ND	250	100
TOLUENE	ND	250	100
TRANS-1,2-DICHLOROETHENE	ND	250	100
TRANS-1,3-DICHLDROPROPENE	ND	250	100
TRICHLOROETHENE	ND	250	100
VINYL CHLORIDE	ND	250	100

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	2340	2500	93.5	70-140
4-BROMOFLUOROBENZENE	2430	2500	97.1	70-130
TOLUENE-D8	2560	2500	102	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 429486
BATCH NO.: 13C207
METHOD: SW 5035/8260B

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	50	50	50		
SAMPLE ID:	MBLK3S				
LAB SAMP ID:	VMF4D01B	VMF4D01L	VMF4D01C		
LAB FILE ID:	RDN007	RDN004	RDN005		
DATE EXTRACTED:	04/01/1310:54	04/01/1309:34	04/01/1310:01	DATE COLLECTED:	NA
DATE ANALYZED:	04/01/1310:54	04/01/1309:34	04/01/1310:01	DATE RECEIVED:	04/01/13
PREP. BATCH:	VSF4D01	VSF4D01	VSF4D01		
CALIB. REF:	RCN164	RCN164	RCN164		

ACCESSION:

PARAMETER	BLNK RSLT (ug/kg)	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	2500	2320	93	2500	2270	91	2	60-130	50
Benzene	ND	2500	2400	96	2500	2370	95	1	70-130	50
Chlorobenzene	ND	2500	2400	96	2500	2370	95	1	70-130	50
Toluene	ND	2500	2410	96	2500	2380	95	1	70-130	50
Trichloroethene	ND	2500	2470	99	2500	2430	97	2	70-130	50

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	2500	2200	88	2500	2210	88	70-140
4-Bromofluorobenzene	2500	2490	100	2500	2480	99	70-130
Toluene-d8	2500	2540	102	2500	2560	102	70-130

METHOD 5035/B260B
VOLATILE ORGANICS BY GC/MS

Client : EUROFINS EATON ANALYTICAL	Date Collected: NA
Project : 429486	Date Received: 04/01/13
Batch No. : 13C207	Date Extracted: 04/01/13 11:20
Sample ID: MBLK4S	Date Analyzed: 04/01/13 11:20
Lab Samp ID: VSC011SB	Dilution Factor: 50
Lab File ID: RDN008	Matrix : SOIL
Ext Btch ID: VSF4D01	% Moisture : NA
Calib. Ref.: RCN164	Instrument ID : TOF4

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	250	100
1,1,2,2-TETRACHLOROETHANE	ND	250	100
1,1,2-TRICHLOROETHANE	ND	250	100
1,1-DICHLOROETHANE	ND	250	100
1,1-DICHLOROETHENE	ND	250	100
1,2-DICHLORDETHANE	ND	250	100
1,2-DICHLOROPROPANE	ND	250	100
2-BUTANONE	ND	500	250
2-HEXANONE	ND	500	250
4-METHYL-2-PENTANONE	ND	500	250
ACETONE	ND	500	250
BENZENE	ND	250	100
BRDMODICHLOROMETHANE	ND	250	100
BROMOFORM	ND	250	100
BROMOMETHANE	ND	500	100
CARBON DISULFIDE	ND	250	100
CARBON TETRACHLORIDE	ND	250	100
CHLOROBENZENE	ND	250	100
CHLOROETHANE	ND	250	100
CHLOROFORM	ND	250	100
CHLORDMETHANE	ND	500	100
CIS-1,2-DICHLOROETHENE	ND	250	100
CIS-1,3-DICHLOROPROPENE	ND	250	100
DIBROMOCHLOROMETHANE	ND	250	100
ETHYLBENZENE	ND	250	100
M/P-XYLENES	ND	500	100
MTBE	ND	250	100
METHYLENE CHLORIDE	ND	500	100
O-XYLENE	ND	250	100
STYRENE	ND	250	100
TETRACHLOROETHENE	ND	250	100
TOLUENE	ND	250	100
TRANS-1,2-DICHLOROETHENE	ND	250	100
TRANS-1,3-DICHLOROPROPENE	ND	250	100
TRICHLOROETHENE	ND	250	100
VINYL CHLORIDE	ND	250	100

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	2250	2500	90.0	70-140
4-BROMOFLUOROBENZENE	2430	2500	97.1	70-130
TOLUENE-D8	2590	2500	104	70-130

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

429486

METHOD 3550B/8270C
SEMI VOLATILE ORGANICS BY GC/MS

SDG#: 13C207

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project : 429486

SDG : 13C207

METHOD 3550B/8270C
SEMI VOLATILE ORGANICS BY GC/MS

One (1) soil sample was received on 03/28/13 for Semivolatile Organics by GCMS analysis, Method 3550B/8270C in accordance with USEPA SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.

Holding Time
The sample was analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Results were compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for SVC021SL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Surrogate
Surrogates were added on QC and field samples. Surrogate recoveries were within project QC limits. Refer to sample result forms for details.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met; otherwise, anomalies were discussed within the associated QC parameter. Sample was initially analyzed at dilution DF 3X due to matrix problem.

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS

Client : EUROFINS EATON ANALYTICAL
Project : 429486

SDG NO. : 13C207
Instrument ID : T-0E4

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
LCS1S	SVC021SL	1	NA	03/30/1300:43	03/29/1313:26	RCJ179	RCJ007	SVC021S	Lab Control Sample (LCS)
LCD1S	SVC021SC	1	NA	03/30/1301:02	03/29/1313:26	RCJ180	RCJ007	SVC021S	LCS Duplicate
FBR SLUDGE	C207-01	3	76.8	03/30/1301:21	03/29/1313:26	RCJ181	RCJ007	SVC021S	Field Sample
MBLK1S	SVC021SB	1	NA	04/01/1313:24	03/29/1313:26	RDJ005	RCJ007	SVC021S	Method Blank

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 3550B/8270C
SEMI VOLATILE ORGANICS BY GC/MS

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	03/22/13
Project	: 429486	Date Received:	03/28/13
Batch No.	: 13C207	Date Extracted:	03/29/13 13:26
Sample ID:	FBR SLUDGE	Date Analyzed:	03/30/13 01:21
Lab Samp ID:	C207-01	Dilution Factor:	3
Lab File ID:	RCJ181	Matrix	: SOIL
Ext Btch ID:	SVC021S	% Moisture	: 76.8
Calib. Ref.:	RCJ007	Instrument ID	: T-OE4

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,2,4-TRICHLOROBENZENE	ND	4300	2200
1,2-DICHLOROBENZENE	ND	4300	2200
1,3-DICHLOROBENZENE	ND	4300	2200
1,4-DICHLOROBENZENE	ND	4300	2200
2,4,5-TRICHLOROPHENOL	ND	4300	2200
2,4,6-TRICHLOROPHENOL	ND	4300	2400
2,4-DICHLOROPHENOL	ND	4300	2200
2,4-DIMETHYLPHENOL	ND	4300	2200
2,4-DINITROPHENOL	ND	8500	2200
2,4-DINITROTOLUENE	ND	4300	2200
2,6-DINITROTOLUENE	ND	4300	2200
2-CHLORONAPHTHALENE	ND	4300	2200
2-CHLOROPHENOL	ND	4300	2200
2-METHYLNAPHTHALENE	ND	4300	2200
2-METHYLPHENOL	ND	4300	2200
2-NITROANILINE	ND	4300	2200
2-NITROPHENOL	ND	4300	2200
3,3'-DICHLOROBENZIDINE	ND	4300	2200
3-NITROANILINE	ND	4300	2200
4,6-DINITRO-2-METHYLPHENOL	ND	8500	2200
4-BROMOPHENYL-PHENYL ETHER	ND	4300	2200
4-CHLORO-3-METHYLPHENOL	ND	4300	2200
4-CHLOROANILINE	ND	4300	2200
4-CHLOROPHENYL-PHENYL ETHER	ND	4300	2200
4-METHYLPHENOL (1)	15000	4300	2200
4-NITROANILINE	ND	4300	2200
4-NITROPHENOL	ND	8500	2200
ACENAPHTHENE	ND	4300	2200
ACENAPHTHYLENE	ND	4300	2200
ANTHRACENE	ND	4300	2200
BENZO(A)ANTHRACENE	ND	4300	2200
BENZO(A)PYRENE	ND	4300	2200
BENZO(B)FLUORANTHENE	ND	4300	2200
BENZO(K)FLUORANTHENE	ND	4300	2200
BENZO(G,H,I)PERYLENE	ND	4300	2200
BIS(2-CHLOROETHOXY)METHANE	ND	4300	2200
BIS(2-CHLOROETHYL)ETHER	ND	4300	2200
BIS(2-CHLOROISOPROPYL)ETHER	ND	4300	2200
BIS(2-ETHYLHEXYL)PHTHALATE	ND	4300	2200
BUTYLBENZYLPHTHALATE	ND	4300	2200
CHRYSENE	ND	4300	2200
DI-N-BUTYLPHTHALATE	ND	4300	2200
DI-N-OCTYLPHTHALATE	ND	4300	2200
DIBENZO(A,H)ANTHRACENE	ND	4300	2200
DIBENZOFURAN	ND	4300	2200
DIETHYLPHTHALATE	ND	4300	2200
DIMETHYLPHTHALATE	ND	4300	2200
FLUORANTHENE	ND	4300	2200
FLUORENE	ND	4300	2200
HEXACHLOROBENZENE	ND	4300	2200
HEXACHLOROBUTADIENE	ND	4300	2500
HEXACHLOROCYCLOPENTADIENE	ND	4300	2200
HEXACHLOROETHANE	ND	4300	2200
INDENO(1,2,3-CD)PYRENE	ND	4300	2200
ISOPHORONE	ND	4300	2200
N-NITROSO-DI-N-PROPYLAMINE	ND	4300	2200
N-NITROSODIPHENYLAMINE (2)	ND	4300	2200
NAPHTHALENE	ND	4300	2200
NITROBENZENE	ND	4300	2200
PENTACHLOROPHENOL	ND	8500	2300
PHENANTHRENE	ND	4300	2200
PHENOL	ND	4300	2200
PYRENE	ND	4300	2200

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	5530	8621	64.2	20-140
2-FLUOROBIPHENYL	1260	2875	43.9	30-130
2-FLUOROPHENOL	2910	8621	33.8	20-130
NITROBENZENE-D5	1260	2875	43.8	20-130
PHENOL-D5	3520	8621	40.8	20-130
TERPHENYL-D14	2040	2875	71.1	40-130

(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine

QC SUMMARIES

METHOD 3550B/8270C
SEMI VOLATILE ORGANICS BY GC/MS

Client : EUROFINS EATON ANALYTICAL	Date Collected: NA
Project : 429486	Date Received: 03/29/13
Batch No. : 13C207	Date Extracted: 03/29/13 13:26
Sample ID: MBLK1S	Date Analyzed: 04/01/13 13:24
Lab Samp ID: SVC021SB	Dilution Factor: 1
Lab File ID: RDJ005	Matrix : SOIL
Ext Btch ID: SVC021S	% Moisture : NA
Calib. Ref.: RCJ007	Instrument ID : T-OE4

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,2,4-TRICHLOROBENZENE	ND	330	170
1,2-DICHLOROBENZENE	ND	330	170
1,3-DICHLOROBENZENE	ND	330	170
1,4-DICHLOROBENZENE	ND	330	170
2,4,5-TRICHLOROPHENOL	ND	330	170
2,4,6-TRICHLOROPHENOL	ND	330	180
2,4-DICHLOROPHENOL	ND	330	170
2,4-DIMETHYLPHENOL	ND	330	170
2,4-DINITROPHENOL	ND	660	170
2,4-DINITROTOLUENE	ND	330	170
2,6-DINITROTOLUENE	ND	330	170
2-CHLORONAPHTHALENE	ND	330	170
2-CHLOROPHENOL	ND	330	170
2-METHYLNAPHTHALENE	ND	330	170
2-METHYLPHENOL	ND	330	170
2-NITROANILINE	ND	330	170
2-NITROPHENOL	ND	330	170
3,3'-DICHLOROBENZIDINE	ND	330	170
3-NITROANILINE	ND	330	170
4,6-DINITRO-2-METHYLPHENOL	ND	660	170
4-BROMOPHENYL-PHENYL ETHER	ND	330	170
4-CHLORO-3-METHYLPHENOL	ND	330	170
4-CHLOROANILINE	ND	330	170
4-CHLOROPHENYL-PHENYL ETHER	ND	330	170
4-METHYLPHENOL (1)	ND	330	170
4-NITROANILINE	ND	330	170
4-NITROPHENOL	ND	660	170
ACENAPHTHENE	ND	330	170
ACENAPHTHYLENE	ND	330	170
ANTHRACENE	ND	330	170
BENZO(A)ANTHRACENE	ND	330	170
BENZO(A)PYRENE	ND	330	170
BENZO(B)FLUORANTHENE	ND	330	170
BENZO(K)FLUORANTHENE	ND	330	170
BENZO(G,H,I)PERYLENE	ND	330	170
BIS(2-CHLOROETHOXY)METHANE	ND	330	170
BIS(2-CHLOROETHYL)ETHER	ND	330	170
BIS(2-CHLOROISOPROPYL)ETHER	ND	330	170
BIS(2-ETHYLHEXYL)PHTHALATE	ND	330	170
BUTYLBENZYLPHTHALATE	ND	330	170
CHRYSENE	ND	330	170
DI-N-BUTYLPHTHALATE	ND	330	170
DI-N-OCTYLPHTHALATE	ND	330	170
DIBENZO(A,H)ANTHRACENE	ND	330	170
DIBENZOFURAN	ND	330	170
DIETHYLPHTHALATE	ND	330	170
DIMETHYLPHTHALATE	ND	330	170
FLUORANTHENE	ND	330	170
FLUORENE	ND	330	170
HEXACHLOROBENZENE	ND	330	170
HEXACHLOROBUTADIENE	ND	330	190
HEXACHLOROCYCLOPENTADIENE	ND	330	170
HEXACHLOROETHANE	ND	330	170
INDENO(1,2,3-CD)PYRENE	ND	330	170
ISOPHORONE	ND	330	170
N-NITROSO-DI-N-PROPYLAMINE	ND	330	170
N-NITROSODIPHENYLAMINE (2)	ND	330	170
NAPHTHALENE	ND	330	170
NITROBENZENE	ND	330	170
PENTACHLOROPHENOL	ND	660	170
PHENANTHRENE	ND	330	170
PHENOL	ND	330	170
PYRENE	ND	330	170

