con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

July 23, 2019

Carl Stopper
TRC Environmental Corporation - CT
21 Griffin Road North
Windsor, CT 06095

Project Location: 510 Grand Ave., New Haven, CT
Client Job Number:
Project Number: 263951.000012.000002
Laboratory Work Order Number: 19G0951

Enclosed are results of analyses for samples received by the laboratory on July 18, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kerry K. McGee
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

TRC Environmental Corporation - CT
21 Griffin Road North
Windsor, CT 06095
ATTN: Carl Stopper

REPORT DATE: 7/23/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 263951.000012.000002

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 19G0951

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: 510 Grand Ave., New Haven, CT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TRC-AOC-13-SW-01	19G0951-01	Surface Water		CTDEP ETPH	
				SW-846 6020B	
				SW-846 7470A	
				SW-846 8082A	
				SW-846 8260C	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

For method 6020, only RCRA 8 metals were requested and reported.

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SW-846 8260C

Qualifications:

L-01

Laboratory fortified blank /laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.

Analyte & Samples(s) Qualified:

2-Hexanone (MBK)
B236031-BS1

4-Methyl-2-pentanone (MIBK)
B236031-BS1

Acrylonitrile
B236031-BS1

V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

2-Hexanone (MBK)
B236031-BS1, S038343-CCV1

4-Methyl-2-pentanone (MIBK)
B236031-BS1, S038343-CCV1

Acrylonitrile
B236031-BS1, S038343-CCV1

V-34

Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:

Bromomethane
B236031-BS1, S038343-CCV1

V-35

Initial calibration verification (ICV) did not meet method specifications and was biased on the high side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:

Acetone
B236031-BS1, S038343-CCV1

V-36

Initial calibration verification (ICV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Carbon Disulfide
B236031-BS1, S038343-CCV1

SW-846 8270D

Qualifications:

V-04

Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.

Analyte & Samples(s) Qualified:

2,4-Dinitrophenol
19G0951-01[TRC-AOC-13-SW-01], B235907-BLK1, B235907-BS1, B235907-BSD1, S038337-CCV1

V-06

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.

Analyte & Samples(s) Qualified:

2,4-Dinitrophenol
B235907-BS1, B235907-BSD1, S038337-CCV1

V-16

Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.

Analyte & Samples(s) Qualified:

Pentachloronitrobenzene
19G0951-01[TRC-AOC-13-SW-01], B235907-BLK1, B235907-BS1, B235907-BSD1, S038337-CCV1

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V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

2,4-Dinitrophenol
19G0951-01[TRC-AOC-13-SW-01], B235907-BLK1

V-34

Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:

4-Chloroaniline
19G0951-01[TRC-AOC-13-SW-01], B235907-BLK1, B235907-BS1, B235907-BSD1, S038337-CCV1

Pyridine
19G0951-01[TRC-AOC-13-SW-01], B235907-BLK1, B235907-BS1, B235907-BSD1, S038337-CCV1

V-35

Initial calibration verification (ICV) did not meet method specifications and was biased on the high side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:

2,4-Dinitrophenol
19G0951-01[TRC-AOC-13-SW-01], B235907-BLK1, B235907-BS1, B235907-BSD1, S038337-CCV1

2,6-Dinitrotoluene
19G0951-01[TRC-AOC-13-SW-01], B235907-BLK1, B235907-BS1, B235907-BSD1, S038337-CCV1

2-Nitroaniline
19G0951-01[TRC-AOC-13-SW-01], B235907-BLK1, B235907-BS1, B235907-BSD1, S038337-CCV1

Benzo(k)fluoranthene (SIM)
19G0951-01[TRC-AOC-13-SW-01], B235972-BLK1, B235972-BS1, B235972-BSD1

Dibenz(a,h)anthracene (SIM)
19G0951-01[TRC-AOC-13-SW-01], B235972-BLK1, B235972-BS1, B235972-BSD1

Indeno(1,2,3-cd)pyrene (SIM)
19G0951-01[TRC-AOC-13-SW-01], B235972-BLK1, B235972-BS1, B235972-BSD1

SW-846 8260C

All water reporting limits specified on the chain-of-custody were met except for Acrylonitrile, where the most protective criteria are not met since the laboratory cannot achieve the required RCP calibration criteria at these levels, unless otherwise listed in this narrative.

SW-846 8270D

The LCS sample recoveries for required RCP 8270 compounds were all within control limits specified by the method, 40-140% for base/neutrals and 30-130% for acids except for “difficult analytes” listed below and/or otherwise listed in this narrative: Difficult analytes for water – limits between 10 and 150% depending on the compound (see QC summary for limits): Benzoic Acid, Dimethylphthalate, Bis(2-chloroisopropyl)ether, Hexachlorocyclopentadiene, Pyridine, 4-Nitrophenol, and Phenol.

All reporting limits specified on the chain-of-custody were met, except for Pyridine for the most protective criteria since the laboratory cannot achieve the required RCP calibration criteria at these levels unless otherwise listed in this narrative.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Lisa A. Worthington
Technical Representative

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 510 Grand Ave., New Haven, CT Sample Description: Work Order: 19G0951

Date Received: 7/18/2019

Field Sample #: TRC-AOC-13-SW-01 Sampled: 7/18/2019 07:00

Sample ID: 19G0951-01

Sample Matrix: Surface Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	10	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
Acrylonitrile	ND	2.0	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
Benzene	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
Bromobenzene	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
Bromoform	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
Bromomethane	ND	5.0	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
2-Butanone (MEK)	ND	5.0	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
Carbon Disulfide	ND	5.0	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
Carbon Tetrachloride	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
Chlorobenzene	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
Chloroethane	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
Chloroform	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
Chloromethane	0.70	0.60	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
2-Chlorotoluene	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
4-Chlorotoluene	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
1,2-Dibromo-3-chloropropane (DBCP)	ND	1.0	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
Dibromomethane	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
1,2-Dichlorobenzene	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
1,3-Dichlorobenzene	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
1,4-Dichlorobenzene	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
Dichlorodifluoromethane (Freon 12)	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
1,1-Dichloroethane	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
1,2-Dichloroethane	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
1,1-Dichloroethylene	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
cis-1,2-Dichloroethylene	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
1,2-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
2,2-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
1,1-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
Ethylbenzene	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
Hexachlorobutadiene	ND	0.60	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
2-Hexanone (MBK)	ND	5.0	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
Isopropylbenzene (Cumene)	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
p-Isopropyltoluene (p-Cymene)	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 510 Grand Ave., New Haven, CT Sample Description: Work Order: 19G0951

Date Received: 7/18/2019

Field Sample #: TRC-AOC-13-SW-01 Sampled: 7/18/2019 07:00

Sample ID: 19G0951-01

Sample Matrix: Surface Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Methyl tert-Butyl Ether (MTBE)	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
4-Methyl-2-pentanone (MIBK)	ND	5.0	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
Styrene	ND	1.0	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
Tetrahydrofuran	ND	10	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
Toluene	ND	1.0	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
1,2,3-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
1,1,1-Trichloroethane	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
1,1,2-Trichloroethane	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
1,2,3-Trichloropropane	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
Vinyl Chloride	ND	1.0	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD
Xylenes (total)	ND	3.0	µg/L	1		SW-846 8260C	7/22/19	7/22/19 10:27	LBD

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	91.2	70-130		7/22/19 10:27
Toluene-d8	113	70-130		7/22/19 10:27
4-Bromofluorobenzene	98.6	70-130		7/22/19 10:27

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Project Location: 510 Grand Ave., New Haven, CT Sample Description: Work Order: 19G0951

Date Received: 7/18/2019

Field Sample #: TRC-AOC-13-SW-01 Sampled: 7/18/2019 07:00

Sample ID: 19G0951-01

Sample Matrix: Surface Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	4.9	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Acenaphthene (SIM)	ND	0.30	µg/L	1		SW-846 8270D	7/18/19	7/19/19 21:22	CLA
Acenaphthylene	ND	4.9	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Acenaphthylene (SIM)	ND	0.20	µg/L	1		SW-846 8270D	7/18/19	7/19/19 21:22	CLA
Aniline	ND	4.9	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Anthracene	ND	4.9	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Anthracene (SIM)	ND	0.20	µg/L	1		SW-846 8270D	7/18/19	7/19/19 21:22	CLA
Benzo(a)anthracene	ND	4.9	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Benzo(a)anthracene (SIM)	ND	0.050	µg/L	1		SW-846 8270D	7/18/19	7/19/19 21:22	CLA
Benzo(a)pyrene	ND	4.9	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Benzo(a)pyrene (SIM)	ND	0.10	µg/L	1		SW-846 8270D	7/18/19	7/19/19 21:22	CLA
Benzo(b)fluoranthene	ND	4.9	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Benzo(b)fluoranthene (SIM)	ND	0.050	µg/L	1		SW-846 8270D	7/18/19	7/19/19 21:22	CLA
Benzo(g,h,i)perylene	ND	4.9	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Benzo(g,h,i)perylene (SIM)	ND	0.50	µg/L	1		SW-846 8270D	7/18/19	7/19/19 21:22	CLA
Benzo(k)fluoranthene	ND	4.9	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Benzo(k)fluoranthene (SIM)	ND	0.20	µg/L	1	V-35	SW-846 8270D	7/18/19	7/19/19 21:22	CLA
Bis(2-chloroethoxy)methane	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Bis(2-chloroethyl)ether	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Bis(2-chloroisopropyl)ether	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Bis(2-Ethylhexyl)phthalate	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
4-Bromophenylphenylether	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Butylbenzylphthalate	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Carbazole	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
4-Chloroaniline	ND	9.7	µg/L	1	V-34	SW-846 8270D	7/19/19	7/22/19 16:55	IMR
4-Chloro-3-methylphenol	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
2-Chloronaphthalene	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
2-Chlorophenol	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
4-Chlorophenylphenylether	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Chrysene	ND	4.9	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Chrysene (SIM)	ND	0.20	µg/L	1		SW-846 8270D	7/18/19	7/19/19 21:22	CLA
Dibenz(a,h)anthracene	ND	4.9	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Dibenz(a,h)anthracene (SIM)	ND	0.10	µg/L	1	V-35	SW-846 8270D	7/18/19	7/19/19 21:22	CLA
Dibenzofuran	ND	4.9	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Di-n-butylphthalate	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
3,3-Dichlorobenzidine	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
2,4-Dichlorophenol	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Diethylphthalate	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
2,4-Dimethylphenol	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Dimethylphthalate	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
4,6-Dinitro-2-methylphenol	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
2,4-Dinitrophenol	ND	9.7	µg/L	1	V-04, V-20, V-35	SW-846 8270D	7/19/19	7/22/19 16:55	IMR
2,4-Dinitrotoluene	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
2,6-Dinitrotoluene	ND	9.7	µg/L	1	V-35	SW-846 8270D	7/19/19	7/22/19 16:55	IMR

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 510 Grand Ave., New Haven, CT Sample Description: Work Order: 19G0951

Date Received: 7/18/2019

Field Sample #: TRC-AOC-13-SW-01 Sampled: 7/18/2019 07:00

Sample ID: 19G0951-01

Sample Matrix: Surface Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Di-n-octylphthalate	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Fluoranthene	ND	4.9	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Fluoranthene (SIM)	ND	0.50	µg/L	1		SW-846 8270D	7/18/19	7/19/19 21:22	CLA
Fluorene	ND	4.9	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Fluorene (SIM)	ND	1.0	µg/L	1		SW-846 8270D	7/18/19	7/19/19 21:22	CLA
Hexachlorobenzene	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Hexachlorobutadiene	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Hexachlorocyclopentadiene	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Hexachloroethane	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Indeno(1,2,3-cd)pyrene	ND	4.9	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Indeno(1,2,3-cd)pyrene (SIM)	ND	0.10	µg/L	1	V-35	SW-846 8270D	7/18/19	7/19/19 21:22	CLA
Isophorone	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
2-Methylnaphthalene	ND	4.9	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
2-Methylnaphthalene (SIM)	ND	1.0	µg/L	1		SW-846 8270D	7/18/19	7/19/19 21:22	CLA
2-Methylphenol	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
3/4-Methylphenol	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Naphthalene	ND	4.9	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Naphthalene (SIM)	ND	1.0	µg/L	1		SW-846 8270D	7/18/19	7/19/19 21:22	CLA
2-Nitroaniline	ND	9.7	µg/L	1	V-35	SW-846 8270D	7/19/19	7/22/19 16:55	IMR
3-Nitroaniline	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
4-Nitroaniline	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Nitrobenzene	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
2-Nitrophenol	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
4-Nitrophenol	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
N-Nitrosodi-n-propylamine	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Pentachloronitrobenzene	ND	9.7	µg/L	1	V-16	SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Pentachlorophenol	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Phenanthrene	ND	4.9	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Phenanthrene (SIM)	ND	0.050	µg/L	1		SW-846 8270D	7/18/19	7/19/19 21:22	CLA
Phenol	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Pyrene	ND	4.9	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
Pyrene (SIM)	ND	1.0	µg/L	1		SW-846 8270D	7/18/19	7/19/19 21:22	CLA
Pyridine	ND	4.9	µg/L	1	V-34	SW-846 8270D	7/19/19	7/22/19 16:55	IMR
1,2,4,5-Tetrachlorobenzene	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
1,2,4-Trichlorobenzene	ND	4.9	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
2,4,5-Trichlorophenol	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR
2,4,6-Trichlorophenol	ND	9.7	µg/L	1		SW-846 8270D	7/19/19	7/22/19 16:55	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	32.8	15-110		7/22/19 16:55
Phenol-d6	23.1	15-110		7/22/19 16:55
Nitrobenzene-d5	53.8	30-130		7/22/19 16:55
Nitrobenzene-d5 (SIM)	59.7	30-130		7/19/19 21:22
2-Fluorobiphenyl	56.4	30-130		7/22/19 16:55

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 510 Grand Ave., New Haven, CT Sample Description: Work Order: 19G0951

Date Received: 7/18/2019

Field Sample #: TRC-AOC-13-SW-01 Sampled: 7/18/2019 07:00

Sample ID: 19G0951-01

Sample Matrix: Surface Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Surrogates		**% Recovery**	**Recovery Limits**		**Flag/Qual**				
2-Fluorobiphenyl (SIM)		43.4	30-130					7/19/19 21:22	
2,4,6-Tribromophenol		64.6	15-110					7/22/19 16:55	
p-Terphenyl-d14		68.2	30-130					7/22/19 16:55	
p-Terphenyl-d14 (SIM)		41.1	30-130					7/19/19 21:22	

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Project Location: 510 Grand Ave., New Haven, CT Sample Description: Work Order: 19G0951

Date Received: 7/18/2019

Field Sample #: TRC-AOC-13-SW-01 Sampled: 7/18/2019 07:00

Sample ID: 19G0951-01

Sample Matrix: Surface Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/19/19	7/23/19 11:54	WAL
Aroclor-1221 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/19/19	7/23/19 11:54	WAL
Aroclor-1232 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/19/19	7/23/19 11:54	WAL
Aroclor-1242 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/19/19	7/23/19 11:54	WAL
Aroclor-1248 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/19/19	7/23/19 11:54	WAL
Aroclor-1254 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/19/19	7/23/19 11:54	WAL
Aroclor-1260 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/19/19	7/23/19 11:54	WAL
Aroclor-1262 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/19/19	7/23/19 11:54	WAL
Aroclor-1268 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/19/19	7/23/19 11:54	WAL
	0.0		µg/L	1		SW-846 8082A	7/19/19	7/23/19 11:54	WAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
Decachlorobiphenyl [1]	88.7	30-150		7/23/19	11:54
Decachlorobiphenyl [2]	96.1	30-150		7/23/19	11:54
Tetrachloro-m-xylene [1]	80.5	30-150		7/23/19	11:54
Tetrachloro-m-xylene [2]	85.2	30-150		7/23/19	11:54

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Project Location: 510 Grand Ave., New Haven, CT Sample Description: Work Order: 19G0951

Date Received: 7/18/2019

Field Sample #: TRC-AOC-13-SW-01 Sampled: 7/18/2019 07:00

Sample ID: 19G0951-01

Sample Matrix: Surface Water

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
CT ETPH	0.18	0.15	mg/L	1		CTDEP ETPH	7/19/19	7/22/19 14:29	RMW

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorobiphenyl	70.2	50-150		7/22/19 14:29

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Date Received: 7/18/2019

Field Sample #: TRC-AOC-13-SW-01 Sampled: 7/18/2019 07:00

Sample ID: 19G0951-01

Sample Matrix: Surface Water

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	29	0.80	µg/L	1		SW-846 6020B	7/18/19	7/19/19 12:43	QNW
Barium	55	10	µg/L	1		SW-846 6020B	7/18/19	7/19/19 12:43	QNW
Cadmium	ND	0.20	µg/L	1		SW-846 6020B	7/18/19	7/19/19 12:43	QNW
Chromium	1.2	1.0	µg/L	1		SW-846 6020B	7/18/19	7/19/19 12:43	QNW
Lead	0.61	0.50	µg/L	1		SW-846 6020B	7/18/19	7/19/19 12:43	QNW
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	7/22/19	7/23/19 12:58	AJL
Selenium	94	5.0	µg/L	1		SW-846 6020B	7/18/19	7/19/19 12:43	QNW
Silver	ND	0.20	µg/L	1		SW-846 6020B	7/18/19	7/19/19 12:43	QNW

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Project Location: 510 Grand Ave., New Haven, CT Sample Description: Work Order: 19G0951

Date Received: 7/18/2019

Field Sample #: TRC-AOC-13-SW-01 Sampled: 7/18/2019 07:00

Sample ID: 19G0951-01

Sample Matrix: Surface Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Reactive Cyanide	ND	3.9	mg/L	1		SW-846 9014	7/19/19	7/22/19 16:30	EC
Reactive Sulfide	ND	20	mg/L	1		SW-846 9030A	7/19/19	7/22/19 14:45	EC

