HAZARDOUS WASTE SECTION - COMPLIANCE BRANCH
FILE TRANSMITTAL & DATA ENTRY FORM

Your Name: Mark Burnette

Facility ID Number: NCR000003319

Facility Name: Heritage Crystal Clean

Document Group: Inspection/Investigation (I)

Document Type: I - Complaint Investigation (CMP)

File Description/Comments: Used Oil Spill, handled by UST section

Date of Document: 1/30/2016

Author(s) of Document: Mark Burnette

Inspector ID #: NC044

Suborganization: Western Region

County (if not on report): Cabarrus

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WASTE MANAGEMENT
HAZARDOUS WASTE SECTION
ACTIVITY REPORT

Subject: Heritage- Crystal Clean (CESQG/Transporter/Transfer Facility) **Date: January 30, 2016**

Address: 2115 Speedrail Ct **Date Invest Open: 1/28/16**
Date Invest Closed:

City: Concord **State: North Carolina** **Zip: 28025**

EPA ID Number: **NCR 000 003 319**

By Whom: **Mark Burnette, ESS**

Mark A Burnette
Digitally signed by Mark A Burnette
DN: cn=Mark A Burnette, o=DWM, ou=HW, email=mark.burnette@ncdenr.gov, c=US
Date: 2016.04.04 13:04:28 -04'00'

Persons Contacted: **Bill Henkel/Branch Manger**
704-455-1333 x 24
Reason for Visit: **Complaint Investigation (CMP)**
Copies To: **Brent Burch, Branch Head**
MRO files

REPORT: Heritage Crystal Clean (HCC) is a used oil processor, transfer facility and transporter located in Cabarrus County. On January 28, 2016 a used oil spill/incident was reported to the National Response Center (NRC). A site visit and investigation was scheduled for the following day by the Hazardous Waste Section (HWS).

On January 29, 2016 a site visit was conducted to check on the status of the oil spill/incident and the progress made on the clean-up. A short meeting was held with Mr. Bill Henkel, and he explained the cause of the spill and what was going on to clean it up. He stated that during an off-loading event air pressure built up in one of the lines which caused it to "burp". This cause a large amount of the used oil to escape and migrate onto the ground and the equipment and tanks in the tank farm.

HCC contracted with CERT to clean-up the spill. CERT arrived on 1/28/16 with a vacuum truck, skid steer, back hoe and pressure washer. On the 28th, CERT 2000 gallons of oil contact water from the retention pond on-site. Over the next few days, CERT removed another 2000 gallons of liquids from the secondary containment, and 12 loads of contaminated dirt from the facility. The clean-up lasted until February 5, 2016. The soil analysis was received on 2/22/16, and the remediation is being handled by Mr. Brett Morris with the UST Section. Pictures attached.

No further action is required by the facility at this time. If there are questions related to the RCRA rules or this report, please contact me at mark.burnette@ncdenr.gov or 704-684-5013.

Activity Type: (Check Most Appropriate)

1. **Investigation: X**
2. **Compliance Assistance:**
3. **Presentation:**
4. **Training:**
5. **Meeting:**
6. **Other:**

Soil removal area on 1/29/16

Soil removal from retention pond

Tan Farm secondary containment

Tank Farm- note oil on AST's and equipment

Tank Farm from entrance

HCC Oil Spill

1-28-2016

Received call from Richard Stout at 3:30 PM, Large oil spill on backside of HCC premises. Sent Vacuum unit, skid steer with sweeper, hot pressure washer, back hoe. Trasported equipment with Roll off, roll back, dump truck #8, response truck and trailer, and two managers trucks. Vacuumed out 2000 gallons of oily contact water out of retention pond. Began containment of oil spill by utilizing saw dust on site at HCC. Crew left at 10:00 PM.

1-29-2016

7:00 AM: With equipment on site from night before, created ramp to get to contaminated area. Was able to vacuum out 2000 gallons of E tank area. Hauled 2 loads of contaminated soil, brought 1 load of clean dirt back and a load of rocks. Pressure washed containment area. 6:00 PM done.

1-30-2016

7:00 AM: Hauled out 5 loads of contaminated soil. Continued pressure washing of tanks. Vacuumed out contaminated material between E tank and pit area. 2:00 PM done.

2-1-2016

7:00 AM: Hauled out 5 more loads of contaminated dirt. Dressed area with clean back fill, hand dug sprayed area across the fence line. Pressure washed tanks with 2 pressure washers, hot pressure washer and cold pressure washer, and secondary containment area. Vacuumed out contaminated dirt in collection pit. Analytical samples were taken. 5:00 laborers finished. Vacuum truck #2 finished at 8:00 PM.

2-2-2016

9:00 AM. Continued pressure washing process on tanks. Laid down straw and matting. 2 loads of rock placed in waterway. 5:00 PM done.

2-3-2016

8:00-12:00 Bobcat dirt and shoveled area.

2-4-2016

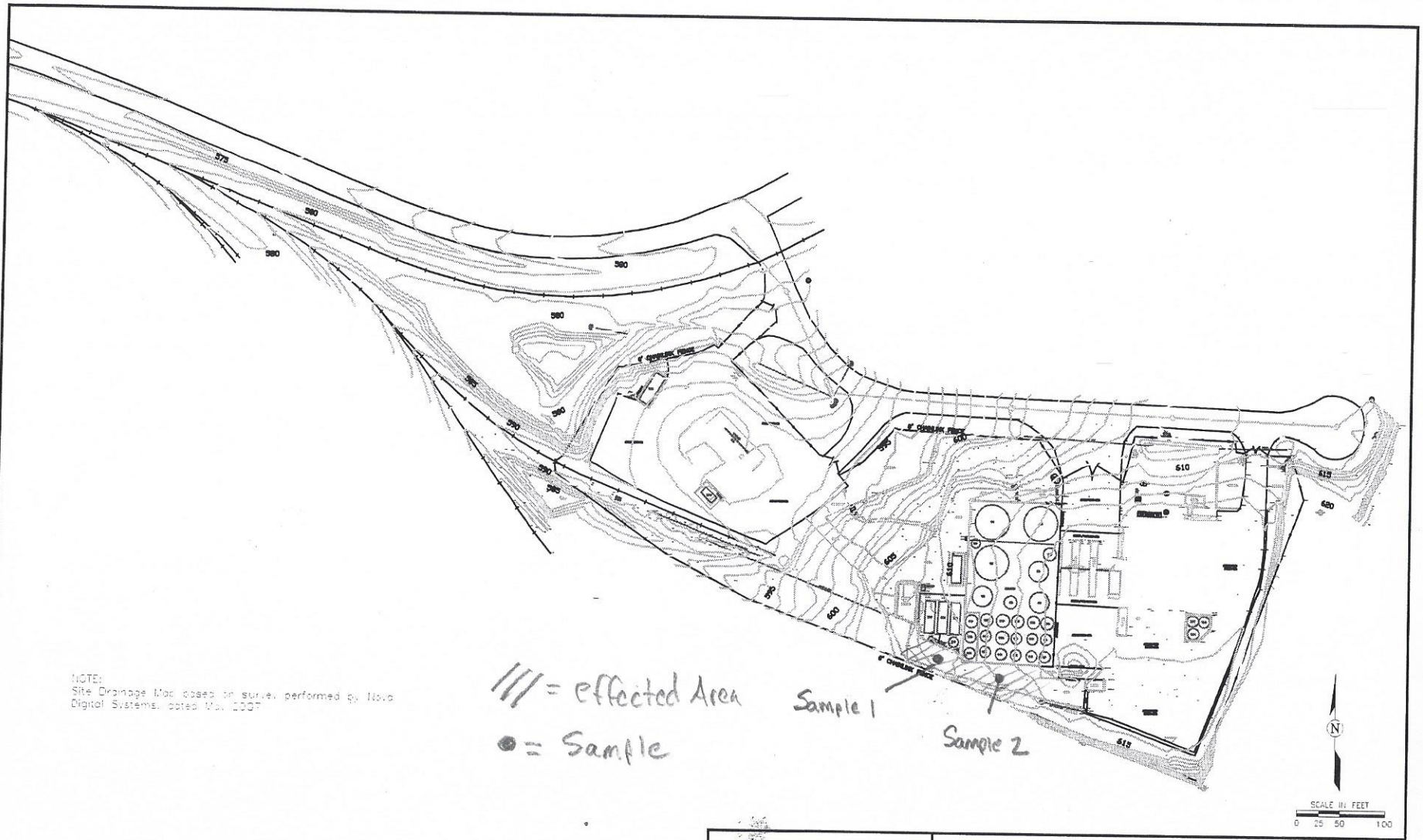
8:00-12:00: Finished matting and straw

2-5-2016

8:00 AM: Vacuumed out rock along secondary pit walk way. Brought two loads of stone, 57 for front entrance way and ABC for back lot. Used bobcat and wheel barrows to place stone. Finished at 5:00 PM

2-10-2016

7:30 AM-12:00PM With roll off truck picked up rest of CERT materials from HCC facility.



