Long Island Rail Road Expansion Project

Floral Park to Hicksville

Final Environmental Impact Statement

Appendix 8-D

Parking Garage Phase II Soil Sampling Investigations

April 2017

SGS ACCUTEST IS PART OF SGS, THE WORLD'S LEADING INSPECTION, VERIFICATION, TESTING AND CERTIFICATION COMPANY.

e-Hardcopy 2.0
Automated Report

Technical Report for

Matrix New World Engineering, Inc.

LIRR Expansion, Long Island, NY

16-144, 2nd Street Parking Lot, 161-163 2nd Street, Mineola

SGS Accutest Job Number: JC38633

Sampling Date: 03/09/17

Report to:

Matrix New World Engineering, Inc.
26 Columbia Turnpike
Florham Park, NJ 07932
bcrespi@matrixneworld.com; mclelland@matrixneworld.com;
mhorowitz@matrixneworld.com
ATTN: Brian Crespi

Total number of pages in report: 95

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Nancy Cole
Laboratory Director

Client Service contact: Tammy McCloskey 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (L-A-B L2248)

This report shall not be reproduced, except in its entirety, without the written approval of SGS Accutest.
Test results relate only to samples analyzed.

SGS Accutest is the sole authority for authorizing edits or modifications to this document.
Unauthorized modification of this report is strictly prohibited.

March 24, 2017

Mr. Brian Crespi
Matrix New World Engineering, Inc.
26 Columbia Turnpike
Florham Park, NJ 07932

Re: SGS Accutest –Dayton, Jobs # JC38631, JC38632, and JC38633 – Reissues

Dear Mr. Crespi,

The final report for SGS Accutest jobs number JC38631, JC38632, and JC38633 have edited to reflect corrections to the data package. These edits have been incorporated into the revised report attached.

Specifically, the Herbicide list has been reivsed per Ms. Lindsey Melicharek's request on 3/22/2017 . This information has been retrieved and is included in this revised report.

Please contact client services at (732) 355-4562 if I can be of further assistance in this matter.

Sincerely,

Report Department

SGS Accutest

SGS ACCUTEST IS PART OF SGS, THE WORLD'S LEADING INSPECTION, VERIFICATION, TESTING AND CERTIFICATION COMPANY.

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SGS Accutest

Sample Summary

Matrix New World Engineering, Inc.

Job No: JC38633

LIRR Expansion, Long Island, NY
Project No: 16-144, 2nd Street Parking Lot, 161-163 2nd Street, Mineola

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC38633-1	03/09/17	07:40	LM	03/09/17	SO	Soil	2ND-SB-01
JC38633-1A	03/09/17	07:40	LM	03/09/17	SO	Soil	2ND-SB-01
JC38633-2	03/09/17	09:00	LM	03/09/17	SO	Soil	2ND-SB-02
JC38633-2A	03/09/17	09:00	LM	03/09/17	SO	Soil	2ND-SB-02
JC38633-3	03/09/17	09:55	LM	03/09/17	SO	Soil	2ND-SB-03
JC38633-3A	03/09/17	09:55	LM	03/09/17	SO	Soil	2ND-SB-03
JC38633-4	03/09/17	10:55	LM	03/09/17	SO	Soil	2ND-SB-04
JC38633-4A	03/09/17	10:55	LM	03/09/17	SO	Soil	2ND-SB-04

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

2

Summary of Hits

Job Number: JC38633
Account: Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Collected: 03/09/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC38633-1	**2ND-SB-01**					
Acetone		0.0064 J	0.0091	0.0046	mg/kg	SW846 8260C
Total TIC, Semi-Volatile		3.22 J			mg/kg	
Aluminum		6540	59		mg/kg	SW846 6010C
Arsenic		3.0	2.3		mg/kg	SW846 6010C
Barium		48.6	23		mg/kg	SW846 6010C
Beryllium		0.28	0.23		mg/kg	SW846 6010C
Calcium		6540	590		mg/kg	SW846 6010C
Chromium		16.0	1.2		mg/kg	SW846 6010C
Copper		7.7	2.9		mg/kg	SW846 6010C
Iron		9190	59		mg/kg	SW846 6010C
Lead		6.9	2.3		mg/kg	SW846 6010C
Magnesium		3910	590		mg/kg	SW846 6010C
Manganese		569	1.8		mg/kg	SW846 6010C
Mercury		0.11	0.036		mg/kg	SW846 7471B
Nickel		6.4	4.7		mg/kg	SW846 6010C
Vanadium		14.3	5.9		mg/kg	SW846 6010C
Zinc		21.5	5.9		mg/kg	SW846 6010C
Cyanide		0.28	0.27		mg/kg	SW846 9012B/LACHAT
JC38633-1A	**2ND-SB-01**					
Corrosivity as pH		7.21 NC			su	SW846 9045D
Ignitability (Flashpoint)		> 200			Deg. F	SW846 1010A/ASTM D93
JC38633-2	**2ND-SB-02**					
Acetone		0.0812	0.0095	0.0047	mg/kg	SW846 8260C
2-Butanone (MEK)		0.0118	0.0095	0.0017	mg/kg	SW846 8260C
Carbon disulfide		0.00027 J	0.0019	0.00016	mg/kg	SW846 8260C
Acenaphthene		0.0615	0.035	0.012	mg/kg	SW846 8270D
Anthracene		0.102	0.035	0.021	mg/kg	SW846 8270D
Benzo(a)anthracene		0.220	0.035	0.0098	mg/kg	SW846 8270D
Benzo(a)pyrene		0.220	0.035	0.016	mg/kg	SW846 8270D
Benzo(b)fluoranthene		0.266	0.035	0.015	mg/kg	SW846 8270D
Benzo(g,h,i)perylene		0.174	0.035	0.017	mg/kg	SW846 8270D
Benzo(k)fluoranthene		0.0989	0.035	0.016	mg/kg	SW846 8270D
Carbazole		0.0416 J	0.069	0.0050	mg/kg	SW846 8270D
Chrysene		0.243	0.035	0.011	mg/kg	SW846 8270D
Dibenzo(a,h)anthracene		0.0537	0.035	0.015	mg/kg	SW846 8270D
Dibenzofuran		0.0259 J	0.069	0.014	mg/kg	SW846 8270D
Fluoranthene		0.472	0.035	0.015	mg/kg	SW846 8270D
Fluorene		0.0494	0.035	0.016	mg/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		0.190	0.035	0.016	mg/kg	SW846 8270D

Summary of Hits

Job Number: JC38633
Account: Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Collected: 03/09/17

Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
2-Methylnaphthalene	0.0207 J	0.069	0.0078	mg/kg	SW846 8270D
Naphthalene	0.0304 J	0.035	0.0098	mg/kg	SW846 8270D
Phenanthrene	0.375	0.035	0.012	mg/kg	SW846 8270D
Pyrene	0.389	0.035	0.011	mg/kg	SW846 8270D
alpha-Chlordane [a]	0.0119	0.00069	0.00033	mg/kg	SW846 8081B
gamma-Chlordane	0.0082	0.00069	0.00030	mg/kg	SW846 8081B
4,4'-DDD [a]	0.00062 J	0.00069	0.00044	mg/kg	SW846 8081B
4,4'-DDE	0.0012	0.00069	0.00036	mg/kg	SW846 8081B
4,4'-DDT [b]	0.00098	0.00069	0.00041	mg/kg	SW846 8081B
Heptachlor epoxide [a]	0.0011	0.00069	0.00037	mg/kg	SW846 8081B
Aluminum	4240	50		mg/kg	SW846 6010C
Arsenic	2.2	2.0		mg/kg	SW846 6010C
Barium	27.5	20		mg/kg	SW846 6010C
Beryllium	0.23	0.20		mg/kg	SW846 6010C
Calcium	5180	500		mg/kg	SW846 6010C
Chromium	15.4	0.99		mg/kg	SW846 6010C
Cobalt	5.0	5.0		mg/kg	SW846 6010C
Copper	11.6	2.5		mg/kg	SW846 6010C
Iron	8640	50		mg/kg	SW846 6010C
Lead	25.1	2.0		mg/kg	SW846 6010C
Magnesium	2060	500		mg/kg	SW846 6010C
Manganese	175	1.5		mg/kg	SW846 6010C
Mercury	0.14	0.033		mg/kg	SW846 7471B
Nickel	16.0	4.0		mg/kg	SW846 6010C
Vanadium	11.4	5.0		mg/kg	SW846 6010C
Zinc	33.4	5.0		mg/kg	SW846 6010C
Cyanide	0.72	0.25		mg/kg	SW846 9012B/LACHAT
JC38633-2A 2ND-SB-02					
Corrosivity as pH	9.53 NC			su	SW846 9045D
Ignitability (Flashpoint)	> 200			Deg. F	SW846 1010A/ASTM D93
JC38633-3 2ND-SB-03					
Acetone	0.0296	0.010	0.0052	mg/kg	SW846 8260C
m,p-Xylene	0.00039 J	0.0010	0.00023	mg/kg	SW846 8260C
o-Xylene	0.00036 J	0.0010	0.00021	mg/kg	SW846 8260C
Xylene (total)	0.00075 J	0.0010	0.00021	mg/kg	SW846 8260C
Acenaphthene	0.0144 J	0.034	0.012	mg/kg	SW846 8270D
Anthracene	0.0368	0.034	0.021	mg/kg	SW846 8270D
Benzo(a)anthracene	0.111	0.034	0.0097	mg/kg	SW846 8270D
Benzo(a)pyrene	0.113	0.034	0.016	mg/kg	SW846 8270D
Benzo(b)fluoranthene	0.144	0.034	0.015	mg/kg	SW846 8270D
Benzo(g,h,i)perylene	0.0915	0.034	0.017	mg/kg	SW846 8270D