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Sample Extraction Data

Prep Method: SW-846 3510C-CTDEP ETPH

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19G0951-01 [TRC-AOC-13-SW-01]	B235883	1020	1.00	07/19/19

Prep Method: SW-846 3005A-SW-846 6020B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19G0951-01 [TRC-AOC-13-SW-01]	B235788	50.0	50.0	07/18/19

Prep Method: SW-846 7470A Prep-SW-846 7470A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19G0951-01 [TRC-AOC-13-SW-01]	B236064	6.00	6.00	07/22/19

Prep Method: SW-846 3510C-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19G0951-01 [TRC-AOC-13-SW-01]	B235909	1010	10.0	07/19/19

Prep Method: SW-846 5030B-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19G0951-01 [TRC-AOC-13-SW-01]	B236031	5	5.00	07/22/19

Prep Method: SW-846 3510C-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19G0951-01 [TRC-AOC-13-SW-01]	B235907	1030	1.00	07/19/19

Prep Method: SW-846 3510C-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19G0951-01 [TRC-AOC-13-SW-01]	B235972	1000	1.00	07/18/19

SW-846 9014

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19G0951-01 [TRC-AOC-13-SW-01]	B235955	25.4	250	07/19/19

SW-846 9030A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19G0951-01 [TRC-AOC-13-SW-01]	B235956	25.4	250	07/19/19

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B236031 - SW-846 5030B										
Blank (B236031-BLK1)				Prepared & Analyzed: 07/22/19						
Acetone	ND	10	µg/L							
Acrylonitrile	ND	2.0	µg/L							
Benzene	ND	0.50	µg/L							
Bromobenzene	ND	0.50	µg/L							
Bromodichloromethane	ND	0.50	µg/L							
Bromoform	ND	0.50	µg/L							
Bromomethane	ND	1.0	µg/L							
2-Butanone (MEK)	ND	5.0	µg/L							
n-Butylbenzene	ND	1.0	µg/L							
sec-Butylbenzene	ND	1.0	µg/L							
tert-Butylbenzene	ND	1.0	µg/L							
Carbon Disulfide	ND	5.0	µg/L							
Carbon Tetrachloride	ND	0.50	µg/L							
Chlorobenzene	ND	0.50	µg/L							
Chlorodibromomethane	ND	0.50	µg/L							
Chloroethane	ND	0.50	µg/L							
Chloroform	ND	0.50	µg/L							
Chloromethane	ND	0.60	µg/L							
2-Chlorotoluene	ND	0.50	µg/L							
4-Chlorotoluene	ND	0.50	µg/L							
1,2-Dibromo-3-chloropropane (DBCP)	ND	1.0	µg/L							
1,2-Dibromoethane (EDB)	ND	0.50	µg/L							
Dibromomethane	ND	0.50	µg/L							
1,2-Dichlorobenzene	ND	0.50	µg/L							
1,3-Dichlorobenzene	ND	0.50	µg/L							
1,4-Dichlorobenzene	ND	0.50	µg/L							
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L							
Dichlorodifluoromethane (Freon 12)	ND	0.50	µg/L							
1,1-Dichloroethane	ND	0.50	µg/L							
1,2-Dichloroethane	ND	0.50	µg/L							
1,1-Dichloroethylene	ND	0.50	µg/L							
cis-1,2-Dichloroethylene	ND	0.50	µg/L							
trans-1,2-Dichloroethylene	ND	1.0	µg/L							
1,2-Dichloropropane	ND	0.50	µg/L							
1,3-Dichloropropane	ND	0.50	µg/L							
2,2-Dichloropropane	ND	0.50	µg/L							
1,1-Dichloropropene	ND	0.50	µg/L							
cis-1,3-Dichloropropene	ND	0.50	µg/L							
trans-1,3-Dichloropropene	ND	0.50	µg/L							
Ethylbenzene	ND	0.50	µg/L							
Hexachlorobutadiene	ND	0.60	µg/L							
2-Hexanone (MBK)	ND	5.0	µg/L							
Isopropylbenzene (Cumene)	ND	0.50	µg/L							
p-Isopropyltoluene (p-Cymene)	ND	0.50	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	0.50	µg/L							
Methylene Chloride	ND	5.0	µg/L							
4-Methyl-2-pentanone (MIBK)	ND	5.0	µg/L							
Naphthalene	ND	2.0	µg/L							
n-Propylbenzene	ND	1.0	µg/L							
Styrene	ND	1.0	µg/L							
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L							
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L							

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B236031 - SW-846 5030B											
Blank (B236031-BLK1)				Prepared & Analyzed: 07/22/19							
Tetrachloroethylene	ND	1.0	µg/L								
Tetrahydrofuran	ND	10	µg/L								
Toluene	ND	1.0	µg/L								
1,2,3-Trichlorobenzene	ND	1.0	µg/L								
1,2,4-Trichlorobenzene	ND	0.50	µg/L								
1,1,1-Trichloroethane	ND	0.50	µg/L								
1,1,2-Trichloroethane	ND	0.50	µg/L								
Trichloroethylene	ND	1.0	µg/L								
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L								
1,2,3-Trichloropropane	ND	0.50	µg/L								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.50	µg/L								
1,2,4-Trimethylbenzene	ND	0.50	µg/L								
1,3,5-Trimethylbenzene	ND	0.50	µg/L								
Vinyl Chloride	ND	1.0	µg/L								
m+p Xylene	ND	2.0	µg/L								
o-Xylene	ND	1.0	µg/L								
Xylenes (total)	ND	3.0	µg/L								
Surrogate: 1,2-Dichloroethane-d4	*22.4*		µg/L	25.0		89.4		70-130			
Surrogate: Toluene-d8	*27.7*		µg/L	25.0		111		70-130			
Surrogate: 4-Bromofluorobenzene	*24.9*		µg/L	25.0		99.6		70-130			
LCS (B236031-BS1)				Prepared & Analyzed: 07/22/19							
Acetone	99.3	10	µg/L	100		99.3		70-130			V-35
Acrylonitrile	13.3	2.0	µg/L	10.0		**133**	*	70-130			L-01, V-20
Benzene	10.5	0.50	µg/L	10.0		105		70-130			
Bromobenzene	10.6	0.50	µg/L	10.0		106		70-130			
Bromodichloromethane	9.85	0.50	µg/L	10.0		98.5		70-130			
Bromoform	9.83	0.50	µg/L	10.0		98.3		70-130			
Bromomethane	7.45	1.0	µg/L	10.0		74.5		70-130			V-34
2-Butanone (MEK)	128	5.0	µg/L	100		128		70-130			
n-Butylbenzene	8.55	1.0	µg/L	10.0		85.5		70-130			
sec-Butylbenzene	8.80	1.0	µg/L	10.0		88.0		70-130			
tert-Butylbenzene	9.08	1.0	µg/L	10.0		90.8		70-130			
Carbon Disulfide	114	5.0	µg/L	100		114		70-130			V-36
Carbon Tetrachloride	9.62	0.50	µg/L	10.0		96.2		70-130			
Chlorobenzene	10.3	0.50	µg/L	10.0		103		70-130			
Chlorodibromomethane	11.2	0.50	µg/L	10.0		112		70-130			
Chloroethane	9.58	0.50	µg/L	10.0		95.8		70-130			
Chloroform	9.42	0.50	µg/L	10.0		94.2		70-130			
Chloromethane	8.91	0.60	µg/L	10.0		89.1		70-130			
2-Chlorotoluene	9.73	0.50	µg/L	10.0		97.3		70-130			
4-Chlorotoluene	9.40	0.50	µg/L	10.0		94.0		70-130			
1,2-Dibromo-3-chloropropane (DBCP)	9.77	1.0	µg/L	10.0		97.7		70-130			
1,2-Dibromoethane (EDB)	10.6	0.50	µg/L	10.0		106		70-130			
Dibromomethane	11.2	0.50	µg/L	10.0		112		70-130			
1,2-Dichlorobenzene	9.94	0.50	µg/L	10.0		99.4		70-130			
1,3-Dichlorobenzene	9.62	0.50	µg/L	10.0		96.2		70-130			
1,4-Dichlorobenzene	9.53	0.50	µg/L	10.0		95.3		70-130			
trans-1,4-Dichloro-2-butene	10.9	2.0	µg/L	10.0		109		70-130			
Dichlorodifluoromethane (Freon 12)	11.5	0.50	µg/L	10.0		115		70-130			
1,1-Dichloroethane	11.0	0.50	µg/L	10.0		110		70-130			
1,2-Dichloroethane	10.1	0.50	µg/L	10.0		101		70-130			

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B236031 - SW-846 5030B											
LCS (B236031-BS1)				Prepared & Analyzed: 07/22/19							
1,1-Dichloroethylene	9.59	0.50	µg/L	10.0		95.9		70-130			
cis-1,2-Dichloroethylene	10.8	0.50	µg/L	10.0		108		70-130			
trans-1,2-Dichloroethylene	11.3	1.0	µg/L	10.0		113		70-130			
1,2-Dichloropropane	12.0	0.50	µg/L	10.0		120		70-130			
1,3-Dichloropropane	10.6	0.50	µg/L	10.0		106		70-130			
2,2-Dichloropropane	9.64	0.50	µg/L	10.0		96.4		70-130			
1,1-Dichloropropene	9.80	0.50	µg/L	10.0		98.0		70-130			
cis-1,3-Dichloropropene	10.3	0.50	µg/L	10.0		103		70-130			
trans-1,3-Dichloropropene	9.75	0.50	µg/L	10.0		97.5		70-130			
Ethylbenzene	10.1	0.50	µg/L	10.0		101		70-130			
Hexachlorobutadiene	10.9	0.60	µg/L	10.0		109		70-130			
2-Hexanone (MBK)	133	5.0	µg/L	100		**133**	*	70-130			L-01, V-20
Isopropylbenzene (Cumene)	10.4	0.50	µg/L	10.0		104		70-130			
p-Isopropyltoluene (p-Cymene)	9.50	0.50	µg/L	10.0		95.0		70-130			
Methyl tert-Butyl Ether (MTBE)	9.62	0.50	µg/L	10.0		96.2		70-130			
Methylene Chloride	11.7	5.0	µg/L	10.0		117		70-130			
4-Methyl-2-pentanone (MIBK)	133	5.0	µg/L	100		**133**	*	70-130			L-01, V-20
Naphthalene	11.0	2.0	µg/L	10.0		110		70-130			
n-Propylbenzene	9.52	1.0	µg/L	10.0		95.2		70-130			
Styrene	10.5	1.0	µg/L	10.0		105		70-130			
1,1,1,2-Tetrachloroethane	10.3	0.50	µg/L	10.0		103		70-130			
1,1,2,2-Tetrachloroethane	10.9	0.50	µg/L	10.0		109		70-130			
Tetrachloroethylene	11.5	1.0	µg/L	10.0		115		70-130			
Tetrahydrofuran	12.3	10	µg/L	10.0		123		70-130			
Toluene	10.4	1.0	µg/L	10.0		104		70-130			
1,2,3-Trichlorobenzene	11.0	1.0	µg/L	10.0		110		70-130			
1,2,4-Trichlorobenzene	10.4	0.50	µg/L	10.0		104		70-130			
1,1,1-Trichloroethane	9.56	0.50	µg/L	10.0		95.6		70-130			
1,1,2-Trichloroethane	10.9	0.50	µg/L	10.0		109		70-130			
Trichloroethylene	10.5	1.0	µg/L	10.0		105		70-130			
Trichlorofluoromethane (Freon 11)	9.09	2.0	µg/L	10.0		90.9		70-130			
1,2,3-Trichloropropane	10.3	0.50	µg/L	10.0		103		70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	9.57	0.50	µg/L	10.0		95.7		70-130			
1,2,4-Trimethylbenzene	9.35	0.50	µg/L	10.0		93.5		70-130			
1,3,5-Trimethylbenzene	9.85	0.50	µg/L	10.0		98.5		70-130			
Vinyl Chloride	10.6	1.0	µg/L	10.0		106		70-130			
m+p Xylene	19.8	2.0	µg/L	20.0		99.0		70-130			
o-Xylene	9.75	1.0	µg/L	10.0		97.5		70-130			
Xylenes (total)	29.6	3.0	µg/L	30.0		98.5		70-130			
Surrogate: 1,2-Dichloroethane-d4	*22.2*		µg/L	25.0		88.6		70-130			
Surrogate: Toluene-d8	*26.2*		µg/L	25.0		105		70-130			
Surrogate: 4-Bromofluorobenzene	*27.0*		µg/L	25.0		108		70-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B235907 - SW-846 3510C										
Blank (B235907-BLK1)				Prepared: 07/19/19 Analyzed: 07/22/19						
Acenaphthene	ND	5.0	µg/L							
Acenaphthylene	ND	5.0	µg/L							
Aniline	ND	5.0	µg/L							
Anthracene	ND	5.0	µg/L							
Benzo(a)anthracene	ND	5.0	µg/L							
Benzo(a)pyrene	ND	5.0	µg/L							
Benzo(b)fluoranthene	ND	5.0	µg/L							
Benzo(g,h,i)perylene	ND	5.0	µg/L							
Benzo(k)fluoranthene	ND	5.0	µg/L							
Bis(2-chloroethoxy)methane	ND	10	µg/L							
Bis(2-chloroethyl)ether	ND	10	µg/L							
Bis(2-chloroisopropyl)ether	ND	10	µg/L							
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L							
4-Bromophenylphenylether	ND	10	µg/L							
Butylbenzylphthalate	ND	10	µg/L							
Carbazole	ND	10	µg/L							
4-Chloroaniline	ND	10	µg/L							V-34
4-Chloro-3-methylphenol	ND	10	µg/L							
2-Chloronaphthalene	ND	10	µg/L							
2-Chlorophenol	ND	10	µg/L							
4-Chlorophenylphenylether	ND	10	µg/L							
Chrysene	ND	5.0	µg/L							
Dibenz(a,h)anthracene	ND	5.0	µg/L							
Dibenzofuran	ND	5.0	µg/L							
Di-n-butylphthalate	ND	10	µg/L							
3,3-Dichlorobenzidine	ND	10	µg/L							
2,4-Dichlorophenol	ND	10	µg/L							
Diethylphthalate	ND	10	µg/L							
2,4-Dimethylphenol	ND	10	µg/L							
Dimethylphthalate	ND	10	µg/L							
4,6-Dinitro-2-methylphenol	ND	10	µg/L							
2,4-Dinitrophenol	ND	10	µg/L							V-04, V-20, V-35
2,4-Dinitrotoluene	ND	10	µg/L							
2,6-Dinitrotoluene	ND	10	µg/L							V-35
Di-n-octylphthalate	ND	10	µg/L							
Fluoranthene	ND	5.0	µg/L							
Fluorene	ND	5.0	µg/L							
Hexachlorobenzene	ND	10	µg/L							
Hexachlorobutadiene	ND	10	µg/L							
Hexachlorocyclopentadiene	ND	10	µg/L							
Hexachloroethane	ND	10	µg/L							
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L							
Isophorone	ND	10	µg/L							
2-Methylnaphthalene	ND	5.0	µg/L							
2-Methylphenol	ND	10	µg/L							
3/4-Methylphenol	ND	10	µg/L							
Naphthalene	ND	5.0	µg/L							
2-Nitroaniline	ND	10	µg/L							V-35
3-Nitroaniline	ND	10	µg/L							
4-Nitroaniline	ND	10	µg/L							
Nitrobenzene	ND	10	µg/L							
2-Nitrophenol	ND	10	µg/L							