Siemens SPCC Plan Drawings_Concord.Inf DWG 6/22/07

ERM

ERM NC, PC

SITE DRAINAGE MAP
SIEMENS WATER TECHNOLOGIES CORP.
2115 SPEEDRAIL COURT
CONCORD, CABARRUS COUNTY, NORTH CAROLINA

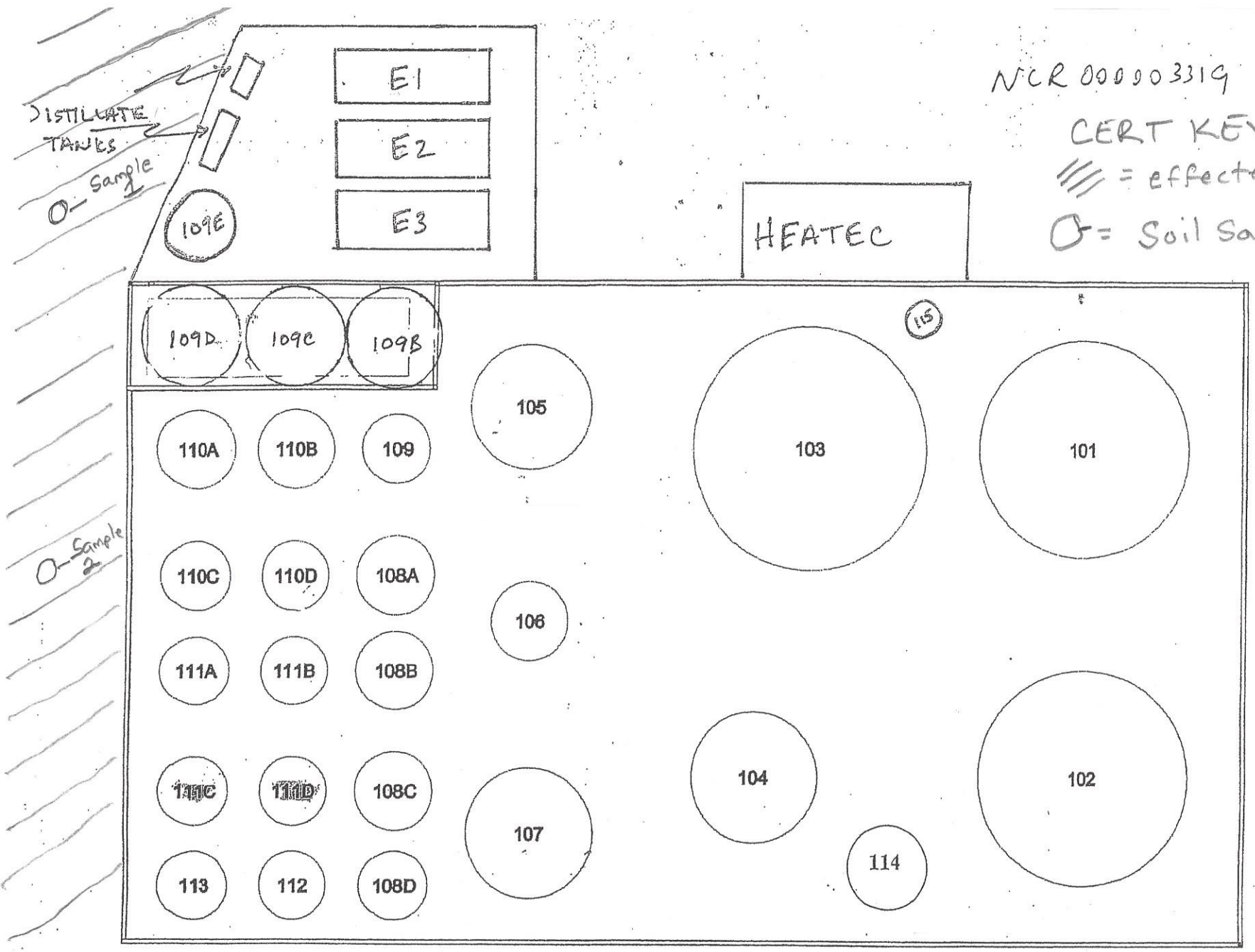
FIGURE
3

NCR 000003319

CERT KEY

/// = effected area

O = Soil Sample



Biota Diagnostics, LLC
2401 Whitehall Park Dr.
Suite 700
Charlotte NC, 28273
(704)992-0708

March 11, 2016

Lee Shank
CERT
5648 Daphne Dr.
Charlotte, NC 28269

RE: Project ID: BD-0067
Customer ID: HCC

Dear Lee Shank,

Enclosed are the analytical results for the sample/samples received on February 22nd, 2016. The following results relate only to the samples included in this report. Should you have any questions or concerns please do not hesitate to contact us.

Sincerely,

Keith Hambright

Keith Hambright
Laboratory Director
Khambright@BiotaDiag.com
Biota Diagnostics

Definitions/Glossary

Qualifiers

Qualifier	Qualifier Description
S	Spike recovery outside limits due to matrix

Glossary

Abbreviation	These abbreviations may or may not be represented in this report
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates Dilution, RE-analysis, RE-extraction, or additional Initial metals/anion analysis of sample
DLC	Decision Level Concentration
MDA	Minimum Detectable Activity
EDL	Estimated Detection Limit
MDC	Minimum Detectable Concentration
MDL	Method Detection Limit
ML	Minimum Level
NC	Not Calculated
ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio
RL	Reporting Limit or Requested Limit
RPD	Relative Percent Difference
TEF	Toxicity Equivalent Factor
TEQ	Toxicity Equivalent Quotient

Client Sample Results

Client Sample ID: HCC 1

Biota Sample ID: SX160012

Date Collected: 2/22/2016

Matrix: Soil

Date Received: 2/22/2016

Method: EPA 6020 Metals

Analyte	Results	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil. Factor
Chromium	46858.8		1.00		µg/Kg	¤	3/8/2016	3/10/2016	1
Lead	23473.1		1.00		µg/Kg	¤	3/8/2016	3/10/2016	1

Method: General Chemistry

Analyte	Results	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil. Factor
Percent Solids	77.1		1.00		%	¤	3/4/2016	3/4/2016	1

Client Sample Results

Client Sample ID: HCC 2

Biota Sample ID: SX160013

Date Collected: 2/22/2016

Matrix: Soil

Date Received: 2/22/2016

Method: EPA 6020 Metals

Analyte	Results	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil. Factor
Chromium	36222.7		1.00		µg/Kg	¤	3/8/2016	3/10/2016	1
Lead	22492.9		1.00		µg/Kg	¤	3/8/2016	3/10/2016	1

Method: General Chemistry

Analyte	Results	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil. Factor
Percent Solids	75.9		1.00		%	¤	3/4/2016	3/4/2016	1

Client Sample Results

Client Sample ID: HCC 1

Biota Sample ID: SX160012

Date Collected: 2/22/2016

Date Received: 2/22/2016

Matrix: Soil

Method: 8015C - Nonhalogenated Organics using GC-FID Modified (Diesel Range Organics)

Analyte	Results	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil. Factor
C10-C28	9.7		7.5		mg/Kg	¤		3/5/2016	1

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Factor*
Dioctyphthalate	*97.7*		*50.1-122*		*3/5/2016*	*1*

Method: 8015C - Nonhalogenated Organics using GC-FID Modified (Gasoline Range Organics)

Analyte	Results	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil. Factor
C6-C10	ND		0.41		mg/Kg	¤		3/7/2016	1

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Factor*
a, a, a, trifluorotoluene	*70.3*		*69.8-134*		*3/7/2016*	*1*

Method: General Chemistry

Analyte	Results	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil. Factor
Percent Solids	89.7		0		%			3/9/2016	1

Client Sample Results

Client Sample ID: HCC 2

Biota Sample ID: SX160013

Date Collected: 2/22/2016

Date Received: 2/22/2016

Matrix: Soil

Method: 8015C - Nonhalogenated Organics using GC-FID Modified (Diesel Range Organics)

Analyte	Results	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil. Factor
C10-C28	13		8.8		mg/Kg	¤		3/5/2016	1

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Factor*
Dioctyphthalate	*97.2*		*50.1-122*		*3/5/2016*	*1*

Method: 8015C - Nonhalogenated Organics using GC-FID Modified (Gasoline Range Organics)

Analyte	Results	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil. Factor
C6-C10	ND		0.44		mg/Kg	¤		3/7/2016	1

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Factor*
a, a, a, trifluorotoluene	*74.3*		*69.8-134*		*3/7/2016*	*1*

Method: General Chemistry

Analyte	Results	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil. Factor
Percent Solids	76		0		%			3/9/2016	1