Summary of Hits

Job Number: JC38633
Account: Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Collected: 03/09/17

Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
Benzo(k)fluoranthene	0.0472	0.034	0.016	mg/kg	SW846 8270D
Butyl benzyl phthalate	0.116	0.069	0.0084	mg/kg	SW846 8270D
Carbazole	0.0154 J	0.069	0.0050	mg/kg	SW846 8270D
Chrysene	0.129	0.034	0.011	mg/kg	SW846 8270D
Dibenzo(a,h)anthracene	0.0311 J	0.034	0.015	mg/kg	SW846 8270D
Fluoranthene	0.249	0.034	0.015	mg/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene	0.0994	0.034	0.016	mg/kg	SW846 8270D
Phenanthrene	0.185	0.034	0.012	mg/kg	SW846 8270D
Pyrene	0.209	0.034	0.011	mg/kg	SW846 8270D
alpha-Chlordane	0.0019	0.00067	0.00032	mg/kg	SW846 8081B
gamma-Chlordane	0.0021	0.00067	0.00030	mg/kg	SW846 8081B
Dieldrin	0.00056 J	0.00067	0.00034	mg/kg	SW846 8081B
4,4'-DDE [a]	0.00050 J	0.00067	0.00035	mg/kg	SW846 8081B
4,4'-DDT [b]	0.0019	0.00067	0.00040	mg/kg	SW846 8081B
Aluminum	2310	51		mg/kg	SW846 6010C
Calcium	2990	510		mg/kg	SW846 6010C
Chromium	5.8	1.0		mg/kg	SW846 6010C
Copper	6.0	2.5		mg/kg	SW846 6010C
Iron	4230	51		mg/kg	SW846 6010C
Lead	11.3	2.0		mg/kg	SW846 6010C
Magnesium	810	510		mg/kg	SW846 6010C
Manganese	132	1.5		mg/kg	SW846 6010C
Mercury	0.059	0.032		mg/kg	SW846 7471B
Nickel	7.2	4.1		mg/kg	SW846 6010C
Silver	0.56	0.51		mg/kg	SW846 6010C
Vanadium	7.7	5.1		mg/kg	SW846 6010C
Zinc	17.1	5.1		mg/kg	SW846 6010C
JC38633-3A 2ND-SB-03					
Corrosivity as pH	10.47 NC			su	SW846 9045D
Ignitability (Flashpoint)	> 200			Deg. F	SW846 1010A/ASTM D93
JC38633-4 2ND-SB-04					
Acetone	0.0095	0.0094	0.0047	mg/kg	SW846 8260C
Anthracene	0.0261 J	0.038	0.023	mg/kg	SW846 8270D
Benzo(a)anthracene	0.0838	0.038	0.011	mg/kg	SW846 8270D
Benzo(a)pyrene	0.0750	0.038	0.017	mg/kg	SW846 8270D
Benzo(b)fluoranthene	0.0953	0.038	0.017	mg/kg	SW846 8270D
Benzo(g,h,i)perylene	0.0552	0.038	0.019	mg/kg	SW846 8270D
Benzo(k)fluoranthene	0.0333 J	0.038	0.018	mg/kg	SW846 8270D
Chrysene	0.0852	0.038	0.012	mg/kg	SW846 8270D
Fluoranthene	0.155	0.038	0.017	mg/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene	0.0625	0.038	0.018	mg/kg	SW846 8270D

Summary of Hits

Job Number: JC38633
Account: Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Collected: 03/09/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Phenanthrene		0.107	0.038	0.013	mg/kg	SW846 8270D
Pyrene		0.132	0.038	0.012	mg/kg	SW846 8270D
4,4'-DDT		0.0015	0.00074	0.00044	mg/kg	SW846 8081B
Aluminum		5380	57		mg/kg	SW846 6010C
Arsenic		26.8	2.3		mg/kg	SW846 6010C
Barium		47.3	23		mg/kg	SW846 6010C
Beryllium		0.34	0.23		mg/kg	SW846 6010C
Calcium		1530	570		mg/kg	SW846 6010C
Chromium		16.8	1.1		mg/kg	SW846 6010C
Cobalt		9.4	5.7		mg/kg	SW846 6010C
Copper		16.3	2.8		mg/kg	SW846 6010C
Iron		19300	57		mg/kg	SW846 6010C
Lead		17.6	2.3		mg/kg	SW846 6010C
Magnesium		1220	570		mg/kg	SW846 6010C
Manganese		827	1.7		mg/kg	SW846 6010C
Mercury		0.092	0.036		mg/kg	SW846 7471B
Nickel		16.0	4.5		mg/kg	SW846 6010C
Vanadium		16.8	5.7		mg/kg	SW846 6010C
Zinc		23.7	5.7		mg/kg	SW846 6010C
JC38633-4A	**2ND-SB-04**					
Corrosivity as pH		7.87 NC			su	SW846 9045D
Ignitability (Flashpoint)		> 200			Deg. F	SW846 1010A/ASTM D93

(a) More than 40 % RPD for detected concentrations between the two GC columns.
(b) Reported from 2nd signal. %D of check on 1st signal excess method criteria (20 %) so using for confirmation only.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	2ND-SB-01		
Lab Sample ID:	JC38633-1	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8260C	**Percent Solids:**	89.7
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C216905.D	1	03/13/17	SY	n/a	n/a	VC7988
Run #2							

	Initial Weight
Run #1	6.1 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0064	0.0091	0.0046	mg/kg	J
71-43-2	Benzene	ND	0.00046	0.00011	mg/kg	
74-97-5	Bromochloromethane	ND	0.0046	0.00029	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0018	0.00014	mg/kg	
75-25-2	Bromoform	ND	0.0046	0.00024	mg/kg	
74-83-9	Bromomethane	ND	0.0046	0.00044	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.0091	0.0016	mg/kg	
75-15-0	Carbon disulfide	ND	0.0018	0.00016	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0018	0.00015	mg/kg	
108-90-7	Chlorobenzene	ND	0.0018	0.00015	mg/kg	
75-00-3	Chloroethane	ND	0.0046	0.00039	mg/kg	
67-66-3	Chloroform	ND	0.0018	0.00022	mg/kg	
74-87-3	Chloromethane	ND	0.0046	0.00019	mg/kg	
110-82-7	Cyclohexane	ND	0.0018	0.00050	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0018	0.00044	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0018	0.00014	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.00091	0.00022	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.00091	0.00016	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.00091	0.00013	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.00091	0.00014	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0046	0.00050	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.00091	0.00017	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.00091	0.00016	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.00091	0.00014	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.00091	0.00040	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.00091	0.00014	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0018	0.00028	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0018	0.00018	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0018	0.00020	mg/kg	
100-41-4	Ethylbenzene	ND	0.00091	0.00014	mg/kg	
76-13-1	Freon 113	ND	0.0046	0.00044	mg/kg	
591-78-6	2-Hexanone	ND	0.0046	0.0013	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-01		
Lab Sample ID:	JC38633-1	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8260C	**Percent Solids:**	89.7
Project:	LIRR Expansion, Long Island, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	0.0018	0.00014	mg/kg	
79-20-9	Methyl Acetate	ND	0.0046	0.0019	mg/kg	
108-87-2	Methylcyclohexane	ND	0.0018	0.00046	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.00091	0.00024	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0046	0.00078	mg/kg	
75-09-2	Methylene chloride	ND	0.0046	0.00091	mg/kg	
100-42-5	Styrene	ND	0.0018	0.00013	mg/kg	
75-65-0	Tert Butyl Alcohol	ND	0.023	0.0028	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0018	0.00022	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0018	0.00026	mg/kg	
108-88-3	Toluene	ND	0.00091	0.00011	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0046	0.00046	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0046	0.00046	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0018	0.00015	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0018	0.00030	mg/kg	
79-01-6	Trichloroethene	ND	0.00091	0.00017	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0046	0.00057	mg/kg	
75-01-4	Vinyl chloride	ND	0.0018	0.00018	mg/kg	
	m,p-Xylene	ND	0.00091	0.00020	mg/kg	
95-47-6	o-Xylene	ND	0.00091	0.00018	mg/kg	
1330-20-7	Xylene (total)	ND	0.00091	0.00018	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		70-122%
17060-07-0	1,2-Dichloroethane-D4	98%		68-124%
2037-26-5	Toluene-D8	101%		77-125%
460-00-4	4-Bromofluorobenzene	101%		72-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-01		
Lab Sample ID:	JC38633-1	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	89.7
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5P36322.D	1	03/11/17	CS	03/10/17	OP1064	E5P1820
Run #2							