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B235907 - SW-846 3510C											
Blank (B235907-BLK1)				Prepared: 07/19/19 Analyzed: 07/22/19							
4-Nitrophenol	ND	10	µg/L								
N-Nitrosodiphenylamine/Diphenylamine	ND	10	µg/L								
N-Nitrosodi-n-propylamine	ND	10	µg/L								
Pentachloronitrobenzene	ND	10	µg/L							V-16	
Pentachlorophenol	ND	10	µg/L								
Phenanthrene	ND	5.0	µg/L								
Phenol	ND	10	µg/L								
Pyrene	ND	5.0	µg/L								
Pyridine	ND	5.0	µg/L							V-34	
1,2,4,5-Tetrachlorobenzene	ND	10	µg/L								
1,2,4-Trichlorobenzene	ND	5.0	µg/L								
2,4,5-Trichlorophenol	ND	10	µg/L								
2,4,6-Trichlorophenol	ND	10	µg/L								
Surrogate: 2-Fluorophenol	*89.2*		µg/L	200		44.6	15-110				
Surrogate: Phenol-d6	*65.2*		µg/L	200		32.6	15-110				
Surrogate: Nitrobenzene-d5	*70.7*		µg/L	100		70.7	30-130				
Surrogate: 2-Fluorobiphenyl	*71.9*		µg/L	100		71.9	30-130				
Surrogate: 2,4,6-Tribromophenol	*161*		µg/L	200		80.6	15-110				
Surrogate: p-Terphenyl-d14	*84.2*		µg/L	100		84.2	30-130				
LCS (B235907-BS1)				Prepared: 07/19/19 Analyzed: 07/22/19							
Acenaphthene	33.2	5.0	µg/L	50.0		66.3	40-140				
Acenaphthylene	32.6	5.0	µg/L	50.0		65.2	40-140				
Aniline	35.8	5.0	µg/L	50.0		71.6	40-140				†
Anthracene	33.5	5.0	µg/L	50.0		67.0	40-140				
Benzo(a)anthracene	34.0	5.0	µg/L	50.0		68.0	40-140				
Benzo(a)pyrene	36.3	5.0	µg/L	50.0		72.6	40-140				
Benzo(b)fluoranthene	33.6	5.0	µg/L	50.0		67.3	40-140				
Benzo(g,h,i)perylene	38.1	5.0	µg/L	50.0		76.1	40-140				
Benzo(k)fluoranthene	34.3	5.0	µg/L	50.0		68.6	40-140				
Bis(2-chloroethoxy)methane	35.3	10	µg/L	50.0		70.6	40-140				
Bis(2-chloroethyl)ether	33.5	10	µg/L	50.0		67.1	40-140				
Bis(2-chloroisopropyl)ether	37.1	10	µg/L	50.0		74.3	40-140				
Bis(2-Ethylhexyl)phthalate	37.3	10	µg/L	50.0		74.6	40-140				
4-Bromophenylphenylether	31.9	10	µg/L	50.0		63.7	40-140				
Butylbenzylphthalate	36.2	10	µg/L	50.0		72.4	40-140				
Carbazole	33.6	10	µg/L	50.0		67.3	40-140				
4-Chloroaniline	33.1	10	µg/L	50.0		66.1	40-140			V-34	†
4-Chloro-3-methylphenol	36.4	10	µg/L	50.0		72.9	30-130				
2-Chloronaphthalene	29.0	10	µg/L	50.0		57.9	40-140				
2-Chlorophenol	31.8	10	µg/L	50.0		63.6	30-130				
4-Chlorophenylphenylether	33.0	10	µg/L	50.0		66.0	40-140				
Chrysene	33.7	5.0	µg/L	50.0		67.4	40-140				
Dibenz(a,h)anthracene	38.5	5.0	µg/L	50.0		76.9	40-140				
Dibenzofuran	32.9	5.0	µg/L	50.0		65.8	40-140				
Di-n-butylphthalate	33.9	10	µg/L	50.0		67.9	40-140				
3,3-Dichlorobenzidine	38.9	10	µg/L	50.0		77.8	40-140				†
2,4-Dichlorophenol	34.1	10	µg/L	50.0		68.2	30-130				
Diethylphthalate	33.6	10	µg/L	50.0		67.3	40-140				
2,4-Dimethylphenol	32.7	10	µg/L	50.0		65.4	30-130				
Dimethylphthalate	33.7	10	µg/L	50.0		67.4	40-140				
4,6-Dinitro-2-methylphenol	42.3	10	µg/L	50.0		84.7	30-130				

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B235907 - SW-846 3510C											
LCS (B235907-BS1)				Prepared: 07/19/19 Analyzed: 07/22/19							
2,4-Dinitrophenol	55.1	10	µg/L	50.0		110	30-130			V-04, V-06, V-35	
2,4-Dinitrotoluene	37.7	10	µg/L	50.0		75.4	40-140				
2,6-Dinitrotoluene	38.9	10	µg/L	50.0		77.8	40-140			V-35	
Di-n-octylphthalate	37.6	10	µg/L	50.0		75.3	40-140				
Fluoranthene	34.2	5.0	µg/L	50.0		68.5	40-140				
Fluorene	33.8	5.0	µg/L	50.0		67.5	40-140				
Hexachlorobenzene	32.9	10	µg/L	50.0		65.8	40-140				
Hexachlorobutadiene	30.8	10	µg/L	50.0		61.6	40-140				
Hexachlorocyclopentadiene	30.4	10	µg/L	50.0		60.8	30-140				
Hexachloroethane	29.2	10	µg/L	50.0		58.5	40-140				
Indeno(1,2,3-cd)pyrene	41.9	5.0	µg/L	50.0		83.9	40-140				
Isophorone	36.3	10	µg/L	50.0		72.6	40-140				
2-Methylnaphthalene	35.4	5.0	µg/L	50.0		70.7	40-140				
2-Methylphenol	30.4	10	µg/L	50.0		60.7	30-130				
3/4-Methylphenol	29.7	10	µg/L	50.0		59.3	30-130				
Naphthalene	31.8	5.0	µg/L	50.0		63.6	40-140				
2-Nitroaniline	46.5	10	µg/L	50.0		93.1	40-140			V-35	
3-Nitroaniline	37.0	10	µg/L	50.0		73.9	40-140				†
4-Nitroaniline	40.8	10	µg/L	50.0		81.6	40-140				
Nitrobenzene	33.0	10	µg/L	50.0		66.0	40-140				
2-Nitrophenol	36.4	10	µg/L	50.0		72.7	30-130				
4-Nitrophenol	22.8	10	µg/L	50.0		45.5	10-130				
N-Nitrosodiphenylamine/Diphenylamine	33.5	10	µg/L	50.0		67.0	40-140				
N-Nitrosodi-n-propylamine	34.2	10	µg/L	50.0		68.4	40-140				
Pentachloronitrobenzene	34.5	10	µg/L	50.0		69.0	40-140			V-16	
Pentachlorophenol	35.3	10	µg/L	50.0		70.6	30-130				
Phenanthrene	34.4	5.0	µg/L	50.0		68.8	40-140				
Phenol	16.2	10	µg/L	50.0		32.4	20-130				
Pyrene	35.3	5.0	µg/L	50.0		70.5	40-140				
Pyridine	14.6	5.0	µg/L	50.0		29.3	10-140			V-34	†
1,2,4,5-Tetrachlorobenzene	30.2	10	µg/L	50.0		60.5	40-140				
1,2,4-Trichlorobenzene	30.4	5.0	µg/L	50.0		60.7	40-140				
2,4,5-Trichlorophenol	34.7	10	µg/L	50.0		69.4	30-130				
2,4,6-Trichlorophenol	33.7	10	µg/L	50.0		67.4	30-130				
Surrogate: 2-Fluorophenol	*89.5*		µg/L	200		44.8	15-110				
Surrogate: Phenol-d6	*65.8*		µg/L	200		32.9	15-110				
Surrogate: Nitrobenzene-d5	*72.7*		µg/L	100		72.7	30-130				
Surrogate: 2-Fluorobiphenyl	*72.2*		µg/L	100		72.2	30-130				
Surrogate: 2,4,6-Tribromophenol	*161*		µg/L	200		80.7	15-110				
Surrogate: p-Terphenyl-d14	*77.8*		µg/L	100		77.8	30-130				
LCS Dup (B235907-BSD1)				Prepared: 07/19/19 Analyzed: 07/22/19							
Acenaphthene	35.3	5.0	µg/L	50.0		70.6	40-140	6.25	20		
Acenaphthylene	34.4	5.0	µg/L	50.0		68.7	40-140	5.23	20		
Aniline	35.9	5.0	µg/L	50.0		71.8	40-140	0.167	50		† ‡
Anthracene	35.3	5.0	µg/L	50.0		70.5	40-140	5.06	20		
Benzo(a)anthracene	35.2	5.0	µg/L	50.0		70.4	40-140	3.58	20		
Benzo(a)pyrene	37.2	5.0	µg/L	50.0		74.4	40-140	2.42	20		
Benzo(b)fluoranthene	34.4	5.0	µg/L	50.0		68.8	40-140	2.29	20		
Benzo(g,h,i)perylene	37.9	5.0	µg/L	50.0		75.8	40-140	0.421	20		
Benzo(k)fluoranthene	34.8	5.0	µg/L	50.0		69.6	40-140	1.45	20		
Bis(2-chloroethoxy)methane	36.9	10	µg/L	50.0		73.8	40-140	4.35	20		

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B235907 - SW-846 3510C											
LCS Dup (B235907-BSD1)				Prepared: 07/19/19 Analyzed: 07/22/19							
Bis(2-chloroethyl)ether	34.6	10	µg/L	50.0		69.2	40-140	3.05	20		
Bis(2-chloroisopropyl)ether	38.1	10	µg/L	50.0		76.1	40-140	2.47	20		
Bis(2-Ethylhexyl)phthalate	38.3	10	µg/L	50.0		76.6	40-140	2.65	20		
4-Bromophenylphenylether	32.6	10	µg/L	50.0		65.1	40-140	2.11	20		
Butylbenzylphthalate	36.6	10	µg/L	50.0		73.2	40-140	1.10	20		
Carbazole	35.3	10	µg/L	50.0		70.5	40-140	4.73	20		
4-Chloroaniline	33.6	10	µg/L	50.0		67.2	40-140	1.65	20	V-34	†
4-Chloro-3-methylphenol	39.0	10	µg/L	50.0		78.1	30-130	6.94	20		
2-Chloronaphthalene	30.3	10	µg/L	50.0		60.5	40-140	4.36	20		
2-Chlorophenol	32.8	10	µg/L	50.0		65.7	30-130	3.25	20		
4-Chlorophenylphenylether	34.3	10	µg/L	50.0		68.7	40-140	3.95	20		
Chrysene	34.9	5.0	µg/L	50.0		69.7	40-140	3.38	20		
Dibenz(a,h)anthracene	39.0	5.0	µg/L	50.0		78.0	40-140	1.42	20		
Dibenzofuran	35.5	5.0	µg/L	50.0		70.9	40-140	7.55	20		
Di-n-butylphthalate	35.5	10	µg/L	50.0		71.0	40-140	4.52	20		
3,3-Dichlorobenzidine	40.0	10	µg/L	50.0		80.0	40-140	2.81	20		† ‡
2,4-Dichlorophenol	35.9	10	µg/L	50.0		71.8	30-130	5.26	20		
Diethylphthalate	36.9	10	µg/L	50.0		73.8	40-140	9.27	20		
2,4-Dimethylphenol	34.9	10	µg/L	50.0		69.9	30-130	6.56	20		
Dimethylphthalate	36.9	10	µg/L	50.0		73.8	40-140	9.09	50		
4,6-Dinitro-2-methylphenol	44.3	10	µg/L	50.0		88.6	30-130	4.52	50		
2,4-Dinitrophenol	59.2	10	µg/L	50.0		118	30-130	7.12	50	V-04, V-06, V-35	
2,4-Dinitrotoluene	41.2	10	µg/L	50.0		82.3	40-140	8.80	20		
2,6-Dinitrotoluene	41.9	10	µg/L	50.0		83.8	40-140	7.48	20	V-35	
Di-n-octylphthalate	38.2	10	µg/L	50.0		76.4	40-140	1.50	20		
Fluoranthene	36.5	5.0	µg/L	50.0		73.0	40-140	6.39	20		
Fluorene	36.4	5.0	µg/L	50.0		72.8	40-140	7.61	20		
Hexachlorobenzene	33.2	10	µg/L	50.0		66.5	40-140	0.968	20		
Hexachlorobutadiene	31.2	10	µg/L	50.0		62.4	40-140	1.29	20		
Hexachlorocyclopentadiene	30.3	10	µg/L	50.0		60.7	30-140	0.231	50		
Hexachloroethane	30.2	10	µg/L	50.0		60.5	40-140	3.30	50		
Indeno(1,2,3-cd)pyrene	42.4	5.0	µg/L	50.0		84.7	40-140	1.02	50		
Isophorone	38.0	10	µg/L	50.0		76.1	40-140	4.68	20		
2-Methylnaphthalene	36.8	5.0	µg/L	50.0		73.7	40-140	4.07	20		
2-Methylphenol	33.2	10	µg/L	50.0		66.3	30-130	8.82	20		
3/4-Methylphenol	31.3	10	µg/L	50.0		62.6	30-130	5.38	20		
Naphthalene	33.2	5.0	µg/L	50.0		66.3	40-140	4.16	20		
2-Nitroaniline	50.6	10	µg/L	50.0		101	40-140	8.46	20	V-35	
3-Nitroaniline	39.9	10	µg/L	50.0		79.7	40-140	7.55	20		†
4-Nitroaniline	46.0	10	µg/L	50.0		91.9	40-140	11.9	20		
Nitrobenzene	34.1	10	µg/L	50.0		68.2	40-140	3.31	20		
2-Nitrophenol	37.8	10	µg/L	50.0		75.6	30-130	3.94	20		
4-Nitrophenol	26.7	10	µg/L	50.0		53.4	10-130	15.9	50		‡
N-Nitrosodiphenylamine/Diphenylamine	34.4	10	µg/L	50.0		68.8	40-140	2.74	20		
N-Nitrosodi-n-propylamine	36.4	10	µg/L	50.0		72.8	40-140	6.23	20		
Pentachloronitrobenzene	35.8	10	µg/L	50.0		71.7	40-140	3.81	20	V-16	
Pentachlorophenol	37.0	10	µg/L	50.0		74.1	30-130	4.89	50		
Phenanthrene	35.1	5.0	µg/L	50.0		70.2	40-140	2.07	20		
Phenol	17.5	10	µg/L	50.0		35.0	20-130	7.72	20		
Pyrene	36.0	5.0	µg/L	50.0		72.1	40-140	2.13	20		
Pyridine	16.2	5.0	µg/L	50.0		32.4	10-140	10.1	50	V-34	†
1,2,4,5-Tetrachlorobenzene	31.1	10	µg/L	50.0		62.1	40-140	2.71	20		

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B235907 - SW-846 3510C										
LCS Dup (B235907-BSD1)				Prepared: 07/19/19 Analyzed: 07/22/19						
1,2,4-Trichlorobenzene	31.3	5.0	µg/L	50.0		62.6	40-140	3.02	20	
2,4,5-Trichlorophenol	35.6	10	µg/L	50.0		71.1	30-130	2.42	20	
2,4,6-Trichlorophenol	35.5	10	µg/L	50.0		70.9	30-130	5.06	50	
Surrogate: 2-Fluorophenol	*92.3*		µg/L	200		46.1	15-110			
Surrogate: Phenol-d6	*71.2*		µg/L	200		35.6	15-110			
Surrogate: Nitrobenzene-d5	*74.8*		µg/L	100		74.8	30-130			
Surrogate: 2-Fluorobiphenyl	*75.0*		µg/L	100		75.0	30-130			
Surrogate: 2,4,6-Tribromophenol	*179*		µg/L	200		89.4	15-110			
Surrogate: p-Terphenyl-d14	*78.6*		µg/L	100		78.6	30-130			
Batch B235972 - SW-846 3510C										
Blank (B235972-BLK1)				Prepared: 07/18/19 Analyzed: 07/19/19						
Acenaphthene (SIM)	ND	0.30	µg/L							
Acenaphthylene (SIM)	ND	0.20	µg/L							
Anthracene (SIM)	ND	0.20	µg/L							
Benzo(a)anthracene (SIM)	ND	0.050	µg/L							
Benzo(a)pyrene (SIM)	ND	0.10	µg/L							
Benzo(b)fluoranthene (SIM)	ND	0.050	µg/L							
Benzo(g,h,i)perylene (SIM)	ND	0.50	µg/L							
Benzo(k)fluoranthene (SIM)	ND	0.20	µg/L							V-35
Chrysene (SIM)	ND	0.20	µg/L							
Dibenz(a,h)anthracene (SIM)	ND	0.10	µg/L							V-35
Fluoranthene (SIM)	ND	0.50	µg/L							
Fluorene (SIM)	ND	1.0	µg/L							
Indeno(1,2,3-cd)pyrene (SIM)	ND	0.10	µg/L							V-35
2-Methylnaphthalene (SIM)	ND	1.0	µg/L							
Naphthalene (SIM)	ND	1.0	µg/L							
Phenanthrene (SIM)	ND	0.050	µg/L							
Pyrene (SIM)	ND	1.0	µg/L							
Surrogate: Nitrobenzene-d5 (SIM)	*92.4*		µg/L	100		92.4	30-130			
Surrogate: 2-Fluorobiphenyl (SIM)	*59.4*		µg/L	100		59.4	30-130			
Surrogate: p-Terphenyl-d14 (SIM)	*63.4*		µg/L	100		63.4	30-130			
LCS (B235972-BS1)				Prepared: 07/18/19 Analyzed: 07/19/19						
Acenaphthene (SIM)	49.7	6.0	µg/L	50.0		99.4	40-140			
Acenaphthylene (SIM)	53.1	4.0	µg/L	50.0		106	40-140			
Anthracene (SIM)	55.9	4.0	µg/L	50.0		112	40-140			
Benzo(a)anthracene (SIM)	49.9	1.0	µg/L	50.0		99.8	40-140			
Benzo(a)pyrene (SIM)	61.0	2.0	µg/L	50.0		122	40-140			
Benzo(b)fluoranthene (SIM)	57.0	1.0	µg/L	50.0		114	40-140			
Benzo(g,h,i)perylene (SIM)	59.1	10	µg/L	50.0		118	40-140			
Benzo(k)fluoranthene (SIM)	61.7	4.0	µg/L	50.0		123	40-140			V-35
Chrysene (SIM)	52.5	4.0	µg/L	50.0		105	40-140			
Dibenz(a,h)anthracene (SIM)	64.3	2.0	µg/L	50.0		129	40-140			V-35
Fluoranthene (SIM)	51.4	10	µg/L	50.0		103	40-140			
Fluorene (SIM)	52.2	20	µg/L	50.0		104	40-140			
Indeno(1,2,3-cd)pyrene (SIM)	64.2	2.0	µg/L	50.0		128	40-140			V-35
2-Methylnaphthalene (SIM)	47.5	20	µg/L	50.0		95.0	40-140			
Naphthalene (SIM)	44.4	20	µg/L	50.0		88.8	40-140			
Phenanthrene (SIM)	49.0	1.0	µg/L	50.0		98.0	40-140			
Pyrene (SIM)	49.9	20	µg/L	50.0		99.7	40-140			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B235972 - SW-846 3510C											
LCS (B235972-BS1)				Prepared: 07/18/19 Analyzed: 07/19/19							
Surrogate: Nitrobenzene-d5 (SIM)	*96.7*		µg/L	100		96.7	30-130				
Surrogate: 2-Fluorobiphenyl (SIM)	*79.5*		µg/L	100		79.5	30-130				
Surrogate: p-Terphenyl-d14 (SIM)	*91.8*		µg/L	100		91.8	30-130				
LCS Dup (B235972-BSD1)				Prepared: 07/18/19 Analyzed: 07/19/19							
Acenaphthene (SIM)	46.5	6.0	µg/L	50.0		93.0	40-140	6.74	20		
Acenaphthylene (SIM)	49.7	4.0	µg/L	50.0		99.4	40-140	6.69	20		
Anthracene (SIM)	51.9	4.0	µg/L	50.0		104	40-140	7.42	20		
Benzo(a)anthracene (SIM)	46.2	1.0	µg/L	50.0		92.4	40-140	7.78	20		
Benzo(a)pyrene (SIM)	56.5	2.0	µg/L	50.0		113	40-140	7.59	20		
Benzo(b)fluoranthene (SIM)	53.1	1.0	µg/L	50.0		106	40-140	7.09	20		
Benzo(g,h,i)perylene (SIM)	54.8	10	µg/L	50.0		110	40-140	7.65	20		
Benzo(k)fluoranthene (SIM)	57.7	4.0	µg/L	50.0		115	40-140	6.67	20	V-35	
Chrysene (SIM)	48.6	4.0	µg/L	50.0		97.2	40-140	7.72	20		
Dibenz(a,h)anthracene (SIM)	59.5	2.0	µg/L	50.0		119	40-140	7.76	20	V-35	
Fluoranthene (SIM)	48.0	10	µg/L	50.0		96.1	40-140	6.84	20		
Fluorene (SIM)	48.8	20	µg/L	50.0		97.6	40-140	6.77	20		
Indeno(1,2,3-cd)pyrene (SIM)	59.2	2.0	µg/L	50.0		118	40-140	8.20	20	V-35	‡
2-Methylnaphthalene (SIM)	44.0	20	µg/L	50.0		88.0	40-140	7.65	20		
Naphthalene (SIM)	40.3	20	µg/L	50.0		80.6	40-140	9.63	20		
Phenanthrene (SIM)	45.7	1.0	µg/L	50.0		91.5	40-140	6.92	20		
Pyrene (SIM)	45.7	20	µg/L	50.0		91.5	40-140	8.62	20		
Surrogate: Nitrobenzene-d5 (SIM)	*87.3*		µg/L	100		87.3	30-130				
Surrogate: 2-Fluorobiphenyl (SIM)	*73.3*		µg/L	100		73.3	30-130				
Surrogate: p-Terphenyl-d14 (SIM)	*83.1*		µg/L	100		83.1	30-130				