Client Sample Results

Client Sample ID: HCC 1

Biota Sample ID: SX160012

Date Collected: 2/22/2016

Matrix: Soil

Date Received: 2/22/2016

Method: 8270-D Semi-Volatile Organic Compounds

Analyte	Results	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil. Factor
1,1´-Biphenyl	ND		370		µg/Kg	¤		3/7/2016	1
2,4,5-Trichlorophenol	ND		1900		µg/Kg	¤		3/7/2016	1
2,4,6-Trichlorophenol	ND		370		µg/Kg	¤		3/7/2016	1
2,4-Dichlorophenol	ND		370		µg/Kg	¤		3/7/2016	1
2,4-Dimethylphenol	ND		370		µg/Kg	¤		3/7/2016	1
2,4-Dinitrophenol	ND		1900		µg/Kg	¤		3/7/2016	1
2,4-Dinitrotoluene	ND		370		µg/Kg	¤		3/7/2016	1
2,6-Dinitrotoluene	ND		370		µg/Kg	¤		3/7/2016	1
2-Chloronaphthalene	ND		370		µg/Kg	¤		3/7/2016	1
2-Chlorophenol	ND		370		µg/Kg	¤		3/7/2016	1
2-Methylnaphthalene	ND		370		µg/Kg	¤		3/7/2016	1
2-Methylphenol	ND		370		µg/Kg	¤		3/7/2016	1
2-Nitroaniline	ND		1900		µg/Kg	¤		3/7/2016	1
2-Nitrophenol	ND		370		µg/Kg	¤		3/7/2016	1
3,3´-Dichlorobenzidine	ND		750		µg/Kg	¤		3/7/2016	1
3-Nitroaniline	ND		1900		µg/Kg	¤		3/7/2016	1
4,6-Dinitro-2-methylphenol	ND		1900		µg/Kg	¤		3/7/2016	1
4-Bromophenyl phenyl ether	ND		370		µg/Kg	¤		3/7/2016	1
4-Chloro-3-methylphenol	ND		370		µg/Kg	¤		3/7/2016	1
4-Chloroaniline	ND		370		µg/Kg	¤		3/7/2016	1
4-Chlorophenyl phenyl ether	ND		370		µg/Kg	¤		3/7/2016	1
4-Methylphenol	ND		370		µg/Kg	¤		3/7/2016	1
4-Nitroaniline	ND		1900		µg/Kg	¤		3/7/2016	1
4-Nitrophenol	ND		1900		µg/Kg	¤		3/7/2016	1
Acenaphthene	ND		370		µg/Kg	¤		3/7/2016	1
Acenaphthylene	ND		370		µg/Kg	¤		3/7/2016	1
Acetophenone	ND		370		µg/Kg	¤		3/7/2016	1
Anthracene	ND		370		µg/Kg	¤		3/7/2016	1
Atrazine	ND		370		µg/Kg	¤		3/7/2016	1
Benz(a)anthracene	ND		370		µg/Kg	¤		3/7/2016	1
Benzaldehyde	ND		370		µg/Kg	¤		3/7/2016	1
Benzo(a)pyrene	ND		370		µg/Kg	¤		3/7/2016	1
Benzo(b)fluoranthene	ND		370		µg/Kg	¤		3/7/2016	1
Benzo(g,h,i)perylene	ND		370		µg/Kg	¤		3/7/2016	1
Benzo(k)fluoranthene	ND		370		µg/Kg	¤		3/7/2016	1
Bis(2-chloroethoxy)methane	ND		370		µg/Kg	¤		3/7/2016	1
Bis(2-chloroethyl)ether	ND		370		µg/Kg	¤		3/7/2016	1
Bis(2-chloroisopropyl)ether	ND		370		µg/Kg	¤		3/7/2016	1
Bis(2-ethylhexyl)phthalate	ND		370		µg/Kg	¤		3/7/2016	1
Butyl benzyl phthalate	ND		370		µg/Kg	¤		3/7/2016	1
Caprolactam	ND		370		µg/Kg	¤		3/7/2016	1
Carbazole	ND		370		µg/Kg	¤		3/7/2016	1
Chrysene	ND		370		µg/Kg	¤		3/7/2016	1
Di-n-butyl phthalate	ND		370		µg/Kg	¤		3/7/2016	1
Di-n-octyl phthalate	ND		370		µg/Kg	¤		3/7/2016	1
Dibenz(a,h)anthracene	ND		370		µg/Kg	¤		3/7/2016	1
Dibenzofuran	ND		370		µg/Kg	¤		3/7/2016	1
Diethyl phthalate	ND		370		µg/Kg	¤		3/7/2016	1
Dimethyl phthalate	ND		370		µg/Kg	¤		3/7/2016	1
Fluoranthene	ND		370		µg/Kg	¤		3/7/2016	1
Fluorene	ND		370		µg/Kg	¤		3/7/2016	1
Hexachlorobenzene	ND		370		µg/Kg	¤		3/7/2016	1
Hexachlorobutadiene	ND		370		µg/Kg	¤		3/7/2016	1
Hexachlorocyclopentadiene	ND		740		µg/Kg	¤		3/7/2016	1
Hexachloroethane	ND		370		µg/Kg	¤		3/7/2016	1
Indeno(1,2,3-cd)pyrene	ND		370		µg/Kg	¤		3/7/2016	1
Isophorone	ND		370		µg/Kg	¤		3/7/2016	1
N-Nitrosodi-n-propylamine	ND		370		µg/Kg	¤		3/7/2016	1
N-Nitrosodiphenylamine	ND		370		µg/Kg	¤		3/7/2016	1
Naphthalene	ND		370		µg/Kg	¤		3/7/2016	1
Nitrobenzene	ND		370		µg/Kg	¤		3/7/2016	1

Client Sample Results

Client Sample ID: HCC 1

Biota Sample ID: SX160012

Date Collected: 2/22/2016

Matrix: Soil

Date Received: 2/22/2016

Method: 8270-D Semi-Volatile Organic Compounds

Analyte	Results	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil. Factor
Pentachlorophenol	ND		1900		µg/Kg	¤		3/7/2016	1
Phenanthrene	ND		370		µg/Kg	¤		3/7/2016	1
Phenol	ND		370		µg/Kg	¤		3/7/2016	1
Pyrene	ND		370		µg/Kg	¤		3/7/2016	1
Surrogates									
2, 4, 6-Tribromophenol	*134*	*S*	*42.4-130*		*%*	¤		*3/7/2016*	*1*
2-Fluorobiphenyl	*103*		*51.5-120*		*%*	¤		*3/7/2016*	*1*
2-Fluorophenol	*70.4*		*41.1-120*		*%*	¤		*3/7/2016*	*1*
4-Terphenyl-d14	*95.9*		*52.7-117*		*%*	¤		*3/7/2016*	*1*
Nitrobenzene-d5	*82.8*		*41.4-120*		*%*	¤		*3/7/2016*	*1*
Phenol-d5	*79.3*		*47.6-120*		*%*	¤		*3/7/2016*	*1*

Client Sample Results

Client Sample ID: HCC 2

Biota Sample ID: SX160013

Date Collected: 2/22/2016

Matrix: Soil

Date Received: 2/22/2016

Method: 8270-D Semi-Volatile Organic Compounds

Analyte	Results	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil. Factor
1,1´-Biphenyl	ND		430		µg/Kg	¤		3/7/2016	1
2,4,5-Trichlorophenol	ND		2200		µg/Kg	¤		3/7/2016	1
2,4,6-Trichlorophenol	ND		430		µg/Kg	¤		3/7/2016	1
2,4-Dichlorophenol	ND		430		µg/Kg	¤		3/7/2016	1
2,4-Dimethylphenol	ND		430		µg/Kg	¤		3/7/2016	1
2,4-Dinitrophenol	ND		2200		µg/Kg	¤		3/7/2016	1
2,4-Dinitrotoluene	ND		430		µg/Kg	¤		3/7/2016	1
2,6-Dinitrotoluene	ND		430		µg/Kg	¤		3/7/2016	1
2-Chloronaphthalene	ND		430		µg/Kg	¤		3/7/2016	1
2-Chlorophenol	ND		430		µg/Kg	¤		3/7/2016	1
2-Methylnaphthalene	ND		430		µg/Kg	¤		3/7/2016	1
2-Methylphenol	ND		430		µg/Kg	¤		3/7/2016	1
2-Nitroaniline	ND		2200		µg/Kg	¤		3/7/2016	1
2-Nitrophenol	ND		430		µg/Kg	¤		3/7/2016	1
3,3´-Dichlorobenzidine	ND		880		µg/Kg	¤		3/7/2016	1
3-Nitroaniline	ND		2200		µg/Kg	¤		3/7/2016	1
4,6-Dinitro-2-methylphenol	ND		2200		µg/Kg	¤		3/7/2016	1
4-Bromophenyl phenyl ether	ND		430		µg/Kg	¤		3/7/2016	1
4-Chloro-3-methylphenol	ND		430		µg/Kg	¤		3/7/2016	1
4-Chloroaniline	ND		430		µg/Kg	¤		3/7/2016	1
4-Chlorophenyl phenyl ether	ND		430		µg/Kg	¤		3/7/2016	1
4-Methylphenol	ND		430		µg/Kg	¤		3/7/2016	1
4-Nitroaniline	ND		2200		µg/Kg	¤		3/7/2016	1
4-Nitrophenol	ND		2200		µg/Kg	¤		3/7/2016	1
Acenaphthene	ND		430		µg/Kg	¤		3/7/2016	1
Acenaphthylene	ND		430		µg/Kg	¤		3/7/2016	1
Acetophenone	ND		430		µg/Kg	¤		3/7/2016	1
Anthracene	ND		430		µg/Kg	¤		3/7/2016	1
Atrazine	ND		430		µg/Kg	¤		3/7/2016	1
Benz(a)anthracene	ND		430		µg/Kg	¤		3/7/2016	1
Benzaldehyde	ND		430		µg/Kg	¤		3/7/2016	1
Benzo(a)pyrene	ND		430		µg/Kg	¤		3/7/2016	1
Benzo(b)fluoranthene	ND		430		µg/Kg	¤		3/7/2016	1
Benzo(g,h,i)perylene	ND		430		µg/Kg	¤		3/7/2016	1
Benzo(k)fluoranthene	ND		430		µg/Kg	¤		3/7/2016	1
Bis(2-chloroethoxy)methane	ND		430		µg/Kg	¤		3/7/2016	1
Bis(2-chloroethyl)ether	ND		430		µg/Kg	¤		3/7/2016	1
Bis(2-chloroisopropyl)ether	ND		430		µg/Kg	¤		3/7/2016	1
Bis(2-ethylhexyl)phthalate	ND		430		µg/Kg	¤		3/7/2016	1
Butyl benzyl phthalate	ND		430		µg/Kg	¤		3/7/2016	1
Caprolactam	ND		430		µg/Kg	¤		3/7/2016	1
Carbazole	ND		430		µg/Kg	¤		3/7/2016	1
Chrysene	ND		430		µg/Kg	¤		3/7/2016	1
Di-n-butyl phthalate	ND		430		µg/Kg	¤		3/7/2016	1
Di-n-octyl phthalate	ND		430		µg/Kg	¤		3/7/2016	1
Dibenz(a,h)anthracene	ND		430		µg/Kg	¤		3/7/2016	1
Dibenzofuran	ND		430		µg/Kg	¤		3/7/2016	1
Diethyl phthalate	ND		430		µg/Kg	¤		3/7/2016	1
Dimethyl phthalate	ND		430		µg/Kg	¤		3/7/2016	1
Fluoranthene	ND		430		µg/Kg	¤		3/7/2016	1
Fluorene	ND		430		µg/Kg	¤		3/7/2016	1
Hexachlorobenzene	ND		430		µg/Kg	¤		3/7/2016	1
Hexachlorobutadiene	ND		430		µg/Kg	¤		3/7/2016	1
Hexachlorocyclopentadiene	ND		870		µg/Kg	¤		3/7/2016	1
Hexachloroethane	ND		430		µg/Kg	¤		3/7/2016	1
Indeno(1,2,3-cd)pyrene	ND		430		µg/Kg	¤		3/7/2016	1
Isophorone	ND		430		µg/Kg	¤		3/7/2016	1
N-Nitrosodi-n-propylamine	ND		430		µg/Kg	¤		3/7/2016	1
N-Nitrosodiphenylamine	ND		430		µg/Kg	¤		3/7/2016	1
Naphthalene	ND		430		µg/Kg	¤		3/7/2016	1
Nitrobenzene	ND		430		µg/Kg	¤		3/7/2016	1