	Initial Weight	Final Volume
Run #1	31.0 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	0.072	0.018	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.18	0.022	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.18	0.031	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.18	0.064	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	0.18	0.14	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.18	0.038	mg/kg	
95-48-7	2-Methylphenol	ND	0.072	0.023	mg/kg	
	3&4-Methylphenol	ND	0.072	0.030	mg/kg	
88-75-5	2-Nitrophenol	ND	0.18	0.024	mg/kg	
100-02-7	4-Nitrophenol	ND	0.36	0.096	mg/kg	
87-86-5	Pentachlorophenol	ND	0.14	0.034	mg/kg	
108-95-2	Phenol	ND	0.072	0.019	mg/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.18	0.024	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.18	0.027	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.18	0.021	mg/kg	
83-32-9	Acenaphthene	ND	0.036	0.012	mg/kg	
208-96-8	Acenaphthylene	ND	0.036	0.018	mg/kg	
98-86-2	Acetophenone	ND	0.18	0.0077	mg/kg	
120-12-7	Anthracene	ND	0.036	0.022	mg/kg	
1912-24-9	Atrazine	ND	0.072	0.015	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.036	0.010	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.036	0.016	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.036	0.016	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.036	0.018	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.036	0.017	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.072	0.014	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.072	0.0088	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.072	0.0049	mg/kg	
100-52-7	Benzaldehyde	ND	0.18	0.0089	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.072	0.0086	mg/kg	
106-47-8	4-Chloroaniline	ND	0.18	0.013	mg/kg	
86-74-8	Carbazole	ND	0.072	0.0052	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-01		
Lab Sample ID:	JC38633-1	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	89.7
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	0.072	0.014	mg/kg	
218-01-9	Chrysene	ND	0.036	0.011	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.072	0.0077	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.072	0.015	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.072	0.013	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.072	0.012	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.036	0.011	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.036	0.018	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.072	0.030	mg/kg	
123-91-1	1,4-Dioxane	ND	0.036	0.024	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.036	0.016	mg/kg	
132-64-9	Dibenzofuran	ND	0.072	0.015	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.072	0.0059	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.072	0.0090	mg/kg	
84-66-2	Diethyl phthalate	ND	0.072	0.0077	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.072	0.0064	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.072	0.0084	mg/kg	
206-44-0	Fluoranthene	ND	0.036	0.016	mg/kg	
86-73-7	Fluorene	ND	0.036	0.017	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.072	0.0091	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.036	0.014	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.36	0.014	mg/kg	
67-72-1	Hexachloroethane	ND	0.18	0.018	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.036	0.017	mg/kg	
78-59-1	Isophorone	ND	0.072	0.0077	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.072	0.0081	mg/kg	
88-74-4	2-Nitroaniline	ND	0.18	0.0085	mg/kg	
99-09-2	3-Nitroaniline	ND	0.18	0.0090	mg/kg	
100-01-6	4-Nitroaniline	ND	0.18	0.0093	mg/kg	
91-20-3	Naphthalene	ND	0.036	0.010	mg/kg	
98-95-3	Nitrobenzene	ND	0.072	0.014	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.072	0.010	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.18	0.013	mg/kg	
85-01-8	Phenanthrene	ND	0.036	0.012	mg/kg	
129-00-0	Pyrene	ND	0.036	0.012	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.18	0.0091	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	81%		23-115%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-01		
Lab Sample ID:	JC38633-1	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	89.7
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	76%		27-114%
118-79-6	2,4,6-Tribromophenol	91%		19-152%
4165-60-0	Nitrobenzene-d5	94%		26-134%
321-60-8	2-Fluorobiphenyl	93%		39-124%
1718-51-0	Terphenyl-d14	102%		36-134%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	1.13	.18	mg/kg	J
	system artifact	1.30	.16	mg/kg	J
	system artifact	2.15	.43	mg/kg	J
	system artifact/aldol-condensation	2.54	.61	mg/kg	J
	unknown	2.83	.34	mg/kg	J
	unknown	14.96	2.1	mg/kg	J
	unknown	15.07	.41	mg/kg	J
	unknown	15.80	.37	mg/kg	J
	Total TIC, Semi-Volatile		3.22	mg/kg	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-01		
Lab Sample ID:	JC38633-1	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8151 SW846 8151/3550C	**Percent Solids:**	89.7
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OA124466.D	1	03/18/17	VDT	03/17/17	OP1193	GOA4266
Run #2							

	Initial Weight	Final Volume
Run #1	15.0 g	5.0 ml
Run #2		

Herbicide List

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	0.019	0.0083	mg/kg	
93-72-1	2,4,5-TP (Silvex)	ND	0.0037	0.0014	mg/kg	
93-76-5	2,4,5-T	ND	0.0037	0.0014	mg/kg	
75-99-0	Dalapon	ND	0.0037	0.0025	mg/kg	
1918-00-9	Dicamba	ND	0.0037	0.0019	mg/kg	
120-36-5	Dichloroprop	ND	0.019	0.0052	mg/kg	
88-85-7	Dinoseb	ND	0.019	0.013	mg/kg	
94-74-6	MCPA	ND	1.9	0.43	mg/kg	
93-65-2	MCPP	ND	1.9	0.41	mg/kg	
87-86-5	Pentachlorophenol	ND	0.0019	0.0016	mg/kg	
94-82-6	2,4-DB	ND	0.019	0.0060	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	24%		10-159%
19719-28-9	2,4-DCAA	13%		10-159%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-01		
Lab Sample ID:	JC38633-1	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8081B SW846 3546	**Percent Solids:**	89.7
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G133055.D	1	03/13/17	RK	03/11/17	OP1060	G1G4254
Run #2							

	Initial Weight	Final Volume
Run #1	16.7 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.00067	0.00032	mg/kg	
319-84-6	alpha-BHC	ND	0.00067	0.00036	mg/kg	
319-85-7	beta-BHC	ND	0.00067	0.00042	mg/kg	
319-86-8	delta-BHC	ND	0.00067	0.00030	mg/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.00067	0.00030	mg/kg	
5103-71-9	alpha-Chlordane	ND	0.00067	0.00032	mg/kg	
5103-74-2	gamma-Chlordane	ND	0.00067	0.00029	mg/kg	
60-57-1	Dieldrin	ND	0.00067	0.00033	mg/kg	
72-54-8	4,4'-DDD	ND	0.00067	0.00043	mg/kg	
72-55-9	4,4'-DDE	ND	0.00067	0.00035	mg/kg	
50-29-3	4,4'-DDT	ND	0.00067	0.00040	mg/kg	
72-20-8	Endrin	ND	0.00067	0.00031	mg/kg	
1031-07-8	Endosulfan sulfate	ND	0.00067	0.00027	mg/kg	
7421-93-4	Endrin aldehyde	ND	0.00067	0.00040	mg/kg	
959-98-8	Endosulfan-I	ND	0.00067	0.00035	mg/kg	
33213-65-9	Endosulfan-II	ND	0.00067	0.00035	mg/kg	
76-44-8	Heptachlor	ND	0.00067	0.00033	mg/kg	
1024-57-3	Heptachlor epoxide	ND	0.00067	0.00036	mg/kg	
72-43-5	Methoxychlor	ND	0.0013	0.00033	mg/kg	
53494-70-5	Endrin ketone	ND	0.00067	0.00051	mg/kg	
8001-35-2	Toxaphene	ND	0.017	0.0069	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	67%		25-135%
877-09-8	Tetrachloro-m-xylene	70%		25-135%
2051-24-3	Decachlorobiphenyl	46%		10-156%
2051-24-3	Decachlorobiphenyl	60%		10-156%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-01		
Lab Sample ID:	JC38633-1	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8082A SW846 3546	**Percent Solids:**	89.7
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX206416.D	1	03/13/17	HB	03/11/17	OP1061	GXX5965
Run #2							

	Initial Weight	Final Volume
Run #1	16.7 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.033	0.016	mg/kg	
11104-28-2	Aroclor 1221	ND	0.033	0.016	mg/kg	
11141-16-5	Aroclor 1232	ND	0.033	0.013	mg/kg	
53469-21-9	Aroclor 1242	ND	0.033	0.012	mg/kg	
12672-29-6	Aroclor 1248	ND	0.033	0.021	mg/kg	
11097-69-1	Aroclor 1254	ND	0.033	0.017	mg/kg	
11096-82-5	Aroclor 1260	ND	0.033	0.014	mg/kg	
11100-14-4	Aroclor 1268	ND	0.033	0.012	mg/kg	
37324-23-5	Aroclor 1262	ND	0.033	0.023	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	81%		24-152%
877-09-8	Tetrachloro-m-xylene	87%		24-152%
2051-24-3	Decachlorobiphenyl	62%		10-166%
2051-24-3	Decachlorobiphenyl	103%		10-166%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-01		
Lab Sample ID:	JC38633-1	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	89.7
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	6540	59	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 2.3	2.3	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Arsenic	3.0	2.3	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Barium	48.6	23	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Beryllium	0.28	0.23	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.59	0.59	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Calcium	6540	590	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Chromium	16.0	1.2	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Cobalt	< 5.9	5.9	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Copper	7.7	2.9	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Iron	9190	59	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Lead	6.9	2.3	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Magnesium	3910	590	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Manganese	569	1.8	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Mercury	0.11	0.036	mg/kg	1	03/11/17	03/11/17	JA	SW846 7471B [1]	SW846 7471B [4]
Nickel	6.4	4.7	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 2.3	2.3	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Silver	< 0.59	0.59	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Vanadium	14.3	5.9	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Zinc	21.5	5.9	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA41540
(2) Instrument QC Batch: MA41549
(3) Prep QC Batch: MP99155
(4) Prep QC Batch: MP99158