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B235909 - SW-846 3510C										
Blank (B235909-BLK1)				Prepared: 07/19/19 Analyzed: 07/23/19						
Aroclor-1016	ND	0.20	µg/L							
Aroclor-1016 [2C]	ND	0.20	µg/L							
Aroclor-1221	ND	0.20	µg/L							
Aroclor-1221 [2C]	ND	0.20	µg/L							
Aroclor-1232	ND	0.20	µg/L							
Aroclor-1232 [2C]	ND	0.20	µg/L							
Aroclor-1242	ND	0.20	µg/L							
Aroclor-1242 [2C]	ND	0.20	µg/L							
Aroclor-1248	ND	0.20	µg/L							
Aroclor-1248 [2C]	ND	0.20	µg/L							
Aroclor-1254	ND	0.20	µg/L							
Aroclor-1254 [2C]	ND	0.20	µg/L							
Aroclor-1260	ND	0.20	µg/L							
Aroclor-1260 [2C]	ND	0.20	µg/L							
Aroclor-1262	ND	0.20	µg/L							
Aroclor-1262 [2C]	ND	0.20	µg/L							
Aroclor-1268	ND	0.20	µg/L							
Aroclor-1268 [2C]	ND	0.20	µg/L							
Total PCB Aroclors	0.0		µg/L							
Surrogate: Decachlorobiphenyl	*1.70*		µg/L	2.00		84.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.84*		µg/L	2.00		91.9	30-150			
Surrogate: Tetrachloro-m-xylene	*1.46*		µg/L	2.00		72.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.54*		µg/L	2.00		77.0	30-150			
LCS (B235909-BS1)				Prepared: 07/19/19 Analyzed: 07/23/19						
Aroclor-1016	0.49	0.20	µg/L	0.500		98.3	40-140			
Aroclor-1016 [2C]	0.50	0.20	µg/L	0.500		101	40-140			
Aroclor-1260	0.46	0.20	µg/L	0.500		92.4	40-140			
Aroclor-1260 [2C]	0.48	0.20	µg/L	0.500		95.6	40-140			
Surrogate: Decachlorobiphenyl	*1.90*		µg/L	2.00		95.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*2.07*		µg/L	2.00		103	30-150			
Surrogate: Tetrachloro-m-xylene	*1.57*		µg/L	2.00		78.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.67*		µg/L	2.00		83.3	30-150			
LCS Dup (B235909-BSD1)				Prepared: 07/19/19 Analyzed: 07/23/19						
Aroclor-1016	0.49	0.20	µg/L	0.500		97.4	40-140	0.903	20	
Aroclor-1016 [2C]	0.49	0.20	µg/L	0.500		98.9	40-140	2.14	20	
Aroclor-1260	0.46	0.20	µg/L	0.500		91.6	40-140	0.898	20	
Aroclor-1260 [2C]	0.47	0.20	µg/L	0.500		94.4	40-140	1.24	20	
Surrogate: Decachlorobiphenyl	*1.82*		µg/L	2.00		91.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.98*		µg/L	2.00		98.9	30-150			
Surrogate: Tetrachloro-m-xylene	*1.63*		µg/L	2.00		81.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.72*		µg/L	2.00		86.1	30-150			

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B235883 - SW-846 3510C										
Blank (B235883-BLK1)				Prepared & Analyzed: 07/19/19						
CT ETPH	ND	0.15	mg/L							
Surrogate: 2-Fluorobiphenyl	*0.0935*		mg/L	0.100		93.5	50-150			
LCS (B235883-BS1)				Prepared & Analyzed: 07/19/19						
CT ETPH	0.777	0.15	mg/L	1.00		77.7	60-120			
Surrogate: 2-Fluorobiphenyl	*0.106*		mg/L	0.100		106	50-150			
LCS Dup (B235883-BSD1)				Prepared & Analyzed: 07/19/19						
CT ETPH	0.743	0.15	mg/L	1.00		74.3	60-120	4.49	30	
Surrogate: 2-Fluorobiphenyl	*0.102*		mg/L	0.100		102	50-150			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B235788 - SW-846 3005A										
Blank (B235788-BLK1)				Prepared: 07/18/19 Analyzed: 07/19/19						
Arsenic	ND	0.80	µg/L							
Barium	ND	10	µg/L							
Cadmium	ND	0.20	µg/L							
Chromium	ND	1.0	µg/L							
Lead	ND	0.50	µg/L							
Selenium	ND	5.0	µg/L							
Silver	ND	0.20	µg/L							
LCS (B235788-BS1)				Prepared: 07/18/19 Analyzed: 07/19/19						
Arsenic	526	8.0	µg/L	500		105	80-120			
Barium	494	100	µg/L	500		98.9	80-120			
Cadmium	512	2.0	µg/L	500		102	80-120			
Chromium	497	10	µg/L	500		99.4	80-120			
Lead	507	5.0	µg/L	500		101	80-120			
Selenium	532	50	µg/L	500		106	80-120			
Silver	502	2.0	µg/L	500		100	80-120			
LCS Dup (B235788-BSD1)				Prepared: 07/18/19 Analyzed: 07/19/19						
Arsenic	531	8.0	µg/L	500		106	80-120	0.940	20	
Barium	512	100	µg/L	500		102	80-120	3.48	20	
Cadmium	529	2.0	µg/L	500		106	80-120	3.22	20	
Chromium	505	10	µg/L	500		101	80-120	1.63	20	
Lead	518	5.0	µg/L	500		104	80-120	2.26	20	
Selenium	541	50	µg/L	500		108	80-120	1.59	20	
Silver	516	2.0	µg/L	500		103	80-120	2.76	20	
Batch B236064 - SW-846 7470A Prep										
Blank (B236064-BLK1)				Prepared: 07/22/19 Analyzed: 07/23/19						
Mercury	ND	0.00010	mg/L							
LCS (B236064-BS1)				Prepared: 07/22/19 Analyzed: 07/23/19						
Mercury	0.00422	0.00010	mg/L	0.00400		106	80-120			
LCS Dup (B236064-BSD1)				Prepared: 07/22/19 Analyzed: 07/23/19						
Mercury	0.00406	0.00010	mg/L	0.00400		101	80-120	3.99	20	

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B235955 - SW-846 9014										
Blank (B235955-BLK1)				Prepared: 07/19/19 Analyzed: 07/22/19						
Reactive Cyanide	ND	0.40	mg/L							
LCS (B235955-BS1)				Prepared: 07/19/19 Analyzed: 07/22/19						
Reactive Cyanide	11	0.40	mg/L	10.0		109	82.8-113			
Batch B235956 - SW-846 9030A										
Blank (B235956-BLK1)				Prepared: 07/19/19 Analyzed: 07/22/19						
Reactive Sulfide	ND	2.0	mg/L							
LCS (B235956-BS1)				Prepared: 07/19/19 Analyzed: 07/22/19						
Reactive Sulfide	15	2.0	mg/L	14.8		103	57.6-114			

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B235909-BS1 Date(s) Analyzed: 07/23/2019 07/23/2019

Instrument ID (1): ECD10 Instrument ID (2): ECD10

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.49	
	2	0.000	0.000	0.000	0.50	2.0
Aroclor-1260	1	0.000	0.000	0.000	0.46	
	2	0.000	0.000	0.000	0.48	4.3

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B235909-BSD1 Date(s) Analyzed: 07/23/2019 07/23/2019

Instrument ID (1): ECD10 Instrument ID (2): ECD10

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.49	
	2	0.000	0.000	0.000	0.49	0.0
Aroclor-1260	1	0.000	0.000	0.000	0.46	
	2	0.000	0.000	0.000	0.47	2.2

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
L-01	Laboratory fortified blank /laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.
V-04	Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.
V-06	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.
V-34	Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.
V-35	Initial calibration verification (ICV) did not meet method specifications and was biased on the high side for this compound. Reported result is estimated.
V-36	Initial calibration verification (ICV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
CTDEP ETPH in Water	
CT ETPH	CT
SW-846 6020B in Water	
Arsenic	CT,NH,NY,ME,VA,NC
Barium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,RI,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
SW-846 7470A in Water	
Mercury	CT,NH,NY,NC,ME,VA
SW-846 8082A in Water	
Aroclor-1016	CT,NH,NY,NC,ME,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1260	CT,NH,NY,NC,ME,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1262	NH,NY,NC,ME,VA,PA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA,PA
Aroclor-1268	NH,NY,NC,ME,VA,PA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA,PA
SW-846 8260C in Water	
Acetone	CT,NH,NY,ME
Acrylonitrile	CT,NY,ME
Benzene	CT,NH,NY,ME
Bromobenzene	NY
Bromodichloromethane	CT,NH,NY,ME
Bromoform	CT,NH,NY,ME
Bromomethane	CT,NH,NY,ME
2-Butanone (MEK)	CT,NH,NY,ME
n-Butylbenzene	NY,ME
sec-Butylbenzene	NY,ME
tert-Butylbenzene	NY,ME
Carbon Disulfide	CT,NH,NY,ME
Carbon Tetrachloride	CT,NH,NY,ME
Chlorobenzene	CT,NH,NY,ME

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260C in Water	
Chlorodibromomethane	CT,NH,NY,ME
Chloroethane	CT,NH,NY,ME
Chloroform	CT,NH,NY,ME
Chloromethane	CT,NH,NY,ME
2-Chlorotoluene	NY,ME
4-Chlorotoluene	NY,ME
1,2-Dibromo-3-chloropropane (DBCP)	NY
1,2-Dibromoethane (EDB)	NY
Dibromomethane	NH,NY,ME
1,2-Dichlorobenzene	CT,NY,ME
1,3-Dichlorobenzene	CT,NH,NY,ME
1,4-Dichlorobenzene	CT,NH,NY,ME
trans-1,4-Dichloro-2-butene	NH,NY,ME
Dichlorodifluoromethane (Freon 12)	NH,NY,ME
1,1-Dichloroethane	CT,NH,NY,ME
1,2-Dichloroethane	CT,NH,NY,ME
1,1-Dichloroethylene	CT,NH,NY,ME
cis-1,2-Dichloroethylene	NY,ME
trans-1,2-Dichloroethylene	CT,NH,NY,ME
1,2-Dichloropropane	CT,NH,NY,ME
1,3-Dichloropropane	NY,ME
2,2-Dichloropropane	NH,NY,ME
1,1-Dichloropropene	NH,NY,ME
cis-1,3-Dichloropropene	CT,NH,NY,ME
trans-1,3-Dichloropropene	CT,NH,NY,ME
Ethylbenzene	CT,NH,NY,ME
Hexachlorobutadiene	CT,NH,NY,ME
2-Hexanone (MBK)	CT,NH,NY,ME
Isopropylbenzene (Cumene)	NY,ME
p-Isopropyltoluene (p-Cymene)	CT,NH,NY,ME
Methyl tert-Butyl Ether (MTBE)	CT,NH,NY,ME
Methylene Chloride	CT,NH,NY,ME
4-Methyl-2-pentanone (MIBK)	CT,NH,NY,ME
Naphthalene	NH,NY,ME
n-Propylbenzene	CT,NH,NY,ME
Styrene	CT,NH,NY,ME
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME
Tetrachloroethylene	CT,NH,NY,ME
Toluene	CT,NH,NY,ME
1,2,3-Trichlorobenzene	NH,NY,ME
1,2,4-Trichlorobenzene	CT,NH,NY,ME
1,1,1-Trichloroethane	CT,NH,NY,ME
1,1,2-Trichloroethane	CT,NH,NY,ME
Trichloroethylene	CT,NH,NY,ME
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME
1,2,3-Trichloropropane	NH,NY,ME

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260C in Water	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NY
1,2,4-Trimethylbenzene	NY,ME
1,3,5-Trimethylbenzene	NY,ME
Vinyl Chloride	CT,NH,NY,ME
m+p Xylene	NH,NY,ME
o-Xylene	NH,NY,ME
Xylenes (total)	CT,NY
SW-846 8270D in Water	
Acenaphthene	CT,NY,NH
Acenaphthylene	CT,NY,NH
Aniline	CT,NY
Anthracene	CT,NY,NH
Benzo(a)anthracene	CT,NY,NH
Benzo(a)pyrene	CT,NY,NH
Benzo(b)fluoranthene	CT,NY,NH
Benzo(g,h,i)perylene	CT,NY,NH
Benzo(k)fluoranthene	CT,NY,NH
Bis(2-chloroethoxy)methane	CT,NY,NH
Bis(2-chloroethyl)ether	CT,NY,NH
Bis(2-chloroisopropyl)ether	CT,NY,NH
Bis(2-Ethylhexyl)phthalate	CT,NY,NH
4-Bromophenylphenylether	CT,NY,NH
Butylbenzylphthalate	CT,NY,NH
4-Chloroaniline	CT,NY,NH
4-Chloro-3-methylphenol	CT,NY,NH
2-Chloronaphthalene	CT,NY,NH
2-Chlorophenol	CT,NY,NH
4-Chlorophenylphenylether	CT,NY,NH
Chrysene	CT,NY,NH
Dibenz(a,h)anthracene	CT,NY,NH
Dibenzofuran	CT,NY,NH
Di-n-butylphthalate	CT,NY,NH
1,2-Dichlorobenzene	NY
1,3-Dichlorobenzene	NY
1,4-Dichlorobenzene	NY
3,3-Dichlorobenzidine	CT,NY,NH
2,4-Dichlorophenol	CT,NY,NH
Diethylphthalate	CT,NY,NH
2,4-Dimethylphenol	CT,NY,NH
Dimethylphthalate	CT,NY,NH
4,6-Dinitro-2-methylphenol	CT,NY,NH
2,4-Dinitrophenol	CT,NY,NH
2,4-Dinitrotoluene	CT,NY,NH
2,6-Dinitrotoluene	CT,NY,NH
Di-n-octylphthalate	CT,NY,NH
Fluoranthene	CT,NY,NH

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270D in Water	
Fluorene	NY,NH
Hexachlorobenzene	CT,NY,NH
Hexachlorobutadiene	CT,NY,NH
Hexachlorocyclopentadiene	CT,NY,NH
Hexachloroethane	CT,NY,NH
Indeno(1,2,3-cd)pyrene	CT,NY,NH
Isophorone	CT,NY,NH
2-Methylnaphthalene	CT,NY,NH
2-Methylphenol	CT,NY,NH
3/4-Methylphenol	CT,NY,NH
Naphthalene	CT,NY,NH
2-Nitroaniline	CT,NY,NH
3-Nitroaniline	CT,NY,NH
4-Nitroaniline	CT,NY,NH
Nitrobenzene	CT,NY,NH
2-Nitrophenol	CT,NY,NH
4-Nitrophenol	CT,NY,NH
N-Nitrosodi-n-propylamine	CT,NY,NH
Pentachlorophenol	CT,NY,NH
Phenanthrene	CT,NY,NH
Phenol	CT,NY,NH
Pyrene	CT,NY,NH
Pyridine	CT,NY,NH
1,2,4,5-Tetrachlorobenzene	NY
1,2,4-Trichlorobenzene	CT,NY,NH
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	03/1/2020
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2019
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2019
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2019
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2019
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

con-test ANALYTICAL LABORATORY

kkm

Phone: 413-525-2332 1990951
Fax: 413-525-6405
Email: info@contestlabs.com

http://www.contestlabs.com

CHAIN OF CUSTODY RECORD

Doc # 381 Rev 1_03242017

39 Spruce Street
East Longmeadow, MA 01028

Cooler packed by client

Page 1 of 1

Company Name:	TRC
Address:	21 Griffin Rd. N. Windsor, CT
Phone:	860-298-9692
Project Name:	English Station Parcel B
Project Location:	510 Grand Ave, New Haven, CT
Project Number:	263951.000012.000002
Project Manager:	Carl Stopper
Con-Test Quote Name/Number:	B-20180911 English Station
Invoice Recipient:	Carl Stopper
Sampled By:	Matt Bluestein

