



# OSPREY ENVIRONMENTAL ENGINEERING, LLC.

146 EAST MAIN STREET . CLINTON, CT 06413

PHONE: 860.669.8651

Mr. Scott Bartlett, Superintendent, Director of Public Works Operations  
Fairfield Department of Public Works  
725 Old Post Road  
Fairfield, CT 06824

06 June 2018

Re: Air Sampling During Earth Moving Activities  
Aggregate Recycling Yard Berm Project, Fairfield, CT  
Collection date: 25 May 2018

Per your request samples were collected from the area downwind of earth moving activities at the above referenced location. Air samples were collected over an 8-hour period from 6:45 am to 3:45pm. Sample containers (glass ampoules containing sorbent materials and glass filter cassettes) were supplied by ESIS Analytical Laboratory. Samples were collected using personal monitoring pumps with flow rates ranging from 0.1 liters/min. for PCBs to 2.0 liters/min. for metals and polynuclear aromatic hydrocarbons (PNAs). Flow rates were calibrated using a Mesalabs Defender 510 air calibration unit. The samples were submitted to ESIS for PCBs, PNAs, lead, mercury, and arsenic. The following is a summary of results as compared to regulatory Permissible Exposure Limits (PELs).

Parameter → Concentration (mg/m <sup>3</sup> ) ↓	* PEL	FFN (Northwest)	FFS Southeast
PCBs	0.001	ND<0.0010	ND<0.0010
PNAs	-	ND	ND
Arsenic	0.01	ND<0.00062	ND<0.00062
Lead	0.05	ND<0.0016	ND<0.0016
Mercury	0.1	ND<0.00062	ND<0.00062

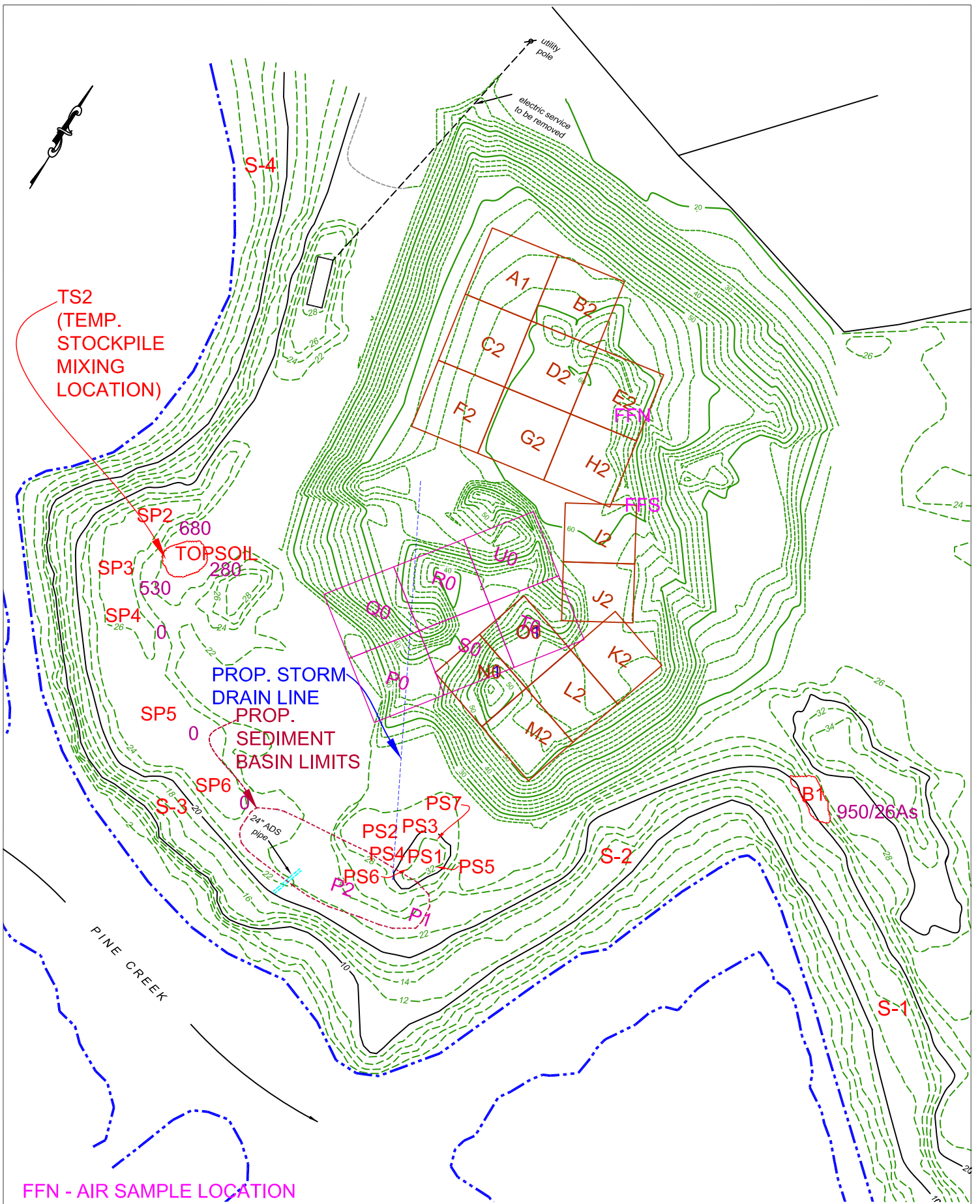
ND = not detected above analytical threshold NE = not established \* NIOSH PEL Reference for PCB, arsenic, lead, and mercury