RL = Reporting Limit

Report of Analysis

Client Sample ID:	2ND-SB-01		
Lab Sample ID:	JC38633-1	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	89.7
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	0.28	0.27	mg/kg	1	03/13/17 09:03	YZ	SW846 9012B/LACHAT
Solids, Percent	89.7		%	1	03/10/17 16:30	TZW	SM2540 G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	2ND-SB-01		
Lab Sample ID:	JC38633-1A	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8260C SW846 1311	**Percent Solids:**	89.7
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B149056.D	5	03/13/17	EH	03/10/17	GP3819	V2B6616
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.0025	0.00070	mg/l	
78-93-3	2-Butanone (MEK)	ND	D035	200	0.10	0.0095	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.0050	0.0027	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.0050	0.00087	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.0050	0.0011	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.0050	0.0011	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.0050	0.0020	mg/l	
75-35-4	1,1-Dichloroethene	ND	D029	0.70	0.0050	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	D039	0.70	0.0050	0.0012	mg/l	
79-01-6	Trichloroethene	ND	D040	0.50	0.0050	0.0013	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.0050	0.0016	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	112%		76-120%
17060-07-0	1,2-Dichloroethane-D4	102%		64-135%
2037-26-5	Toluene-D8	100%		76-117%
460-00-4	4-Bromofluorobenzene	97%		72-122%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-01		
Lab Sample ID:	JC38633-1A	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	89.7
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6P35601.D	1	03/13/17	AC	03/12/17	OP1073	E6P1642
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.020	0.0089	mg/l	
	3&4-Methylphenol	ND	D024	200	0.020	0.0088	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.10	0.014	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.013	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0092	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.020	0.0017	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.020	0.0055	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.020	0.0033	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.010	0.0049	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0039	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.020	0.0064	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.020	0.0039	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	40%		14-88%
4165-62-2	Phenol-d5	25%		10-110%
118-79-6	2,4,6-Tribromophenol	72%		39-149%
4165-60-0	Nitrobenzene-d5	70%		32-128%
321-60-8	2-Fluorobiphenyl	72%		35-119%
1718-51-0	Terphenyl-d14	95%		10-126%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-01		
Lab Sample ID:	JC38633-1A	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8151 SW846 8151/3510C	**Percent Solids:**	89.7
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G106941.D	1	03/13/17	VDT	03/11/17	OP1072	G3G3736
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Herbicide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND	D016	10	0.0050	0.0039	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.0015	0.00047	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	96%		50-142%
19719-28-9	2,4-DCAA	84%		50-142%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-01		
Lab Sample ID:	JC38633-1A	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	89.7
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	8G3740.D	1	03/13/17	RK	03/12/17	OP1074	G8G110
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Pesticide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	D013	0.40	0.00010	0.000028	mg/l	
12789-03-6	Chlordane	ND	D020	0.030	0.0050	0.0011	mg/l	
72-20-8	Endrin	ND	D012	0.020	0.00010	0.000050	mg/l	
76-44-8	Heptachlor	ND	D031	0.0080	0.00010	0.000038	mg/l	
1024-57-3	Heptachlor epoxide	ND	D031	0.0080	0.00010	0.000065	mg/l	
72-43-5	Methoxychlor	ND	D014	10	0.00020	0.000057	mg/l	
8001-35-2	Toxaphene	ND	D015	0.50	0.0025	0.0018	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	90%		30-137%
877-09-8	Tetrachloro-m-xylene	96%		30-137%
2051-24-3	Decachlorobiphenyl	92%		10-137%
2051-24-3	Decachlorobiphenyl	85%		10-137%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-01		
Lab Sample ID:	JC38633-1A	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	89.7
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 0.50	D004	5.0	0.50	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Barium	< 1.0	D005	100	1.0	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 0.025	D006	1.0	0.025	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 0.050	D007	5.0	0.050	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Lead	< 0.50	D008	5.0	0.50	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	03/13/17	03/13/17	JPM	SW846 7470A [1]	SW846 7470A [4]
Selenium	< 0.50	D010	1.0	0.50	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Silver	< 0.050	D011	5.0	0.050	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA41553
(2) Instrument QC Batch: MA41554
(3) Prep QC Batch: MP99157
(4) Prep QC Batch: MP99205

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID:	2ND-SB-01		
Lab Sample ID:	JC38633-1A	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	89.7
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Corrosivity as pH	7.21 NC		su	1	03/11/17 11:00	AT	SW846 9045D
Cyanide Reactivity	< 11	11	mg/kg	1	03/13/17 15:56	YZ	SW846 CHAP7/9012 B
Ignitability (Flashpoint)	> 200		Deg. F	1	03/11/17 15:00	AT	SW846 1010A/ASTM D93
Sulfide Reactivity	< 110	110	mg/kg	1	03/13/17 01:33	MP	SW846 CHAP7/9034

RL = Reporting Limit

Report of Analysis

Client Sample ID:	2ND-SB-02		
Lab Sample ID:	JC38633-2	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8260C	**Percent Solids:**	96.1
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C216906.D	1	03/13/17	SY	n/a	n/a	VC7988
Run #2							

	Initial Weight
Run #1	5.5 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0812	0.0095	0.0047	mg/kg	
71-43-2	Benzene	ND	0.00047	0.00011	mg/kg	
74-97-5	Bromochloromethane	ND	0.0047	0.00030	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0019	0.00014	mg/kg	
75-25-2	Bromoform	ND	0.0047	0.00025	mg/kg	
74-83-9	Bromomethane	ND	0.0047	0.00046	mg/kg	
78-93-3	2-Butanone (MEK)	0.0118	0.0095	0.0017	mg/kg	
75-15-0	Carbon disulfide	0.00027	0.0019	0.00016	mg/kg	J
56-23-5	Carbon tetrachloride	ND	0.0019	0.00016	mg/kg	
108-90-7	Chlorobenzene	ND	0.0019	0.00015	mg/kg	
75-00-3	Chloroethane	ND	0.0047	0.00041	mg/kg	
67-66-3	Chloroform	ND	0.0019	0.00023	mg/kg	
74-87-3	Chloromethane	ND	0.0047	0.00020	mg/kg	
110-82-7	Cyclohexane	ND	0.0019	0.00052	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0019	0.00046	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0019	0.00014	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.00095	0.00023	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.00095	0.00016	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.00095	0.00013	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.00095	0.00014	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0047	0.00052	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.00095	0.00018	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.00095	0.00016	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.00095	0.00014	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.00095	0.00041	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.00095	0.00015	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0019	0.00029	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0019	0.00019	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0019	0.00021	mg/kg	
100-41-4	Ethylbenzene	ND	0.00095	0.00014	mg/kg	
76-13-1	Freon 113	ND	0.0047	0.00046	mg/kg	
591-78-6	2-Hexanone	ND	0.0047	0.0013	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-02		
Lab Sample ID:	JC38633-2	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8260C	**Percent Solids:**	96.1
Project:	LIRR Expansion, Long Island, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	0.0019	0.00015	mg/kg	
79-20-9	Methyl Acetate	ND	0.0047	0.0019	mg/kg	
108-87-2	Methylcyclohexane	ND	0.0019	0.00048	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.00095	0.00025	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0047	0.00080	mg/kg	
75-09-2	Methylene chloride	ND	0.0047	0.00095	mg/kg	
100-42-5	Styrene	ND	0.0019	0.00014	mg/kg	
75-65-0	Tert Butyl Alcohol	ND	0.024	0.0029	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0019	0.00023	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0019	0.00027	mg/kg	
108-88-3	Toluene	ND	0.00095	0.00012	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0047	0.00047	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0047	0.00047	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0019	0.00016	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0019	0.00031	mg/kg	
79-01-6	Trichloroethene	ND	0.00095	0.00018	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0047	0.00060	mg/kg	
75-01-4	Vinyl chloride	ND	0.0019	0.00019	mg/kg	
	m,p-Xylene	ND	0.00095	0.00021	mg/kg	
95-47-6	o-Xylene	ND	0.00095	0.00019	mg/kg	
1330-20-7	Xylene (total)	ND	0.00095	0.00019	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		70-122%
17060-07-0	1,2-Dichloroethane-D4	98%		68-124%
2037-26-5	Toluene-D8	98%		77-125%
460-00-4	4-Bromofluorobenzene	102%		72-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-02		
Lab Sample ID:	JC38633-2	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	96.1
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5P36330.D	1	03/11/17	CS	03/10/17	OP1064	E5P1820
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	0.069	0.017	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.17	0.021	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.17	0.030	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.17	0.062	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	0.17	0.13	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.17	0.037	mg/kg	
95-48-7	2-Methylphenol	ND	0.069	0.022	mg/kg	
	3&4-Methylphenol	ND	0.069	0.029	mg/kg	
88-75-5	2-Nitrophenol	ND	0.17	0.023	mg/kg	
100-02-7	4-Nitrophenol	ND	0.35	0.093	mg/kg	
87-86-5	Pentachlorophenol	ND	0.14	0.033	mg/kg	
108-95-2	Phenol	ND	0.069	0.018	mg/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.17	0.023	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.17	0.026	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.17	0.021	mg/kg	
83-32-9	Acenaphthene	0.0615	0.035	0.012	mg/kg	
208-96-8	Acenaphthylene	ND	0.035	0.018	mg/kg	
98-86-2	Acetophenone	ND	0.17	0.0075	mg/kg	
120-12-7	Anthracene	0.102	0.035	0.021	mg/kg	
1912-24-9	Atrazine	ND	0.069	0.015	mg/kg	
56-55-3	Benzo(a)anthracene	0.220	0.035	0.0098	mg/kg	
50-32-8	Benzo(a)pyrene	0.220	0.035	0.016	mg/kg	
205-99-2	Benzo(b)fluoranthene	0.266	0.035	0.015	mg/kg	
191-24-2	Benzo(g,h,i)perylene	0.174	0.035	0.017	mg/kg	
207-08-9	Benzo(k)fluoranthene	0.0989	0.035	0.016	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.069	0.013	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.069	0.0085	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.069	0.0048	mg/kg	
100-52-7	Benzaldehyde	ND	0.17	0.0086	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.069	0.0083	mg/kg	
106-47-8	4-Chloroaniline	ND	0.17	0.012	mg/kg	
86-74-8	Carbazole	0.0416	0.069	0.0050	mg/kg	J