Requested Turnaround Time
7-Day ☐ 10-Day ☐
Due Date:

Rush Approval Required
1-Day ☒ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☒ EXCEL ☒
Other: EQuIS EDD
CLP Like Data Pkg Required: ☐
Email To: CStopper@trcsolutions.com
Fax To #:

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code	PCBs 8082	ETPH	RCRA Metals	VOCs	SVOCs	Reactive Cyanide	Reactive Sulfide				
								2	2	1	3	2	1	1				
								i	i	N	H	i	i	i				
								A	A	P	V	A	P	P				
1	TRC-AOC-13-SW-01	7/18/19	0700			SW	U	X	X	X	X	X	X	X				

ANALYSIS REQUESTED

# of Containers
Preservation Code
Container Code

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

Comments:

Please use the following codes to indicate possible sample concentration within the **Conc Code** column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
Surface water

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

[3] **Container Codes:**
A = Amber Glass
G = Glass
P = Plastic
ST = Sterile
V = Vial
S = Summa Canister
T = Tedlar Bag
O = Other (please define)

Relinquished by: (signature)	Date/Time:	7/18/19 1415
Received by: (signature)	Date/Time:	7/18/19 2120
Relinquished by: (signature)	Date/Time:	7/19/19 300
Received by: (signature)	Date/Time:	7/18/19 15:50
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements
MA:
CT: CT RSRs
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☒ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

con-test ANALYTICAL LABORATORY www.contestlabs.com
NELAC and AIHA-LAP, LLC Accredited

Project Entity
☐ Government ☐ Municipality ☐ MWRA ☐ WRTA
☐ Federal ☐ 21 J ☐ School
☐ City ☐ Brownfield ☐ MBTA

Other
☐ Chromatogram
☐ *AIHA-LAP, LLC*

PCB ONLY
☒ Soxhlet
☐ Non Soxhlet

Table of Contents

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples_____

con-test® ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client TRC

Received By mp Date 7/18/19 Time 15:50

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____

Direct from Sampling _____ Ambient _____ Melted Ice _____

By Gun # 4 Actual Temp - 4.9

Were samples within Temperature? 2-6°C T By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? N/A Were Samples Tampered with? N/A

Was COC Relinquished ? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name T

Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? _____

Are there Rushes? T Who was notified? Kayla, Mary, Miranda

Are there Short Holds? F Who was notified? _____

Is there enough Volume? T

Is there Headspace where applicable? F MS/MSD? F

Proper Media/Containers Used? T Is splitting samples required? F

Were trip blanks received? F On COC? F

Do all samples have the proper pH? Acid TC2 Base _____

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.	6	1 Liter Plastic	1	16 oz Amb.	
HCL-	3	500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic	1	4oz Amb/Clear	
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear	
DI-		Other Glass		Other Plastic		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

C:\MSDCHEM\2\DATA\B072219\B0722006.D

CT ETPH Discrimination Check

Data File Name B0722006.D
Data File Path C:\MSDCHEM\2\DATA\B072219\
Operator RMW
Date Acquired 7/22/2019 12:46
Acq. Method File EPH04.M
Sample Name ETPH 1500
Instrument Name GCFID2

Name	Ret Time	Target Response	Average Response	*%D+/-20
n-Nonane	1.51	8505480	9615463	12
n-Decane	2.20	8622735	9615463	10
n-Dodecane	3.15	9008412	9615463	6
n-Tetradecane	3.87	9376941	9615463	2
n-Hexadecane	4.48	9591235	9615463	0
n-Octadecane	5.02	9563618	9615463	1
n-Eicosane	5.61	9930440	9615463	-3
n-Docosane	6.33	10220741	9615463	-6
n-Tetracosane	7.16	9382845	9615463	2
n-Hexacosane	7.97	10306303	9615463	-7
n-Octacosane	8.71	10145307	9615463	-6
n-Triacontane	9.39	10060601	9615463	-5
n-Dotriacontane	10.02	9967286	9615463	-4
n-Tetratriacontane	10.62	9783246	9615463	-2
n-Hexatriacontane	11.19	9766759	9615463	-2

Samples

19G0816-01
19G0888-07
19G0904-01
19G0951-01

*One compound allowed %D</=50

REASONABLE CONFIDENCE PROTOCOL
LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

Laboratory Name: Con-Test Analytical Laboratory

Client: TRC Environmental Corporation - CT

Project Location: 510 Grand Ave., New Haven, CT

Project Number: 19G0951

Laboratory Sample ID(s):

19G0951-01

Sample Date(s):

07/18/2019

List RCP Methods Used:

CTDEP ETPH, SW-846 6020B, SW-846 7470A, SW-846 8082A, SW-846 8260C, SW-846 8270D

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CTDEP method-specific Reasonable Confidence Protocol documents?	☑ Yes ☐ No
1A	Were the method specified preservation and holding time requirements met?	☑ Yes ☐ No
1B	VPH and EPH Methods only: Was the VPH and EPH method conducted without significant modifications (see Section 11.3 of respective RCP methods)?	☐ Yes ☐ No ☑ N/A
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	☑ Yes ☐ No
3	Were samples received at an appropriate temperature (< 6 degrees C.)?	☑ Yes ☐ No ☐ N/A
4	Were all QA/QC performance criteria specified in the CTDEP Reasonable Confidence Protocol documents achieved?	☐ Yes ☑ No
5A	Were reporting limits specified or referenced on the chain-of-custody?	☐ Yes ☑ No
5B	Were these reporting limits met?	☐ Yes ☐ No
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	☐ Yes ☑ No
7	Are project-specific matrix spikes and laboratory duplicates included in this data set?	☑ Yes ☐ No

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A, or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence."
This form may not be altered and all questions must be answered.

Lisa A. Worthington

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete.

Authorized Signature: Lisa Worthington **Position:** Technical Representative

Printed Name: Lisa A. Worthington **Date:** 07/23/19

Name of Laboratory: Con-Test Analytical Laboratory

This certification form is to be used for RCP methods only.

MOWGreen®

Clean & Serene, No Gasoline!™

Lawn Care Countering Climate Change

Avoiding Tons of Pollution & Noise

Dan Delventhal,
Founder, MowGreen LLC

MOWGreen®

Clean & Serene, No Gasoline!™

Lawn Care Air & Noise Pollution

- 5-10%+ (10-20x) Problem - Get the Gas off the Grass!
- Less Lawn Mowing, More Food Growing
- Primary Area – NYC Suburbia
- Electric & Manual Lawn Care Services
- Manual Mowing Innovation – Reel2Reel™
- Education & Advocacy
- SMOG Reducing Partnerships (Solar, HVAC, etc.)
- 5000 M Tons Carbon/GHG's Avoided
- Rapid Growth: 500 Tons/Yr. in Region

MOWGreen®

Clean & Serene, No Gasoline!™

Target Market NYC Suburbia, Westchester & Fairfield Counties, NY & CT

MOWGreen®

Clean & Serene, No Gasoline!™

Target Market NYC Suburbia, Westchester & Fairfield Counties, NY & CT

- 100,000 or more lawns @ $3,500 each = Approx. $350 MM target market in area (500,000 m Tons of Carbon/GHG's
- 1% Market Share, 2 Counties = $3.5MM
- National Market is Billions

MOWGreen®

Clean & Serene, No Gasoline!™

Zero Emission Lawn Care

- All battery electric gear
- Batteries charged with Solar
- Batteries charged with 100% elected renewable
- Carbon Credits purchased for vehicle gas
- Zero Noxious Fumes!

SMOGATHON

TOWNVIBE green awards

ORGANIC LAND CARE NOFA organiclandcare.net NATURALLY BEAUTIFUL

SCREENED & HomeAdvisor APPROVED

Green America's PEOPLE & PLANET AWARD

MOWGreen®

Clean & Serene, No Gasoline!™

Lawn Care Fumes & Noise

- Mowers, hedgers, edgers, trimmers, chainsaws, aerators, de-thatchers, sprayers, spreaders, snow blowers & Blowers

All Electric (Mean Green, EGO, Worx, or manual)

MowGreen®

Clean & Serene, No Gasoline!™

MowGreen All Electric is Serene

- MowGreen Battery Electric Gear is 50% quieter than gas-powered gear.
  - Examples:
    - Quiet Aerating https://www.instagram.com/p/Bn_r0s3nUfL/?utm_source=ig_web_copy_link
    - Quiet De-thatching https://www.instagram.com/p/BoDS_9_hmy2/?utm_source=ig_web_copy_link
- Human powered tools also used when practical
  - https://www.mowgreen.com/project/news-12-report/


NEWS 12
CONNECTICUT
Play 4 Night (07/16/12)
9 8 2 1
85°
6:14

MOWGreen

BUSINESS SUMMARY

- Mission: 1. Get the gas off the grass! 2. Less lawn mowing, more food growing! 3. No Invasives, Let's Grow Natives
- Vision: A national network of locally managed, gas-free lawn care and organic native gardening folks
- Value proposition: Zero Emission lawn care with carbon neutrally charged gear;
- Strengths: Tons of air pollution avoided & quiet commercial electric gear. Organic know-how.

SERVICES

MowGreen uses electric mowers to combat the air pollution, gas consumption and spillage, noise, and chemical contamination associated with conventional **lawn care** – yet fees are comparable. We also encourage lawn reduction with native plants and organic gardens.

CEO: Dan Delventhal

SERVING: Fairfield, New Haven, & Greenwich/Westchester County areas

INDUSTRY: Lawn care services and technology

TECHNOLOGY

Solar @ HQ, Commercial electric mowers and other battery powered gear, reel mower push gang kits; Web solutions supporting marketing and operations.

MARKET: Lawn care is a $20 Bn industry in the U.S. MowGreen's 2 county market is $350 MM. Target customers are those seeking less polluting and quieter lawn care, while preferred staff and partners are eco and fitness oriented people serious about quality lawn care and gardening. Annual growth: 25-35%

MOWGreen®

Clean & Serene, No Gasoline!™

MowGreen Mowing Evolution

2006, Reel mowers, 2010, Reel2Reel gang kits, 2011 Hydrogen …

MOWGreen®

Clean & Serene, No Gasoline!™

The "Tesla" of Mowers (Mean Green)

2013, Small electric, 2015, Medium electric, 2017, Large electric

MOWGreen®

Clean & Serene, No Gasoline!™

Reel2Reel™ Double/Triple Push Gang Kit

MOWGreen®

Clean & Serene, No Gasoline!™

Pollution Avoiding Electric Gear

- Mowing
- Trimming
- Edging
- Hedging
- Pruning/Sawing
- Blowing/Cleanup
- Aeration/De-thatching, Top Dressing, Spraying

MOWGreen®

Clean & Serene, No Gasoline!™

Avoiding Endrocrine Disruption, Carcinogens & Nerve Damage

- Synthetics are Bad:
  - Fertilizers
  - Pesticides
    - Pesticides, Herbicides, Fungicides, Repellents

MowGreen is All Organic (NOFA Accredited)

- Fertilizer, Weed killer
- PH control
- Mosquito & Tick –Organic Treatments Guides

MOWGreen®

Clean & Serene, No Gasoline!™

No Invasives! Let's Plant Natives

- See Habitat Restoration Services Sheet

MOWGreen®

Clean & Serene, No Gasoline!™

Team

Dan Delventhal

MBA, AOLCP, Founder

Ed Bruderman

Director, Operations

Susan Angst

Master Gardener, Manager, Westchester

Bill McKinney

Dual Licensed Arborist, CT, NRCS Certified Conservation Planner

MOWGreen®

Clean & Serene, No Gasoline!™

Customers, Advisors, & Partners

Dan Mabe, CEO, AGZA (American Green Zone Alliance)

Jamie Banks, PHD, MS, CEO, Quiet Communities, Inc.

Daphne Dixon, E.D. LiveGreen CT,

Mel LeMay, H2H Pollinator Pathways

Analiese Paik, Sustainne

Liz Garrett, Rye Healthy Yards

Discovery Museum

Earthplace Nature Center

Aspetuck Land Trust

Stephanie Weiner, New England Smart Energy

Lori Scala, Apex Solar

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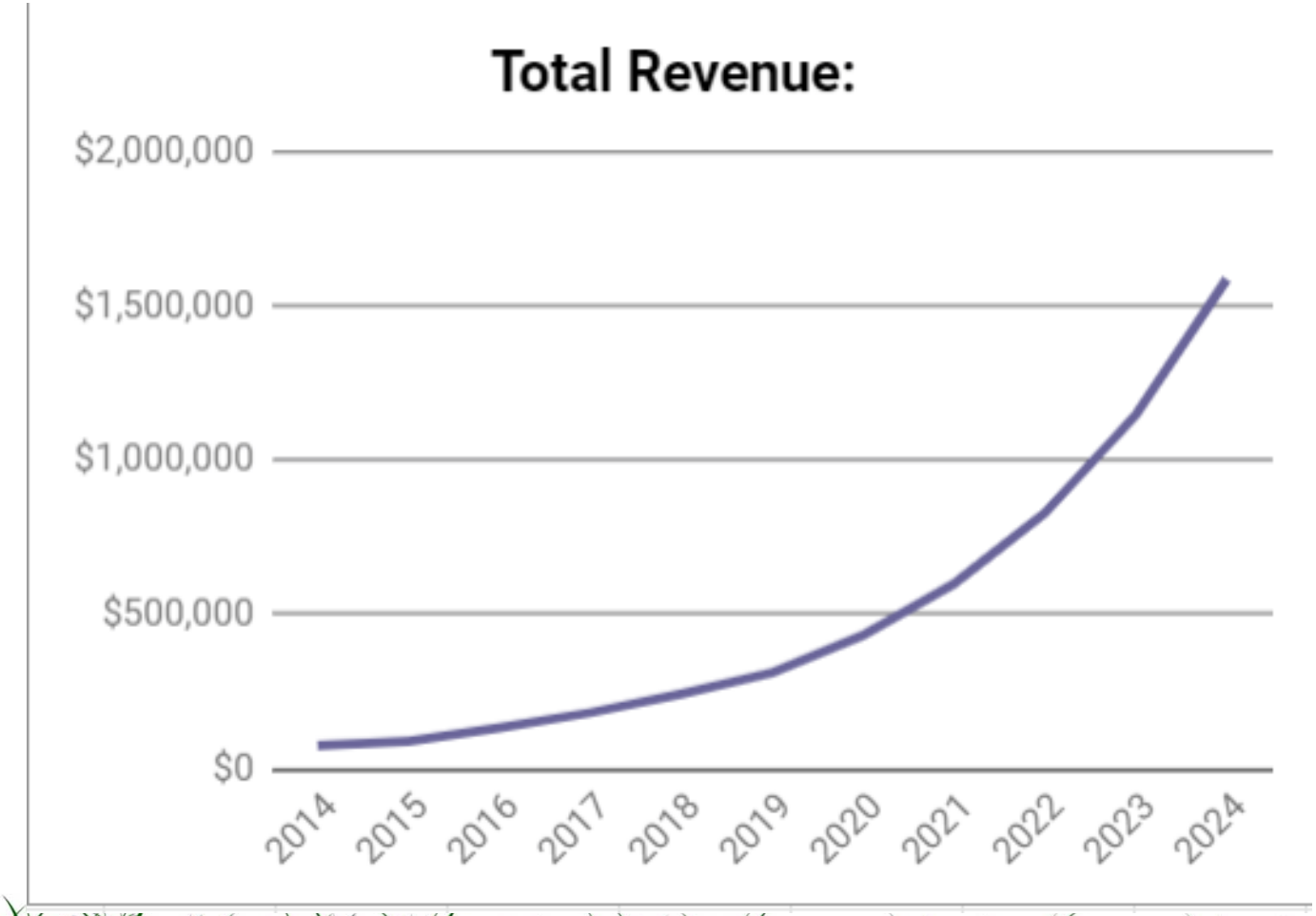
History & Current Plan




Contact
• http://MowGreen.com
• http://mowgreen.com/mowgreen-blog/
• Dan@MowGreen.com, 203-254-9999

Impossible Dream?