Client Sample Results

Client Sample ID: HCC 2

Biota Sample ID: SX160013

Date Collected: 2/22/2016

Matrix: Soil

Date Received: 2/22/2016

Method: 8270-D Semi-Volatile Organic Compounds

Analyte	Results	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil. Factor
Pentachlorophenol	ND		2200		µg/Kg	¤		3/7/2016	1
Phenanthrene	ND		430		µg/Kg	¤		3/7/2016	1
Phenol	ND		430		µg/Kg	¤		3/7/2016	1
Pyrene	ND		430		µg/Kg	¤		3/7/2016	1
Surrogates									
2, 4, 6-Tribromophenol	*104*		*42.4-130*		*%*	¤		*3/7/2016*	*1*
2-Fluorobiphenyl	*93.9*		*51.5-120*		*%*	¤		*3/7/2016*	*1*
2-Fluorophenol	*65.6*		*41.1-120*		*%*	¤		*3/7/2016*	*1*
4-Terphenyl-d14	*88.8*		*52.7-117*		*%*	¤		*3/7/2016*	*1*
Nitrobenzene-d5	*67.9*		*41.4-120*		*%*	¤		*3/7/2016*	*1*
Phenol-d5	*69*		*47.6-120*		*%*	¤		*3/7/2016*	*1*

Client Sample Results

Client Sample ID: HCC 1

Biota Sample ID: SX160012

Date Collected: 2/22/2016

Matrix: Soil

Date Received: 2/22/2016

Method: 8260-C Volatile Organic Compounds

Analyte	Results	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil. Factor
Dichlorodifluoromethane	ND		2		µg/Kg			3/12/2016	1
Chloromethane	ND		2		µg/Kg			3/12/2016	1
Vinyl Chloride	ND		2		µg/Kg			3/12/2016	1
Bromomethane	ND		2		µg/Kg			3/12/2016	1
Chloroethane	ND		2		µg/Kg			3/12/2016	1
Trichlorofluoromethane	ND		2		µg/Kg			3/12/2016	1
1,1-Dichloroethene	ND		2		µg/Kg			3/12/2016	1
Carbon disulfide	ND		2		µg/Kg			3/12/2016	1
1,1,2-Trichloro-1,2,2-trifluor	ND		2		µg/Kg			3/12/2016	1
Iodomethane	ND		2		µg/Kg			3/12/2016	1
Acrylonitirle	ND		2		µg/Kg			3/12/2016	1
trans-1,2 Dichloroethene	ND		2		µg/Kg			3/12/2016	1
1,1,-Dichloroethane	ND		2		µg/Kg			3/12/2016	1
2-Chloro-1,3-Butadiene	ND		2		µg/Kg			3/12/2016	1
Methyl Acrylate	ND		2		µg/Kg			3/12/2016	1
cis-1,2,-Dichloroethene	ND		2		µg/Kg			3/12/2016	1
Methyl Acrylonitrile	ND		2		µg/Kg			3/12/2016	1
Bromochloromethane	ND		2		µg/Kg			3/12/2016	1
Chloroform	ND		2		µg/Kg			3/12/2016	1
1,1,1-Trichloroethane	ND		2		µg/Kg			3/12/2016	1
1,1-Dichloropropene	ND		2		µg/Kg			3/12/2016	1
Benzene	ND		2		µg/Kg			3/12/2016	1
Trichloroethane	ND		2		µg/Kg			3/12/2016	1
1,2-Dichloropropane	ND		2		µg/Kg			3/12/2016	1
Bromodichloromethane	ND		2		µg/Kg			3/12/2016	1
Dibromomethane	ND		2		µg/Kg			3/12/2016	1
Toluene	ND		2		µg/Kg			3/12/2016	1
trans-1,3-Dichloropropene	ND		2		µg/Kg			3/12/2016	1
1,1,2-Trichloroethane	ND		2		µg/Kg			3/12/2016	1
Tetrachloroethene	ND		2		µg/Kg			3/12/2016	1
Chlorodibromomethane	ND		2		µg/Kg			3/12/2016	1
Ethylene Dibromide	ND		2		µg/Kg			3/12/2016	1
Ethylbenzene	ND		2		µg/Kg			3/12/2016	1
Chlorobenzene	ND		2		µg/Kg			3/12/2016	1
p,m-Xylene	ND		4		µg/Kg			3/12/2016	1
o-Xylene	ND		2		µg/Kg			3/12/2016	1
Bromoform	ND		2		µg/Kg			3/12/2016	1
Isopropylbenzene	ND		2		µg/Kg			3/12/2016	1
m-EthylToluene	ND		2		µg/Kg			3/12/2016	1
Bromobenzene	ND		2		µg/Kg			3/12/2016	1
n-Propylbenzene	ND		2		µg/Kg			3/12/2016	1
1,1,2,2-Tetrachloroethane	ND		2		µg/Kg			3/12/2016	1
1,3,5-trimethylbenzene	ND		2		µg/Kg			3/12/2016	1
4-Chlorotoluene	ND		2		µg/Kg			3/12/2016	1
tert-Butylbenzene	ND		2		µg/Kg			3/12/2016	1
1,3,5-Trimethylbenzene	ND		2		µg/Kg			3/12/2016	1
sec-Butylbenzene	ND		2		µg/Kg			3/12/2016	1
4-Isopropyltoluene	ND		2		µg/Kg			3/12/2016	1
1,3-Dichlorobenzene	ND		2		µg/Kg			3/12/2016	1
1,4-Dichlorobenzene	ND		2		µg/Kg			3/12/2016	1
n-Butylbenzene	ND		2		µg/Kg			3/12/2016	1
1,2-Dichlorobenzene	ND		2		µg/Kg			3/12/2016	1
1,2-Dibromo-3-chloropropane	ND		2		µg/Kg			3/12/2016	1
1,2,4-Trichlorobenzene	ND		2		µg/Kg			3/12/2016	1
Hexachlorobutadiene	ND		2		µg/Kg			3/12/2016	1
Naphthalene	ND		2		µg/Kg			3/12/2016	1
1,2,3-Trichlorobenzene	ND		2		µg/Kg			3/12/2016	1

Surrogates

Dibromofluoromethane	*98*	*80-120*

Client Sample Results

Client Sample ID: HCC 2

Biota Sample ID: SX160013

Date Collected: 2/22/2016

Matrix: Soil

Date Received: 2/22/2016

Method: 8260-C Volatile Organic Compounds

Analyte	Results	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil. Factor
Dichlorodifluoromethane	ND		2		µg/Kg			3/12/2016	1
Chloromethane	ND		2		µg/Kg			3/12/2016	1
Vinyl Chloride	ND		2		µg/Kg			3/12/2016	1
Bromomethane	ND		2		µg/Kg			3/12/2016	1
Chloroethane	ND		2		µg/Kg			3/12/2016	1
Trichlorofluoromethane	ND		2		µg/Kg			3/12/2016	1
1,1-Dichloroethene	ND		2		µg/Kg			3/12/2016	1
Carbon disulfide	ND		2		µg/Kg			3/12/2016	1
1,1,2-Trichloro-1,2,2-trifluor	ND		2		µg/Kg			3/12/2016	1
Iodomethane	ND		2		µg/Kg			3/12/2016	1
Acrylonitirle	ND		2		µg/Kg			3/12/2016	1
trans-1,2 Dichloroethene	ND		2		µg/Kg			3/12/2016	1
1,1,-Dichloroethane	ND		2		µg/Kg			3/12/2016	1
2-Chloro-1,3-Butadiene	ND		2		µg/Kg			3/12/2016	1
Methyl Acrylate	ND		2		µg/Kg			3/12/2016	1
cis-1,2,-Dichloroethene	ND		2		µg/Kg			3/12/2016	1
Methyl Acrylonitrile	ND		2		µg/Kg			3/12/2016	1
Bromochloromethane	ND		2		µg/Kg			3/12/2016	1
Chloroform	ND		2		µg/Kg			3/12/2016	1
1,1,1-Trichloroethane	ND		2		µg/Kg			3/12/2016	1
1,1-Dichloropropene	ND		2		µg/Kg			3/12/2016	1
Benzene	ND		2		µg/Kg			3/12/2016	1
Trichloroethane	ND		2		µg/Kg			3/12/2016	1
1,2-Dichloropropane	ND		2		µg/Kg			3/12/2016	1
Bromodichloromethane	ND		2		µg/Kg			3/12/2016	1
Dibromomethane	ND		2		µg/Kg			3/12/2016	1
Toluene	ND		2		µg/Kg			3/12/2016	1
trans-1,3-Dichloropropene	ND		2		µg/Kg			3/12/2016	1
1,1,2-Trichloroethane	ND		2		µg/Kg			3/12/2016	1
Tetrachloroethene	ND		2		µg/Kg			3/12/2016	1
Chlorodibromomethane	ND		2		µg/Kg			3/12/2016	1
Ethylene Dibromide	ND		2		µg/Kg			3/12/2016	1
Ethylbenzene	ND		2		µg/Kg			3/12/2016	1
Chlorobenzene	ND		2		µg/Kg			3/12/2016	1
p,m-Xylene	ND		4		µg/Kg			3/12/2016	1
o-Xylene	ND		2		µg/Kg			3/12/2016	1
Bromoform	ND		2		µg/Kg			3/12/2016	1
Isopropylbenzene	ND		2		µg/Kg			3/12/2016	1
m-EthylToluene	ND		2		µg/Kg			3/12/2016	1
Bromobenzene	ND		2		µg/Kg			3/12/2016	1
n-Propylbenzene	ND		2		µg/Kg			3/12/2016	1
1,1,2,2-Tetrachloroethane	ND		2		µg/Kg			3/12/2016	1
1,3,5-trimethylbenzene	ND		2		µg/Kg			3/12/2016	1
4-Chlorotoluene	ND		2		µg/Kg			3/12/2016	1
tert-Butylbenzene	ND		2		µg/Kg			3/12/2016	1
1,3,5-Trimethylbenzene	ND		2		µg/Kg			3/12/2016	1
sec-Butylbenzene	ND		2		µg/Kg			3/12/2016	1
4-Isopropyltoluene	ND		2		µg/Kg			3/12/2016	1
1,3-Dichlorobenzene	ND		2		µg/Kg			3/12/2016	1
1,4-Dichlorobenzene	ND		2		µg/Kg			3/12/2016	1
n-Butylbenzene	ND		2		µg/Kg			3/12/2016	1
1,2-Dichlorobenzene	ND		2		µg/Kg			3/12/2016	1
1,2-Dibromo-3-chloropropane	ND		2		µg/Kg			3/12/2016	1
1,2,4-Trichlorobenzene	ND		2		µg/Kg			3/12/2016	1
Hexachlorobutadiene	ND		2		µg/Kg			3/12/2016	1
Naphthalene	ND		2		µg/Kg			3/12/2016	1
1,2,3-Trichlorobenzene	ND		2		µg/Kg			3/12/2016	1