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-02		
Lab Sample ID:	JC38633-2	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	96.1
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	0.069	0.014	mg/kg	
218-01-9	Chrysene	0.243	0.035	0.011	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.069	0.0074	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.069	0.015	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.069	0.012	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.069	0.011	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.035	0.011	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.035	0.017	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.069	0.029	mg/kg	
123-91-1	1,4-Dioxane	ND	0.035	0.023	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	0.0537	0.035	0.015	mg/kg	
132-64-9	Dibenzofuran	0.0259	0.069	0.014	mg/kg	J
84-74-2	Di-n-butyl phthalate	ND	0.069	0.0057	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.069	0.0086	mg/kg	
84-66-2	Diethyl phthalate	ND	0.069	0.0074	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.069	0.0062	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.069	0.0081	mg/kg	
206-44-0	Fluoranthene	0.472	0.035	0.015	mg/kg	
86-73-7	Fluorene	0.0494	0.035	0.016	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.069	0.0088	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.035	0.014	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.35	0.014	mg/kg	
67-72-1	Hexachloroethane	ND	0.17	0.017	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	0.190	0.035	0.016	mg/kg	
78-59-1	Isophorone	ND	0.069	0.0074	mg/kg	
91-57-6	2-Methylnaphthalene	0.0207	0.069	0.0078	mg/kg	J
88-74-4	2-Nitroaniline	ND	0.17	0.0082	mg/kg	
99-09-2	3-Nitroaniline	ND	0.17	0.0087	mg/kg	
100-01-6	4-Nitroaniline	ND	0.17	0.0090	mg/kg	
91-20-3	Naphthalene	0.0304	0.035	0.0098	mg/kg	J
98-95-3	Nitrobenzene	ND	0.069	0.013	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.069	0.010	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.17	0.013	mg/kg	
85-01-8	Phenanthrene	0.375	0.035	0.012	mg/kg	
129-00-0	Pyrene	0.389	0.035	0.011	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.17	0.0088	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	80%		23-115%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-02		
Lab Sample ID:	JC38633-2	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	96.1
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	76%		27-114%
118-79-6	2,4,6-Tribromophenol	84%		19-152%
4165-60-0	Nitrobenzene-d5	83%		26-134%
321-60-8	2-Fluorobiphenyl	89%		39-124%
1718-51-0	Terphenyl-d14	82%		36-134%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-02		
Lab Sample ID:	JC38633-2	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8151 SW846 8151/3550C	**Percent Solids:**	96.1
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OA124467.D	1	03/18/17	VDT	03/17/17	OP1193	GOA4266
Run #2							

	Initial Weight	Final Volume
Run #1	15.3 g	5.0 ml
Run #2		

Herbicide List

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	0.017	0.0076	mg/kg	
93-72-1	2,4,5-TP (Silvex)	ND	0.0034	0.0012	mg/kg	
93-76-5	2,4,5-T	ND	0.0034	0.0013	mg/kg	
75-99-0	Dalapon	ND	0.0034	0.0023	mg/kg	
1918-00-9	Dicamba	ND	0.0034	0.0017	mg/kg	
120-36-5	Dichloroprop	ND	0.017	0.0048	mg/kg	
88-85-7	Dinoseb	ND	0.017	0.011	mg/kg	
94-74-6	MCPA	ND	1.7	0.39	mg/kg	
93-65-2	MCPP	ND	1.7	0.37	mg/kg	
87-86-5	Pentachlorophenol	ND	0.0017	0.0015	mg/kg	
94-82-6	2,4-DB	ND	0.017	0.0055	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	55%		10-159%
19719-28-9	2,4-DCAA	61%		10-159%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-02		
Lab Sample ID:	JC38633-2	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8081B SW846 3546	**Percent Solids:**	96.1
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G133056.D	1	03/13/17	RK	03/11/17	OP1060	G1G4254
Run #2							

	Initial Weight	Final Volume
Run #1	15.1 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.00069	0.00033	mg/kg	
319-84-6	alpha-BHC	ND	0.00069	0.00037	mg/kg	
319-85-7	beta-BHC	ND	0.00069	0.00043	mg/kg	
319-86-8	delta-BHC	ND	0.00069	0.00031	mg/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.00069	0.00030	mg/kg	
5103-71-9	alpha-Chlordane [a]	0.0119	0.00069	0.00033	mg/kg	
5103-74-2	gamma-Chlordane	0.0082	0.00069	0.00030	mg/kg	
60-57-1	Dieldrin	ND	0.00069	0.00034	mg/kg	
72-54-8	4,4'-DDD [a]	0.00062	0.00069	0.00044	mg/kg	J
72-55-9	4,4'-DDE	0.0012	0.00069	0.00036	mg/kg	
50-29-3	4,4'-DDT [b]	0.00098	0.00069	0.00041	mg/kg	
72-20-8	Endrin	ND	0.00069	0.00032	mg/kg	
1031-07-8	Endosulfan sulfate	ND	0.00069	0.00028	mg/kg	
7421-93-4	Endrin aldehyde	ND	0.00069	0.00041	mg/kg	
959-98-8	Endosulfan-I	ND	0.00069	0.00036	mg/kg	
33213-65-9	Endosulfan-II	ND	0.00069	0.00036	mg/kg	
76-44-8	Heptachlor	ND	0.00069	0.00034	mg/kg	
1024-57-3	Heptachlor epoxide [a]	0.0011	0.00069	0.00037	mg/kg	
72-43-5	Methoxychlor	ND	0.0014	0.00034	mg/kg	
53494-70-5	Endrin ketone	ND	0.00069	0.00053	mg/kg	
8001-35-2	Toxaphene	ND	0.017	0.0072	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	66%		25-135%
877-09-8	Tetrachloro-m-xylene	74%		25-135%
2051-24-3	Decachlorobiphenyl	45%		10-156%
2051-24-3	Decachlorobiphenyl	59%		10-156%

(a) More than 40 % RPD for detected concentrations between the two GC columns.
(b) Reported from 2nd signal. %D of check on 1st signal excess method criteria (20 %) so using for confirmation only.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-02		
Lab Sample ID:	JC38633-2	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8082A SW846 3546	**Percent Solids:**	96.1
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX206417.D	1	03/13/17	HB	03/11/17	OP1061	GXX5965
Run #2							

	Initial Weight	Final Volume
Run #1	15.1 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.034	0.017	mg/kg	
11104-28-2	Aroclor 1221	ND	0.034	0.017	mg/kg	
11141-16-5	Aroclor 1232	ND	0.034	0.014	mg/kg	
53469-21-9	Aroclor 1242	ND	0.034	0.012	mg/kg	
12672-29-6	Aroclor 1248	ND	0.034	0.022	mg/kg	
11097-69-1	Aroclor 1254	ND	0.034	0.017	mg/kg	
11096-82-5	Aroclor 1260	ND	0.034	0.015	mg/kg	
11100-14-4	Aroclor 1268	ND	0.034	0.012	mg/kg	
37324-23-5	Aroclor 1262	ND	0.034	0.023	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	78%		24-152%
877-09-8	Tetrachloro-m-xylene	136%		24-152%
2051-24-3	Decachlorobiphenyl	60%		10-166%
2051-24-3	Decachlorobiphenyl	114%		10-166%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-02		
Lab Sample ID:	JC38633-2	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	96.1
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	4240	50	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 2.0	2.0	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Arsenic	2.2	2.0	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Barium	27.5	20	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Beryllium	0.23	0.20	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.50	0.50	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Calcium	5180	500	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Chromium	15.4	0.99	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Cobalt	5.0	5.0	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Copper	11.6	2.5	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Iron	8640	50	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Lead	25.1	2.0	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Magnesium	2060	500	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Manganese	175	1.5	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Mercury	0.14	0.033	mg/kg	1	03/11/17	03/11/17	JA	SW846 7471B [1]	SW846 7471B [4]
Nickel	16.0	4.0	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Potassium	< 990	990	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 2.0	2.0	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Silver	< 0.50	0.50	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 990	990	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 0.99	0.99	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Vanadium	11.4	5.0	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Zinc	33.4	5.0	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA41540
(2) Instrument QC Batch: MA41549
(3) Prep QC Batch: MP99155
(4) Prep QC Batch: MP99158