To Dream, The Impossible Dream,
To Hope, that our Air can be Clean,
To Mow, with No Carbon Emissions,
To Drink, from a Clear Mountain Stream,

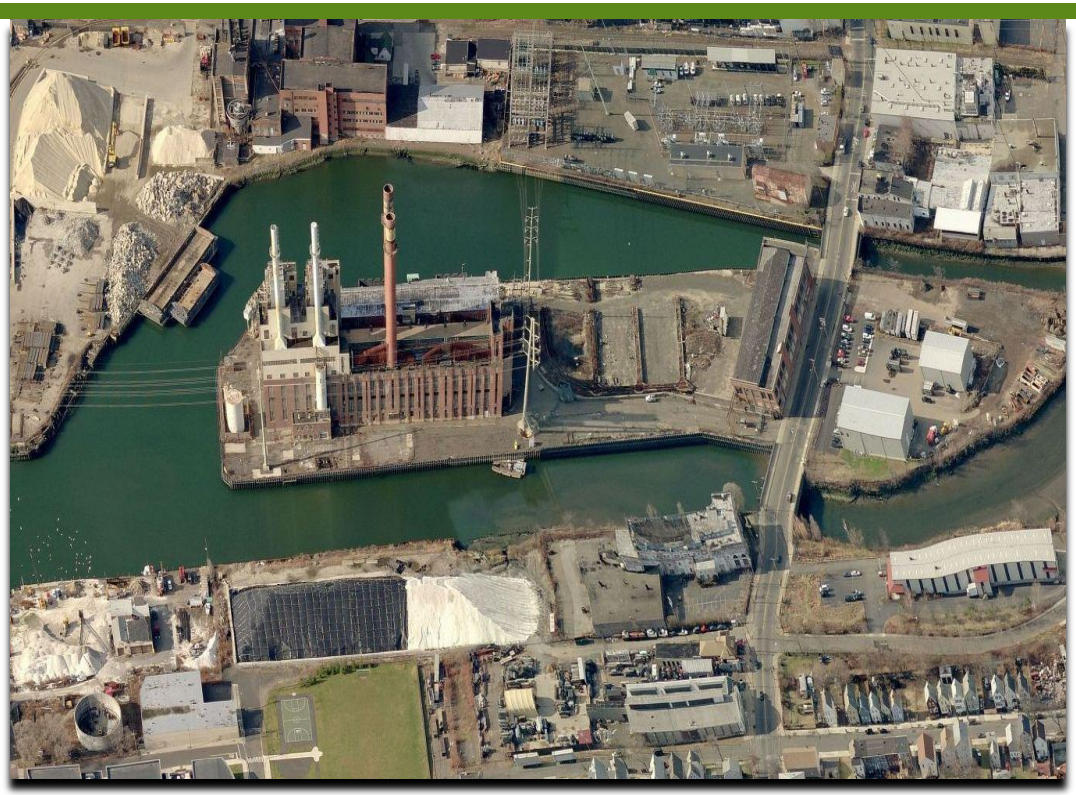
This is my Quest, and I'm Healthy and Strong,
Its from pushing Reel mowers, on Organic Lawns,
So I'm thinking its Cool, to Burn Fat but Not Fuel,
Let's Stand up for what's Right, like we're Teaching in School.....

MowGreen's Reel Mowing, and solar charged electric's,
Clean & Serene,
So, go green with MowGreen,
…we use no stinking gasoline!

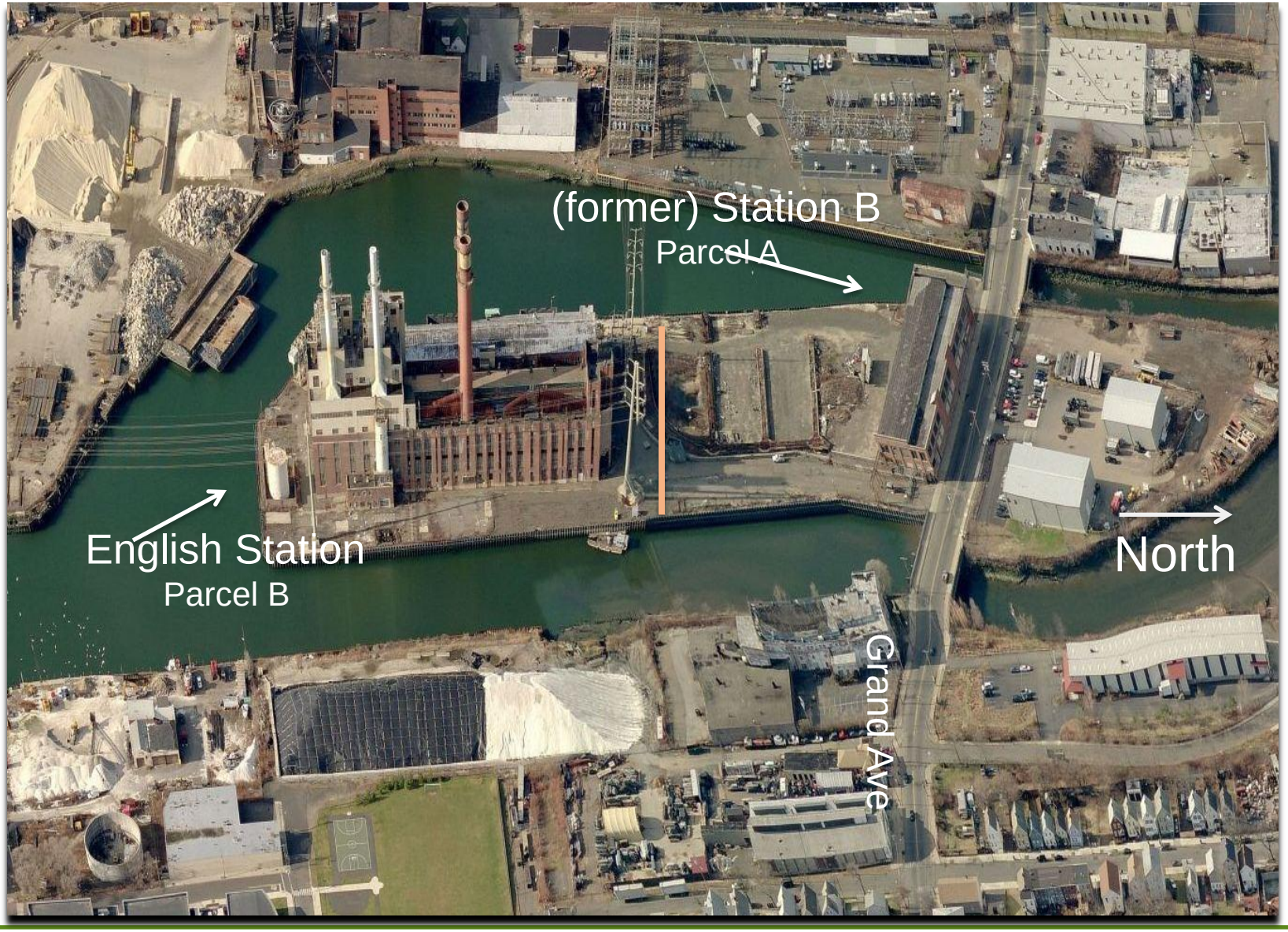
English Station Remediation Project
City of New Haven Environmental Advisory Council Update

AVANGRID

MARCH 2021



ENGLISH STATION



ENGLISH STATION

BACKGROUND

The Site is comprised of two (2) Parcels referred to as:
- Parcel A: The parcel fronting Grand Ave where Station B formerly stood.
- Parcel B: The parcel on which the English Station building is located.

HISTORY

2000 – CT Department of Public Utility Control approves sale of English Station property by UI to Quinnipiac Energy (QE); QE intends to operate a generation facility at the site. QE assumed environmental liability for the site

2012 – CT DEEP issues cease and desist order which finds that ASNAT and Evergreen had allowed work to be conducted on the Site that disturbed the hazardous conditions at the Site which caused PCB and other pollution to spread throughout the Site.

2016 – UI issued Partial Consent Order (PCO) COWSPCB 19-001 to investigate and clean-up site (river not included)

2018 – Haven River Properties purchases Parcel A from Pacific & Atlantic LLC, and Paramount View Millennium LLC purchases Parcel B from Pacific & Atlantic LLC, both through foreclosure

Recent Activities

Phase I Remediation Work (*Station B Demo & Parcel A & B Soil Remediation*)

- Station B Demo completed as of April 2020
- Continue to work on obtaining property owners sign-off for Parcel A PCB Remedial Action Plan (*RAP*) and (*non-PCB*) Soil RAP for Parcel A &B
  - Remediation work for approved to-date RAPs is anticipated to start once property owner provides acknowledgement letter
- Parcel B PCB RAP is under review by CTDEEP & EPA

Phase II Remediation Work (*Main Power Plant*)

- Completed the sampling of area between first floor and mat foundation (*known as interstitial fill layer*)
- Ongoing dialogue with CTDEEP on Supplemental Sampling efforts within areas (Western, Boiler 1-12 & Boiler 13/14)
- Submission of Boiler 13 IRM RAP to address PCB impacted soil in interstitial fill

Onsite Miscellaneous

- Completed the plugging and capping of onsite storm and roof drains as of December 21, 2020
  - Follow-up inspection performed on February 15, 2021 confirms the 17 storm drains plugged and capped in December of 2020 are not leaking .
- Continue to perform the required Significant Environmental Hazard (*SEH*) inspections and submittals pursuant to UI's General Permit authorizations (*Stormwater = GSN003422 and Surface Water = CTRSW0011*)

Upcoming Activities

Phase I Remediation Work (*Station B Demo & Parcel A & B Soil Remediation*)

- Commence remediation of PCB and non-PCB impacted soils (Q2/Q3 2021)

Phase II Remediation Work (*Main Power Plant*)

- Complete supplemental sampling within Western, Boiler 1-12 & Boiler 13/14 (Q1 through Q3 2021)
- Commence Boiler 13 IRM (Q4 2021)
- Evaluate Mat Foundation for impacts caused by historical plant operations

ENGLISH STATION

PUBLIC OUTREACH AVENUES

- UI Website (*www.uinet.com/englishstation*)
- UI Phone Inquiries – 888-848-3697

PUBLIC MEETINGS

- Public Meetings – June 2017, March 2019, & November 2019
- Next Public Meeting – TBD

SITE & COMMUNITY SAFETY

- Site environmental controls
- Traffic control measures.
- Dust emissions monitoring and mitigation.
- Erosion control measures.
- Proper management, handling, storage and disposal of contaminated materials.
- Equipment decontamination.

March 31, 2021

Gary Trombly, Jr.
Supervising Environmental Analyst
Department of Energy and Environmental Protection
Emergency Response and Spill Prevention Division
Bureau of Materials Management and Compliance Assurance
79 Elm Street
Hartford, Connecticut 06106

Re: Partial Consent Order #COWSPCB 15-001
Monthly Progress Report – March 2021

Dear Mr. Trombly:

Pursuant to paragraph B.6. of the Partial Consent Order (PCO) between the Commissioner of Energy and Environmental Protection (the "Commissioner") and The United Illuminating Company ("UI"), UI is submitting the following Progress Report for the month of March 2021.

In accordance with Section B., 13 of the PCO, the undersigned have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, that the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information is punishable as a criminal offense under §53a-157b of the Connecticut General Statutes and any other applicable law.

Should you have any question regarding any of the above, please do not hesitate to contact Shawn Crosbie at (203) 926-4595.

UNITED ILLUMINATING COMPANY

David G. LaBelle

David LaBelle
Vice President Environmental, Health & Safety
AVANGRID

Shawn C Crosbie

Shawn C. Crosbie
Project Manager – Remediation
The United Illuminating Company

FORMER ENGLISH STATION PROJECT MONTHLY PROGRESS REPORT

March 2021

Partial Consent Order: COWSPCB 15-001
UI Project Manager: S. Crosbie
LEP: Marya B Mahoney - TRC

Respondent: United Illuminating Co. (UI)
Reporting Period: March 2021

Site Information: Former English Station
510 Grand Avenue
New Haven, CT

1. **Main Activities During Reporting Period.**
    a. Developing the following Project related documents
        i. English Station Boiler 13 Mat Foundation Scope of Study
        ii. English Station Boiler 13 IRM Plans and Specifications
        iii. English Station First Floor & Interstitial Fill Investigation Report
    b. Submitted the following Project related documents to CTDEEP
        i. January 2021 Groundwater Summary Report
        ii. Response to CTDEEP Comments on Scope of Study (Partial) English Station Interior High-Pressure Boiler Area (Boilers 13&14),
    c. Provided responses to the City of New Haven Environmental Advisory Council questions on prior and upcoming Project related activities
    d. Continue to work with the State of Connecticut along with Property Owner(s) of Parcel A & B (*and as necessary, the developer*) in order to obtain signatures/acceptance on the current approved RAPs pursuant to requirements in the CTDEEP and EPA approval letters
    e. Continue to have dialogue with EPA and CTDEEP on the status of the Parcel B PCB RAP.
    f. Continue to refine overall Project schedule and cost estimate(s) associated Main Power Plant scope.
    g. Continue to work with AVANGRID Procurement to identify a contractor for the soil remediation activities on Phase I.
    h. Perform required stormwater inspections of the site erosion and sediment controls for the Phase I activities approved under CT DEEP permit number GSN003422.
    i. TRC performed bi-weekly inspections of the Significant Environmental Hazard (*SEH*) areas and submitted inspection reports to UI.
    j. Updated of Project Website.

2. **Upcoming Activities**
    a. Submit to CTDEEP
        i. English Station Boiler 13 Mat Foundation Scope of Study
        ii. English Station First Floor & Interstitial Fill Investigation Report
    b. Continue to work with EPA and CT DEEP on the authorization of the Phase I - Parcel B PCB RAP
    c. Commence certain Phase I PCB and other COC soil remediation activities covered in the Phase I RAPs, such as:
        i. Evaluate off-site sources for suitable soil/clean fill to be used as cover material for site-wide restoration.

ii. Sample debris piles.

d. Work with State of Connecticut on obtaining property owner's signature for the Parcel A PCB RAP and Non-PCB Soil RAP (Parcel A&B)
e. Pursuant to the sequence of approvals from CTDEEP, perform supplemental environmental media sampling inside of English Station (*Western Side, Boiler 1-12, & Boiler 13/14)*
f. Work with CT DEEP on any follow-up comments for the Scope of Study for English Station Eastern Interior Boilers 1 through 12 and High Pressure Boilers 13 & 14 (*hazardous building materials*).
g. Work with CT DEEP on Project schedule and scope
h. Continue to refine Project estimates for Main Power Plant

3. Site Security

a. Performed as needed maintenance on system infrastructure
b. Continue to maintain the security measures put in place by, and acquired from, the current property owners.

4. Cost Incurred to Date

Activity	**Total** (As of 31Mar2021)
Licensed Environmental Professional Services	$3,626,209
Site Security	$235,447
Environmental Material Testing	$111,466
Survey	$5,980
External Support	$2,185,759
Soil and Groundwater Investigation	$1,151,138
English Station Interim Abatement	$5,400,000
Site Remediation	$1,902,042
Bulkhead inspection	$50,000
UI Project Oversight	$568,051
Grant Mackay Reimbursement	-$70,211
TOTAL	$15,165,881

Milestone Table

PCO Reference	Milestone	General Timing Requirement	Planned Completion Date	Completion Date
B.4	Effective Date	Defined as the later of the closing of the transaction (as further defined in B.4) or when the PCO becomes a final order of the Commissioner		8/4/2016
B.5	Access Date	Defined as the date that the Commissioner provides written notification the Required Access (as further defined in B.18) has been secured		8/10/2016
B.1.a	Retain LEP	On or before thirty (30) days from the Effective Date of this order	9/3/2016	8/25/2016
B.1.b	Submit Scope of Study	On or before sixty (60) days from the Access Date of this order	10/11/2016	10/11/2016
B.1.c	Submit Supplemental Plan and Schedule (if determined necessary by Commissioner)	On or before thirty (30) days after notice from the Commissioner that such supplemental plan is required		
B.1.d	Implementation of Approved Scope of Study - Property	In accordance with the approved schedules		3/5/2018
B.1.e	Submit Investigation Report/Remedial Alternatives Assessment Report and schedule to perform remedial actions (all in accordance with details under B.1.e)	On or before thirty (30) days after the approved date for completion of the investigation		4/30/2018
B.1.f	Submit for Commissioner review and written approval, contract plans and specifications for the approved remedial actions, a revised list of all permits and approvals required for on-site actions and a revised schedule for applying for and obtaining such permits and approvals, consistent with all applicable state and federals statutes and regulations under the CO	Unless otherwise specified in writing by the Commissioner, on or before thirty (30) days after approval of the report described in Section B.1.e of the CO		3/19/2018
B.1.g	Implementation of the Approved Remedial Actions	In accordance with the approved schedule		6/10/2018
B.1.g	Notify Commissioner of completion of approved remedial actions	Within 15 ays of completion of remedial action		
B.1.j	Submission of a supplemental remedial plan and schedule for the Commissioner's review and written approval	On or before thirty (30) days after notice from the Commissioner that such supplemental plan is required (unless otherwise specified by the Commissioner)	3/18/2019	3/18/2019
B.1.j	Submission of a report describing the results (to date) of the approved monitoring program to determine the effectiveness of the on-site remedial actions	On a schedule established by the Commissioner or if no such schedule is established, on a quarterly basis beginning no later than ninety (90) days after the completion of the approved remedial actions or, as applicable, supplemental remedial actions		
B.1.6	Monthly Progress Reports	On or before the last business day of the month UI submits summary of activities performed during month, summary of activities anticiapted to be performed for upcoming month, security, and financials briken down by a task or discipline		First business day of the month complete for each month from 8/2015 through 10/2019

**Plan dates are based on risks associated with the project. As activities progress, explanations will be provided for a schedule variance.*

NEW HAVEN ENVIRONMENTAL ADVISORY COUNCIL

April 12, 2021

The Honorable Tyisha Walker-Myers, President
New Haven Board of Alders
City Hall
165 Church Street
New Haven, Connecticut 06510

Re: Request for A Public Meeting to Address Better Waste Management

Madam President:

The Environmental Advisory Council hereby requests that the Board of Alders hold a public meeting to discuss waste management in New Haven.

Our motto for 2021 is "Use Less, Reuse More, and Dispose of Everything in the Most Environmentally-Friendly Way Possible."

We are concerned that New Haven residents and visitors are not discarding waste properly. We hope to improve habits, save money for our city, and spare our planet from being overwhelmed by garbage.

Some issues for consideration:

- Pay As You Throw
- Curbside Textile and Shoe Recycling
- Recycling Education
- State Recycling Programs for Bottles, Paint, Mattresses, and Motor Oil
- Minimum Recycled Glass Content in Wine and Liquor Bottles
- Access for all Residents to Waste Transfer Station
- Avoiding Plastic, Especially Single-Use Plastic
- Composting

We look forward to discussing these issues and other waste matters -- which affect the city budget and ultimately tax rates -- at your convenience.