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	1550	2000	77.6	40-130
2-FLUOROBIPHENYL	462	667.0	69.2	30-130
2-FLUOROPHENOL	1570	2000	78.6	30-130
NITROBENZENE-D5	426	667.0	63.8	30-130
PHENOL-D5	1650	2000	82.5	30-130
TERPHENYL-D14	660	667.0	98.9	40-130

(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 429486
BATCH NO.: 13C207
METHOD: METHOD 3550B/8270C

MATRIX: SOIL % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	SVC021SB	SVC021SL	SVC021SC		
LAB FILE ID:	RDJ005	RCJ179	RCJ180		
DATE EXTRACTED:	03/29/1313:26	03/29/1313:26	03/29/1313:26	DATE COLLECTED:	NA
DATE ANALYZED:	04/01/1313:24	03/30/1300:43	03/30/1301:02	DATE RECEIVED:	03/29/13
PREP. BATCH:	SVC021S	SVC021S	SVC021S		
CALIB. REF:	RCJ007	RCJ007	RCJ007		

ACCESSION:

PARAMETER	BLNK RSLT (ug/kg)	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,2,4-Trichlorobenzene	ND	1330	1170	88	1330	1150	87	2	30-130	50
1,4-Dichlorobenzene	ND	1330	1140	86	1330	1100	83	4	30-130	50
2,4-Dinitrotoluene	ND	1330	1330	100	1330	1330	100	0	30-130	50
2-Chlorophenol	ND	1330	1100	83	1330	1080	81	2	30-130	50
4-Chloro-3-Methylphenol	ND	1330	1150	86	1330	1170	88	2	30-130	50
4-Nitrophenol	ND	1330	1070	80	1330	1080	81	1	20-130	50
Acenaphthene	ND	1330	1160	87	1330	1180	89	2	30-130	50
n-Nitroso-di-n-propylamine	ND	1330	1150	86	1330	1300	98	12	30-130	50
Pentachlorophenol	ND	1330	694	52	1330	735	55	6	20-130	50
Phenol	ND	1330	1070	80	1330	1080	81	1	30-130	50
Pyrene	ND	1330	1250	93	1330	1280	96	3	30-130	50

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	QC LIMIT (%)
2,4,6-Tribromophenol	2000	1840	92	2000	1880	94	40-130
2-Fluorobiphenyl	667	504	76	667	502	75	30-130
2-Fluorophenol	2000	1590	80	2000	1590	79	30-130
Nitrobenzene-d5	667	471	71	667	457	68	30-130
Phenol-d5	2000	1670	84	2000	1670	83	30-130
Terphenyl-d14	667	695	104	667	710	106	40-130

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

429486

METHOD 3550B/8270C SIM
SEMI VOLATILE ORGANICS BY GC/MS

SDG#: 13C207

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project : 429486

SDG : 13C207

METHOD 3550B/8270C SIM
SEMI VOLATILE ORGANICS BY GC/MS

One (1) soil sample was received on 03/28/13 for PAH BY 8270C SIM analysis, Method 3550B/8270C SIM in accordance with USEPA SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.

Holding Time
The sample was analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios were evaluated and results were within acceptance criteria. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Results were compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for SVC021SL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Surrogate
Surrogate was added on QC and field samples. Surrogate recoveries were within project QC limits. Refer to sample result forms for details.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met; otherwise, anomalies were discussed within the associated QC parameter. Sample was initially analyzed at dilution SDF 3X due to matrix problem.

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS

Client : EUROFINS EATON ANALYTICAL
Project : 429486

SDG NO. : 13C207
Instrument ID : T-0E4

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	SVC021SB	1	NA	04/01/1313:24	03/29/1313:26	RDJ005	RCJ007	SVC021S	Method Blank
LCS1S	SVC021SL	1	NA	03/30/1300:43	03/29/1313:26	RCJ179	RCJ007	SVC021S	Lab Control Sample (LCS)
LCD1S	SVC021SC	1	NA	03/30/1301:02	03/29/1313:26	RCJ180	RCJ007	SVC021S	LCS Duplicate
FBR SLUDGE	C207-01	3	76.8	03/30/1301:21	03/29/1313:26	RCJ181	RCJ007	SVC021S	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 3550B/8270C SIM
SEMI VOLATILE ORGANICS BY GC/MS

Client : EUROFINS EATON ANALYTICAL	Date Collected: 03/22/13
Project : 429486	Date Received: 03/28/13
Batch No. : 13C207	Date Extracted: 03/29/13 13:26
Sample ID: FBR SLUDGE	Date Analyzed: 03/30/13 01:21
Lab Samp ID: C207-01	Dilution Factor: 3
Lab File ID: RCJ181	Matrix : SOIL
Ext Btch ID: SVC021S	% Moisture : 76.8
Calib. Ref.: RCJ007	Instrument ID : T-OE4

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
ACENAPHTHENE	ND	65	32
ACENAPHTHYLENE	ND	65	32
ANTHRACENE	160	65	32
BENZO(A)ANTHRACENE	73	65	32
BENZO(A)PYRENE	270	65	32
BENZO(B)FLUORANTHENE	310	65	32
BENZO(K)FLUORANTHENE	230	65	32
BENZO(G,H,I)PERYLENE	1200	65	32
CHRYSENE	56J	65	32
DIBENZO(A,H)ANTHRACENE	410	65	32
FLUORANTHENE	82	65	32
FLUORENE	ND	65	32
INDENO(1,2,3-CD)PYRENE	610	65	32
NAPHTHALENE	ND	65	32
PHENANTHRENE	67	65	32
PYRENE	98	65	32

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TERPHENYL-D14	1880	2874	65.3	40-130

QC SUMMARIES

METHOD 3550B/8270C SIM
SEMI VOLATILE ORGANICS BY GC/MS

Client : EUROFINS EATON ANALYTICAL
Project : 429486
Batch No. : 13C207
Sample ID: MBLK1S
Lab Samp ID: SVC021SB
Lab File ID: RDJ005
Ext Btch ID: SVC021S
Calib. Ref.: RCJ007

Date Collected: NA
Date Received: 03/29/13
Date Extracted: 03/29/13 13:26
Date Analyzed: 04/01/13 13:24
Dilution Factor: 1
Matrix : SOIL
% Moisture : NA
Instrument ID : T-OE4

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
ACENAPHTHENE	ND	5.0	2.5
ACENAPHTHYLENE	ND	5.0	2.5
ANTHRACENE	ND	5.0	2.5
BENZO(A)ANTHRACENE	ND	5.0	2.5
BENZO(A)PYRENE	ND	5.0	2.5
BENZO(B)FLUORANTHENE	ND	5.0	2.5
BENZO(K)FLUORANTHENE	ND	5.0	2.5
BENZO(G,H,I)PERYLENE	ND	5.0	2.5
CHRYSENE	ND	5.0	2.5
DIBENZO(A,H)ANTHRACENE	ND	5.0	2.5
FLUORANTHENE	ND	5.0	2.5
FLUORENE	ND	5.0	2.5
INDENO(1,2,3-CD)PYRENE	ND	5.0	2.5
NAPHTHALENE	ND	5.0	2.5
PHENANTHRENE	ND	5.0	2.5
PYRENE	ND	5.0	2.5

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TERPHENYL-D14	628	666.7	94.2	40-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 429486
BATCH NO.: 13C207
METHOD: METHOD 3550B/8270C SIM

MATRIX: SOIL % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: MBLK1S
LAB SAMP ID: SVC021SB SVC021SL SVC021SC
LAB FILE ID: RDJ005 RCJ179 RCJ180
DATE EXTRACTED: 03/29/1313:26 03/29/1313:26 03/29/1313:26 DATE COLLECTED: NA
DATE ANALYZED: 04/01/1313:24 03/30/1300:43 03/30/1301:02 DATE RECEIVED: 03/29/13
PREP. BATCH: SVC021S SVC021S SVC021S
CALIB. REF: RCJ007 RCJ007 RCJ007

ACCESSION:

PARAMETER	BLNK RSLT (ug/kg)	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Acenaphthene	ND	1330	1130	85	1330	1140	86	1	10-130	50
Acenaphthylene	ND	1330	1210	91	1330	1220	91	0	20-130	50
Anthracene	ND	1330	1150	86	1330	1180	89	3	20-130	50
Benzo(a)anthracene	ND	1330	1220	91	1330	1250	94	2	30-130	50
Benzo(a)pyrene	ND	1330	1240	93	1330	1260	94	1	30-130	50
Benzo(b)fluoranthene	ND	1330	1210	91	1330	1230	93	2	40-130	50
Benzo(k)fluoranthene	ND	1330	1280	96	1330	1300	97	1	30-140	50
Benzo(g,h,i)perylene	ND	1330	1020	77	1330	1090	82	6	30-140	50
Chrysene	ND	1330	1240	93	1330	1270	95	2	30-140	50
Dibenzo(a,h)anthracene	ND	1330	1300	97	1330	1320	99	2	40-140	50
Fluoranthene	ND	1330	1160	87	1330	1180	89	2	30-130	50
Fluorene	ND	1330	1220	91	1330	1230	92	1	20-130	50
Indeno(1,2,3-cd)pyrene	ND	1330	1200	90	1330	1240	93	3	20-160	50
Naphthalene	ND	1330	1090	82	1330	1080	81	1	10-130	50
Phenanthrene	ND	1330	1150	86	1330	1180	89	2	20-130	50
Pyrene	ND	1330	1160	87	1330	1180	89	2	20-150	50

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	QC LIMIT (%)
Terphenyl-d14	667	649	97	667	659	99	40-130

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

429486

METHOD 3550B/8081A
PESTICIDES

SDG#: 13C207

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project : 429486

SDG : 13C207

METHOD 3550B/8081A
PESTICIDES

One (1) soil sample was received on 03/28/13 for Pesticides Organochlorine analysis, Method 3550B/8081A in accordance with USEPA SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.

Holding Time
The sample was analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument performance was checked prior to calibration. DDT and Endrin breakdown were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. All project calibration requirements were satisfied; except for mean recovery in column A of closing DCC-MD01052 was bias high. Detected pesticides were reported from in-control column B. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Results were compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for CPC033SL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Surrogate
Surrogates were added on QC and field samples. Surrogate recoveries were within project QC limits.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met; otherwise, anomalies were discussed within the associated QC parameter. Positive sample results were confirmed by a second column. Relative percentage difference (RPD) between the two results was evaluated. If RPD is less than 40% and peaks are well defined the higher result is reported. Where RPD is greater than 40% the chromatogram is checked for anomalies and results are selected based on processed knowledge. If there is no evidence of any chromatographic ambiguity, the higher result is reported. Sample extracts subjected to appropriate cleanup technique (to reduce matrix interference) are recorded in extraction log. Results were reported from dilution run DF 10X due to matrix problem in non-dilution run.