Surrogates

Dibromofluoromethane	*95*	*80-120*

QC Data

Client Sample ID: Method Blank
Date Collected: 2/22/2016
Date Received: 2/22/2016

Biota Sample ID: Method Blank
Matrix: Aqueous
QC Batch: QC07216-A

Method: EPA 6020 Metals

Analyte	Results	Unit	D	Qualifier	Analyzed	Dil. Factor
Chromium	ND	µg/L			3/10/2016	
Lead	ND	µg/L			3/10/2016	

Client Sample ID: Laboratory Control Sample
Date Collected: 2/22/2016
Date Received: 2/22/2016

Biota Sample ID: LCS
Matrix: Aqueous
QC Batch: QC07216-A

Method: EPA 6020 Metals

Analyte	Results	Target Concentration	% Recovery	% Recovery Limits	Unit	D	Qualifier	Analyzed	Dil. Factor
Chromium	101.5	100	101.5	80-120%	µg/L			3/10/2016	1
Lead	98.1	100	98.1	80-120%	µg/L			3/10/2016	1

Client Sample ID: Sample Spike
Date Collected: 2/22/2016
Date Received: 2/22/2016

Biota Sample ID: Spike
Matrix: Soil
QC Batch: QC07216-A

Method: EPA 6020 Metals

Analyte	Results	Spike Concentration	Spike Recovery	% Recovery	% Recovery Limits	Unit	D	Qualifier	Analyzed
Chromium	238.4	75	296.3	77.2	75 - 130	µg/Kg	¤		3/10/2016
Lead	131.5	75	204.3	97.1	75 - 130	µg/Kg	¤		3/10/2016

Client Sample ID: Sample Duplicate
Date Collected: 2/22/2016
Date Received: 2/22/2016

Biota Sample ID: Duplicate
Matrix: Soil
QC Batch: QC07216-A

Method: EPA 6020 Metals

Analyte	Results	Duplicate Result	RPD	RPD Limits	Unit	D	Qualifier	Analyzed
Chromium	25012.2	24140.7	3.5	20	µg/Kg	¤		3/10/2016
Lead	13232.7	13135.8	1.0	20	µg/Kg	¤		3/10/2016

QC Data

Client Sample ID: Sample Duplicate

Biota Sample ID: Duplicate

Date Collected: 2/22/2016

Date Received: 2/22/2016

Matrix: Soil

QC Batch: QC07216-A

Method: General Chemistry

Analyte	Results	Duplicate Result	RPD	RPD Limits	Unit	D	Qualifier	Analyzed
Percent Solids	77.1	77.1	1.0	20	%	¤		3/4/2016

QC Data

Method: 8015C - Nonhalogenated Organics using GC-FID Modified (GRO & DRO)

Lab Sample ID: Method Blank
Matrix: Solid
Analysis Batch:

Client Sample ID: Method Blank
Prep Batch: 220829 (GRO)
220680 (DRO)

Analyte	Results	Qualifier	RL	MDL	Unit	D	Analyzed
C6-C10 (GRO)	ND		0.50		mg/Kg	¤	3/7/2016
C10-C28 (DRO)	ND		6.7		mg/Kg	¤	3/5/2016

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Analyzed*
a, a, a, trifluorotoluene (GRO)	*83.3*		*69.8-134*	*3/7/2016*
Dioctyphthalate(DRO)	*95.7*		*50.1-122*	*3/5/2016*

Lab Sample ID: LCS
Matrix: Solid
Analysis Batch:

Client Sample ID: Lab Control Sample
Prep Batch: 220829 (GRO)
220680 (DRO)

Analyte	Spike Added	Result	Qualifier	Unit	D	% Recovery	Limits
C6-C10 (GRO)	1.0	0.92		mg/Kg	¤	92.2	68.9-129
C10-C28 (DRO)	33.3	24.56		mg/Kg	¤	73.8	56.4-119

Surrogate	*% Recovery*	*Qualifier*	*Limits*
a, a, a, trifluorotoluene (GRO)	*86.8*		*69.8-129*
Dioctyphthalate(DRO)	*89.7*		*50.1-122*

Lab Sample ID: Spike
Matrix: Solid
Analysis Batch:

Client Sample ID: Matrix Spike
Prep Batch: 220829 (GRO)
220680 (DRO)

Analyte	Spike Added	MS Result	Qualifier	Unit	D	% Recovery	Limits
C6-C10 (GRO)	1.148	0.9422		mg/Kg	¤	73.2	61.1-134
C10-C28 (DRO)	35.44	28.03		mg/Kg	¤	79.1	43.6-123

Surrogate	*% Recovery*	*Qualifier*	*Limits*
a, a, a, trifluorotoluene (GRO)	*87.4*		*69.8-134*
Dioctyphthalate(DRO)	*95*		*50.1-122*

Lab Sample ID: Duplicate
Matrix: Solid
Analysis Batch:

Client Sample ID: Sample Duplicate
Prep Batch: 220829 (GRO)
220680 (DRO)

Analyte	Sample Result	Dup Result	Qualifier	Unit	D	RPD	RPD Limit
C6-C10 (GRO)	0.9422	0.9512		mg/Kg	¤	1	20
C10-C28 (DRO)	28.03	30.17		mg/Kg	¤	7.4	20

Surrogate	*% Recovery*	*Dup % Recovery*	*RPD*	*Qualifier*
a, a, a, trifluorotoluene (GRO)	*87.4*	*88.5*	*0*	
Dioctyphthalate(DRO)	*95*	106	*0*	

QC Data

Method: 8270D Semi-Volatile Organic Compounds

Lab Sample ID: Method Blank
Matrix: Solid
Analysis Batch:

Client Sample ID: Method Blank
Prep Batch: 220663

Analyte	Results	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed
1,1´-Biphenyl	ND				µg/Kg			3/3/2016
2,4,5-Trichlorophenol	ND				µg/Kg			3/3/2016
2,4,6-Trichlorophenol	ND				µg/Kg			3/3/2016
2,4-Dichlorophenol	ND				µg/Kg			3/3/2016
2,4-Dimethylphenol	ND				µg/Kg			3/3/2016
2,4-Dinitrophenol	ND				µg/Kg			3/3/2016
2,4-Dinitrotoluene	ND				µg/Kg			3/3/2016
2,6-Dinitrotoluene	ND				µg/Kg			3/3/2016
2-Chloronaphthalene	ND				µg/Kg			3/3/2016
2-Chlorophenol	ND				µg/Kg			3/3/2016
2-Methylnaphthalene	ND				µg/Kg			3/3/2016
2-Methylphenol	ND				µg/Kg			3/3/2016
2-Nitroaniline	ND				µg/Kg			3/3/2016
2-Nitrophenol	ND				µg/Kg			3/3/2016
3,3´-Dichlorobenzidine	ND				µg/Kg			3/3/2016
3-Nitroaniline	ND				µg/Kg			3/3/2016
4,6-Dinitro-2-methylphenol	ND				µg/Kg			3/3/2016
4-Bromophenyl phenyl ether	ND				µg/Kg			3/3/2016
4-Chloro-3-methylphenol	ND				µg/Kg			3/3/2016
4-Chloroaniline	ND				µg/Kg			3/3/2016
4-Chlorophenyl phenyl ether	ND				µg/Kg			3/3/2016
4-Methylphenol	ND				µg/Kg			3/3/2016
4-Nitroaniline	ND				µg/Kg			3/3/2016
4-Nitrophenol	ND				µg/Kg			3/3/2016
Acenaphthene	ND				µg/Kg			3/3/2016
Acenaphthylene	ND				µg/Kg			3/3/2016
Acetophenone	ND				µg/Kg			3/3/2016
Anthracene	ND				µg/Kg			3/3/2016
Atrazine	ND				µg/Kg			3/3/2016
Benz(a)anthracene	ND				µg/Kg			3/3/2016
Benzaldehyde	ND				µg/Kg			3/3/2016
Benzo(a)pyrene	ND				µg/Kg			3/3/2016
Benzo(b)fluoranthene	ND				µg/Kg			3/3/2016
Benzo(g,h,i)perylene	ND				µg/Kg			3/3/2016
Benzo(k)fluoranthene	ND				µg/Kg			3/3/2016
Bis(2-chloroethoxy)methane	ND				µg/Kg			3/3/2016
Bis(2-chloroethyl)ether	ND				µg/Kg			3/3/2016
Bis(2-chloroisopropyl)ether	ND				µg/Kg			3/3/2016
Bis(2-ethylhexyl)phthalate	ND				µg/Kg			3/3/2016
Butyl benzyl phthalate	ND				µg/Kg			3/3/2016
Caprolactam	ND				µg/Kg			3/3/2016
Carbazole	ND				µg/Kg			3/3/2016
Chrysene	ND				µg/Kg			3/3/2016
Di-n-butyl phthalate	ND				µg/Kg			3/3/2016
Di-n-octyl phthalate	ND				µg/Kg			3/3/2016
Dibenz(a,h)anthracene	ND				µg/Kg			3/3/2016
Dibenzofuran	ND				µg/Kg			3/3/2016
Diethyl phthalate	ND				µg/Kg			3/3/2016
Dimethyl phthalate	ND				µg/Kg			3/3/2016
Fluoranthene	ND				µg/Kg			3/3/2016
Fluorene	ND				µg/Kg			3/3/2016
Hexachlorobenzene	ND				µg/Kg			3/3/2016
Hexachlorobutadiene	ND				µg/Kg			3/3/2016
Hexachlorocyclopentadiene	ND				µg/Kg			3/3/2016
Hexachloroethane	ND				µg/Kg			3/3/2016
Indeno(1,2,3-cd)pyrene	ND				µg/Kg			3/3/2016
Isophorone	ND				µg/Kg			3/3/2016
N-Nitrosodi-n-propylamine	ND				µg/Kg			3/3/2016
N-Nitrosodiphenylamine	ND				µg/Kg			3/3/2016
Naphthalene	ND				µg/Kg			3/3/2016
Nitrobenzene	ND				µg/Kg			3/3/2016