Thank you for helping us care for our city and our planet.

Sincerely,

The New Haven Environmental Advisory Council

Cc: Sherill Baldwin, Pierre Barbour, Rebecca Bombero, Lynne Bonnett, Lou Rosado Burch, State Representative Pat Dillon, Mayor Justin Elicker, Anstress Farwell, Steve Fontana, Dawn Henning, Kathie Hurley, Steve King, Al Lucas, Domingo Medina, Jeff Pescosolido, Mike Piscitelli, Jeff Simon, Aicha Woods, Giovanni Zinn

NEW HAVEN ENVIRONMENTAL ADVISORY COUNCIL

June 2021

Dear Neighbor,

The New Haven Environmental Advisory Council – the city board that deals with environmental issues – has learned that gas leaf blowers are hazardous to health and urges avoiding them. Some reasons:

Noise Pollution – They are so loud they can cause hearing loss fairly quickly for anyone within a 50-foot radius. Their noise has a strong low-frequency component that travels especially far and passes through walls and windows easily. A typical lawn care crew operating multiple machines generates enough noise to exceed EPA community standards for 800 feet in all directions, making it difficult for people within earshot to concentrate.

Air Pollution – They have extremely inefficient two-stroke engines that spew large amounts of fine particulate matter (soot) and other pollutants into the air. The California Air Resources Board studied lawn and garden equipment and found that the best-selling commercial leaf blower emits more smog-forming pollution in one hour than a Toyota Camry driving 1,100 miles.

Health of Residents and Workers – They blast air at over 200 miles an hour, raising clouds of dust, mold, pollen, animal feces, pesticides, viruses, and other tiny particles that linger in the air for hours. These can cause health problems for humans and animals. The pollutants they emit are known to cause cancer, heart problems, respiratory issues, problems in pregnancy, and even premature death for those with certain conditions. The landscape workers suffer most, due to chronic exposure.

Biodiversity – Leaf blowers destroy topsoil and leaf litter that protect and nourish plants and wildlife, including pollinators.

Lawn and Garden Beauty – Leaving short grass clippings on the lawn recycles their nutrients into the soil. In the fall, leaves can be mulched or left on garden beds, where they protect plants through the winter, suppress weeds, and improve soil structure and health.

We encourage everyone to put down destructive machines and pick up a rake and a broom and help save our planet.

Thank you very much for your consideration.

Sincerely,

The New Haven Environmental Advisory Council

NEW HAVEN ENVIRONMENTAL ADVISORY COUNCIL

April 2021

Re: Avoiding Lawn Chemicals

Dear Neighbor,

The City of New Haven enacted a voluntary ban on lawn chemicals in October 2017.

We have documented the use of lawn chemicals on your property.

The New Haven Environmental Advisory Council strongly urges you to stop applying poisons to try to kill unwanted plants in lawns and gardens. These chemicals harm people and animals. They contaminate our air, water, and soil.

- Glyphosate, the main ingredient in Monsanto's Roundup, has been banned in many places and put on the list of likely carcinogens by the World Health Organization. An $11 billion Roundup class action lawsuit is in process.

- Dimension contains 2,4-D, an herbicide in common use today that constituted 50% of the Vietnam War era's defoliant Agent Orange, has been declared a possible carcinogen by the International Agency for Research on Cancer, and Dithiopyr, which is highly toxic to aquatic organisms.

- Dicamba, another widely used herbicide, is an extremely potent toxin and is also considered carcinogenic. It was banned in federal court 6/3/20 and is the subject of a $400 million class action lawsuit settled 6/24/20.

- Barricade is the liquid form of Prodiamine, which is banned for sale in New York.

We encourage you to use safe, organic lawn and garden care products.

Attached please find information about avoiding lawn and garden chemicals prepared by Meg Harvey, an epidemiologist at the Connecticut Department of Public Health.

Thank you for helping us care for our city and our planet.

Sincerely,

The New Haven Environmental Advisory Council

ATTACHMENT

Avoiding Residential Lawn and Garden Chemicals

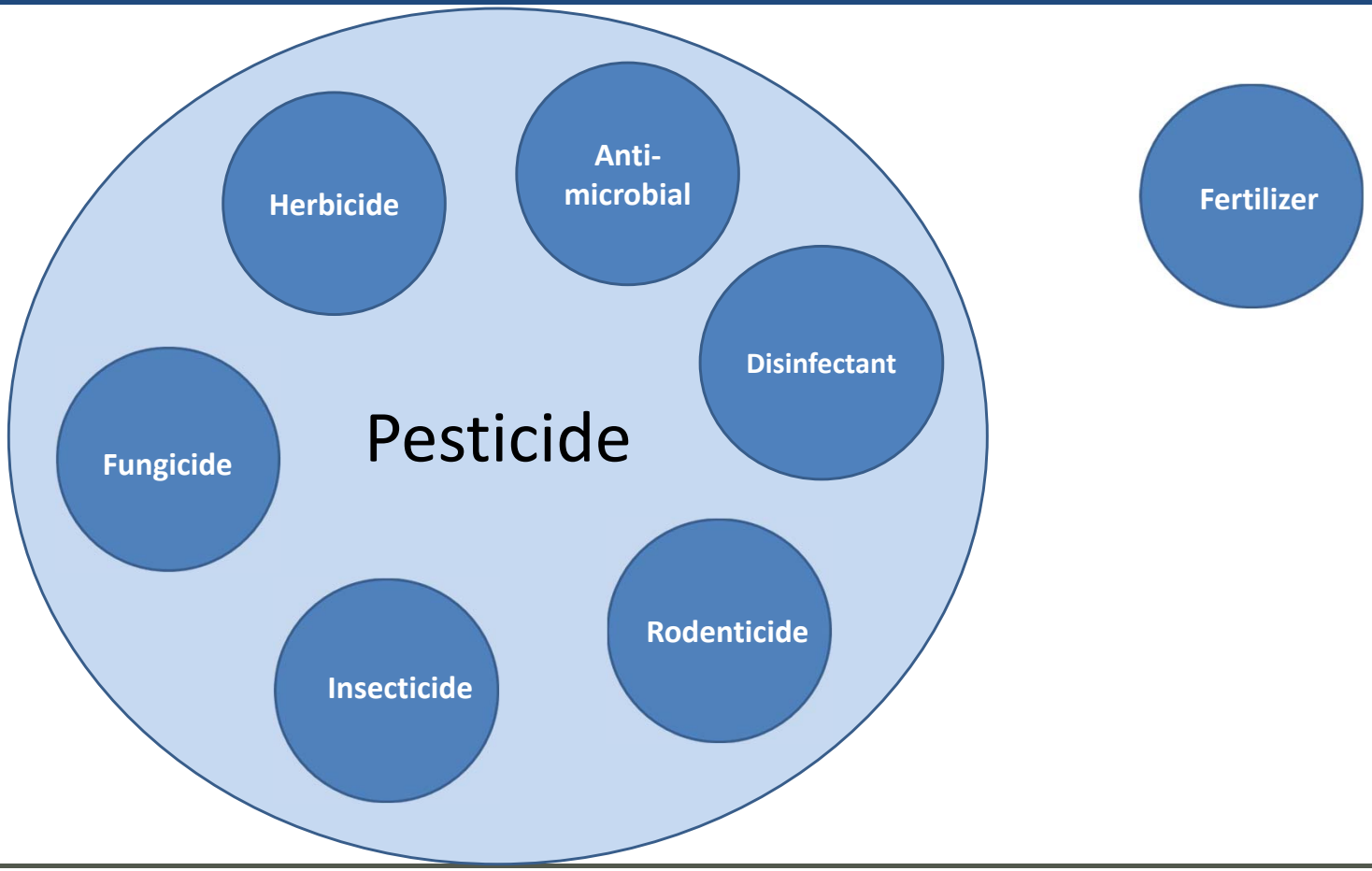
March 3, 2021
New Haven Environmental Advisory Council Meeting

Meg Harvey, Epidemiologist, Environmental and Occupational Health Assessment Program, CT DPH

ACCREDITED HEALTH DEPARTMENT
PHAB
PUBLIC HEALTH ACCREDITATION BOARD

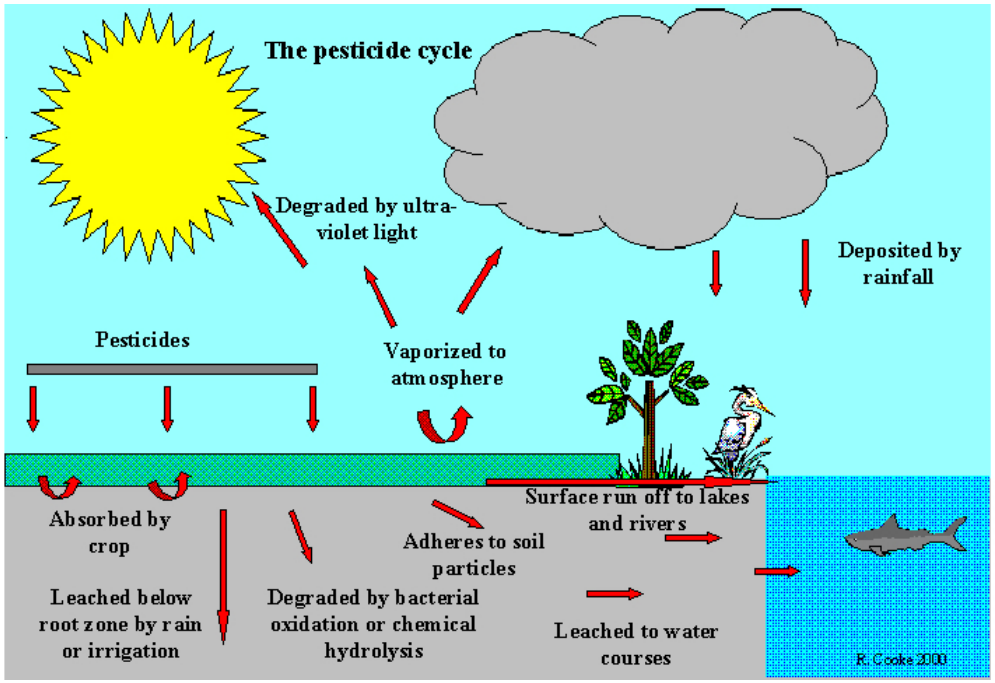
Keeping Connecticut Healthy
DPH
Connecticut Department of Public Health

Lawn and Garden Chemicals - Terminology

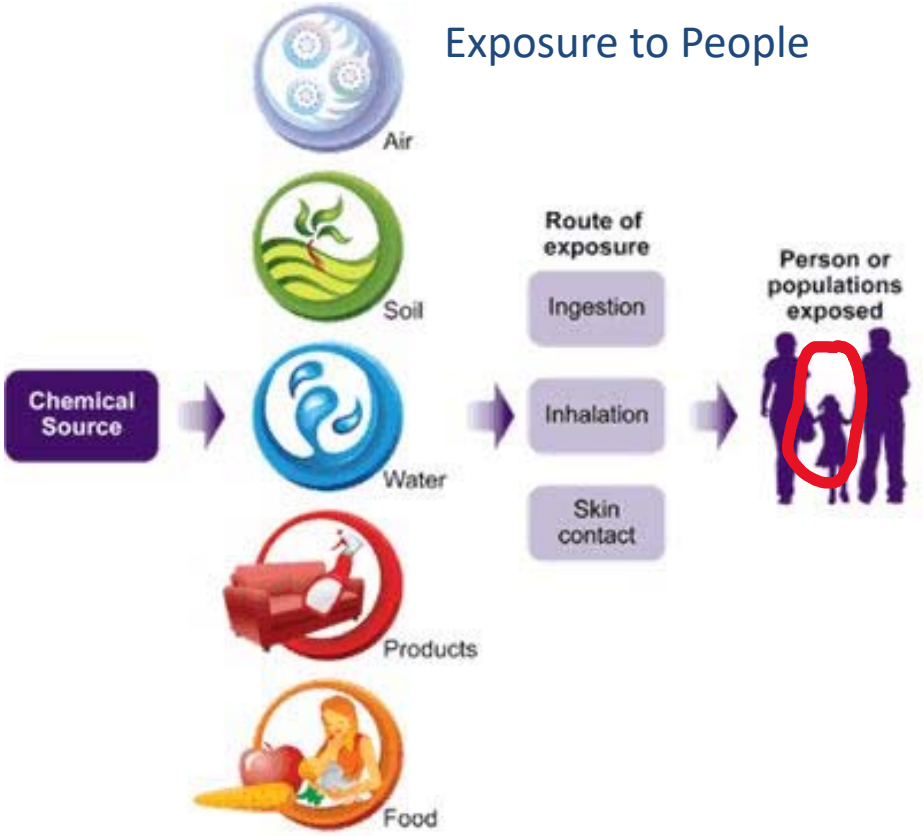


Exposure to Lawn & Garden Chemicals

Exposure to the Environment

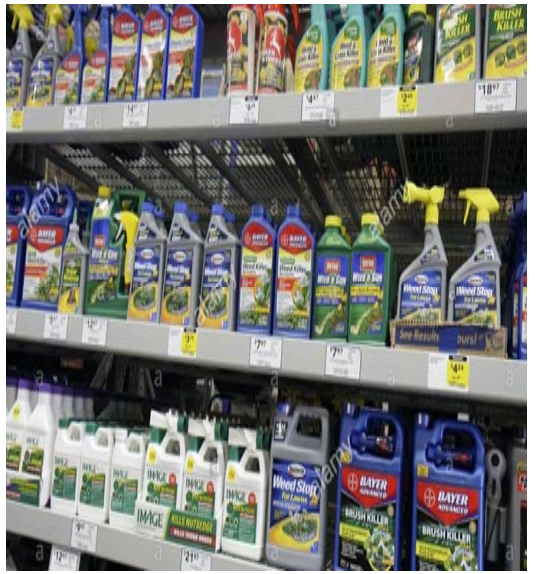


Exposure to People



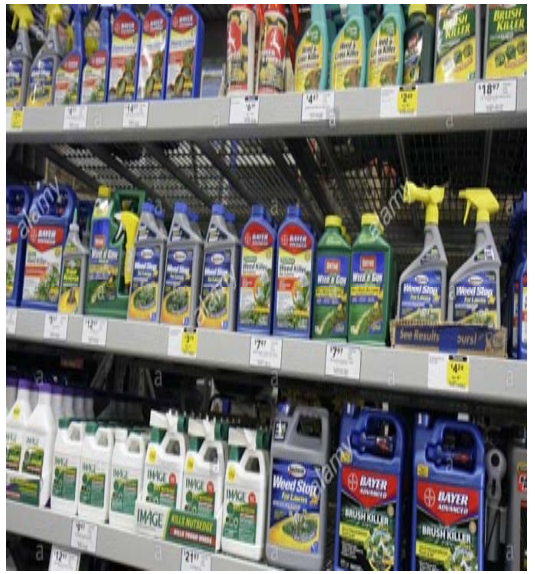
Some Commonly Used Lawn/Garden Herbicides

- Dicamba (Surge, Cool Power, Horse Power, Escalade)
- Glyphosate (Roundup)
- 2,4-D (GroundClear, Escalade)
- Dithiopyr (Dimension)
- Prodiamine (Barricade)
- MCPP, mecoprop (many weed-and-feed lawn fertilizers)
- Atrazine (Image)



Some Commonly Used Lawn/Garden Insecticides

- Malathion (insect control sprays for fruit trees, garden vegetables)
- Permethrin (termite, flea, mosquito, tick control)
- Carbaryl (grub control)
- Bifenthrin (termites, plant insects, ants, ticks)



Why Are We Concerned About Exposure?

- Some Lawn/Garden Chemicals Pose Environmental Concerns
  - Toxicity to beneficial insects (especially bees)
  - Toxicity to wildlife
  - Leaching into soil – toxicity to beneficial soil organisms
  - Runoff into waterways – toxicity to aquatic organisms and aquatic plants
  - Leaching into groundwater used for drinking water
  - Runoff into surface water used for drinking water
  - Fertilizers - Promote algal blooms in waterways
  - Over time, can actually damage lawn

Why Are We Concerned About Exposure?

- Some Lawn/Garden Chemicals May Pose Risks to Pets
  - Pets may have greater exposure
  - Pet exposure risks not well studied for many chemicals

Why Are We Concerned About Exposure?

- Some Lawn/Garden Chemicals May Pose Risks to People
  - Toxicity of many chemicals not as well studied as we'd like
  - Biomonitoring data tells us we have measurable levels of many pesticides in our bodies
  - Possible concern for cancer risks for some chemicals
  - Very high levels of exposure to some chemicals could harm immune system, nervous system, liver, reproductive system
  - Fertilizers – nitrogen can contaminate groundwater (nitrate/nitrite) used for drinking water.

Alternatives to Lawn & Garden Chemicals

- Test soil for nutrient deficiencies.
- Plant right for your site, go “native”
- Mow smart (high, sharp blade, leave clippings)
- Use organic fertilizer only if needed, only in fall
- Control grubs and other pests naturally (beneficial nematodes, milky spore, compost tea)
- Use an organic lawn care professional (no synthetic pesticides or fertilizers).