LAB CHRONICLE
PESTICIDES

Client : EUROFINS EATON ANALYTICAL
Project : 429486

SDG NO. : 13C207
Instrument ID : GCE8

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	CPC033SB	1	NA	04/02/1303:16	03/29/1313:26	MD01043B	MD01034B	CPC033S	Method Blank
LCS1S	CPC033SL	1	NA	04/02/1303:38	03/29/1313:26	MD01044B	MD01034B	CPC033S	Lab Control Sample (LCS)
LCD1S	CPC033SC	1	NA	04/02/1303:59	03/29/1313:26	MD01045B	MD01034B	CPC033S	LCS Duplicate
FBR SLUDGE	C207-01I	10	76.8	04/02/1305:45	03/29/1313:26	MD01050B	MD01047B	CPC033S	Diluted Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 3550B/8081A
PESTICIDES

Client : EUROFINS EATON ANALYTICAL	Date Collected: 03/22/13
Project : 429486	Date Received: 03/28/13
Batch No. : 13C207	Date Extracted: 03/29/13 13:26
Sample ID: FBR SLUDGE	Date Analyzed: 04/02/13 05:45
Lab Samp ID: C207-011	Dilution Factor: 10
Lab File ID: MD01050A	Matrix : SOIL
Ext Btch ID: CPC033S	% Moisture : 76.8
Calib. Ref.: MDD1047A	Instrument ID : GCE8

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
ALPHA-BHC	140 (230)	86	26 26
GAMMA-BHC (LINDANE)	250 (ND)	86	26 26
BETA-BHC	200 (250)	86	26 26
HEPTACHLOR	ND (ND)	86	26 26
DELTA-BHC	160 (130)	86	26 26
ALDRIN	(ND) 34J	86	26 26
HEPTACHLOR EPOXIDE	27J (ND)	86	26 26
GAMMA-CHLORDANE	100 (110)	86	26 26
ALPHA-CHLORDANE	ND (ND)	86	26 26
ENDOSULFAN I	52J (ND)	86	26 26
4,4'-DDE	ND (ND)	170	52 52
DIELDRIN	ND (ND)	170	52 52
ENDRIN	ND (ND)	170	52 52
4,4'-DDD	ND (ND)	170	52 52
ENDOSULFAN II	ND (ND)	170	52 52
4,4'-DDT	ND (ND)	170	52 52
ENDRIN ALDEHYDE	150J (ND)	170	52 52
ENDOSULFAN SULFATE	ND (ND)	170	65 65
ENDRIN KETONE	ND (ND)	170	52 52
METHOXYCHLOR	ND (ND)	860	170 170
TOXAPHENE	ND (ND)	2200	430 430

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	110.9 (71.10)	57.46	193* (124)	10-160
DECACHLOROBIPHENYL	66.94 (28.50)	57.46	116 (49.6)	30-150

RL : Reporting limit
Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )

QC SUMMARIES

METHOD 3550B/8081A
PESTICIDES

Client : EUROFINS EATON ANALYTICAL	Date Collected: NA
Project : 429486	Date Received: 03/29/13
Batch No. : 13C207	Date Extracted: 03/29/13 13:26
Sample ID: MBLK1S	Date Analyzed: 04/02/13 03:16
Lab Samp ID: CPC033SB	Dilution Factor: 1
Lab File ID: MD01043A	Matrix : SOIL
Ext Btch ID: CPC033S	% Moisture : NA
Calib. Ref.: MD01034A	Instrument ID : GCE8

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
ALPHA-BHC	ND | (ND)	2.0	0.60 | 0.60
GAMMA-BHC (LINDANE)	ND | (ND)	2.0	0.60 | 0.60
BETA-BHC	ND | (ND)	2.0	0.60 | 0.60
HEPTACHLOR	ND | (ND)	2.0	0.60 | 0.60
DELTA-BHC	ND | (ND)	2.0	0.60 | 0.60
ALDRIN	ND | (ND)	2.0	0.60 | 0.60
HEPTACHLOR EPOXIDE	ND | (ND)	2.0	0.60 | 0.60
GAMMA-CHLORDANE	ND | (ND)	2.0	0.60 | 0.60
ALPHA-CHLORDANE	ND | (ND)	2.0	0.60 | 0.60
ENDOSULFAN I	ND | (ND)	2.0	0.60 | 0.60
4,4'-DDE	ND | (ND)	4.0	1.2 | 1.2
DIELDRIN	ND | (ND)	4.0	1.2 | 1.2
ENDRIN	ND | (ND)	4.0	1.2 | 1.2
4,4'-DDD	ND | (ND)	4.0	1.2 | 1.2
ENDOSULFAN II	ND | (ND)	4.0	1.2 | 1.2
4,4'-DDT	ND | (ND)	4.0	1.2 | 1.2
ENDRIN ALDEHYDE	ND | (ND)	4.0	1.2 | 1.2
ENDOSULFAN SULFATE	ND | (ND)	4.0	1.5 | 1.5
ENDRIN KETONE	ND | (ND)	4.0	1.2 | 1.2
METHOXYCHLOR	ND | (ND)	20	4.0 | 4.0
TOXAPHENE	ND | (ND)	50	10 | 10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	15.53 | (13.83)	13.33	117 | (104)	40-130
DECACHLOROBIPHENYL	15.95 | (14.32)	13.33	120 | (107)	40-160

RL : Reporting limit
Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 429486
BATCH NO.: 13C207
METHOD: METHOD 3550B/8081A

MATRIX: SOIL % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: MBLK1S
LAB SAMP ID: CPC033SB CPC033SL CPC033SC
LAB FILE ID: MD01043A MD01044A MD01045A
DATE EXTRACTED: 03/29/1313:26 03/29/1313:26 03/29/1313:26 DATE COLLECTED: NA
DATE ANALYZED: 04/02/1303:16 04/02/1303:38 04/02/1303:59 DATE RECEIVED: 03/29/13
PREP. BATCH: CPC033S CPC033S CPC033S
CALIB. REF: MD01034A MD01034A MD01034A

ACCESSION:

PARAMETER	BLNK RSLT (ug/kg)	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
gamma-BHC (Lindane)	ND|(ND)	6.67	9.33|(8.62)	140*|(129)	6.67	8.60|(8.18)	129|(123)	8|(5)	40-130	50
Heptachlor	ND|(ND)	6.67	8.44|(8.24)	127|(124)	6.67	7.96|(7.87)	119|(118)	6|(5)	30-130	50
Aldrin	ND|(ND)	6.67	8.28|(8.06)	124|(121)	6.67	8.03|(8.08)	120|(121)	3|(0)	30-130	50
Dieldrin	ND|(ND)	6.67	8.32|(8.18)	125|(123)	6.67	8.20|(8.03)	123|(120)	1|(2)	60-130	50
Endrin	ND|(ND)	6.67	8.63|(8.29)	129|(124)	6.67	8.39|(8.01)	126|(120)	3|(3)	50-140	50
4,4'-DDT	ND|(ND)	6.67	9.95|(9.15)	149*|(137)	6.67	9.76|(8.54)	146*|(128)	2|(7)	60-140	50

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	QC LIMIT (%)
Tetrachloro-m-xylene	13.33	18.09|(16.08)	136*|(121)	13.33	16.41|(14.68)	123|(110)	40-130
Decachlorobiphenyl	13.33	16.39|(14.82)	123|(111)	13.33	16.79|(14.66)	126|(110)	40-160

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

429486

METHOD 3550B/8082
PCBs

SDG#: 13C207

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project : 429486

SDG : 13C207

METHOD 3550B/8082
PCBS

One (1) soil sample was received on 03/28/13 for Polychlorinated Biphenyls (PCBs) analysis, Method 3550B/8082 in accordance with USEPA SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Results were compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for 60C033SL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Surrogate
Surrogates were added on QC and field samples. Surrogate recoveries were within project QC limits. Refer to sample result forms for details.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met; otherwise, anomalies were discussed within the associated QC parameter. Sample extracts subjected to appropriate cleanup technique (to reduce matrix interference) are recorded in extraction log.

LAB CHRONICLE
PCBs

Client : EUROFINS EATON ANALYTICAL
Project : 429486

SDG NO. : 13C207
Instrument ID : GCT071

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	CPC033SB	1	NA	04/01/1310:24	03/29/1313:26	KD01006A	KD01003A	CPC033SB	Method Blank
LCS1S	60C033SL	1	NA	04/01/1310:49	03/29/1313:26	KD01007A	KD01003A	CPC033SB	Lab Control Sample (LCS)
LCD1S	60C033SC	1	NA	04/01/1311:13	03/29/1313:26	KD01008A	KD01003A	CPC033SB	LCS Duplicate
FBR SLUDGE	C207-01	1	76.8	04/01/1311:38	03/29/1313:26	KD01009A	KD01003A	CPC033SB	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 3550B/8082
PCBs

Client : EUROFINS EATON ANALYTICAL	Date Collected: 03/22/13
Project : 429486	Date Received: 03/28/13
Batch No. : 13C207	Date Extracted: 03/29/13 13:26
Sample ID: FBR SLUDGE	Date Analyzed: 04/01/13 11:38
Lab Samp ID: C207-01	Dilution Factor: 1
Lab File ID: KD01009A	Matrix : SOIL
Ext Btch ID: CPC033SB	% Moisture : 76.8
Calib. Ref.: KD01003A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
PCB-1016	(ND)|ND	220	86|86
PCB-1221	(ND)|ND	220	86|86
PCB-1232	(ND)|ND	220	86|86
PCB-1242	(ND)|ND	220	86|86
PCB-1248	(ND)|ND	220	86|86
PCB-1254	(ND)|ND	220	86|86
PCB-1260	(ND)|ND	220	86|86

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	(66.35)|49.18	57.46	(115)|85.6	10-160
DECACHLOROBIPHENYL	(55.20)|48.43	57.46	(96.1)|84.3	30-150

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
** Out side of QC Limit

QC SUMMARIES

METHOD 3550B/8082
PCBs

Client : EUROFINS EATON ANALYTICAL	Date Collected: NA
Project : 429486	Date Received: 03/29/13
Batch No. : 13C207	Date Extracted: 03/29/13 13:26
Sample ID: MBLK1S	Date Analyzed: 04/01/13 10:24
Lab Samp ID: CPC033SB	Dilution Factor: 1
Lab File ID: KD01006A	Matrix : SOIL
Ext Btch ID: CPC033SB	% Moisture : NA
Calib. Ref.: KD01003A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
PCB-1016	(ND)|ND	50	20|20
PCB-1221	(ND)|ND	50	20|20
PCB-1232	(ND)|ND	50	20|20
PCB-1242	(ND)|ND	50	20|20
PCB-1248	(ND)|ND	50	20|20
PCB-1254	(ND)|ND	50	20|20
PCB-1260	(ND)|ND	50	20|20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	(15.22)|14.96	13.33	(114)|112	40-130
DECACHLOROBIPHENYL	(17.01)|16.24	13.33	(128)|122	40-160

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 429486
BATCH NO.: 13C207
METHOD: METHOD 3550B/8082

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	CPC033SB	60C033SL	60C033SC		
LAB FILE ID:	KD01006A	KD01007A	KD01008A		
DATE EXTRACTED:	03/29/1313:26	03/29/1313:26	03/29/1313:26	DATE COLLECTED:	NA
DATE ANALYZED:	04/01/1310:24	04/01/1310:49	04/01/1311:13	DATE RECEIVED:	03/29/13
PREP. BATCH:	CPC033SB	CPC033SB	CPC033SB		
CALIB. REF:	KD01003A	KD01003A	KD01003A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/kg)	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
PCB-1016	(ND) | ND	167	(185) | 177	(111) | 106	167	(189) | 179	(113) | 107	(2) | 1	50-130	50
PCB-1260	(ND) | ND	167	196 | (199)	118 | (119)	167	202 | (205)	121 | (123)	3 | (3)	70-150	50

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	QC LIMIT (%)
Tetrachloro-m-xylene	13.33	(15.77) | 15.55	(118) | 117	13.33	(16.20) | 15.91	(122) | 119	40-130
Decachlorobiphenyl	13.33	(15.63) | 14.94	(117) | 112	13.33	(16.29) | 15.63	(122) | 117	40-160

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

429486

METALS / MERCURY

SDG#: 13C207

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project : 429486

SDG : 13C207

METHOD 6020A
METALS BY ICP-MS

One (1) soil sample was received on 03/28/13 for Total Metals by ICP-MS analysis, Method 6020A in accordance with USEPA SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source. Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Results were compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for IMC037SL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG. Analytical spike and serial dilution were analyzed for matrix interference evaluation. Results were within method acceptance criteria.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met; otherwise, anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
METALS BY ICP-MS

Client : EUROFINS EATON ANALYTICAL
Project : 429486

SDG NO. : 13C207
Instrument ID : T-IF6

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	IMC037SB	1	NA	04/02/1316:08	03/28/1315:35	F6D03049	F6D03047	IMC037S	Method Blank
LCS1S	IMC037SL	1	NA	04/02/1316:12	03/28/1315:35	F6D03050	F6D03047	IMC037S	Lab Control Sample (LCS)
LCD1S	IMC037SC	1	NA	04/02/1316:17	03/28/1315:35	F6D03051	F6D03047	IMC037S	LCS Duplicate
FBR SLUDGEAS	C207-01A	0.971	76.8	04/02/1316:21	03/28/1315:35	F6D03052	F6D03047	IMC037S	Analytical Spike Sample
FBR SLUDGE	C207-01	0.971	76.8	04/02/1316:25	03/28/1315:35	F6D03053	F6D03047	IMC037S	Field Sample
FBR SLUDGEDL	C207-01J	4.85	76.8	04/02/1316:29	03/28/1315:35	F6D03054	F6D03047	IMC037S	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD 6020A
METALS BY ICP-MS

Client	: EURDFINS EATON ANALYTICAL	Date Collected:	03/22/13
Project	: 429486	Date Received:	03/28/13
SDG NO.	: 13C207	Date Extracted:	03/28/13 15:35
Sample ID:	FBR SLUDGE	Date Analyzed:	04/02/13 16:25
Lab Samp ID:	C207-01	Dilution Factor:	0.971
Lab File ID:	F6D03053	Matrix :	SOIL
Ext Btch ID:	IMC037S	% Moisture :	76.8
Calib. Ref.:	F6D03047	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	318	2.09	0.419
Barium	32.2	2.09	0.419
Cadmium	ND	2.09	0.419
Chromium	350	2.09	0.419
Cobalt	76.3	2.09	0.419
Copper	202	2.09	0.837
Lead	0.450J	2.09	0.419
Magnesium	1880	419	83.7
Manganese	56.1	2.09	0.837
Molybdenum	918	2.09	0.837
Nickel	35.3	2.09	0.419
Selenium	85.6	2.09	0.419
Silver	ND	2.09	0.419
Zinc	302	8.37	4.19

METHOD 6020A
METALS BY ICP-MS

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	NA
Project	: 429486	Date Received:	03/28/13
SDG NO.	: 13C207	Date Extracted:	03/28/13 15:35
Sample ID:	MBLK1S	Date Analyzed:	04/02/13 16:08
Lab Samp ID:	IMC037SB	Dilution Factor:	1
Lab File ID:	F6D03049	Matrix :	SOIL
Ext Btch ID:	IMC037S	% Moisture :	NA
Calib. Ref.:	F6D03047	Instrument ID :	T-IF6