QC Data

Method: 8270D Semi-Volatile Organic Compounds

Lab Sample ID: Method Blank
Matrix: Solid
Analysis Batch:

Client Sample ID: Method Blank
Prep Batch: 220663

Analyte	Results	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed
Pentachlorophenol	ND				µg/Kg			3/3/2016
Phenanthrene	ND				µg/Kg			3/3/2016
Phenol	ND				µg/Kg			3/3/2016
Pyrene	ND				µg/Kg			3/3/2016
Surrogates								
2, 4, 6-Tribromophenol	*95*		*42.4-130*		*%*			*3/3/2016*
2-Fluorobiphenyl	*90.8*		*51.5-120*		*%*			*3/3/2016*
2-Fluorophenol	*74.7*		*41.1-120*		*%*			*3/3/2016*
4-Terphenyl-d14	*108*		*52.7-117*		*%*			*3/3/2016*
Nitrobenzene-d5	*68*		*41.4-120*		*%*			*3/3/2016*
Phenol-d5	*72.7*		*47.6-120*		*%*			*3/3/2016*

QC Data

Method: 8270D Semi-Volatile Organic Compounds

Lab Sample ID: Laboratory Control Sample
Matrix: Solid
Analysis Batch:

Client Sample ID: LCS
Prep Batch: 220663

Analyte	Spike Value	Spike Recovery	% Recovery	RL	Qualifier	Limits	D	Analyzed
2,4-Dinitrotoluene	3333	3193	95.8	330				3/3/2016
2-Chlorophenol	3333	2948	88.4	330				3/3/2016
4-Chloro-3-methylphenol	3333	3241	97.2	330				3/3/2016
4-Nitrophenol	3333	ND	48.1	1700				3/3/2016
Acenaphthene	3333	3409	102	330				3/3/2016
N-Nitrosodi-n-propylamine	3333	2746	82.4	330				3/3/2016
Pentachlorophenol	3333	2826	84.8	1700				3/3/2016
Phenol	3333	2667	80.0	330				3/3/2016
Pyrene	3333	3664	110	330				3/3/2016
Surrogates								
2, 4, 6-Tribromophenol			*133*		*S*	*42.4-130*		*3/3/2016*
2-Fluorobiphenyl			*112*			*51.5-120*		*3/3/2016*
2-Fluorophenol			*83.7*			*41.1-120*		*3/3/2016*
4-Terphenyl-d14			*119*		*S*	*52.7-117*		*3/3/2016*
Nitrobenzene-d5			*89.7*			*41.4-120*		*3/3/2016*
Phenol-d5			*99.8*			*47.6-120*		*3/3/2016*

QC Data

Method: 8270D Semi-Volatile Organic Compounds

Lab Sample ID: Matrix Spike
Matrix: Solid
Analysis Batch:

Client Sample ID: MS
Prep Batch: 220663

Analyte	Spike Value	Spike Recovery	% Recovery	Qualifier	Limits	D	Analyzed
2,4-Dinitrotoluene	3745	2949	8.8		49.3-120	¤	3/3/2016
2-Chlorophenol	3745	2685	71.7		51.7-120	¤	3/3/2016
4-Chloro-3-methylphenol	3745	3049	81.4		52.9-120	¤	3/3/2016
4-Nitrophenol	3745	ND	10.4	S	30.8-120	¤	3/3/2016
Acenaphthene	3745	3468	92.6		52.2-120	¤	3/3/2016
N-Nitrosodi-n-propylamine	3745	2954	78.9		51.7-125	¤	3/3/2016
Pentachlorophenol	3745	ND	0	S	39.4-120	¤	3/3/2016
Phenol	3745	2547	68		45.4-120	¤	3/3/2016
Pyrene	3745	3973	101		49.1-120	¤	3/3/2016
Surrogates							
2, 4, 6-Tribromophenol			*17.3*	*S*	*42.4-130*	¤	*3/3/2016*
2-Fluorobiphenyl			*99.4*		*51.5-120*	¤	*3/3/2016*
2-Fluorophenol			*56.1*		*41.1-120*	¤	*3/3/2016*
4-Terphenyl-d14			*104*		*52.7-117*	¤	*3/3/2016*
Nitrobenzene-d5			*77.8*		*41.4-120*	¤	*3/3/2016*
Phenol-d5			*84.0*		*47.6-120*	¤	*3/3/2016*

QC Data

Method: 8270D Semi-Volatile Organic Compounds

Lab Sample ID: Duplicate
Matrix: Solid
Analysis Batch:

Client Sample ID: Dup
Prep Batch: 220663

Analyte	Result	Dup. Result	RPD	RPD Limits	Qualifier	D	Analyzed
2,4-Dinitrotoluene	2949	3121	5.7	20			3/3/2016
2-Chlorophenol	2685	2652	1.2	20			3/3/2016
4-Chloro-3-methylphenol	3049	3232	5.8	20			3/3/2016
4-Nitrophenol	ND	ND	1	20			3/3/2016
Acenaphthene	3468	3576	3.1	20			3/3/2016
N-Nitrosodi-n-propylamine	2954	2789	5.7	20			3/3/2016
Pentachlorophenol	ND	ND	1	20			3/3/2016
Phenol	2547	2524	1	20			3/3/2016
Pyrene	3973	3860	2.9	20			3/3/2016
Surrogates							
2, 4, 6-Tribromophenol	*17.3*	*20.9*		*42.4-130*	*S*		
2-Fluorobiphenyl	*99.4*	*103*		*51.5-120*			
2-Fluorophenol	*56.1*	*54.8*		*41.1-120*			
4-Terphenyl-d14	*104*	*98.3*		*52.7-117*			
Nitrobenzene-d5	*77.8*	*74.1*		*41.4-120*			
Phenol-d5	*84.0*	*80.2*		*47.6-120*			

QC Data

Method: 8260C Volatile Organic Compounds

Lab Sample ID: Method Blank
Matrix: Solid
Analysis Batch:

Client Sample ID: Method Blank
Prep Batch:

Analyte	Results	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed
Dichlorodifluoromethane	ND		2		µg/Kg			3/12/2016
Chloromethane	ND		2		µg/Kg			3/12/2016
Vinyl Chloride	ND		2		µg/Kg			3/12/2016
Bromomethane	ND		2		µg/Kg			3/12/2016
Chloroethane	ND		2		µg/Kg			3/12/2016
Trichlorofluoromethane	ND		2		µg/Kg			3/12/2016
1,1-Dichloroethene	ND		2		µg/Kg			3/12/2016
Carbon disulfide	ND		2		µg/Kg			3/12/2016
1,1,2-Trichloro-1,2,2-trifluor	ND		2		µg/Kg			3/12/2016
Iodomethane	ND		2		µg/Kg			3/12/2016
Acrylonitirle	ND		2		µg/Kg			3/12/2016
trans-1,2 Dichloroethene	ND		2		µg/Kg			3/12/2016
1,1,-Dichloroethane	ND		2		µg/Kg			3/12/2016
2-Chloro-1,3-Butadiene	ND		2		µg/Kg			3/12/2016
Methyl Acrylate	ND		2		µg/Kg			3/12/2016
cis-1,2,-Dichloroethene	ND		2		µg/Kg			3/12/2016
Methyl Acrylonitrile	ND		2		µg/Kg			3/12/2016
Bromochloromethane	ND		2		µg/Kg			3/12/2016
Chloroform	ND		2		µg/Kg			3/12/2016
1,1,1-Trichloroethane	ND		2		µg/Kg			3/12/2016
1,1-Dichloropropene	ND		2		µg/Kg			3/12/2016
Benzene	ND		2		µg/Kg			3/12/2016
Trichloroethane	ND		2		µg/Kg			3/12/2016
1,2-Dichloropropane	ND		2		µg/Kg			3/12/2016
Bromodichloromethane	ND		2		µg/Kg			3/12/2016
Dibromomethane	ND		2		µg/Kg			3/12/2016
Toluene	ND		2		µg/Kg			3/12/2016
trans-1,3-Dichloropropene	ND		2		µg/Kg			3/12/2016
1,1,2-Trichloroethane	ND		2		µg/Kg			3/12/2016
Tetrachloroethene	ND		2		µg/Kg			3/12/2016
Chlorodibromomethane	ND		2		µg/Kg			3/12/2016
Ethylene Dibromide	ND		2		µg/Kg			3/12/2016
Ethylbenzene	ND		2		µg/Kg			3/12/2016
Chlorobenzene	ND		2		µg/Kg			3/12/2016
p,m-Xylene	ND		4		µg/Kg			3/12/2016
o-Xylene	ND		2		µg/Kg			3/12/2016
Bromoform	ND		2		µg/Kg			3/12/2016
Isopropylbenzene	ND		2		µg/Kg			3/12/2016
m-EthylToluene	ND		2		µg/Kg			3/12/2016
Bromobenzene	ND		2		µg/Kg			3/12/2016
n-Propylbenzene	ND		2		µg/Kg			3/12/2016
1,1,2,2-Tetrachloroethane	ND		2		µg/Kg			3/12/2016
1,3,5-trimethylbenzene	ND		2		µg/Kg			3/12/2016
4-Chlorotoluene	ND		2		µg/Kg			3/12/2016
tert-Butylbenzene	ND		2		µg/Kg			3/12/2016
1,3,5-Trimethylbenzene	ND		2		µg/Kg			3/12/2016
sec-Butylbenzene	ND		2		µg/Kg			3/12/2016
4-Isopropyltoluene	ND		2		µg/Kg			3/12/2016
1,3-Dichlorobenzene	ND		2		µg/Kg			3/12/2016
1,4-Dichlorobenzene	ND		2		µg/Kg			3/12/2016
n-Butylbenzene	ND		2		µg/Kg			3/12/2016
1,2-Dichlorobenzene	ND		2		µg/Kg			3/12/2016
1,2-Dibromo-3-chloropropane	ND		2		µg/Kg			3/12/2016
1,2,4-Trichlorobenzene	ND		2		µg/Kg			3/12/2016
Hexachlorobutadiene	ND		2		µg/Kg			3/12/2016
Naphthalene	ND		2		µg/Kg			3/12/2016
1,2,3-Trichlorobenzene	ND		2		µg/Kg			3/12/2016