All air results were below applicable Permissible Exposure Limits, where standards have been established.

Should you have any questions regarding the above, please contact me.

Sincerely,  
**Osprey Environmental Engineering, LLC.**

Robert Grabarek, P.E., L.S., LEP  
President



A-3

AGGREGATE YARD SAMPLES  
 DEPARTMENT OF PUBLIC WORKS FACILITY  
 90 ROD HIGHWAY, FAIRFIELD, CT

OSPREY  
 ENVIRONMENTAL ENGINEERING, LLC  
 146 East Main Street  
 Clinton, CT 06413  
 Phone (860) 669-8651

DRAWN BY: RJC  
 SCALE: 1"=100'  
 DATE: 06.06.18  
 REVISIONS:

To: Robert Grabarek  
 Osprey  
 146 East Main Street  
 Clinton, CT 06413

**Report #: C1857778**

P.O. No.:  
 Sampling - 5/29/18

Date Received: 05/30/2018  
 Date Reported: 06/04/2018

Analysis: Total Particulates

Analytical Method: Gravimetric; NIOSH 0500 - MWA Filter

Prep Date: 05/30/18

Analysis Date: 05/30/18

Sample Number	Air Volume (Liters)	Component	ug	mg/m <sup>3</sup>
FFN Metals	960	Total Particulates	<100	<0.10
FFS Metals	960	Total Particulates	<100	<0.10
		Total Particulates		Reporting Limit: 100 ug

The analytical sensitivity for this gravimetric method is 10.0 ug.  
 The media tolerance limit for MWA filters is +/- 100 ug.  
 A blank was not submitted for analysis. EHL recommends submitting a blank with the samples to check weight loss/gain.  
 Unless noted, the condition of samples on receipt was acceptable. Results relate only to items tested in the condition received.

Analysis: Mercury

Analytical Method: Atomic Absorption Spectrophotometry; Hydride Generation OSHA ID #145 - MCE Filter

Prep Date: 05/30/18

Analysis Date: 05/31/18

Sample Number	Air Volume (Liters)	Component	ug	mg/m <sup>3</sup>
FFN Metals	960	Mercury	<0.600	<0.00062
FFS Metals	960	Mercury	<0.600	<0.00062
		Mercury		Reporting Limit: 0.600 ug

A blank was not submitted with the samples. EHL recommends submitting a blank to check for contamination.  
 Analytical results do not require blank correction.  
 Concentrations reported are based on air volumes provided.  
 Unless noted, the condition of samples on receipt was acceptable. Results relate only to items tested in the condition received.