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	ND	0.500	0.100
Barium	ND	0.500	0.100
Cadmium	ND	0.500	0.100
Chromium	ND	0.500	0.100
Cobalt	ND	0.500	0.100
Copper	ND	0.500	0.200
Lead	ND	0.500	0.100
Magnesium	ND	100	20.0
Manganese	ND	0.500	0.200
Molybdenum	ND	0.500	0.200
Nickel	ND	0.500	0.100
Selenium	ND	0.500	0.100
Silver	ND	0.500	0.100
Zinc	ND	2.00	1.00

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 429486
SDG NO.: 13C207
METHOD: METHOD 6020A

MATRIX:	SOIL			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1S				
CONTROL NO.:	IMC037SB	IMC037SL	IMC037SC		
LAB FILE ID:	F6D03049	F6D03050	F6D03051		
DATIME EXTRCTD:	03/28/1315:35	03/28/1315:35	03/28/1315:35	DATE COLLECTED:	NA
DATIME ANALYZD:	04/02/1316:08	04/02/1316:12	04/02/1316:17	DATE RECEIVED:	03/28/13
PREP. BATCH:	IMC037S	IMC037S	IMC037S		
CALIB. REF:	F6D03047	F6D03047	F6D03047		

ACCESSION:

PARAMETER	BLNK RSLT mg/kg	SPIKE AMT mg/kg	BS RSLT mg/kg	BS % REC	SPIKE AMT mg/kg	BSD RSLT mg/kg	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Arsenic	ND	25.0	23.9	96	25.0	24.4	98	2	80-120	20
Barium	ND	25.0	24.1	97	25.0	24.3	97	1	80-120	20
Cadmium	ND	25.0	24.2	97	25.0	24.5	98	1	80-120	20
Chromium	ND	25.0	23.9	96	25.0	24.2	97	1	80-120	20
Cobalt	ND	25.0	24.2	97	25.0	24.3	97	1	80-120	20
Copper	ND	25.0	23.6	95	25.0	24.0	96	2	80-120	20
Lead	ND	25.0	24.3	97	25.0	24.6	98	1	80-120	20
Magnesium	ND	2500	2500	100	2500	2520	101	1	80-120	20
Manganese	ND	25.0	24.6	98	25.0	24.7	99	1	80-120	20
Molybdenum	ND	25.0	24.0	96	25.0	24.3	97	1	80-120	20
Nickel	ND	25.0	23.8	95	25.0	23.9	96	1	80-120	20
Selenium	ND	25.0	24.0	96	25.0	24.2	97	1	80-120	20
Silver	ND	25.0	24.6	98	25.0	24.8	99	1	80-120	20
Zinc	ND	50.0	48.2	96	50.0	48.7	97	1	80-120	20

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 429486
BATCH NO.: 13C207
METHOD: METHOD 6020A

MATRIX:	SOIL		% MOISTURE:	76.8
DILUTION FACTOR:	0.971	4.85		
SAMPLE ID:	FBR SLUDGE	FBR SLUDGEDL		
EMAX SAMP ID:	C207-01	C207-01J		
LAB FILE ID:	F6D03053	F6D03054		
DATE EXTRACTED:	03/28/1315:35	03/28/1315:35	DATE COLLECTED:	03/22/13
DATE ANALYZED:	04/02/1316:25	04/02/1316:29	DATE RECEIVED:	03/28/13
PREP. BATCH:	IMC037S	IMC037S		
CALIB. REF:	F6D03047	F6D03047		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SERIAL DIL RSLT (mg/kg)	DIF RSLT %	QC LIMIT (%)
Arsenic	318	308	3	10
Barium	32.2	31.9	1	10
Cadmium	ND	ND	0	10
Chromium	350	337	4	10
Cobalt	76.3	74.6	2	10
Copper	202	197	2	10
Lead	0.450J	ND	NA	10
Magnesium	1880	1950J	NA	10
Manganese	56.1	55.2	2	10
Molybdenum	918	891	3	10
Nickel	35.3	34.4	3	10
Selenium	85.6	80.2	6	10
Silver	ND	ND	0	10
Zinc	302	300	0	10

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 429486
SDG NO.: 13C207
METHOD: METHOD 6020A

MATRIX:	SOIL		% MOISTURE:	76.8
DILTN FACTR:	0.971	0.971		
SAMPLE ID:	FBR SLUDGE			
CONTROL NO.:	C207-01	C207-01A		
LAB FILE ID:	F6D03053	F6D03052		
DATIME EXTRCTD:	03/28/1315:35	03/28/1315:35	DATE COLLECTED:	03/22/13
DATIME ANALYZD:	04/02/1316:25	04/02/1316:21	DATE RECEIVED:	03/28/13
PREP. BATCH:	IMC037S	IMC037S		
CALIB. REF:	F6D03047	F6D03047		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	AS RSLT (mg/kg)	AS % REC	QC LIMIT (%)
Arsenic	318	105	419	97	80-120
Barium	32.2	105	136	99	80-120
Cadmium	ND	105	106	102	80-120
Chromium	350	105	452	98	80-120
Cobalt	76.3	105	186	105	80-120
Copper	202	105	303	97	80-120
Lead	0.450J	105	106	100	80-120
Magnesium	1880	10500	12600	103	80-120
Manganese	56.1	105	165	104	80-120
Molybdenum	918	105	1020	99	80-120
Nickel	35.3	105	138	98	80-120
Selenium	85.6	105	190	100	80-120
Silver	ND	105	105	101	80-120
Zinc	302	209	514	102	80-120

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project : 429486

SDG : 13C207

METHOD 7471A
MERCURY BY COLD VAPOR

One (1) soil sample was received on 03/28/13 for Mercury analysis, Method 7471A in accordance with USEPA SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for HGD002SL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG. Analytical spike and serial dilution were analyzed for matrix interference evaluation. Results were within method acceptance criteria.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met; otherwise, anomalies were discussed within the associated QC parameter. Limited sample; not enough samples to analyzed MS/MSD.

LAB CHRONICLE
MERCURY BY COLD VAPOR

Client : EUROFINS EATON ANALYTICAL
Project : 429486

SDG NO. : 13C207
Instrument ID : TI047

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	HGD002SB	1	NA	04/03/1316:25	04/03/1314:30	M47D002011	M47D002009	HGD002S	Method Blank
LCS1S	HGD002SL	1	NA	04/03/1316:28	04/03/1314:30	M47D002012	M47D002009	HGD002S	Lab Control Sample (LCS)
LCD1S	HGD002SC	1	NA	04/03/1316:30	04/03/1314:30	M47D002013	M47D002009	HGD002S	LCS Duplicate
FBR SLUDGEAS	C207-01A	0.982	76.8	04/03/1316:32	04/03/1314:30	M47D002014	M47D002009	HGD002S	Analytical Spike Sample
FBR SLUDGE	C207-01	0.982	76.8	04/03/1316:34	04/03/1314:30	M47D002015	M47D002009	HGD002S	Field Sample
FBR SLUDGEDL	C207-01J	4.91	76.8	04/03/1316:37	04/03/1314:30	M47D002016	M47D002009	HGD002S	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD 7471A
MERCURY BY COLD VAPOR

Client : EUROFINS EATON ANALYTICAL
Project : 429486
Batch No. : 13C207

Matrix : SOIL
Instrument ID : TI047

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	HGD002SB	ND	1	NA	0.100	0.0200	04/03/1316:25	04/03/1314:30	M47D002011	M47D002009	HGD002S	NA	04/03/13
LCS1S	HGD002SL	0.817	1	NA	0.100	0.0200	04/03/1316:28	04/03/1314:30	M47D002012	M47D002009	HGD002S	NA	04/03/13
LCD1S	HGD002SC	0.815	1	NA	0.100	0.0200	04/03/1316:30	04/03/1314:30	M47D002013	M47D002009	HGD002S	NA	04/03/13
FBR SLUDGEAS	C207-01A	3.28	0.982	76.8	0.423	0.0847	04/03/1316:32	04/03/1314:30	M47D002014	M47D002009	HGD002S	03/22/13	03/28/13
FBR SLUDGE	C207-01	ND	0.982	76.8	0.423	0.0847	04/03/1316:34	04/03/1314:30	M47D002015	M47D002009	HGD002S	03/22/13	03/28/13
FBR SLUDGEDL	C207-01J	ND	4.91	76.8	2.12	0.423	04/03/1316:37	04/03/1314:30	M47D002016	M47D002009	HGD002S	03/22/13	03/28/13

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 429486
SDG NO.: 13C207
METHOD: METHOD 7471A

MATRIX:	SOIL			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1S				
CONTROL NO.:	HGD002SB	HGD002SL	HGD002SC		
LAB FILE ID:	M47D002011	M47D002012	M47D002013		
DATIME EXTRCTD:	04/03/1314:30	04/03/1314:30	04/03/1314:30	DATE COLLECTED:	NA
DATIME ANALYZD:	04/03/1316:25	04/03/1316:28	04/03/1316:30	DATE RECEIVED:	04/03/13
PREP. BATCH:	HGD002S	HGD002S	HGD002S		
CALIB. REF:	M47D002009	M47D002009	M47D002009		

ACCESSION:

PARAMETER	BLNK RSLT mg/kg	SPIKE AMT mg/kg	BS RSLT mg/kg	BS % REC	SPIKE AMT mg/kg	BSD RSLT mg/kg	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Mercury	ND	.833	.817	98	.833	.815	98	0	80-120	20

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 429486
BATCH NO.: 13C207
METHOD: METHOD 7471A

MATRIX:	SOIL		% MOISTURE:	76.8
DILUTION FACTOR:	0.982	4.91		
SAMPLE ID:	FBR SLUDGE	FBR SLUDGEDL		
EMAX SAMP ID:	C207-01	C207-01J		
LAB FILE ID:	M47D002015	M47D002016		
DATE EXTRACTED:	04/03/1314:30	04/03/1314:30	DATE COLLECTED:	03/22/13
DATE ANALYZED:	04/03/1316:34	04/03/1316:37	DATE RECEIVED:	03/28/13
PREP. BATCH:	HGD002S	HGD002S		
CALIB. REF:	M47D002009	M47D002009		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SERIAL DIL RSLT (mg/kg)	DIF RSLT %	QC LIMIT (%)
Mercury	ND	ND	0	10

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT:	EUROFINS EATON ANALYTICAL			
PROJECT:	429486			
SDG NO.:	13C207			
METHOD:	METHOD 7471A			
MATRIX:	SOIL		% MOISTURE:	76.8
DILTN FACTR:	0.982	0.982		
SAMPLE ID:	FBR SLUDGE			
CONTROL NO.:	C207-01	C207-01A		
LAB FILE ID:	M47D002015	M47D002014		
DATIME EXTRCTD:	04/03/1314:30	04/03/1314:30	DATE COLLECTED:	03/22/13
DATIME ANALYZD:	04/03/1316:34	04/03/1316:32	DATE RECEIVED:	03/28/13
PREP. BATCH:	HGD002S	HGD002S		
CALIB. REF:	M47D002009	M47D002009		

ACCESSIDN:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	AS RSLT (mg/kg)	AS % REC	QC LIMIT (%)
Mercury	ND	3.53	3.28	93	85-115

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

429486

WET CHEMICAL ANALYSES

SDG#: 13C207

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project : 429486

SDG : 13C207

METHOD SM 4500 NH3 F
AMMONIA (NH3-N)

One (1) soil sample was received on 03/28/13 for Ammonia-N by SM4500-NH3 F analysis, Method SM 4500 NH3 F in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for NHD001SL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met; otherwise, anomalies were discussed within the associated QC parameter. Limited sample; not enough sample to analyzed sample duplicate and matrix spike.

METHOD SM 4500 NH3 F
AMMONIA (NH3-N)

Client : EUROFINS EATON ANALYTICAL
Project : 429486
Batch No. : 13C207

Matrix : SLUDGE
InstrumentID : 70

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	PREP FACTOR	MOIST (%)	LOQ (mg/kg)	LOD (mg/kg)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATETIME
MBLK1S	NHD001SB	ND	1	NA	1.00	0.60	04/02/1319:36	04/01/1314:07	13NHD00111	NHD001	NHD001S	NA	NA
LCS1S	NHD001SL	3.97	1	NA	1.00	0.60	04/02/1319:37	04/01/1314:07	13NHD00112	NHD001	NHD001S	NA	NA
LCD1S	NHD001SC	3.94	1	NA	1.00	0.60	04/02/1319:37	04/01/1314:07	13NHD00113	NHD001	NHD001S	NA	NA
FBR SLUDGE	C207-01	4260	220	76.8	948	569	04/02/1319:40	04/01/1314:07	13NHD00124	NHD001	NHD001S	03/22/1310:36	03/28/13

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 429486
BATCH NO. : 13C207
METHOD : SM 4500 NH3 F

MATRIX : SOIL % MOISTURE: NA

DILUTION FACTOR:	1	1	1
SAMPLE ID :	MBLK1S	LCS1S	LCD1S
LAB SAMPLE ID :	NHD001SB	NHD001SL	NHD001SC
LAB FILE ID :	13NHD00111	13NHD00112	13NHD00113
DATE EXTRACTED :	04/01/1314:07	04/01/1314:07	04/01/1314:07
DATE ANALYZED :	04/02/1319:36	04/02/1319:37	04/02/1319:37
PREP BATCH :	NHD001S	NHD001S	NHD001S
CALIBRATION REF:	NHD001	NHD001	NHD001

ACCESSION:

PARAMETER	MB RESULT (mg/kg)	SPIKE AMT (mg/kg)	BS RESULT (mg/kg)	BS REC (%)	SPIKE AMT (mg/kg)	BSD RESULT (mg/kg)	BSD REC (%)	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Ammonia (NH3-N)	ND	4	3.97	99	4	3.94	99	1	80-120	20

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project : 429486

SDG : 13C207

METHOD SM 4500 S2F
SULFIDE

One (1) soil sample was received on 03/28/13 for Total Sulfide by Std Method analysis, Method SM 4500 S2 F in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Holding Time
The sample was analyzed within the prescribed holding time.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for SDC002SL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met; otherwise, anomalies were discussed within the associated QC parameter. Limited sample; not enough sample to analyzed sample duplicate.