Surrogates

Dibromofluoromethane	*98*	*80-120*

QC Data

Method: 8260C Volatile Organic Compounds

Lab Sample ID: Laboratory Control Sample
Matrix: Solid
Analysis Batch:

Client Sample ID: LCS
Prep Batch:

Analyte	Spike Value	Spike Recovery	% Recovery	Limits	Qualifier	D	Analyzed
Dichlorodifluoromethane	50	52	104	60-130			
Chloromethane	50	46.6	93.2	60-130			
Vinyl Chloride	50	47.9	95.8	60-130			
Bromomethane	50	35.6	71.2	60-130			
Chloroethane	50	35.6	71.2	60-130			
Trichlorofluoromethane	50	60.6	121.2	60-130			
1,1-Dichloroethene	50	61	122	60-130			
Carbon disulfide	50	50.7	101.4	60-130			
1,1,2-Trichloro-1,2,2-trifluor	50	61	122	60-130			
Iodomethane	50	32.8	65.6	60-130			
Acrylonitirle	50	59.2	118.4	60-130			
trans-1,2 Dichloroethene	50	50.8	101.6	60-130			
1,1,-Dichloroethane	50	51.7	103.4	60-130			
2-Chloro-1,3-Butadiene	50	50.3	100.6	60-130			
Methyl Acrylate	50	50.3	100.6	60-130			
cis-1,2,-Dichloroethene	50	55.2	110.4	60-130			
Methyl Acrylonitrile	50	12.2	24.4	60-130	B1		
Bromochloromethane	50	55.4	110.8	60-130			
Chloroform	50	48.9	97.8	60-130			
1,1,1-Trichloroethane	50	51.3	102.6	60-130			
1,1-Dichloropropene	50	49.3	98.6	60-130			
Benzene	50	52.1	104.2	60-130			
Trichloroethane	50	50.9	101.8	60-130			
1,2-Dichloropropane	50	53.9	107.8	60-130			
Bromodichloromethane	50	53.6	107.2	60-130			
Dibromomethane	50	55.7	111.4	60-130			
Toluene	50	55.1	110.2	60-130			
trans-1,3-Dichloropropene	50	51	102	60-130			
1,1,2-Trichloroethane	50	56.7	113.4	60-130			
Tetrachloroethene	50	49.2	98.4	60-130			
Chlorodibromomethane	50	55.7	111.4	60-130			
Ethylene Dibromide	50	55.4	110.8	60-130			
Ethylbenzene	50	56.7	113.4	60-130			
Chlorobenzene	50	55.3	110.6	60-130			
p,m-Xylene	100	113	113	60-130			
o-Xylene	50	58.2	116.4	60-130			
Bromoform	50	57.9	115.8	60-130			
Isopropylbenzene	50	54.3	108.6	60-130			
m-EthylToluene	50	56.6	113.2	60-130			
Bromobenzene	50	45.3	90.6	60-130			
n-Propylbenzene	50	47.8	95.6	60-130			
1,1,2,2-Tetrachloroethane	50	46.3	92.6	60-130			
1,3,5-trimethylbenzene	50	56.6	113.2	60-130			
4-Chlorotoluene	50	54.8	109.6	60-130			
tert-Butylbenzene	50	55.4	110.8	60-130			
1,3,5-Trimethylbenzene	50	51.7	103.4	60-130			
sec-Butylbenzene	50	44.8	89.6	60-130			
4-Isopropyltoluene	50	50.7	101.4	60-130			
1,3-Dichlorobenzene	50	53.2	106.4	60-130			
1,4-Dichlorobenzene	50	51.6	103.2	60-130			
n-Butylbenzene	50	42	84	60-130			
1,2-Dichlorobenzene	50	51	102	60-130			
1,2-Dibromo-3-chloropropane	50	61	122	60-130			
1,2,4-Trichlorobenzene	50	41	82	60-130			
Hexachlorobutadiene	50	39.6	79.2	60-130			
Naphthalene	50	43.8	87.6	60-130			
1,2,3-Trichlorobenzene	50	42.8	85.6	60-130			

Surrogates		
Dibromofluoromethane	*99*	*80-120*

QC Data

Method: 8260C Volatile Organic Compounds

Lab Sample ID: Matrix Spike
Matrix: Solid
Analysis Batch:

Client Sample ID: MS
Prep Batch:

Analyte	Spike Value	Spike Recovery	% Recovery	Qualifier	% Rec. Limits	D	Analyzed
Dichlorodifluoromethane	50	62	124		50-120		3/12/2016
Chloromethane	50	48.25	96.5		50-120		3/12/2016
Vinyl Chloride	50	52.25	104.5		50-120		3/12/2016
Bromomethane	50	24.49	48.98	S	50-120		3/12/2016
Chloroethane	50	56.38	112.76		50-120		3/12/2016
Trichlorofluoromethane	50	54.88	109.76		50-120		3/12/2016
1,1-Dichloroethene	50	42.9	85.8		50-120		3/12/2016
Carbon disulfide	50	39.2	78.4		50-120		3/12/2016
1,1,2-Trichloro-1,2,2-trifluor	50	40.2	80.4		50-120		3/12/2016
Iodomethane	50	13.8	27.6	S	50-120		3/12/2016
Acrylonitirle	50	5.1	10.2	S	50-120		3/12/2016
trans-1,2 Dichloroethene	50	56.2	112.4		50-120		3/12/2016
1,1,-Dichloroethane	50	45.3	90.6		50-120		3/12/2016
2-Chloro-1,3-Butadiene	50	32.8	65.6		50-120		3/12/2016
Methyl Acrylate	50	26.4	52.8		50-120		3/12/2016
cis-1,2,-Dichloroethene	50	49.1	98.2		50-120		3/12/2016
Methyl Acrylonitrile	50	11	22	S	50-120		3/12/2016
Bromochloromethane	50	52	104		50-120		3/12/2016
Chloroform	50	55.7	111.4		50-120		3/12/2016
1,1,1-Trichloroethane	50	47.8	95.6		50-120		3/12/2016
1,1-Dichloropropene	50	45	90		50-120		3/12/2016
Benzene	50	54.9	109.8		50-120		3/12/2016
Trichloroethane	50	59.3	118.6		50-120		3/12/2016
1,2-Dichloropropane	50	56.7	113.4		50-120		3/12/2016
Bromodichloromethane	50	51.6	103.2		50-120		3/12/2016
Dibromomethane	50	52.7	105.4		50-120		3/12/2016
Toluene	50	43.6	87.2		50-120		3/12/2016
trans-1,3-Dichloropropene	50	12.9	25.8	S	50-120		3/12/2016
1,1,2-Trichloroethane	50	48.8	97.6		50-120		3/12/2016
Tetrachloroethene	50	37.4	74.8		50-120		3/12/2016
Chlorodibromomethane	50	40.1	80.2		50-120		3/12/2016
Ethylene Dibromide	50	35	70		50-120		3/12/2016
Ethylbenzene	50	33.1	66.2		50-120		3/12/2016
Chlorobenzene	50	34.7	69.4		50-120		3/12/2016
p,m-Xylene	100	66.15	66.15		50-120		3/12/2016
o-Xylene	50	34.3	68.6		50-120		3/12/2016
Bromoform	50	31.8	63.6		50-120		3/12/2016
Isopropylbenzene	50	29.9	59.8		50-120		3/12/2016
m-EthylToluene	50	24.2	48.4	S	50-120		3/12/2016
Bromobenzene	50	28.3	56.6		50-120		3/12/2016
n-Propylbenzene	50	26.9	53.8		50-120		3/12/2016
1,1,2,2-Tetrachloroethane	50	21	42	S	50-120		3/12/2016
1,3,5-trimethylbenzene	50	25.9	51.8		50-120		3/12/2016
4-Chlorotoluene	50	26.1	52.2		50-120		3/12/2016
tert-Butylbenzene	50	27.3	54.6		50-120		3/12/2016
1,3,5-Trimethylbenzene	50	21.4	42.8	S	50-120		3/12/2016
sec-Butylbenzene	50	22.5	45	S	50-120		3/12/2016
4-Isopropyltoluene	50	20.1	40.2	S	50-120		3/12/2016
1,3-Dichlorobenzene	50	18.7	37.4	S	50-120		3/12/2016
1,4-Dichlorobenzene	50	18.6	37.2	S	50-120		3/12/2016
n-Butylbenzene	50	14.4	28.8	S	50-120		3/12/2016
1,2-Dichlorobenzene	50	0	0	S	50-120		3/12/2016
1,2-Dibromo-3-chloropropane	50	23.6	47.2	S	50-120		3/12/2016
1,2,4-Trichlorobenzene	50	8.6	17.2	S	50-120		3/12/2016
Hexachlorobutadiene	50	7.9	15.8	S	50-120		3/12/2016
Naphthalene	50	9.9	19.8	S	50-120		3/12/2016
1,2,3-Trichlorobenzene	50	7.9	15.8	S	50-120		3/12/2016