Analysis: Polychlorinated Biphenyls

Analytical Method: Gas Chromatography; NIOSH 5503 - Florisil

Prep Date: 05/30/18

Analysis Date: 06/01/18

Sample Number	Air Volume (Liters)	Component	ug	mg/m <sup>3</sup>
FFN PCB	48.0	Chlorodiphenyl (1221)	<0.0500	<0.0010
FFS PCB	48.0	Chlorodiphenyl (1221)	<0.0500	<0.0010
		Chlorodiphenyl (1221)		Reporting Limit: 0.0500 ug

A blank was not submitted with the samples. EHL recommends that a blank be submitted to check for contamination. No other Aroclors were detected in the samples. However, other peaks were detected and if quantitated as Chlorodiphenyl (1221), then samples FFN PCB and FFS PCB would have a mg/m<sup>3</sup> value of 0.018 and 0.0034 respectively. Samples analyzed by gas chromatography are quantitated by matching the retention times of sample peaks with those of known compounds. A matching retention time is not proof of chemical identity. On all sorbent tubes and 3M 3520 organic vapor monitors the front and back section were analyzed separately. Unless indicated by an asterisk, significant breakthrough was not detected. Concentrations reported are based on air volumes provided. Unless noted, the condition of samples on receipt was acceptable. Results relate only to items tested in the condition received.

Analysis: Metals in Air

Analytical Method: Inductively Coupled Plasma; OSHA ID 125G - MCE Filter

Prep Date: 05/30/18

Analysis Date: 05/31/18

Sample Number	Air Volume (Liters)	Component	ug	mg/m <sup>3</sup>
FFN Metals	960	Arsenic	<0.600	<0.00062
		Lead	<1.50	<0.0016
FFS Metals	960	Arsenic	<0.600	<0.00062
		Lead	<1.50	<0.0016
		Arsenic		Reporting Limit: 0.600 ug
		Lead		Reporting Limit: 1.50 ug

A blank was not submitted with the samples. EHL recommends submitting a blank to check for possible contamination. Analytical results do not require blank correction. Concentrations reported are based on air volumes provided. Unless noted, the condition of samples on receipt was acceptable. Results relate only to items tested in the condition received.

Analysis: Polynuclear Aromatic Hydrocarbons (PAHs or PNAs)

Analytical Method: High Performance Liquid Chromatography (HPLC); NIOSH 5506

Prep Date: 05/30/18

Analysis Date: 05/31/18

Sample Number	Air Volume (Liters)	Component	ug	mg/m <sup>3</sup>	ppm
FFN PNA	960	Naphthalene	<0.600	<0.00062	<0.00012
		Acenaphthylene	<1.20	<0.0012	<0.00020
		Acenaphthene	<0.600	<0.00062	<0.000099
		Fluorene	<0.120	<0.00012	<0.000018
		Phenanthrene	<0.0600	<0.000062	<0.0000086
		Anthracene	<0.0600	<0.000062	<0.0000086
		Fluoranthene	<0.120	<0.00012	<0.000015
		Pyrene	<0.0600	<0.000062	<0.0000076
		Benz(a)Anthracene	<0.0750	<0.000078	<0.0000084
		Chrysene	<0.0750	<0.000078	<0.0000084
		Benzo(b)Fluoranthene	<0.150	<0.00016	<0.000015
		Benzo(k)Fluoranthene	<0.0750	<0.000078	<0.0000076
		Benzo(a)Pyrene	<0.0750	<0.000078	<0.0000076
		Dibenz(ah)Anthracene	<0.180	<0.00019	<0.000016
		Benzo(ghi)Perylene	<0.180	<0.00019	<0.000017
		Indeno(1,2,3-cd)Pyrene	<0.180	<0.00019	<0.000017
		FFS PNA	960	Naphthalene	<0.600
Acenaphthylene	<1.20			<0.0012	<0.00020
Acenaphthene	<0.600			<0.00062	<0.000099
Fluorene	<0.120			<0.00012	<0.000018
Phenanthrene	<0.0600			<0.000062	<0.0000086
Anthracene	<0.0600			<0.000062	<0.0000086
Fluoranthene	<0.120			<0.00012	<0.000015
Pyrene	<0.0600			<0.000062	<0.0000076
Benz(a)Anthracene	<0.0750			<0.000078	<0.0000084
Chrysene	<0.0750			<0.000078	<0.0000084
Benzo(b)Fluoranthene	<0.150			<0.00016	<0.000015
Benzo(k)Fluoranthene	<0.0750			<0.000078	<0.0000076
Benzo(a)Pyrene	<0.0750			<0.000078	<0.0000076
Dibenz(ah)Anthracene	<0.180			<0.00019	<0.000016
Benzo(ghi)Perylene	<0.180			<0.00019	<0.000017
Indeno(1,2,3-cd)Pyrene	<0.180			<0.00019	<0.000017