METHOD SM4500 S2F
SULFIDE

Client : EUROFINS EATON ANALYTICAL
Project : 429486
Batch No. : 13C207

Matrix : SLUDGE
InstrumentID : NA

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	PREP. FACTOR	MOIST (%)	LOQ (mg/kg)	LOD (mg/kg)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATETIME
MBLK1S	SDC002SB	ND	1	NA	10	10	03/29/1316:26	03/29/1314:25	13SDC002S01	13SDC002	SDC002S	NA	NA
LCS1S	SDC002SL	38.6	1	NA	10	10	03/29/1316:33	03/29/1314:25	13SDC002S02	13SDC002	SDC002S	NA	NA
LCD1S	SDC002SC	37	1	NA	10	10	03/29/1316:52	03/29/1314:25	13SDC002S03	13SDC002	SDC002S	NA	NA
FBR SLUDGE	C207-01	ND	1	76.8	43.1	43.1	03/29/1317:03	03/29/1314:25	13SDC002S04	13SDC002	SDC002S	03/22/1310:36	03/28/13

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 429486
BATCH NO. : 13C207
METHOD : METHOD SM4500 S2F

MATRIX : SOIL % MOISTURE: NA

DILUTION FACTOR:	1	1	1
SAMPLE ID :	MBLK1S	LCS1S	LCD1S
LAB SAMPLE ID :	SDC002SB	SDC002SL	SDC002SC
LAB FILE ID :	13SDC002S01	13SDC002S02	13SDC002S03
DATE EXTRACTED :	03/29/1314:25	03/29/1314:25	03/29/1314:25
DATE ANALYZED :	03/29/1316:26	03/29/1316:33	03/29/1316:52
PREP BATCH :	SDC002S	SDC002S	SDC002S
CALIBRATION REF:	13SDC002	13SDC002	13SDC002

ACCESSION:

PARAMETER	MB RESULT (mg/kg)	SPIKE AMT (mg/kg)	BS RESULT (mg/kg)	BS REC (%)	SPIKE AMT (mg/kg)	BSD RESULT (mg/kg)	BSD REC (%)	RPD (%)	QC LIMIT (%)	MAX RPD (%)
SULFIDE	ND	40	38.6	96	40	37.0	92	4	80-120	20

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project : 429486

SDG : 13C207

METHOD 6850
PERCHLORATE

One (1) soil sample was received on 03/28/13 for Perchlorate by 6850 analysis, Method 6850 in accordance with USEPA SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for PLC001SL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met; otherwise, anomalies were discussed within the associated QC parameter.

SAMPLE RESULTS

METHOD 6850
PERCHLORATE

Client : EUROFINS EATON ANALYTICAL
Project : 429486
Batch No. : 13C207

Matrix : SOIL
Instrument ID : GO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (ug/kg)	DLF	MOIST	RL (ug/kg)	MDL (ug/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	PLC001SB	ND	1	NA	2.00	1.00	04/02/1312:05	03/29/1313:31	MD02004	MD02003	PLC001S	NA	03/29/13
LCS1S	PLC001SL	20.2	1	NA	2.00	1.00	04/02/1312:19	03/29/1313:31	MD02005	MD02003	PLC001S	NA	03/29/13
LCD1S	PLC001SC	21.0	1	NA	2.00	1.00	04/02/1312:33	03/29/1313:31	MD02006	MD02003	PLC001S	NA	03/29/13
FBR SLUDGE	C207-01	ND	1	76.8	8.62	4.31	04/02/1312:47	03/29/1313:31	MD02007	MD02003	PLC001S	03/22/1310:36	03/28/13

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 429486
BATCH NO.: 13C207
METHOD: METHOD 6850

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	PLC001SB	PLC001SL	PLC001SC		
LAB FILE ID:	MD02004	MD02005	MD02006		
DATE EXTRACTED:	03/29/1313:31	03/29/1313:31	03/29/1313:31	DATE COLLECTED:	NA
DATE ANALYZED:	04/02/1312:05	04/02/1312:19	04/02/1312:33	DATE RECEIVED:	03/29/13
PREP. BATCH:	PLC001S	PLC001S	PLC001S		
CALIB. REF:	MD02003	MD02003	MD02003		

ACCESSION:

PARAMETER	BLNK RSLT (ug/kg)	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Perchlorate	ND	20.0	20.2	101	20.0	21.0	105	4	85-115	20

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project : 429486

SDG : 13C207

METHOD 3060A/7196A
HEXAVALENT CHROMIUM

One (1) soil sample was received on 03/28/13 for Chromium Hexavalent analysis, Method 3060A/7196A in accordance with USEPA SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
Two (2) sets of LCS/LCD were analyzed with the samples in this SDG.
Percent recoveries for CIS012SL/C (insoluble spike) were all within QC limits.
Percent recoveries for CSC012SL/C (soluble spike) were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG. Analytical spike was analyzed for matrix interference evaluation. Results were within method acceptance criteria.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met; otherwise anomalies were discussed within the associated QC parameter. Limited sample; not enough sample to analyze matrix spike and matrix spike duplicate.

METHOD 3060A/7196A
HEXAVALENT CHROMIUM

Client : EUROFINS EATON ANALYTICAL
Project : 429486
Batch No. : 13C207

Matrix : SOIL
InstrumentID : 70

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	PREP FACTOR	MOIST (%)	RL (mg/kg)	MDL (mg/kg)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATETIME
MBLK1S	CRC012SB	ND	1	NA	1	.5	04/02/1315:44	03/28/1314:44	CRC01209	CRC012	CRC012S	NA	NA
LCS1S	CSC012SL	11.2	1	NA	1	.5	04/02/1315:44	03/28/1314:44	CRC01210	CSC012	CSC012S	NA	NA
LCD1S	CSC012SC	10.9	1	NA	1	.5	04/02/1315:44	03/28/1314:44	CRC01211	CRC012	CRC012S	NA	NA
LCS2S	CIS012SL	586	50	NA	50	25	04/02/1315:44	03/28/1314:44	CRC01212	CIS012	CIS012S	NA	NA
LCD2S	CIS012SC	599	50	NA	50	25	04/02/1315:45	03/28/1314:44	CRC01213	CRC012	CRC012S	NA	NA
FBR SLUDGE	C207-01K	ND	100	76.8	431	216	04/02/1315:47	03/28/1314:44	CRC01217	CRC012	CRC012S	03/22/1310:36	03/28/13
FBR SLUDGE	C207-01A	4450	100	76.8	431	216	04/02/1315:53	03/28/1314:44	CRC01218	CRC012	CRC012S	03/22/1310:36	03/28/13

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 429486
BATCH NO. : 13C207
METHOD : 3060A/7196A

MATRIX : SOIL % MOISTURE: NA

DILUTION FACTOR:	1	1	1
SAMPLE ID :	MBLK1S	LCS1S	LCD1S
LAB SAMPLE ID :	CRC012SB	CSC012SL	CSC012SC
LAB FILE ID :	CRC01209	CRC01210	CRC01211
DATE EXTRACTED :	03/28/1314:44	03/28/1314:44	03/28/1314:44
DATE ANALYZED :	04/02/1315:44	04/02/1315:44	04/02/1315:44
PREP BATCH :	CRC012S	CRC012S	CRC012S
CALIBRATION REF:	CRC012	CRC012	CRC012

ACCESSION:

PARAMETER	MB RESULT (mg/kg)	SPIKE AMT (mg/kg)	BS RESULT (mg/kg)	BS REC (%)	SPIKE AMT (mg/kg)	BSD RESULT (mg/kg)	BSD REC (%)	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Hexavalent Chromium	ND	12	11.2	93	12	10.9	91	2	85-115	20

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 429486
BATCH NO. : 13C207
METHOD : 3060A/7196A

MATRIX : SOIL % MOISTURE: NA

DILUTION FACTOR:	1	1	1
SAMPLE ID :	MBLK1S	LCS2S	LCD2S
LAB SAMPLE ID :	CRC012SB	CIS012SL	CIS012SC
LAB FILE ID :	CRC01209	CRC01212	CRC01213
DATE EXTRACTED :	03/28/1314:44	03/28/1314:44	03/28/1314:44
DATE ANALYZED :	04/02/1315:44	04/02/1315:44	04/02/1215:45
PREP BATCH :	CRC012S	CRC012S	CRC012S
CALIBRATION REF:	CRC012	CRC012	CRC012

ACCESSION:

PARAMETER	MB RESULT (mg/kg)	SPIKE AMT (mg/kg)	BS RESULT (mg/kg)	BS REC (%)	SPIKE AMT (mg/kg)	BSD RESULT (mg/kg)	BSD REC (%)	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Hexavalent Chromium	ND	624	586	94	676	599	89	2	80-120	20

EMAX QUALITY CONTROL DATA
MATRIX SPIKE (SOLUBLE) ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 429486
BATCH NO. : 13C207
METHOD : 3060A/7196A

MATRIX : SLUDGE % MOISTURE: 76.8

DILUTION FACTOR:	100	100
SAMPLE ID :	FBR SLUDGE	FBR SLUDGE
LAB SAMPLE ID :	C207-01K	C207-01A
LAB FILE ID :	CRC01217	CRC01218
DATE PREPARED :	03/28/1314:44	03/28/1314:44
DATE ANALYZED :	04/02/1315:47	04/02/1315:53
PREP BATCH :	CRC012S	CRC012S
CALIBRATION REF:	CRC012	CRC012

ACCESSION:

PARAMETER	PARENT RESULT (mg/kg)	SPIKE AMT (mg/kg)	MS RESULT (mg/kg)	MS REC (%)	QC LIMIT (%)
Hexavalent Chromium	ND	5090	4450	88	85-115

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project : 429486

SDG : 13C207

METHOD 9010B/9014
TOTAL CYANIDE

One (1) soil sample was received on 03/28/13 for Total Cyanide analysis, Method 9010B/9014 in accordance with USEPA SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for CND001SL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met; otherwise, anomalies were discussed within the associated QC parameter.

METHOD 9010B/9014
TOTAL CYANIDE

Client : EUROFINS EATON ANALYTICAL
Project : 429486
Batch No. : 13C207

Matrix : SOIL
InstrumentID : 70

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	PREP FACTOR	MOIST (%)	RL (mg/kg)	MDL (mg/kg)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATETIME
MBLK1S	CND001SB	ND	1	NA	1	0.2	04/01/1318:55	04/01/1312:04	13CND00110	CND001	CND001S	NA	NA
LCS1S	CND001SL	4.54	1	NA	1	0.2	04/01/1318:56	04/01/1312:04	13CND00111	CND001	CND001S	NA	NA
LCD1S	CND001SC	4.63	1	NA	1	0.2	04/01/1318:56	04/01/1312:04	13CND00112	CND001	CND001S	NA	NA
FBR SLUDGE	C207-01	ND	1	76.8	4.31	0.862	04/01/1318:56	04/01/1312:04	13CND00115	CND001	CND001S	03/22/1310:36	03/28/13

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 429486
BATCH NO. : 13C207
METHOD : 9010B/9014

MATRIX : SOIL % MOISTURE: NA

DILUTION FACTOR:	1	1	1
SAMPLE ID :	MBLK1S	LCS1S	LCD1S
LAB SAMPLE ID :	CND001SB	CND001SL	CND001SC
LAB FILE ID :	13CND00110	13CND00111	13CND00112
DATE EXTRACTED :	04/01/1312:04	04/01/1312:04	04/01/1312:04
DATE ANALYZED :	04/01/1318:55	04/01/1318:56	04/01/1318:56
PREP BATCH :	CND001S	CND001S	CND001S
CALIBRATION REF:	CND001	CND001	CND001

ACCESSION:

PARAMETER	MB RESULT (mg/kg)	SPIKE AMT (mg/kg)	BS RESULT (mg/kg)	BS REC (%)	SPIKE AMT (mg/kg)	BSD RESULT (mg/kg)	BSD REC (%)	RPD (%)	QC LIMIT (%)	MAX RPD (%)
CYANIDE	ND	5	4.54	91	5	4.63	93	2	85-115	20

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project : 429486

SDG : 13C207

METHOD 9045C
PH

One (1) soil sample was received on 03/28/13 for pH analysis, Method 9045C in accordance with USEPA SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method. All calibration requirements were within acceptance criteria.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met; otherwise, anomalies were discussed within the associated QC parameter.