Surrogates

Dibromofluoromethane	*103*	*80-120*

QC Data

Method: 8260C Volatile Organic Compounds

Lab Sample ID: Duplicate
Matrix: Solid
Analysis Batch:

Client Sample ID: Dup
Prep Batch:

Analyte	Result	Dup. Result	RPD	RPD Limits	Qualifier	D	Analyzed
Dichlorodifluoromethane	ND	ND	1	20			3/12/2016
Chloromethane	ND	ND	1	20			3/12/2016
Vinyl Chloride	ND	ND	1	20			3/12/2016
Bromomethane	ND	ND	1	20			3/12/2016
Chloroethane	ND	ND	1	20			3/12/2016
Trichlorofluoromethane	ND	ND	1	20			3/12/2016
1,1-Dichloroethene	ND	ND	1	20			3/12/2016
Carbon disulfide	ND	ND	1	20			3/12/2016
1,1,2-Trichloro-1,2,2-trifluor	ND	ND	1	20			3/12/2016
Iodomethane	ND	ND	1	20			3/12/2016
Acrylonitirle	ND	ND	1	20			3/12/2016
trans-1,2 Dichloroethene	ND	ND	1	20			3/12/2016
1,1,-Dichloroethane	ND	ND	1	20			3/12/2016
2-Chloro-1,3-Butadiene	ND	ND	1	20			3/12/2016
Methyl Acrylate	ND	ND	1	20			3/12/2016
cis-1,2,-Dichloroethene	ND	ND	1	20			3/12/2016
Methyl Acrylonitrile	ND	ND	1	20			3/12/2016
Bromochloromethane	ND	ND	1	20			3/12/2016
Chloroform	ND	ND	1	20			3/12/2016
1,1,1-Trichloroethane	ND	ND	1	20			3/12/2016
1,1-Dichloropropene	ND	ND	1	20			3/12/2016
Benzene	ND	ND	1	20			3/12/2016
Trichloroethane	ND	ND	1	20			3/12/2016
1,2-Dichloropropane	ND	ND	1	20			3/12/2016
Bromodichloromethane	ND	ND	1	20			3/12/2016
Dibromomethane	ND	ND	1	20			3/12/2016
Toluene	ND	ND	1	20			3/12/2016
trans-1,3-Dichloropropene	ND	ND	1	20			3/12/2016
1,1,2-Trichloroethane	ND	ND	1	20			3/12/2016
Tetrachloroethene	ND	ND	1	20			3/12/2016
Chlorodibromomethane	ND	ND	1	20			3/12/2016
Ethylene Dibromide	ND	ND	1	20			3/12/2016
Ethylbenzene	ND	ND	1	20			3/12/2016
Chlorobenzene	ND	ND	1	20			3/12/2016
p,m-Xylene	ND	ND	1	20			3/12/2016
o-Xylene	ND	ND	1	20			3/12/2016
Bromoform	ND	ND	1	20			3/12/2016
Isopropylbenzene	ND	ND	1	20			3/12/2016
m-EthylToluene	ND	ND	1	20			3/12/2016
Bromobenzene	ND	ND	1	20			3/12/2016
n-Propylbenzene	ND	ND	1	20			3/12/2016
1,1,2,2-Tetrachloroethane	ND	ND	1	20			3/12/2016
1,3,5-trimethylbenzene	ND	ND	1	20			3/12/2016
4-Chlorotoluene	ND	ND	1	20			3/12/2016
tert-Butylbenzene	ND	ND	1	20			3/12/2016
1,3,5-Trimethylbenzene	ND	ND	1	20			3/12/2016
sec-Butylbenzene	ND	ND	1	20			3/12/2016
4-Isopropyltoluene	ND	ND	1	20			3/12/2016
1,3-Dichlorobenzene	ND	ND	1	20			3/12/2016
1,4-Dichlorobenzene	ND	ND	1	20			3/12/2016
n-Butylbenzene	ND	ND	1	20			3/12/2016
1,2-Dichlorobenzene	ND	ND	1	20			3/12/2016
1,2-Dibromo-3-chloropropane	ND	ND	1	20			3/12/2016
1,2,4-Trichlorobenzene	ND	ND	1	20			3/12/2016
Hexachlorobutadiene	ND	ND	1	20			3/12/2016
Naphthalene	ND	ND	1	20			3/12/2016
1,2,3-Trichlorobenzene	ND	ND	1	20			3/12/2016
Surrogates							
Dibromofluoromethane	*95*	*88*		*80-120*			

Certification Summary

Authority	Program	EPA Region	Certification ID	Expiration Date
North Carolina	State Program		683, 562	12/31/2016

Biota Diagnostics, LLC
2401 Whitehall Park Dr. Suite 700
Charlotte, NC 28273
Phone: 704-992-0708
Fax: 704-992-0737
website: biotadiag.com

Chain Of Custody Record

Page ____ of ____

Client Name: CERT
Address: 3648 Daphne Dr. Charlotte NC
Project Manager: Chris Borcich
Telephone Number: 704-674-9956 FAX #:
PO No. ML Project No. BD-0067

Sample ID / Description	Date of Sample	Time of Sample	ML Sample Number	Total Number of Containers	Test Parameters	DRO + GRO	Cr + Pb	VOC	SVOC										
						N							Filtered (Yes / N0)						
						G							Container Type (P / G)						
						1pint							Container Volume						
						G							Sample Type (Grab / Composite *)						
						S							Sample Matrix (WW, GW, DW, Solid, Other)						
													Lab Receipt Cl2 check						
													Lab Receipt pH check						
						A							Preservation Code						
HCC #1	2/22/16	8:00 am		1		✓	✓	✓	✓										
HCC #2	2/22/16	8:00 am		1		✓	✓	✓	✓										

Preservation Code: A=None, B=HNO_3, C=H_2SO_4, D=NaOH, E=HCl, F=$Na_2S_2O_3$, G=Boric Acid, H=Ascorbic Acid, I=Ice, J=____

Special Instructions:

Temperature of Blank or representative sample Collection: ____ °C Arrival: ____ °C

Method of Shipment:

Composite Sample *
Start Date and Time:
End Date and Time:

Sampled by:	Date	Time	Received by:	Date	Time
Chris Borcich	2/22/16	8:00 am	Rachel Thayer	2/22/16	8:39 am
Relinquished by:	**Date**	**Time**	**Received by Biota Diag.:**	**Date**	**Time**
				2/22/16	9:30 am

Doc. Name: COC Doc. #:BD-FRM-0010 Rev. #: 3
Issue Date: 4-14-14 Rev. Date: 9/25/2015

Cooler Receipt Form

Client: CERT
Cooler Received/Opened On: 2/22/16
1) Tracking Number _____ (last 4 digits)
Courier: Nechol
2) Temp. of Rep. Sx or Temp. of Blank when opened: NA Degrees Celsius

3) If item #2 temp. is ≤ 0° C, was rep. sx or temp. blank frozen?	Yes	No	NA
4) Were custody seals in place?	Yes	No	NA
If yes, how many and where?			
5) Were the seals intact, signed, and dated correctly?	Yes	No	NA
6) Were custody papers inside cooler?	Yes	No	NA
I cerfity that I opened the cooler and answered questions 1-6 (intial)	JR		
7) Were custody seals on continers? Yes No and intact	Yes	No	NA
Were these signed and dated correctly?	Yes	No	NA
8) Packing Mat'l used? Bubblewrap Plastic Bag Peanuts Vermiculite Foam Insert Paper Other None			
9) Cooling process? Ice Ice Pack Ice (direct Contact) Dry Ice Other _____			None
10) Did all contaiiners arrive in good condition, unbroken?	Yes	No	NA
11) Were all container labels complete (#, date, signed, pres.)?	Yes	No	NA
12) Did all container labels and tags agree with COC?	Yes	No	NA
13) a. Were VOA vials received?	Yes	No	NA
b. Was there any observable headspace in any VOA vial?	Yes	No	NA
14) Was there a trip blank in this cooler?	Yes	No	NA
I cerfity that I unloaded the cooler and answered questions 7-14 (intial)	JR		
15) a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level?	Yes	No	NA
b. Did the bottle labels indicate the correct pervatives were used?	Yes	No	NA
16) Was residual chlorine present?	Yes	No	NA
I cerfity that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial)	JR		
17) Were custody papers properly filled out (ink, signed, etc)?	Yes	No	NA
18) Did you sign the custody papers in the appropriate place?	Yes	No	NA
19) Were correct containers used for analysis requested?	Yes	No	NA
20) Was sufficient amount of sample sent in each container?	Yes	No	NA
I cerfity that I entered this project into the logbook (intial)?	JR		
I cerfity that I labeled each container with appropriate sample ID (intial)	JR		
21) a. Were there Non-Conformances issues at login?	Yes	No	NA
b. Was the client and/or regulatory body notified?	Yes	No	NA

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