RL = Reporting Limit

Report of Analysis

Client Sample ID:	2ND-SB-02		
Lab Sample ID:	JC38633-2	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	96.1
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	0.72	0.25	mg/kg	1	03/13/17 09:05	YZ	SW846 9012B/LACHAT
Solids, Percent	96.1		%	1	03/10/17 16:30	TZW	SM2540 G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	2ND-SB-02		
Lab Sample ID:	JC38633-2A	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8260C SW846 1311	**Percent Solids:**	96.1
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B149057.D	5	03/13/17	EH	03/10/17	GP3819	V2B6616
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.0025	0.00070	mg/l	
78-93-3	2-Butanone (MEK)	ND	D035	200	0.10	0.0095	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.0050	0.0027	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.0050	0.00087	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.0050	0.0011	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.0050	0.0011	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.0050	0.0020	mg/l	
75-35-4	1,1-Dichloroethene	ND	D029	0.70	0.0050	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	D039	0.70	0.0050	0.0012	mg/l	
79-01-6	Trichloroethene	ND	D040	0.50	0.0050	0.0013	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.0050	0.0016	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	113%		76-120%
17060-07-0	1,2-Dichloroethane-D4	102%		64-135%
2037-26-5	Toluene-D8	99%		76-117%
460-00-4	4-Bromofluorobenzene	96%		72-122%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-02		
Lab Sample ID:	JC38633-2A	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	96.1
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6P35602.D	1	03/13/17	AC	03/12/17	OP1073	E6P1642
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.020	0.0089	mg/l	
	3&4-Methylphenol	ND	D024	200	0.020	0.0088	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.10	0.014	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.013	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0092	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.020	0.0017	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.020	0.0055	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.020	0.0033	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.010	0.0049	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0039	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.020	0.0064	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.020	0.0039	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	40%		14-88%
4165-62-2	Phenol-d5	27%		10-110%
118-79-6	2,4,6-Tribromophenol	74%		39-149%
4165-60-0	Nitrobenzene-d5	75%		32-128%
321-60-8	2-Fluorobiphenyl	76%		35-119%
1718-51-0	Terphenyl-d14	92%		10-126%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-02		
Lab Sample ID:	JC38633-2A	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8151 SW846 8151/3510C	**Percent Solids:**	96.1
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G106942.D	1	03/13/17	VDT	03/11/17	OP1072	G3G3736
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Herbicide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND	D016	10	0.0050	0.0039	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.0015	0.00047	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	93%		50-142%
19719-28-9	2,4-DCAA	84%		50-142%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-02		
Lab Sample ID:	JC38633-2A	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	96.1
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	8G3741.D	1	03/13/17	RK	03/12/17	OP1074	G8G110
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Pesticide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	D013	0.40	0.00010	0.000028	mg/l	
12789-03-6	Chlordane	ND	D020	0.030	0.0050	0.0011	mg/l	
72-20-8	Endrin	ND	D012	0.020	0.00010	0.000050	mg/l	
76-44-8	Heptachlor	ND	D031	0.0080	0.00010	0.000038	mg/l	
1024-57-3	Heptachlor epoxide	ND	D031	0.0080	0.00010	0.000065	mg/l	
72-43-5	Methoxychlor	ND	D014	10	0.00020	0.000057	mg/l	
8001-35-2	Toxaphene	ND	D015	0.50	0.0025	0.0018	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	90%		30-137%
877-09-8	Tetrachloro-m-xylene	97%		30-137%
2051-24-3	Decachlorobiphenyl	89%		10-137%
2051-24-3	Decachlorobiphenyl	87%		10-137%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-02		
Lab Sample ID:	JC38633-2A	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	96.1
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 0.50	D004	5.0	0.50	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Barium	< 1.0	D005	100	1.0	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 0.025	D006	1.0	0.025	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 0.050	D007	5.0	0.050	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Lead	< 0.50	D008	5.0	0.50	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	03/13/17	03/13/17	JPM	SW846 7470A [1]	SW846 7470A [4]
Selenium	< 0.50	D010	1.0	0.50	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Silver	< 0.050	D011	5.0	0.050	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA41553
(2) Instrument QC Batch: MA41554
(3) Prep QC Batch: MP99157
(4) Prep QC Batch: MP99205

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID:	2ND-SB-02		
Lab Sample ID:	JC38633-2A	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	96.1
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Corrosivity as pH	9.53 NC		su	1	03/11/17 11:00	AT	SW846 9045D
Cyanide Reactivity	< 10	10	mg/kg	1	03/13/17 15:57	YZ	SW846 CHAP7/9012 B
Ignitability (Flashpoint)	> 200		Deg. F	1	03/11/17 15:00	AT	SW846 1010A/ASTM D93
Sulfide Reactivity	< 100	100	mg/kg	1	03/13/17 01:33	MP	SW846 CHAP7/9034

RL = Reporting Limit

Report of Analysis

Client Sample ID:	2ND-SB-03		
Lab Sample ID:	JC38633-3	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8260C	**Percent Solids:**	96.7
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C216907.D	1	03/13/17	SY	n/a	n/a	VC7988
Run #2							

	Initial Weight
Run #1	5.0 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0296	0.010	0.0052	mg/kg	
71-43-2	Benzene	ND	0.00052	0.00012	mg/kg	
74-97-5	Bromochloromethane	ND	0.0052	0.00033	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0021	0.00016	mg/kg	
75-25-2	Bromoform	ND	0.0052	0.00028	mg/kg	
74-83-9	Bromomethane	ND	0.0052	0.00050	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.010	0.0018	mg/kg	
75-15-0	Carbon disulfide	ND	0.0021	0.00018	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0021	0.00017	mg/kg	
108-90-7	Chlorobenzene	ND	0.0021	0.00017	mg/kg	
75-00-3	Chloroethane	ND	0.0052	0.00044	mg/kg	
67-66-3	Chloroform	ND	0.0021	0.00025	mg/kg	
74-87-3	Chloromethane	ND	0.0052	0.00022	mg/kg	
110-82-7	Cyclohexane	ND	0.0021	0.00056	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0021	0.00050	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0021	0.00016	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.0010	0.00025	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0010	0.00018	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0010	0.00014	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0010	0.00016	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0052	0.00056	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00019	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00018	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00016	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00045	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00016	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0021	0.00032	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0021	0.00020	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0021	0.00023	mg/kg	
100-41-4	Ethylbenzene	ND	0.0010	0.00015	mg/kg	
76-13-1	Freon 113	ND	0.0052	0.00050	mg/kg	
591-78-6	2-Hexanone	ND	0.0052	0.0014	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-03		
Lab Sample ID:	JC38633-3	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8260C	**Percent Solids:**	96.7
Project:	LIRR Expansion, Long Island, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	0.0021	0.00016	mg/kg	
79-20-9	Methyl Acetate	ND	0.0052	0.0021	mg/kg	
108-87-2	Methylcyclohexane	ND	0.0021	0.00052	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0010	0.00027	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0052	0.00088	mg/kg	
75-09-2	Methylene chloride	ND	0.0052	0.0010	mg/kg	
100-42-5	Styrene	ND	0.0021	0.00015	mg/kg	
75-65-0	Tert Butyl Alcohol	ND	0.026	0.0031	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0021	0.00025	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0021	0.00029	mg/kg	
108-88-3	Toluene	ND	0.0010	0.00013	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0052	0.00052	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0052	0.00052	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0021	0.00017	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0021	0.00033	mg/kg	
79-01-6	Trichloroethene	ND	0.0010	0.00020	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0052	0.00065	mg/kg	
75-01-4	Vinyl chloride	ND	0.0021	0.00021	mg/kg	
	m,p-Xylene	0.00039	0.0010	0.00023	mg/kg	J
95-47-6	o-Xylene	0.00036	0.0010	0.00021	mg/kg	J
1330-20-7	Xylene (total)	0.00075	0.0010	0.00021	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	90%		70-122%
17060-07-0	1,2-Dichloroethane-D4	96%		68-124%
2037-26-5	Toluene-D8	99%		77-125%
460-00-4	4-Bromofluorobenzene	103%		72-130%

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RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-03		
Lab Sample ID:	JC38633-3	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	96.7
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5P36331.D	1	03/11/17	CS	03/10/17	OP1064	E5P1820
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	0.069	0.017	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.17	0.021	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.17	0.029	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.17	0.061	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	0.17	0.13	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.17	0.037	mg/kg	
95-48-7	2-Methylphenol	ND	0.069	0.022	mg/kg	
	3&4-Methylphenol	ND	0.069	0.028	mg/kg	
88-75-5	2-Nitrophenol	ND	0.17	0.023	mg/kg	
100-02-7	4-Nitrophenol	ND	0.34	0.092	mg/kg	
87-86-5	Pentachlorophenol	ND	0.14	0.032	mg/kg	
108-95-2	Phenol	ND	0.069	0.018	mg/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.17	0.023	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.17	0.026	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.17	0.020	mg/kg	
83-32-9	Acenaphthene	0.0144	0.034	0.012	mg/kg	J
208-96-8	Acenaphthylene	ND	0.034	0.017	mg/kg	
98-86-2	Acetophenone	ND	0.17	0.0074	mg/kg	
120-12-7	Anthracene	0.0368	0.034	0.021	mg/kg	
1912-24-9	Atrazine	ND	0.069	0.015	mg/kg	
56-55-3	Benzo(a)anthracene	0.111	0.034	0.0097	mg/kg	
50-32-8	Benzo(a)pyrene	0.113	0.034	0.016	mg/kg	
205-99-2	Benzo(b)fluoranthene	0.144	0.034	0.015	mg/kg	
191-24-2	Benzo(g,h,i)perylene	0.0915	0.034	0.017	mg/kg	
207-08-9	Benzo(k)fluoranthene	0.0472	0.034	0.016	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.069	0.013	mg/kg	
85-68-7	Butyl benzyl phthalate	0.116	0.069	0.0084	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.069	0.0047	mg/kg	
100-52-7	Benzaldehyde	ND	0.17	0.0085	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.069	0.0082	mg/kg	
106-47-8	4-Chloroaniline	ND	0.17	0.012	mg/kg	
86-74-8	Carbazole	0.0154	0.069	0.0050	mg/kg	J