METHOD 9045C
PH

Client : EUROFINS EATON ANALYTICAL
Project : 429486
Batch No. : 13C207

Matrix : SOIL
InstrumentID : 53

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (pH unit)	PREP FACTOR	MOIST (%)	RL (pH unit)	MDL (pH unit)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATETIME
FBR SLUDGE	C207-01	5.86	1	76.8	0.1	0.1	03/28/1313:42	03/28/1312:15	13PHC007S01	13PHC007	PHC007S	03/22/1310:36	03/28/13

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project : 429486

SDG : 13C207

METHOD 9056
ANIONS BY IC

One (1) soil sample was received on 03/28/13 for Anions (Bromide, Chloride, Fluoride, Nitrate-N, Nitrite-N, Orthophosphate and Sulfate) by IC analysis, Method 9056 in accordance with USEPA SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Results were compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for ICD001SL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met; otherwise, anomalies were discussed within the associated QC parameter.

SAMPLE RESULTS

METHOD 9056
BROMIDE

Client : EUROFINS EATON ANALYTICAL
Project : 429486
Batch No. : 13C207

Matrix : SOIL
Instrument ID : D0

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	ICD001SB	ND	1	NA	5.00	2.50	04/02/1315:06	04/01/1311:09	AD03-03	AD03-01	ICD001S	NA	04/01/13
LCS1S	ICD001SL	18.7	1	NA	5.00	2.50	04/02/1315:22	04/01/1311:09	AD03-04	AD03-01	ICD001S	NA	04/01/13
LCD1S	ICD001SC	18.7	1	NA	5.00	2.50	04/02/1315:38	04/01/1311:09	AD03-05	AD03-01	ICD001S	NA	04/01/13
FBR SLUDGE	C207-01	ND	1	76.8	21.6	10.8	04/02/1315:54	04/01/1311:09	AD03-06	AD03-01	ICD001S	03/22/1310:36	03/28/13

METHOD 9056
CHLORIDE

Client : EUROFINS EATON ANALYTICAL
Project : 429486
Batch No. : 13C207

Matrix : SOIL
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	ICD001SB	ND	1	NA	2.00	1.00	04/02/1315:06	04/01/1311:09	AD03-03	AD03-01	ICD001S	NA	04/01/13
LCS1S	ICD001SL	19.5	1	NA	2.00	1.00	04/02/1315:22	04/01/1311:09	AD03-04	AD03-01	ICD001S	NA	04/01/13
LCD1S	ICD001SC	19.5	1	NA	2.00	1.00	04/02/1315:38	04/01/1311:09	AD03-05	AD03-01	ICD001S	NA	04/01/13
FBR SLUDGE	C207-01I	5250	50	76.8	431	216	04/02/1316:11	04/01/1311:09	AD03-07	AD03-01	ICD001S	03/22/1310:36	03/28/13

METHOD 9056
FLUORIDE

Client : EUROFINS EATON ANALYTICAL
Project : 429486
Batch No. : 13C207

Matrix : SOIL
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	ICD001SB	ND	1	NA	1.00	0.500	04/02/1315:06	04/01/1311:09	AD03-03	AD03-01	ICD001S	NA	04/01/13
LCS1S	ICD001SL	20.5	1	NA	1.00	0.500	04/02/1315:22	04/01/1311:09	AD03-04	AD03-01	ICD001S	NA	04/01/13
LCD1S	ICD001SC	20.5	1	NA	1.00	0.500	04/02/1315:38	04/01/1311:09	AD03-05	AD03-01	ICD001S	NA	04/01/13
FBR SLUDGE	C207-01	30.2	1	76.8	4.31	2.16	04/02/1315:54	04/01/1311:09	AD03-06	AD03-01	ICD001S	03/22/1310:36	03/28/13

METHOD 9056
NITRATE-N

Client : EUROFINS EATON ANALYTICAL
Project : 429486
Batch No. : 13C207

Matrix : SOIL
Instrument ID : D0

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	ICD001SB	ND	1	NA	1.00	0.500	04/02/1315:06	04/01/1311:09	AD03-03	AD03-01	ICD001S	NA	04/01/13
LCS1S	ICD001SL	10.1	1	NA	1.00	0.500	04/02/1315:22	04/01/1311:09	AD03-04	AD03-01	ICD001S	NA	04/01/13
LCD1S	ICD001SC	10.1	1	NA	1.00	0.500	04/02/1315:38	04/01/1311:09	AD03-05	AD03-01	ICD001S	NA	04/01/13
FBR SLUDGE	C207-01	2.54J	1	76.8	4.31	2.16	04/02/1315:54	04/01/1311:09	AD03-06	AD03-01	ICD001S	03/22/1310:36	03/28/13

METHOD 9056
NITRITE-N

Client : EUROFINS EATON ANALYTICAL
Project : 429486
Batch No. : 13C207

Matrix : SOIL
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	ICD001SB	ND	1	NA	1.00	0.500	04/02/1315:06	04/01/1311:09	AD03-03	AD03-01	ICD001S	NA	04/01/13
LCS1S	ICD001SL	20.5	1	NA	1.00	0.500	04/02/1315:22	04/01/1311:09	AD03-04	AD03-01	ICD001S	NA	04/01/13
LCD1S	ICD001SC	20.4	1	NA	1.00	0.500	04/02/1315:38	04/01/1311:09	AD03-05	AD03-01	ICD001S	NA	04/01/13
FBR SLUDGE	C207-01	ND	1	76.8	4.31	2.16	04/02/1315:54	04/01/1311:09	AD03-06	AD03-01	ICD001S	03/22/1310:36	03/28/13

METHOD 9056
ORTHOPHOSPHATE-P

Client : EUROFINS EATON ANALYTICAL
Project : 429486
Batch No. : 13C207

Matrix : SOIL
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	ICD001SB	ND	1	NA	5.00	2.50	04/02/1315:06	04/01/1311:09	AD03-03	AD03-01	ICD001S	NA	04/01/13
LCS1S	ICD001SL	18.2	1	NA	5.00	2.50	04/02/1315:22	04/01/1311:09	AD03-04	AD03-01	ICD001S	NA	04/01/13
LCD1S	ICD001SC	18.4	1	NA	5.00	2.50	04/02/1315:38	04/01/1311:09	AD03-05	AD03-01	ICD001S	NA	04/01/13
FBR SLUDGE	C207-01	ND	1	76.8	21.6	10.8	04/02/1315:54	04/01/1311:09	AD03-06	AD03-01	ICD001S	03/22/1310:36	03/28/13

METHOD 9056
SULFATE

Client : EUROFINS EATON ANALYTICAL
Project : 429486
Batch No. : 13C207

Matrix : SOIL
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DLF	MOIST	RL (mg/kg)	MOL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	ICD001SB	ND	1	NA	5.00	2.50	04/02/1315:06	04/01/1311:09	AD03-03	AD03-01	ICD001S	NA	04/01/13
LCS1S	ICD001SL	47.4	1	NA	5.00	2.50	04/02/1315:22	04/01/1311:09	AD03-04	AD03-01	ICD001S	NA	04/01/13
LCD1S	ICD001SC	47.5	1	NA	5.00	2.50	04/02/1315:38	04/01/1311:09	AD03-05	AD03-01	ICD001S	NA	04/01/13
FBR SLUDGE	C207-011	10500	50	76.8	1080	539	04/02/1316:11	04/01/1311:09	AD03-07	AD03-01	ICD001S	03/22/1310:36	03/28/13

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 429486
BATCH NO.: 13C207
METHOD: METHOD 9056

MATRIX: SOIL % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: MBLK1S
LAB SAMP ID: ICD001SB ICD001SL ICD001SC
LAB FILE ID: AD03-03 AD03-04 AD03-05
DATE EXTRACTED: 04/01/1311:09 04/01/1311:09 04/01/1311:09 DATE COLLECTED: NA
DATE ANALYZED: 04/02/1315:06 04/02/1315:22 04/02/1315:38 DATE RECEIVED: 04/01/13
PREP. BATCH: ICD001S ICD001S ICD001S
CALIB. REF: AD03-01 AD03-01 AD03-01

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Bromide	ND	20	18.7	94	20	18.7	94	0	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 429486
BATCH NO.: 13C207
METHOD: METHOD 9056

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	ICD001SB	ICD001SL	ICD001SC		
LAB FILE ID:	AD03-03	AD03-04	AD03-05		
DATE EXTRACTED:	04/01/1311:09	04/01/1311:09	04/01/1311:09	DATE COLLECTED:	NA
DATE ANALYZED:	04/02/1315:06	04/02/1315:22	04/02/1315:38	DATE RECEIVED:	04/01/13
PREP. BATCH:	ICD001S	ICD001S	ICD001S		
CALIB. REF:	AD03-01	AD03-01	AD03-01		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Chloride-Cl	ND	20	19.5	97	20	19.5	98	0	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 429486
BATCH NO.: 13C207
METHOD: METHOD 9056

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	ICD001SB	ICD001SL	ICD001SC		
LAB FILE ID:	AD03-03	AD03-04	AD03-05		
DATE EXTRACTED:	04/01/1311:09	04/01/1311:09	04/01/1311:09	DATE COLLECTED:	NA
DATE ANALYZED:	04/02/1315:06	04/02/1315:22	04/02/1315:38	DATE RECEIVED:	04/01/13
PREP. BATCH:	ICD001S	ICD001S	ICD001S		
CALIB. REF:	AD03-01	AD03-01	AD03-01		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Fluoride-F	ND	20	20.5	102	20	20.5	102	0	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 429486
BATCH NO.: 13C207
METHOD: METHOD 9056

MATRIX: SOIL % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: MBLK1S
LAB SAMP ID: ICD001SB ICD001SL ICD001SC
LAB FILE ID: A003-03 A003-04 A003-05
DATE EXTRACTED: 04/01/1311:09 04/01/1311:09 04/01/1311:09 DATE COLLECTED: NA
DATE ANALYZED: 04/02/1315:06 04/02/1315:22 04/02/1315:38 DATE RECEIVED: 04/01/13
PREP. BATCH: ICD001S ICD001S ICD001S
CALIB. REF: A003-01 A003-01 A003-01

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrate-N	ND	10	10.1	101	10	10.1	101	0	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 429486
BATCH NO.: 13C207
METHOD: METHOD 9056

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	ICD001SB	ICD001SL	ICD001SC		
LAB FILE ID:	AD03-03	AD03-04	AD03-05		
DATE EXTRACTED:	04/01/1311:09	04/01/1311:09	04/01/1311:09	DATE COLLECTED:	NA
DATE ANALYZED:	04/02/1315:06	04/02/1315:22	04/02/1315:38	DATE RECEIVED:	04/01/13
PREP. BATCH:	ICD001S	ICD001S	ICD001S		
CALIB. REF:	AD03-01	AD03-01	AD03-01		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Nitrite-N	ND	20	20.5	102	20	20.4	102	0	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 429486
BATCH NO.: 13C207
METHOD: METHOD 9056

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	ICD001SB	ICD001SL	ICD001SC		
LAB FILE ID:	AD03-03	AD03-04	AD03-05		
DATE EXTRACTED:	04/01/1311:09	04/01/1311:09	04/01/1311:09	DATE COLLECTED:	NA
DATE ANALYZED:	04/02/1315:06	04/02/1315:22	04/02/1315:38	DATE RECEIVED:	04/01/13
PREP. BATCH:	ICD001S	ICD001S	ICD001S		
CALIB. REF:	AD03-01	AD03-01	AD03-01		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
ORTHOPHOSPHATE-P	ND	20	18.2	91	20	18.4	92	1	90-110	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 429486
BATCH NO.: 13C207
METHOD: METHOD 9056

MATRIX: SOIL % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: MBLK1S
LAB SAMP ID: ICD001SB ICD001SL ICD001SC
LAB FILE ID: AD03-03 AD03-04 AD03-05
DATE EXTRACTED: 04/01/1311:09 04/01/1311:09 04/01/1311:09 DATE COLLECTED: NA
DATE ANALYZED: 04/02/1315:06 04/02/1315:22 04/02/1315:38 DATE RECEIVED: 04/01/13
PREP. BATCH: ICD001S ICD001S ICD001S
CALIB. REF: AD03-01 AD03-01 AD03-01

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Sulfate	ND	50	47.4	95	50	47.5	95	0	90-110	20

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project : 429486

SDG : 13C207

METHOD 9056
ORTHOPHOSPHATE BY IC

One (1) soil sample was received on 03/28/13 for Anions by IC analysis, Method 9056 in accordance with USEPA SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source. Continuing calibration verifications were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Result was compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for ICD001SL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated for this SDG.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. All project requirements were met; otherwise, anomalies were discussed within the associated QC parameter.