Analysis: Polynuclear Aromatic Hydrocarbons (PAHs or PNAs)  
 Analytical Method: High Performance Liquid Chromatography (HPLC); NIOSH 5506  
 Prep Date: 05/30/18                                      Analysis Date: 05/31/18

<u>Sample Number</u>	<u>Air Volume (Liters)</u>	<u>Component</u>	
		Naphthalene	<i>Reporting Limit: 0.600 ug</i>
		Acenaphthylene	<i>Reporting Limit: 1.20 ug</i>
		Acenaphthene	<i>Reporting Limit: 0.600 ug</i>
		Fluorene	<i>Reporting Limit: 0.120 ug</i>
		Phenanthrene	<i>Reporting Limit: 0.0600 ug</i>
		Anthracene	<i>Reporting Limit: 0.0600 ug</i>
		Fluoranthene	<i>Reporting Limit: 0.120 ug</i>
		Pyrene	<i>Reporting Limit: 0.0600 ug</i>
		Benz(a)Anthracene	<i>Reporting Limit: 0.0750 ug</i>
		Chrysene	<i>Reporting Limit: 0.0750 ug</i>
		Benzo(b)Fluoranthene	<i>Reporting Limit: 0.150 ug</i>
		Benzo(k)Fluoranthene	<i>Reporting Limit: 0.0750 ug</i>
		Benzo(a)Pyrene	<i>Reporting Limit: 0.0750 ug</i>
		Dibenz(ah)Anthracene	<i>Reporting Limit: 0.180 ug</i>
		Benzo(ghi)Perylene	<i>Reporting Limit: 0.180 ug</i>
		Indeno(1,2,3-cd)Pyrene	<i>Reporting Limit: 0.180 ug</i>

Analytical results do not require blank correction.  
 A blank was not submitted with the samples. EHL recommends submitting a blank to check for contamination.  
 The samples analyzed by HPLC were quantitated by matching retention time of the samples with those of known compounds.  
 A matching retention time is not proof of chemical identity.  
 Concentrations reported are based on air volumes provided.  
 Unless noted, the condition of samples on receipt was acceptable. Results relate only to items tested in the condition received



ESIS, INC.  
Environmental Health Laboratory

100 Sebethe Drive Suite A-5  
Cromwell, CT 06416  
(860) 635-6475 or (800) 243-4903 FAX (860) 635-6750

REQUEST FOR ANALYTICAL SERVICES

\*Lab approval is REQUIRED for RUSH analysis  
Please call ahead. Additional charges apply.