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E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-03		
Lab Sample ID:	JC38633-3	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	96.7
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	0.069	0.014	mg/kg	
218-01-9	Chrysene	0.129	0.034	0.011	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.069	0.0074	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.069	0.015	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.069	0.012	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.069	0.011	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.034	0.011	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.034	0.017	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.069	0.029	mg/kg	
123-91-1	1,4-Dioxane	ND	0.034	0.023	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	0.0311	0.034	0.015	mg/kg	J
132-64-9	Dibenzofuran	ND	0.069	0.014	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.069	0.0056	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.069	0.0086	mg/kg	
84-66-2	Diethyl phthalate	ND	0.069	0.0073	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.069	0.0061	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.069	0.0080	mg/kg	
206-44-0	Fluoranthene	0.249	0.034	0.015	mg/kg	
86-73-7	Fluorene	ND	0.034	0.016	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.069	0.0087	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.034	0.014	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.34	0.014	mg/kg	
67-72-1	Hexachloroethane	ND	0.17	0.017	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	0.0994	0.034	0.016	mg/kg	
78-59-1	Isophorone	ND	0.069	0.0074	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.069	0.0078	mg/kg	
88-74-4	2-Nitroaniline	ND	0.17	0.0081	mg/kg	
99-09-2	3-Nitroaniline	ND	0.17	0.0086	mg/kg	
100-01-6	4-Nitroaniline	ND	0.17	0.0089	mg/kg	
91-20-3	Naphthalene	ND	0.034	0.0097	mg/kg	
98-95-3	Nitrobenzene	ND	0.069	0.013	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.069	0.0099	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.17	0.013	mg/kg	
85-01-8	Phenanthrene	0.185	0.034	0.012	mg/kg	
129-00-0	Pyrene	0.209	0.034	0.011	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.17	0.0087	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	70%		23-115%

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Report of Analysis

Client Sample ID:	2ND-SB-03		
Lab Sample ID:	JC38633-3	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	96.7
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	70%		27-114%
118-79-6	2,4,6-Tribromophenol	43%		19-152%
4165-60-0	Nitrobenzene-d5	73%		26-134%
321-60-8	2-Fluorobiphenyl	82%		39-124%
1718-51-0	Terphenyl-d14	83%		36-134%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-03		
Lab Sample ID:	JC38633-3	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8151 SW846 8151/3550C	**Percent Solids:**	96.7
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OA124468.D	1	03/18/17	VDT	03/17/17	OP1193	GOA4266
Run #2							

	Initial Weight	Final Volume
Run #1	15.3 g	5.0 ml
Run #2		

Herbicide List

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	0.017	0.0076	mg/kg	
93-72-1	2,4,5-TP (Silvex)	ND	0.0034	0.0012	mg/kg	
93-76-5	2,4,5-T	ND	0.0034	0.0013	mg/kg	
75-99-0	Dalapon	ND	0.0034	0.0023	mg/kg	
1918-00-9	Dicamba	ND	0.0034	0.0017	mg/kg	
120-36-5	Dichloroprop	ND	0.017	0.0048	mg/kg	
88-85-7	Dinoseb	ND	0.017	0.011	mg/kg	
94-74-6	MCPA	ND	1.7	0.39	mg/kg	
93-65-2	MCPP	ND	1.7	0.37	mg/kg	
87-86-5	Pentachlorophenol	ND	0.0017	0.0015	mg/kg	
94-82-6	2,4-DB	ND	0.017	0.0055	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	60%		10-159%
19719-28-9	2,4-DCAA	40%		10-159%

ND = Not detected MDL = Method Detection Limit
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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-03		
Lab Sample ID:	JC38633-3	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8081B SW846 3546	**Percent Solids:**	96.7
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G133057.D	1	03/13/17	RK	03/11/17	OP1060	G1G4254
Run #2							

	Initial Weight	Final Volume
Run #1	15.4 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.00067	0.00032	mg/kg	
319-84-6	alpha-BHC	ND	0.00067	0.00036	mg/kg	
319-85-7	beta-BHC	ND	0.00067	0.00042	mg/kg	
319-86-8	delta-BHC	ND	0.00067	0.00030	mg/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.00067	0.00030	mg/kg	
5103-71-9	alpha-Chlordane	0.0019	0.00067	0.00032	mg/kg	
5103-74-2	gamma-Chlordane	0.0021	0.00067	0.00030	mg/kg	
60-57-1	Dieldrin	0.00056	0.00067	0.00034	mg/kg	J
72-54-8	4,4'-DDD	ND	0.00067	0.00043	mg/kg	
72-55-9	4,4'-DDE [a]	0.00050	0.00067	0.00035	mg/kg	J
50-29-3	4,4'-DDT [b]	0.0019	0.00067	0.00040	mg/kg	
72-20-8	Endrin	ND	0.00067	0.00031	mg/kg	
1031-07-8	Endosulfan sulfate	ND	0.00067	0.00027	mg/kg	
7421-93-4	Endrin aldehyde	ND	0.00067	0.00040	mg/kg	
959-98-8	Endosulfan-I	ND	0.00067	0.00035	mg/kg	
33213-65-9	Endosulfan-II	ND	0.00067	0.00035	mg/kg	
76-44-8	Heptachlor	ND	0.00067	0.00033	mg/kg	
1024-57-3	Heptachlor epoxide	ND	0.00067	0.00036	mg/kg	
72-43-5	Methoxychlor	ND	0.0013	0.00034	mg/kg	
53494-70-5	Endrin ketone	ND	0.00067	0.00052	mg/kg	
8001-35-2	Toxaphene	ND	0.017	0.0070	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	65%		25-135%
877-09-8	Tetrachloro-m-xylene	73%		25-135%
2051-24-3	Decachlorobiphenyl	38%		10-156%
2051-24-3	Decachlorobiphenyl	65%		10-156%

(a) More than 40 % RPD for detected concentrations between the two GC columns.
(b) Reported from 2nd signal. %D of check on 1st signal excess method criteria (20 %) so using for confirmation only.

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E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-03		
Lab Sample ID:	JC38633-3	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8082A SW846 3546	**Percent Solids:**	96.7
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX206418.D	1	03/13/17	HB	03/11/17	OP1061	GXX5965
Run #2							

	Initial Weight	Final Volume
Run #1	15.4 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.034	0.017	mg/kg	
11104-28-2	Aroclor 1221	ND	0.034	0.016	mg/kg	
11141-16-5	Aroclor 1232	ND	0.034	0.013	mg/kg	
53469-21-9	Aroclor 1242	ND	0.034	0.012	mg/kg	
12672-29-6	Aroclor 1248	ND	0.034	0.021	mg/kg	
11097-69-1	Aroclor 1254	ND	0.034	0.017	mg/kg	
11096-82-5	Aroclor 1260	ND	0.034	0.014	mg/kg	
11100-14-4	Aroclor 1268	ND	0.034	0.012	mg/kg	
37324-23-5	Aroclor 1262	ND	0.034	0.023	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	86%		24-152%
877-09-8	Tetrachloro-m-xylene	94%		24-152%
2051-24-3	Decachlorobiphenyl	65%		10-166%
2051-24-3	Decachlorobiphenyl	89%		10-166%

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-03		
Lab Sample ID:	JC38633-3	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	96.7
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	2310	51	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 2.0	2.0	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Arsenic	< 2.0	2.0	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Barium	< 20	20	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Beryllium	< 0.20	0.20	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.51	0.51	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Calcium	2990	510	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Chromium	5.8	1.0	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Cobalt	< 5.1	5.1	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Copper	6.0	2.5	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Iron	4230	51	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Lead	11.3	2.0	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Magnesium	810	510	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Manganese	132	1.5	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Mercury	0.059	0.032	mg/kg	1	03/11/17	03/11/17	JA	SW846 7471B [1]	SW846 7471B [4]
Nickel	7.2	4.1	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Potassium	< 1000	1000	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 2.0	2.0	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Silver	0.56	0.51	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 1000	1000	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 1.0	1.0	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Vanadium	7.7	5.1	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Zinc	17.1	5.1	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA41540
(2) Instrument QC Batch: MA41549
(3) Prep QC Batch: MP99155
(4) Prep QC Batch: MP99158