METHOD 9056
ORTHOPHOSPHATE-P

Client : EUROFINS EATON ANALYTICAL
Project : 429486
Batch No. : 13C207

Matrix : SLUDGE
Instrument ID : DO

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	ICD001SB	ND	1	NA	5.00	2.50	04/02/1315:06	04/01/1311:09	AD03-03	AD03-01	ICD001S	NA	04/01/13
LCS1S	ICD001SL	18.2	1	NA	5.00	2.50	04/02/1315:22	04/01/1311:09	AD03-04	AD03-01	ICD001S	NA	04/01/13
LCD1S	ICD001SC	18.4	1	NA	5.00	2.50	04/02/1315:38	04/01/1311:09	AD03-05	AD03-01	ICD001S	NA	04/01/13
FBR SLUDGE	C207-01	ND	1	76.8	21.6	10.8	04/02/1315:54	04/01/1311:09	AD03-06	AD03-01	ICD001S	03/22/1310:36	03/28/13

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 429486
BATCH NO. : 13C207
METHOD : SM 4500 PE

MATRIX : SOIL % MOISTURE: NA

DILUTION FACTOR:	1	1	1
SAMPLE ID :	MBLK1S	LCS1S	LCD1S
LAB SAMPLE ID :	POD001SB	POD001SL	POD001SC
LAB FILE ID :	13POD00112	13POD00113	13POD00114
DATE EXTRACTED :	04/01/1313:31	04/01/1313:31	04/01/1313:31
DATE ANALYZED :	04/01/1317:44	04/01/1317:44	04/01/1317:44
PREP BATCH :	POD001S	POD001S	POD001S
CALIBRATION REF:	POD001	POD001	POD001

ACCESSION:

PARAMETER	MB RESULT (mg/kg)	SPIKE AMT (mg/kg)	BS RESULT (mg/kg)	BS REC (%)	SPIKE AMT (mg/kg)	BSD RESULT (mg/kg)	BSD REC (%)	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Phosphorus	ND	5	4.89	98	5	4.99	100	2	80-120	20

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

www.pacelabs.com

Report Prepared for:

Jaclyn Contreras
Montgomery Watson Harza Labs
750 Royal Oaks Drive
Suite 100
Monrovia CA 91016-3629

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

Pace Project #: 10223720
Sample Receipt Date: 03/28/2013
Client Project #: 429486
Client Sub PO #: 99-22845
State Cert #: 200012

Invoicing & Reporting Options:

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

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

This report has been reviewed by:

April 04, 2013

Emily Hazelroth, Project Manager
(612) 607-6407
(612) 607-6444 (fax)
emily.hazelroth@pacelabs.com

Report Prepared Date:
April 3, 2013

ACCREDITED IN ACCORDANCE WITH nelac

Report of Laboratory Analysis

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

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

DISCUSSION

This report presents the results from the analysis performed on one sample submitted by a representative of Eurofins. The sample was analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. The reporting limits were based on signal-to-noise measurements. Method blank and field sample results presented with reporting limits corresponding to the lowest calibration points and a nominal 10-gram sample amount were included in Appendix A.

Second column confirmation analyses of 2,3,7,8-TCDF values obtained from the primary (DB5-MS) column are performed only when specifically requested for a project and only when the values are above the concentration of the lowest calibration standard. Typical resolution for this isomer using the DB5-MS column ranges from 25-30%.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extract ranged from 38-70%. Except for one low value, which was flagged "R" on the results table, the labeled standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Also, since the quantification of the native 2,3,7,8-substituted congeners was based on isotope dilution, the data were automatically corrected for variation in recovery and accurate values were obtained.

In some cases, interfering substances impacted the determinations of PCDD or PCDF congeners; the affected values were flagged "I" where incorrect isotope ratios were obtained or "P" where polychlorinated diphenyl ethers were present. Concentrations below the calibration range were flagged "J" and should be regarded as estimates.

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

Laboratory spike samples were also prepared with the sample batch using clean sand that had been fortified with native standard materials. The results show that the spiked native compounds were recovered at 82-119% with relative percent differences of 0.0-9.3%. These results indicate high degrees of accuracy and precision for these determinations. Matrix spikes were not prepared with the sample batch.

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

Tel: 612-607-1700
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Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
Alabama	40770	Montana	92
Alaska	MN00064	Nebraska	
Arizona	AZ0014	Nevada	MN_00064_200
Arkansas	88-0680	New Jersey (NE	MN002
California	01155CA	New Mexico	MN00064
Colorado	MN00064	New York (NEL	11647
Connecticut	PH-0256	North Carolina	27700
EPA Region 5	WD-15J	North Dakota	R-036
EPA Region 8	8TMS-Q	Ohio	4150
Florida (NELAP	E87605	Ohio VAP	CL101 9507
Georgia (DNR)	959	Oklahoma	D9922
Guam	959	Oregon (ELAP)	MN200001-005
Hawaii	SLD	Oregon (OREL	MN300001-001
Idaho	MN00064	Pennsylvania	68-00563
Illinois	200012	Saipan	MP0003
Indiana	C-MN-01	South Carolina	74003001
Indiana	C-MN-01	Tennesee	2818
Iowa	368	Tennessee	02818
Kansas	E-10167	Texas	T104704192-08
Kentucky	90062	Utah (NELAP)	PAM
Louisiana	03086	Virginia	00251
Maine	2007029	Washington	C755
Maryland	322	West Virginia	9952C
Michigan	9909	Wisconsin	999407970
Minnesota	027-053-137	Wyoming	8TMS-Q
Mississippi	MN00064		

REPORT OF LABORATORY ANALYSIS

Appendix A

Sample Management

32813 TN 1124

eurofins | Eaton Analytical
formerly MWH Laboratories

Ship To:
1700 Southeast Elm Street, Suite 200
PACE Analytical Services, Inc.

Minneapolis, MN 55414

Phone: 612-607-6330 Fax: 612-607-6444

Submittal Form & Purchase Order 99-22845 10223720 Date: 3/27/2013

*REPORTING REQUIRMENTS: *Do Not Combine Reports with any other samples submitted under different Folder Numbers!*
Report & Invoice must have the Folder# **429486** Sub PO# **99-22845** and Job # **1000014**

Report all quality control data according to Method. Include dates analyzed. Date extracted (if extracted) and Method reference on the report.
Results must have Complete data & QC with Approval Signature.

Reports: Jackie Contreras Sub-Contracting Administrator
EMAIL TO: us20_subcontract@eurofinsus.com
Eurofins Eaton Analytical 750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016
Phone (626) 386-1165 Fax (626) 386-1122
Invoices to: Eurofins Eaton Analytical
Accounts Payable 2425 New Holland Pike, Lancaster, PA 17605

Provide in each Report the Specified State Certification # & Exp Date for requested tests + matrix.

Samples from: ILLINOIS

4-5 day rush

Sequester the glass, no pre-screening and pre-approved 4-5day rush

Folder #:	Report Due:	Sub PO #:
429486	04/03/2013	99-22845

JLS	Use Lab Order Work ID	Client Sample ID for reference only	Analysis Requested	Sample Date & Time	Matrix	PWS Systemcode	PWSID
	201303270294	FBR BIOLOGICAL SOLIDS		03/22/13 1036	DW	10223720001	
EPA8290	@8290_Solid_PM		Dioxin/Furan - MDL and RL reporting				

Relinquished by: M. DeWitt Sample Control EDT Date 3-27-13 Time 1601

Received by: TN/Pace Date 32813 Time 911

NOTIFICATION REQUIRED IF RECEIVED OUTSIDE OF 0-6 CELSIUS

An Acknowledgement of Receipt is requested to attn: Jackie Contreras

T= 0.0

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 28Jan2013 Page 1 of 1
	Document No.: F-MN-L-213-rev.06	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Eurofins

Project #: WO# : 10223720

10223720

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

Tracking Number: 9294 2880 7474

Custody Seal on Cooler/Box Present? ☐ Yes ☒ No **Seals Intact?** ☐ Yes ☒ No

Optional: Proj. Due Date: Proj. Name:

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

Thermom. Used: ☒ 3888A912167504 ☐ 80512447 ☐ 72937080 **Type of Ice:** ☒ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has begun

Cooler Temp Read (°C): 0.0 **Cooler Temp Corrected (°C):** 0.0 **Biological Tissue Frozen?** ☐ Yes ☐ No

Temp should be above freezing to 6°C **Correction Factor:** True **Date and Initials of Person Examining Contents:** 3 28 13 TN

				Comments:
Chain of Custody Present?	☒ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☒ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☒ Yes	☐ No	☐ N/A	3.
Sampler Name and/or Signature on COC?	☐ Yes	☒ No	☐ N/A	4.
Samples Arrived within Hold Time?	☒ Yes	☐ No	☐ N/A	5.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☐ No	☐ N/A	7.
Sufficient Volume?	☒ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☒ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☐ Yes	☒ No	☐ N/A	
Containers Intact?	☒ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☒ N/A	11.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: SL	☒ Yes	☐ No	☐ N/A	12.
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13.	☐ Yes	☐ No	☒ N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl<2; NaOH>12)	☐ Yes	☐ No	☒ N/A	Sample #
Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water)	☐ Yes	☒ No		Initial when completed: Lot # of added preservative:
Headspace in VOA Vials (>6mm)?	☐ Yes	☐ No	☒ N/A	14.
Trip Blank Present?	☐ Yes	☐ No	☒ N/A	15.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A	
Pace Trip Blank Lot # (If purchased):				

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: Date/Time:

Comments/Resolution:

Project Manager Review: EKH **Date:** 28 March 13

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)

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

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

Method 8290 Blank Analysis Results

Lab Sample ID	BLANK-35946	Matrix	Solid
Filename	U130402A_06	Dilution	NA
Total Amount Extracted	20.1 g	Extracted	03/28/2013 19:40
ICAL ID	U130319	Analyzed	04/02/2013 14:10
CCal Filename(s)	U130402A_01 & U130402A_13	Injected By	CVS

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	1.0	2,3,7,8-TCDF-13C	2.00	67
Total TCDF	ND	-----	1.0	2,3,7,8-TCDD-13C	2.00	82
				1,2,3,7,8-PeCDF-13C	2.00	77
2,3,7,8-TCDD	ND	-----	1.0	2,3,4,7,8-PeCDF-13C	2.00	75
Total TCDD	ND	-----	1.0	1,2,3,7,8-PeCDD-13C	2.00	97
				1,2,3,4,7,8-HxCDF-13C	2.00	64
1,2,3,7,8-PeCDF	ND	-----	5.0	1,2,3,6,7,8-HxCDF-13C	2.00	71
2,3,4,7,8-PeCDF	ND	-----	5.0	2,3,4,6,7,8-HxCDF-13C	2.00	66
Total PeCDF	ND	-----	5.0	1,2,3,7,8,9-HxCDF-13C	2.00	67
				1,2,3,4,7,8-HxCDD-13C	2.00	72
1,2,3,7,8-PeCDD	ND	-----	5.0	1,2,3,6,7,8-HxCDD-13C	2.00	71
Total PeCDD	ND	-----	5.0	1,2,3,4,6,7,8-HpCDF-13C	2.00	69
				1,2,3,4,7,8,9-HpCDF-13C	2.00	65
1,2,3,4,7,8-HxCDF	ND	-----	5.0	1,2,3,4,6,7,8-HpCDD-13C	2.00	77
1,2,3,6,7,8-HxCDF	ND	-----	5.0	OCDD-13C	4.00	56
2,3,4,6,7,8-HxCDF	ND	-----	5.0			
1,2,3,7,8,9-HxCDF	ND	-----	5.0	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	5.0	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	5.0	2,3,7,8-TCDD-37Cl4	0.20	82
1,2,3,6,7,8-HxCDD	ND	-----	5.0			
1,2,3,7,8,9-HxCDD	ND	-----	5.0			
Total HxCDD	ND	-----	5.0			
1,2,3,4,6,7,8-HpCDF	ND	-----	5.0	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	5.0	Equivalence: 0.00 ng/Kg		
Total HpCDF	ND	-----	5.0	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	-----	5.0			
Total HpCDD	ND	-----	5.0			
OCDF	ND	-----	10.0			
OCDD	ND	-----	10.0			

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

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

REPORT OF LABORATORY ANALYSIS

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

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

Method 8290 Sample Analysis Results

Client - Montgomery Watson Harza Labs

Client's Sample ID	201303270294		
Lab Sample ID	10223720001		
Filename	U130402A_07		
Injected By	CVS		
Total Amount Extracted	40.4 g	Matrix	Solid
% Moisture	76.8	Dilution	NA
Dry Weight Extracted	9.39 g	Collected	03/22/2013 10:36
ICAL ID	U130319	Received	03/28/2013 09:11
CCal Filename(s)	U130402A_01 & U130402A_13	Extracted	03/28/2013 19:40
Method Blank ID	BLANK-35946	Analyzed	04/02/2013 14:55

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	1.6	-----	1.0	2,3,7,8-TCDF-13C	2.00	50
Total TCDF	23.0	-----	1.0	2,3,7,8-TCDD-13C	2.00	60
				1,2,3,7,8-PeCDF-13C	2.00	56
2,3,7,8-TCDD	ND	-----	1.0	2,3,4,7,8-PeCDF-13C	2.00	55
Total TCDD	ND	-----	1.0	1,2,3,7,8-PeCDD-13C	2.00	70
				1,2,3,4,7,8-HxCDF-13C	2.00	47
1,2,3,7,8-PeCDF	ND	-----	5.0	1,2,3,6,7,8-HxCDF-13C	2.00	50
2,3,4,7,8-PeCDF	ND	-----	5.0	2,3,4,6,7,8-HxCDF-13C	2.00	50
Total PeCDF	ND	-----	5.0	1,2,3,7,8,9-HxCDF-13C	2.00	49
				1,2,3,4,7,8-HxCDD-13C	2.00	52
1,2,3,7,8-PeCDD	ND	-----	5.0	1,2,3,6,7,8-HxCDD-13C	2.00	52
Total PeCDD	ND	-----	5.0	1,2,3,4,6,7,8-HpCDF-13C	2.00	47
				1,2,3,4,7,8,9-HpCDF-13C	2.00	49
1,2,3,4,7,8-HxCDF	ND	-----	5.0	1,2,3,4,6,7,8-HpCDD-13C	2.00	55
1,2,3,6,7,8-HxCDF	ND	-----	5.0	OCDD-13C	4.00	38 R
2,3,4,6,7,8-HxCDF	ND	-----	5.0			
1,2,3,7,8,9-HxCDF	ND	-----	5.0	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	5.0	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	5.0	2,3,7,8-TCDD-37Cl4	0.20	61
1,2,3,6,7,8-HxCDD	ND	-----	5.0			
1,2,3,7,8,9-HxCDD	ND	-----	5.0			
Total HxCDD	ND	-----	5.0			
1,2,3,4,6,7,8-HpCDF	6.9	-----	5.0	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	5.0	Equivalence: 0.29 ng/Kg		
Total HpCDF	6.9	-----	5.0	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	-----	5.0			
Total HpCDD	ND	-----	5.0			
OCDF	60.0	-----	10.0			
OCDD	ND	-----	10.0			