Standard TAT

Next Day RUSH TAT\*

3 Day RUSH TAT\*

Same Day RUSH TAT\*

FOR INTERNAL USE ONLY

Report #: C1857778

Log In Date: 5/30/18

EIU #:

Control #:

Send INVOICE To: Osprey Environmental

Company Name:

Mailing Address: 146 East Main St

City, State, Zip: Clinton CT 06413

Accts. Payable Phone #: AP Fax No:

Accts. Payable E-mail: bobg@ospreyee.com

PO#, Ref # (If Required):

Sampling Location:

Send RESULTS To: Robert Grabarek

Company Name:

Mailing Address:

City, State, Zip:

Phone No: Fax No:

E-mail: bobg@ospreyee.com

Division:

Sampling Description:

CHAIN OF CUSTODY

Signature:

Print Name

Date/Time:

Relinquished by:

Received at lab by:

Acceptable

Unacceptable

5/29/18 12:30pm

E-Mail

Fax

Phone

RESULTS DELIVERY

(check all that apply)

EHL # (Lab Use Only)	SAMPLE IDENTIFICATION (Name or Number)	MEDIA TYPE	ANALYSIS DESIRED (a 3 sample minimum charge applies when less than 3 of each specific analyte is requested.)	NOTES (Record location, operation, other compounds present, etc.)	DATE SAMPLED	SAMPLING RATE (liters/min)	TOTAL TIME (minutes)	SAMPLE VOLUME (liters)
1	FFN PNA		PNA's	2630A+ tube			2.0	480 960
2	FFN Metals		Hg Pb As Total Dust	24910M			2.0	480 960
3	FFN PCB		PCB's	7619200566+ swinex			.1	480 48
4	FFS PNA		PNA's	2629A+ tube			2.0	480 960
5	FFS Metals		Hg Pb As Total Dust	24932M			2.0	480 960
6	FFS PCB		PCB's	7619200565+ swinex			.1	480 48
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

FOR NOTES ONLY:

\* re-written COC, original attached 5/30/18  
Relinquished signature on original NS



ESIS, INC.  
Environmental Health Laboratory

100 Sebethe Drive Suite A-5  
Cromwell, CT 06416  
(860) 635-6475 or (800) 243-4903 FAX (860) 635-6750

5/29/18  
WS  
call  
per phone

REQUEST FOR ANALYTICAL SERVICES

\*Lab approval is REQUIRED for RUSH analysis  
Please call ahead. Additional charges apply.

Standard TAT

Next Day RUSH TAT\*

3 Day RUSH TAT\*

Same Day RUSH TAT\*

FOR INTERNAL USE ONLY

Report #:

Log In Date:

E/U #:

Control #:

Send INVOICE To: OSPREY ENVIRONMENTAL

Company Name:

Mailing Address: 146 EAST MAIN ST

City, State, Zip: CLINTON CT 06413

Accts. Payable Phone #:

AP Fax No:

Accts. Payable E-mail: bobg@ospreyee.com

PO#, Ref # (If Required):

Sampling Location:

Send RESULTS To: ROBERT GRABARIC

Company Name: OSPREY

Mailing Address:

City, State, Zip:

Phone No:

Fax No:

E-mail: bobg@ospreyee.com

Division:

Sampling Description:

CHAIN OF CUSTODY

Signature:

Print Name

Date/Time:

Relinquished by: [Signature]

R GRABARIC

5/29/18 11:55 Am

RESULTS DELIVERY

(check all that apply)

Received at lab by: [Signature]

Acceptable  Unacceptable

5/29/18 12:30 pm

E-Mail  Fax  Phone

EHL # (Lab Use Only)	SAMPLE IDENTIFICATION (Name or Number)	MEDIA TYPE	ANALYSIS DESIRED (a 3 sample minimum charge applies when less than 3 of each specific analyte is requested.)	NOTES (Record location, operation, other compounds present, etc.)	DATE SAMPLED	SAMPLING RATE (liters/min)	TOTAL TIME (minutes)	SAMPLE VOLUME (liters)
1	FFN		PCBS, PNAS, Hg, Pb, As		5/25/18			
2	FFS		"					
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

FOR NOTES ONLY:

PCBS 0.1 l/min  
Metals 2.0 l/min

PNAS 2.0 l/min

480 min. for ALL