Benefits of Avoiding Lawn & Garden Chemicals

- Reduced Exposure and Risks to Environment, Pets, People
- Promote Healthier Lawn and Garden

Bottom Line

- Adjust your expectations of what a lawn is supposed to look like
- You don’t need lawn and garden pesticides or synthetic fertilizers to have a nice looking lawn
- Your soil and plants will be healthier without chemicals
- You, your family and your environment will be healthier too

Resources

- Soil Nutrient Testing:
  - UConn: https://news.extension.uconn.edu/tag/soil-test/
  - CT Ag. Station: https://portal.ct.gov/CAES/Soil-Office/Soil-Office/Soil-Testing-Offices-Instructions
- CT Dept. of Energy & Env. Protection - Organic Lawn Care Website
  - https://portal.ct.gov/DEEP/P2/Individual/Organic-Lawn-Care-For-Consumers#Better
- NE Organic Farming Assoc. - Find an Accredited Land Care Professional
  - https://nofa.organiclandcare.net/
- EPA Lawn and Garden Website
  - https://www.epa.gov/safepestcontrol/lawn-and-garden
- National Pesticide Info Center-Health Info: http://npic.orst.edu/health/humhealth.html
- ATSDR Tox FAQs: https://wwwn.cdc.gov/TSP/ToxFAQs/ToxFAQsLanding.aspx

NEW HAVEN ENVIRONMENTAL ADVISORY COUNCIL

May 5, 2021

To: The New Haven Delegation to the Connecticut General Assembly

Re: S.B. No. 1037, AN ACT CONCERNING SOLID WASTE MANAGEMENT

The New Haven Environmental Advisory Council strongly supports S.B. 1037 and urges you to support it.

Connecticut's "Bottle Bill" needs updating.

Increasing the deposit from 5 to 10 cents, expanding types of containers that can be redeemed, increasing the handling fee per container, and mandating reverse vending machines in more places will provide incentive for all of us to do a better job recycling and reusing beverage containers.

Please contact Laura Cahn with any concerns at 203/397-2338 or laurasline@sbcglobal.net.

Thank you.

Sincerely,

The New Haven Environmental Advisory Council

NEW HAVEN ENVIRONMENTAL ADVISORY COUNCIL

March 4, 2021

Re: S.B. No. 882, AN ACT CONCERNING CLIMATE CHANGE MITIGATION AND HOME ENERGY AFFORDABILITY

To: Co-chairs Needleman and Arconti, Vice-chairs Winfield and Allie-Brennan, Ranking Members Formica and Ferraro, and members of the Energy and Technology Committee:

The New Haven Environmental Advisory Council supports S.B. 882, pending the following amendments to Section 1:

1. Require all supply AND generation to be 100% zero-carbon by 2040,
2. Develop a more aggressive final target for greenhouse gas emissions reduction of net zero by 2050,
3. Establish a moratorium on new fossil fuel plants, and
4. Clarify DEEP Commissioner oversight role, including checks and balances.

We support greenhouse gas reduction, demand response and energy efficiency, and home energy affordability labeling and urge you to join us.

Thank you for your consideration.

Please contact Kathy Fay with any concerns at 203/815-5615 or kathyfay@gmail.com.

Thank you.

Sincerely,

The New Haven Environmental Advisory Council

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NEW HAVEN ENVIRONMENTAL ADVISORY COUNCIL

March 4, 2021

Re: S.B. No. 356, AN ACT ESTABLISHING AN ENERGY EFFICIENCY RETROFIT GRANT PROGRAM FOR AFFORDABLE HOUSING

To: Co-chairs Lopes and McGee, Vice-chairs Anwar and Smith, Ranking Members Cicarella and Polletta, and members of the Housing Committee:

The New Haven Environmental Advisory Council supports S.B. 356 and urges you to support it too.

We must eliminate the barriers to upgrading affordable housing units to make them energy efficient and thus energy-affordable.

Now is the time for energy equity in Connecticut housing.

Please contact Kathy Fay with any concerns at 203/815-5615 or kathyfay@gmail.com.

Thank you.

Sincerely,

The New Haven Environmental Advisory Council

.

NEW HAVEN ENVIRONMENTAL ADVISORY COUNCIL

March 4, 2021

Re: S.B. No. 884, AN ACT REDUCING TRANSPORTATION-RELATED CARBON EMISSIONS

To: Co-chairs Cohen and Gresko, Vice-chairs Slap and Palm, Ranking Members Miner and Harding, and members of the Environment Committee:

The New Haven Environmental Advisory Council supports S.B. 884, the Transportation and Climate Initiative (TCI), and urges you to support it for the following reasons:

- 35% of TCI revenues will be invested in communities overburdened by air pollution and underserved by public transportation.
- TCI is expected to reduce Connecticut carbon emissions by 26% within ten years.
- The bill mandates creation of an Equity Advisory Board, making the allocation of the proceeds a fair process.
- By investing in bicycles and pedestrian infrastructures, TCI will support a healthy lifestyle.

Please contact Laura Cahn with any concerns at 203/397-2338 or laurasline@sbcglobal.net.

Thank you.

Sincerely,

The New Haven Environmental Advisory Council

Nuclear Power: Assessing the Cleanliness of Power Generation Options

Steve K. Lamoreaux

Professor of Physics, Yale

The Piper Must Be Paid

- Thomas L. Friedman, in a NYT editorial a few (10+) years ago wrote an editorial that we could reduce our carbon footprint if everyone started driving electric cars
- Whether this is true depends on many factors

1. How is the electricity used to charge the car battery generated?
2. What are the resource and energy needs to build electric cars along with the infrastructure to keep the fleet running?
3. What are the long-term environmental consequences of the full life cycle of electric cars and the associated power distribution infrastructure?

A diddy I learned as a child

This is the cinder
Which came from the coal
That burned in the fire
Which boiled the water
That made the steam
Which drove the engine
That turned the dynamo
Which produced the current
That made the light
Which shone in the
House that Jack built.

Energy Return on Investment

- “EROI”
- Need to consider all aspects of the infrastructure, from construction of the power generating devices (solar panels, wind turbines) to the cost of distribution (copper wire)
- Concrete and cement manufacturing account for 10% of carbon emissions
- Maintenance costs and reliability are also factor

Fukushima

- A disaster resulting from criminal incompetence and neglect
- The meltdown could have been easily avoided; TEPCO insisted that it needed to construct a 100 mile electric transmission line to supply power to run the cooling system. A navy ship with generator could have been brought in on hours' notice and easily supplied sufficient power to run the cooling system
- The disaster pivoted to a land-grab
- I would have refused to leave my home, the radiation levels were insignificant in my opinion, but I am sure infrastructure (water, electricity, and certainly hospitals) was completely shut down

Chernobyl

- The worst nuclear disaster, again due to criminal levels of incompetence
- The basis design was unstable against the loss of water
- Graphite reactors banned worldwide as a result

How bad was this accident? (from https://www.bbc.com/news/science-environment-54211450)

Some studies claim ”a million people have already died because of exposure to the toxic plume that spread across Europe in the wake of the accident back in April 1986.

The real numbers

Any idea how many deaths can actually be directly linked to Chernobyl? Brace yourself.

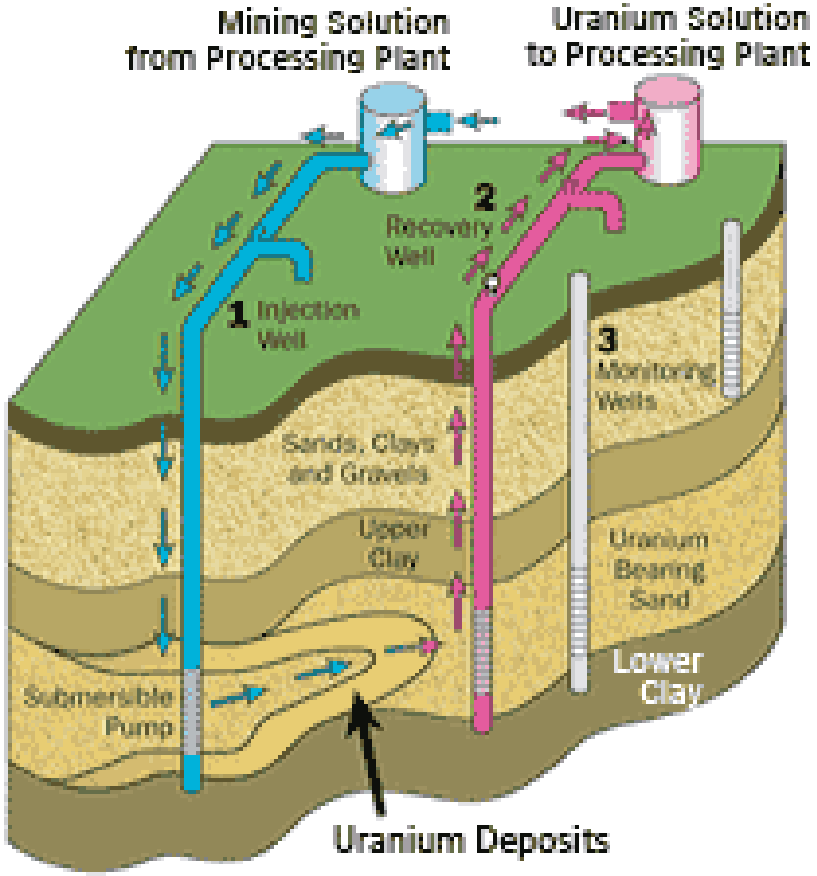
- According to the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR), **28 plant staff and emergency workers died** as a result of radiation exposure.
- There were also over 6,000 cases of thyroid cancer among people who were children or adolescents at the time of the accident. Fortunately, because thyroid cancer has a very good survival rate, as of 2005 only 15 cases had proved fatal.

- And these deaths were avoidable, according to UNSCEAR. It says these cancers were caused "almost entirely" by the Soviet authorities' failure to prevent people drinking milk contaminated with radioactive iodine.
- But, even if we include them, according to the UN in 2005, just 43 deaths could be directly attributed to the worst nuclear disaster the world has ever seen.
- The true figure for deaths that can be directly attributed to Chernobyl will ultimately be a bit higher than that, say radiation experts, but not much.”

Prehistory of Nuclear Power

- Two billion years ago a natural uranium ore deposit in Gabon became critical and operated as a natural nuclear reactor
- Analysis of the remaining isotopes allows the characteristics of the reactor to be determined
- Operated as a long-period pulsed reactor
- The lack of migration of fission products are an existence proof that waste can be stored safely for long duration
- Suggests a new way to mine uranium- hydraulic extraction– this was discovered in petroleum fracking, in PA

Actinide oxides dissolve in oxygenated water: ISL– in situ leaching



In situ recovery process.
Image: Nuclear Regulatory Commission

Uranium Energy CEO Amir Adnani, with $50,000 of yellowcake.

A barrel of uranium can produce 100,000,000 times as much energy as a barrel of oil.

From Forbes, 2/10/2013

Compare to Open Pit Mining

Uranium

Copper

Conclusions

- Assessing the safety and environmental impact of any electrical generation scheme requires a cradle-to-end use analysis that includes infrastructure needs
- Diffuse electrical sources (wind power, solar power) require much greater resources (copper wire, concrete) for the required infrastructure; issues of icing in winter storms, repair costs and resource needs, and reliability need to be assessed also
- All energy sources except direct solar power (wind is solar power) are finite on a human scale (nuclear power, Th-232 breeding to U-233 could last 10,000 to 100,000 years based on current world-wide energy use)
- The regulation and safety of nuclear reactors has a solution. The issue of waste management has been solved in the scientific sense but not bureaucratically
- The insurance cost for nuclear power will remain an issue in the US

PULLMAN &COMLEY

MEMORANDUM

TO:	City of New Haven Environmental Advisory Council
FROM:	Gary B. O'Connor
DATE:	April 5, 2021
FILE NO:	81423.1
SUBJECT:	Status of Remediation Plan at English Station

This office represents GMP Property Solutions, LLC ("GMP") with respect to environmental issues related to its redevelopment of the English Station site (the "Site"). GMP is extremely committed to the development of a mixed use project at the Site. It is currently working with the current owners, United Illuminating ("UI"), the United State Environmental Protection Agency ("EPA") and the Connecticut Department of Energy and Environmental Protection ("DEEP") to assess the impact of the proposed remediation on any future development of the Site. GMP's goal is to ensure that the proposed remediation will allow for the productive reuse of English Station – one which will be an asset to the entire community. The review of the investigation and remediation plans completed to date has been an enormous undertaking, because: (a) the environmental conditions at the Site are enormously complex; (b) the Site has not been fully investigated and (c) the proposed Remedial Action Plans ("RAPs") only address a portion of the environmental conditions that need to be remediated. We understand that your organization is seeking an update regarding the remediation of the Site. In order to provide the Council with a clear understanding, we believe that it is necessary to provide some background information regarding the Site, its recent ownership history, and key regulatory matters.

I. General Description of the Site

English Station is the location of a former UI power generating plant in New Haven, Connecticut. It sits on an 8.9-acre site, located on Ball Island in the Mill River, that fronts on 510 Grand Avenue. The Site is entirely enclosed by a steel bulkhead, except for the portion along Grand Avenue.

The portion of the Site identified as "Parcel A" (the northern portion) is approximately 3.58 acres in size. Parcel A was occupied by a portion of a former electrical generating plant commonly referred to as "Station B", now demolished. Station B was a two-story structure that occupied a footprint of approximately 25,000 square feet. Station B was immediately adjacent to Grand Avenue, which runs along the Site's northern property boundary.

The remainder of the property, identified as "Parcel B", encompasses the southern portion of the Site and is approximately 5.32 acres in size. Parcel B is occupied by the English Station power generating plant, which has an approximate footprint of 100,000 square feet and it stands 10 stories

tall. Parcel B was created in the 1920's by expanding the bulkhead structure at the southern end of the island and filling the interior to construct English Station.

II. Ownership History

UI sold the Site on August 16, 2000 to Quinnipiac Energy, LLC, which subdivided it and sold Parcel A to Evergreen Power, LLC ("Evergreen") and Parcel B to ASNAT Realty LLC ("ASNAT"), both in December 2006. On May 23, 2016, GMP entered into Lease Agreements with Evergreen and Asnat for the lease of Parcel A and Parcel B respectively. In December 2018, title to Parcel A was vested in Haven River Properties, LLC ("Haven") and title to Parcel B was vested in Paramount View Millennium LLC ("PVM").

III. Regulatory Summary

As a result of UI's past activities at the Site, UI entered into a partial Consent Order ("PCO") with DEEP, in July of 2016, under which UI agreed to investigate and remediate the Site in accordance with the terms of the proposed PCO. The PCO addresses only investigation and remediation within the site boundary which is defined as all areas within the bulkhead and does not address the Mill River. UI obtained access to the Site on August 10, 2016 and has been progressing through the various phases of documentation, investigation and remediation since that time.

The previous owners of the Site, ASNAT and Evergreen, also entered into a Consent Order in July of 2016 with DEEP (the "Owner CO"). The Owner CO specifically prohibits current and future owners of the Site from: (a) disturbing the soil; (b) creating a release of any contaminant; or (c) interfering with UI's investigation and remediation activities at the Site.

IV. Status of Remedial Activities

UI has conducted a number investigations and have submitted several RAPs that separately address certain types of contaminants (PCB v. Non-PCB), limited categories of environmental media (soil, but not groundwater) and only partial areas of the Site. To date, as a result of UI's investigation it has submitted a Parcel A PCB Soil RAP, a Parcel B Partial PCB RAP, a Partial Non-PCB Soil RAP for Parcels A and B, and a Boiler 13 IRM RAP (to address PCB impacted soil in interstitial fill).

The Parcel A PCB Soil RAP has been separately approved by DEEP and EPA (respectively, the "DEEP Approval" and the "EPA Approval"). The DEEP Approval requires the Parcel A owner to prepare a document which acknowledges that the owner has reviewed the Parcel A PCB Soil RAP and has no objection to the implementation of such RAP. The EPA Approval requires a written certification by the Parcel A owner of acceptance of the conditions contained in the EPA Approval. The Deep Approval and the EPA Approval are highly technical and have required GMP and Haven to seek a number of clarifications from DEEP and EPA regarding certain provisions in the respective approvals. These clarifications were essential in order for Haven to be in a position to prepare and sign the owner's acknowledgment and the owner's certification. For instance, in EPA's Parcel A PCB Soil RAP approval, there is a reference to a deed restriction specified in 40 CFR § 761.61(a)(8), which raised concern about GMP's ability to develop the Site, in the future, beyond a "low occupancy" use, which would have limited occupancy of any building to 16.8 hours per week. This restriction would have essentially eliminated any residential, commercial, or manufacturing use of the Site. In 2021, EPA provided the critical clarification, and as a result, an

owner's certification has been prepared for Haven's signature. A number of drafts of the owner's acknowledgment have been submitted to DEEP, and DEEP has requested additional revisions to each draft. GMP and Haven are continuing to work with DEEP to finalize the owner's acknowledgment. DEEP has recently asked GMP and Haven to include DEEP's approval of the Partial Non-PCB Soil RAP in the owner's acknowledgment.

The Partial Non-PCB Soil RAP Approval was granted by DEEP with conditions. The RAP is considered partial, because it does not address PCBs, groundwater, and contaminated soils in certain areas on the Site, including the soils under the power plant. Despite the added complexity of incorporating the DEEP Conditional Approval of the Partial Non-PCB Soil RAP into the owner's acknowledgment of the DEEP Approval of the Parcel A PCB Soil RAP, GMP and Haven are hopeful that they will shortly have a draft of the owner's acknowledgment, which is acceptable to DEEP, and ready for Haven's signature.

Given the complexity of the environmental conditions at the Site, the lack of complete environmental investigations, the submission of partial RAPs, the highly technical requirements of the RAP approvals, and the significant remaining data gaps relating to the environmental conditions at the Site, GMP and Haven have proceeded carefully in their review of the voluminous documents, assessments, administrative orders and reports related to UI's RAPs. Likewise, GMP and Haven have been deliberate in their negotiations with EPA and DEEP in order to ensure that any owner's acknowledgment or certification will not foreclose the development of a viable mixed use project. They sincerely believe that remediation without a pathway to the productive reuse of the Site is a tremendous disservice to the community.

GMP and Haven will be happy to provide the Council with periodic updates, and collaborate with it on the successful remediation and redevelopment of this historic brownfield site.