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

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

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

REPORT OF LABORATORY ANALYSIS

Report No.....10223720

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

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

Reporting Flags

A = Reporting Limit based on signal to noise

B = Less than 10x higher than method blank level

C = Result obtained from confirmation analysis

D = Result obtained from analysis of diluted sample

E = Exceeds calibration range

I = Interference present

J = Estimated value

Nn = Value obtained from additional analysis

P = PCDE Interference

R = Recovery outside target range

S = Peak saturated

U = Analyte not detected

V = Result verified by confirmation analysis

X = %D Exceeds limits

Y = Calculated using average of daily RFs

* = See Discussion

REPORT OF LABORATORY ANALYSIS

Appendix B

Sample Analysis Summary

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

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Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Montgomery Watson Harza Labs

Client's Sample ID	201303270294		
Lab Sample ID	10223720001		
Filename	U130402A_07		
Injected By	CVS		
Total Amount Extracted	40.4 g	Matrix	Solid
% Moisture	76.8	Dilution	NA
Dry Weight Extracted	9.39 g	Collected	03/22/2013 10:36
ICAL ID	U130319	Received	03/28/2013 09:11
CCal Filename(s)	U130402A_01 & U130402A_13	Extracted	03/28/2013 19:40
Method Blank ID	BLANK-35946	Analyzed	04/02/2013 14:55

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	1.60	-----	0.31		2,3,7,8-TCDF-13C	2.00	50
Total TCDF	23.00	-----	0.31		2,3,7,8-TCDD-13C	2.00	60
					1,2,3,7,8-PeCDF-13C	2.00	56
2,3,7,8-TCDD	ND	-----	0.24		2,3,4,7,8-PeCDF-13C	2.00	55
Total TCDD	ND	-----	0.24		1,2,3,7,8-PeCDD-13C	2.00	70
					1,2,3,4,7,8-HxCDF-13C	2.00	47
1,2,3,7,8-PeCDF	1.60	-----	0.40	J	1,2,3,6,7,8-HxCDF-13C	2.00	50
2,3,4,7,8-PeCDF	1.10	-----	0.43	J	2,3,4,6,7,8-HxCDF-13C	2.00	50
Total PeCDF	13.00	-----	0.41		1,2,3,7,8,9-HxCDF-13C	2.00	49
					1,2,3,4,7,8-HxCDD-13C	2.00	52
1,2,3,7,8-PeCDD	ND	-----	0.31		1,2,3,6,7,8-HxCDD-13C	2.00	52
Total PeCDD	0.64	-----	0.31	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	47
					1,2,3,4,7,8,9-HpCDF-13C	2.00	49
1,2,3,4,7,8-HxCDF	2.40	-----	0.42	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	55
1,2,3,6,7,8-HxCDF	-----	1.60	0.43	I	OCDD-13C	4.00	38 R
2,3,4,6,7,8-HxCDF	0.79	-----	0.36	J			
1,2,3,7,8,9-HxCDF	-----	0.63	0.42	P	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	9.80	-----	0.41		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.29		2,3,7,8-TCDD-37Cl4	0.20	61
1,2,3,6,7,8-HxCDD	ND	-----	0.38				
1,2,3,7,8,9-HxCDD	ND	-----	0.32				
Total HxCDD	ND	-----	0.33				
1,2,3,4,6,7,8-HpCDF	6.90	-----	0.32		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	2.70	-----	0.42	J	Equivalence: 1.3 ng/Kg		
Total HpCDF	11.00	-----	0.37		(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	-----	0.81	0.36	I			
Total HpCDD	2.00	-----	0.36	J			
OCDF	60.00	-----	0.65				
OCDD	4.50	-----	0.78	J			

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

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

REPORT OF LABORATORY ANALYSIS

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

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

Method 8290 Blank Analysis Results

Lab Sample ID	BLANK-35946	Matrix	Solid
Filename	U130402A_06	Dilution	NA
Total Amount Extracted	20.1 g	Extracted	03/28/2013 19:40
ICAL ID	U130319	Analyzed	04/02/2013 14:10
CCal Filename(s)	U130402A_01 & U130402A_13	Injected By	CVS

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.12	-----	0.055	J	2,3,7,8-TCDF-13C	2.00	67
Total TCDF	0.12	-----	0.055	J	2,3,7,8-TCDD-13C	2.00	82
					1,2,3,7,8-PeCDF-13C	2.00	77
2,3,7,8-TCDD	ND	-----	0.076		2,3,4,7,8-PeCDF-13C	2.00	75
Total TCDD	ND	-----	0.076		1,2,3,7,8-PeCDD-13C	2.00	97
					1,2,3,4,7,8-HxCDF-13C	2.00	64
1,2,3,7,8-PeCDF	ND	-----	0.065		1,2,3,6,7,8-HxCDF-13C	2.00	71
2,3,4,7,8-PeCDF	ND	-----	0.060		2,3,4,6,7,8-HxCDF-13C	2.00	66
Total PeCDF	ND	-----	0.063		1,2,3,7,8,9-HxCDF-13C	2.00	67
					1,2,3,4,7,8-HxCDD-13C	2.00	72
1,2,3,7,8-PeCDD	ND	-----	0.075		1,2,3,6,7,8-HxCDD-13C	2.00	71
Total PeCDD	ND	-----	0.075		1,2,3,4,6,7,8-HpCDF-13C	2.00	69
					1,2,3,4,7,8,9-HpCDF-13C	2.00	65
1,2,3,4,7,8-HxCDF	ND	-----	0.052		1,2,3,4,6,7,8-HpCDD-13C	2.00	77
1,2,3,6,7,8-HxCDF	ND	-----	0.051		OCDD-13C	4.00	56
2,3,4,6,7,8-HxCDF	ND	-----	0.048				
1,2,3,7,8,9-HxCDF	ND	-----	0.073		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.056		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.071		2,3,7,8-TCDD-37Cl4	0.20	82
1,2,3,6,7,8-HxCDD	ND	-----	0.097				
1,2,3,7,8,9-HxCDD	ND	-----	0.099				
Total HxCDD	ND	-----	0.089				
1,2,3,4,6,7,8-HpCDF	ND	-----	0.068		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.095		Equivalence: 0.013 ng/Kg		
Total HpCDF	ND	-----	0.082		(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	-----	0.100				
Total HpCDD	0.14	-----	0.100	J			
OCDF	ND	-----	0.120				
OCDD	0.45	-----	0.180	J			

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

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
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Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-35947		
Filename	U130402A_02	Matrix	Solid
Total Amount Extracted	20.2 g	Dilution	NA
ICAL ID	U130319	Extracted	03/28/2013 19:40
CCal Filename(s)	U130402A_01 & U130402A_13	Analyzed	04/02/2013 11:10
Method Blank ID	BLANK-35946	Injected By	CVS

Native Isomers	**Qs** (ng)	**Qm** (ng)	% Rec.	**Internal Standards**	**ng's Added**	**Percent Recovery**
2,3,7,8-TCDF	0.20	0.23	113	2,3,7,8-TCDF-13C	2.0	66
Total TCDF				2,3,7,8-TCDD-13C	2.0	82
				1,2,3,7,8-PeCDF-13C	2.0	77
2,3,7,8-TCDD	0.20	0.17	87	2,3,4,7,8-PeCDF-13C	2.0	76
Total TCDD				1,2,3,7,8-PeCDD-13C	2.0	96
				1,2,3,4,7,8-HxCDF-13C	2.0	65
1,2,3,7,8-PeCDF	1.0	1.0	104	1,2,3,6,7,8-HxCDF-13C	2.0	73
2,3,4,7,8-PeCDF	1.0	1.0	102	2,3,4,6,7,8-HxCDF-13C	2.0	69
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.0	68
				1,2,3,4,7,8-HxCDD-13C	2.0	74
1,2,3,7,8-PeCDD	1.0	0.90	90	1,2,3,6,7,8-HxCDD-13C	2.0	72
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.0	74
				1,2,3,4,7,8,9-HpCDF-13C	2.0	68
1,2,3,4,7,8-HxCDF	1.0	1.1	105	1,2,3,4,6,7,8-HpCDD-13C	2.0	81
1,2,3,6,7,8-HxCDF	1.0	1.00	100	OCDD-13C	4.0	62
2,3,4,6,7,8-HxCDF	1.0	0.98	98			
1,2,3,7,8,9-HxCDF	1.0	0.99	99	1,2,3,4-TCDD-13C	2.0	NA
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.0	NA
1,2,3,4,7,8-HxCDD	1.0	1.1	107	2,3,7,8-TCDD-37Cl4	0.20	79
1,2,3,6,7,8-HxCDD	1.0	1.1	106			
1,2,3,7,8,9-HxCDD	1.0	1.1	107			
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.0	1.1	107			
1,2,3,4,7,8,9-HpCDF	1.0	0.96	96			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.0	0.94	94			
Total HpCDD						
OCDF	2.0	1.8	90			
OCDD	2.0	2.1	105			

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
R = Recovery outside of target range

Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCSD-35948		
Filename	U130402A_03	Matrix	Solid
Total Amount Extracted	20.3 g	Dilution	NA
ICAL ID	U130319	Extracted	03/28/2013 19:40
CCal Filename(s)	U130402A_01 & U130402A_13	Analyzed	04/02/2013 11:54
Method Blank ID	BLANK-35946	Injected By	CVS

Native Isomers	**Qs** (ng)	**Qm** (ng)	% Rec.	**Internal Standards**	**ng's Added**	**Percent Recovery**
2,3,7,8-TCDF	0.20	0.24	119	2,3,7,8-TCDF-13C	2.0	56
Total TCDF				2,3,7,8-TCDD-13C	2.0	71
				1,2,3,7,8-PeCDF-13C	2.0	65
2,3,7,8-TCDD	0.20	0.18	88	2,3,4,7,8-PeCDF-13C	2.0	65
Total TCDD				1,2,3,7,8-PeCDD-13C	2.0	82
				1,2,3,4,7,8-HxCDF-13C	2.0	54
1,2,3,7,8-PeCDF	1.0	1.1	113	1,2,3,6,7,8-HxCDF-13C	2.0	60
2,3,4,7,8-PeCDF	1.0	1.1	107	2,3,4,6,7,8-HxCDF-13C	2.0	56
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.0	53
				1,2,3,4,7,8-HxCDD-13C	2.0	61
1,2,3,7,8-PeCDD	1.0	0.95	95	1,2,3,6,7,8-HxCDD-13C	2.0	59
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.0	60
				1,2,3,4,7,8,9-HpCDF-13C	2.0	55
1,2,3,4,7,8-HxCDF	1.0	1.1	108	1,2,3,4,6,7,8-HpCDD-13C	2.0	66
1,2,3,6,7,8-HxCDF	1.0	1.0	104	OCDD-13C	4.0	47
2,3,4,6,7,8-HxCDF	1.0	1.1	106			
1,2,3,7,8,9-HxCDF	1.0	1.0	102	1,2,3,4-TCDD-13C	2.0	NA
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.0	NA
1,2,3,4,7,8-HxCDD	1.0	1.1	107	2,3,7,8-TCDD-37Cl4	0.20	71
1,2,3,6,7,8-HxCDD	1.0	1.2	116			
1,2,3,7,8,9-HxCDD	1.0	1.1	111			
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.0	1.1	112			
1,2,3,4,7,8,9-HpCDF	1.0	1.0	102			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.0	0.98	98			
Total HpCDD						
OCDF	2.0	1.6	82			
OCDD	2.0	2.2	111			

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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Method 8290

Spike Recovery Relative Percent Difference (RPD) Results

Client	Montgomery Watson Harza Labs		
Spike 1 ID	LCS-35947	Spike 2 ID	LCSD-35948
Spike 1 Filename	U130402A_02	Spike 2 Filename	U130402A_03

Compound	Spike 1 %REC	Spike 2 %REC	%RPD
2,3,7,8-TCDF	113	119	5.2
2,3,7,8-TCDD	87	88	1.1
1,2,3,7,8-PeCDF	104	113	8.3
2,3,4,7,8-PeCDF	102	107	4.8
1,2,3,7,8-PeCDD	90	95	5.4
1,2,3,4,7,8-HxCDF	105	108	2.8
1,2,3,6,7,8-HxCDF	100	104	3.9
2,3,4,6,7,8-HxCDF	98	106	7.8
1,2,3,7,8,9-HxCDF	99	102	3.0
1,2,3,4,7,8-HxCDD	107	107	0.0
1,2,3,6,7,8-HxCDD	106	116	9.0
1,2,3,7,8,9-HxCDD	107	111	3.7
1,2,3,4,6,7,8-HpCDF	107	112	4.6
1,2,3,4,7,8,9-HpCDF	96	102	6.1
1,2,3,4,6,7,8-HpCDD	94	98	4.2
OCDF	90	82	9.3
OCDD	105	111	5.6

%REC = Percent Recovered
RPD = The difference between the two values divided by the mean value

REPORT OF LABORATORY ANALYSIS