RL = Reporting Limit

Report of Analysis

Client Sample ID:	2ND-SB-03		
Lab Sample ID:	JC38633-3	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	96.7
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	< 0.23	0.23	mg/kg	1	03/13/17 09:06	YZ	SW846 9012B/LACHAT
Solids, Percent	96.7		%	1	03/10/17 16:30	TZW	SM2540 G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	2ND-SB-03		
Lab Sample ID:	JC38633-3A	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8260C SW846 1311	**Percent Solids:**	96.7
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B149058.D	5	03/13/17	EH	03/10/17	GP3819	V2B6616
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.0025	0.00070	mg/l	
78-93-3	2-Butanone (MEK)	ND	D035	200	0.10	0.0095	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.0050	0.0027	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.0050	0.00087	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.0050	0.0011	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.0050	0.0011	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.0050	0.0020	mg/l	
75-35-4	1,1-Dichloroethene	ND	D029	0.70	0.0050	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	D039	0.70	0.0050	0.0012	mg/l	
79-01-6	Trichloroethene	ND	D040	0.50	0.0050	0.0013	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.0050	0.0016	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	113%		76-120%
17060-07-0	1,2-Dichloroethane-D4	103%		64-135%
2037-26-5	Toluene-D8	99%		76-117%
460-00-4	4-Bromofluorobenzene	97%		72-122%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-03		
Lab Sample ID:	JC38633-3A	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	96.7
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6P35603.D	1	03/13/17	AC	03/12/17	OP1073	E6P1642
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.020	0.0089	mg/l	
	3&4-Methylphenol	ND	D024	200	0.020	0.0088	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.10	0.014	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.013	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0092	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.020	0.0017	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.020	0.0055	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.020	0.0033	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.010	0.0049	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0039	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.020	0.0064	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.020	0.0039	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	46%		14-88%
4165-62-2	Phenol-d5	30%		10-110%
118-79-6	2,4,6-Tribromophenol	90%		39-149%
4165-60-0	Nitrobenzene-d5	87%		32-128%
321-60-8	2-Fluorobiphenyl	95%		35-119%
1718-51-0	Terphenyl-d14	108%		10-126%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-03		
Lab Sample ID:	JC38633-3A	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8151 SW846 8151/3510C	**Percent Solids:**	96.7
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G106943.D	1	03/13/17	VDT	03/11/17	OP1072	G3G3736
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Herbicide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND	D016	10	0.0050	0.0039	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.0015	0.00047	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	98%		50-142%
19719-28-9	2,4-DCAA	86%		50-142%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-03		
Lab Sample ID:	JC38633-3A	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	96.7
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	8G3742.D	1	03/13/17	RK	03/12/17	OP1074	G8G110
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Pesticide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	D013	0.40	0.00010	0.000028	mg/l	
12789-03-6	Chlordane	ND	D020	0.030	0.0050	0.0011	mg/l	
72-20-8	Endrin	ND	D012	0.020	0.00010	0.000050	mg/l	
76-44-8	Heptachlor	ND	D031	0.0080	0.00010	0.000038	mg/l	
1024-57-3	Heptachlor epoxide	ND	D031	0.0080	0.00010	0.000065	mg/l	
72-43-5	Methoxychlor	ND	D014	10	0.00020	0.000057	mg/l	
8001-35-2	Toxaphene	ND	D015	0.50	0.0025	0.0018	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	77%		30-137%
877-09-8	Tetrachloro-m-xylene	82%		30-137%
2051-24-3	Decachlorobiphenyl	81%		10-137%
2051-24-3	Decachlorobiphenyl	81%		10-137%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-03		
Lab Sample ID:	JC38633-3A	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	96.7
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 0.50	D004	5.0	0.50	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Barium	< 1.0	D005	100	1.0	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 0.025	D006	1.0	0.025	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 0.050	D007	5.0	0.050	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Lead	< 0.50	D008	5.0	0.50	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	03/13/17	03/13/17	JPM	SW846 7470A [1]	SW846 7470A [4]
Selenium	< 0.50	D010	1.0	0.50	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Silver	< 0.050	D011	5.0	0.050	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA41553
(2) Instrument QC Batch: MA41554
(3) Prep QC Batch: MP99157
(4) Prep QC Batch: MP99205

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID:	2ND-SB-03		
Lab Sample ID:	JC38633-3A	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	96.7
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Corrosivity as pH	10.47 NC		su	1	03/11/17 11:00	AT	SW846 9045D
Cyanide Reactivity	< 10	10	mg/kg	1	03/13/17 16:01	YZ	SW846 CHAP7/9012 B
Ignitability (Flashpoint)	> 200		Deg. F	1	03/11/17 15:00	AT	SW846 1010A/ASTM D93
Sulfide Reactivity	< 100	100	mg/kg	1	03/13/17 01:33	MP	SW846 CHAP7/9034

RL = Reporting Limit

Report of Analysis

Client Sample ID:	2ND-SB-04		
Lab Sample ID:	JC38633-4	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8260C	**Percent Solids:**	87.3
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C216908.D	1	03/13/17	SY	n/a	n/a	VC7988
Run #2							

	Initial Weight
Run #1	6.1 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0095	0.0094	0.0047	mg/kg	
71-43-2	Benzene	ND	0.00047	0.00011	mg/kg	
74-97-5	Bromochloromethane	ND	0.0047	0.00030	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0019	0.00014	mg/kg	
75-25-2	Bromoform	ND	0.0047	0.00025	mg/kg	
74-83-9	Bromomethane	ND	0.0047	0.00046	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.0094	0.0017	mg/kg	
75-15-0	Carbon disulfide	ND	0.0019	0.00016	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0019	0.00016	mg/kg	
108-90-7	Chlorobenzene	ND	0.0019	0.00015	mg/kg	
75-00-3	Chloroethane	ND	0.0047	0.00040	mg/kg	
67-66-3	Chloroform	ND	0.0019	0.00022	mg/kg	
74-87-3	Chloromethane	ND	0.0047	0.00020	mg/kg	
110-82-7	Cyclohexane	ND	0.0019	0.00051	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0019	0.00045	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0019	0.00014	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.00094	0.00023	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.00094	0.00016	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.00094	0.00013	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.00094	0.00014	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0047	0.00051	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.00094	0.00018	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.00094	0.00016	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.00094	0.00014	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.00094	0.00041	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.00094	0.00015	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0019	0.00029	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0019	0.00018	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0019	0.00021	mg/kg	
100-41-4	Ethylbenzene	ND	0.00094	0.00014	mg/kg	
76-13-1	Freon 113	ND	0.0047	0.00045	mg/kg	
591-78-6	2-Hexanone	ND	0.0047	0.0013	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-04		
Lab Sample ID:	JC38633-4	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8260C	**Percent Solids:**	87.3
Project:	LIRR Expansion, Long Island, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	0.0019	0.00014	mg/kg	
79-20-9	Methyl Acetate	ND	0.0047	0.0019	mg/kg	
108-87-2	Methylcyclohexane	ND	0.0019	0.00047	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.00094	0.00025	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0047	0.00080	mg/kg	
75-09-2	Methylene chloride	ND	0.0047	0.00094	mg/kg	
100-42-5	Styrene	ND	0.0019	0.00014	mg/kg	
75-65-0	Tert Butyl Alcohol	ND	0.023	0.0029	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0019	0.00022	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0019	0.00026	mg/kg	
108-88-3	Toluene	ND	0.00094	0.00012	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0047	0.00047	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0047	0.00047	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0019	0.00016	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0019	0.00030	mg/kg	
79-01-6	Trichloroethene	ND	0.00094	0.00018	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0047	0.00059	mg/kg	
75-01-4	Vinyl chloride	ND	0.0019	0.00019	mg/kg	
	m,p-Xylene	ND	0.00094	0.00021	mg/kg	
95-47-6	o-Xylene	ND	0.00094	0.00019	mg/kg	
1330-20-7	Xylene (total)	ND	0.00094	0.00019	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		70-122%
17060-07-0	1,2-Dichloroethane-D4	97%		68-124%
2037-26-5	Toluene-D8	98%		77-125%
460-00-4	4-Bromofluorobenzene	103%		72-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-04		
Lab Sample ID:	JC38633-4	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	87.3
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5P36332.D	1	03/11/17	CS	03/10/17	OP1064	E5P1820
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	0.076	0.019	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.19	0.023	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.19	0.032	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.19	0.068	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	0.19	0.14	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.19	0.041	mg/kg	
95-48-7	2-Methylphenol	ND	0.076	0.024	mg/kg	
	3&4-Methylphenol	ND	0.076	0.031	mg/kg	
88-75-5	2-Nitrophenol	ND	0.19	0.025	mg/kg	
100-02-7	4-Nitrophenol	ND	0.38	0.10	mg/kg	
87-86-5	Pentachlorophenol	ND	0.15	0.036	mg/kg	
108-95-2	Phenol	ND	0.076	0.020	mg/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.19	0.025	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.19	0.028	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.19	0.023	mg/kg	
83-32-9	Acenaphthene	ND	0.038	0.013	mg/kg	
208-96-8	Acenaphthylene	ND	0.038	0.019	mg/kg	
98-86-2	Acetophenone	ND	0.19	0.0082	mg/kg	
120-12-7	Anthracene	0.0261	0.038	0.023	mg/kg	J
1912-24-9	Atrazine	ND	0.076	0.016	mg/kg	
56-55-3	Benzo(a)anthracene	0.0838	0.038	0.011	mg/kg	
50-32-8	Benzo(a)pyrene	0.0750	0.038	0.017	mg/kg	
205-99-2	Benzo(b)fluoranthene	0.0953	0.038	0.017	mg/kg	
191-24-2	Benzo(g,h,i)perylene	0.0552	0.038	0.019	mg/kg	
207-08-9	Benzo(k)fluoranthene	0.0333	0.038	0.018	mg/kg	J
101-55-3	4-Bromophenyl phenyl ether	ND	0.076	0.015	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.076	0.0093	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.076	0.0052	mg/kg	
100-52-7	Benzaldehyde	ND	0.19	0.0094	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.076	0.0090	mg/kg	
106-47-8	4-Chloroaniline	ND	0.19	0.014	mg/kg	
86-74-8	Carbazole	ND	0.076	0.0055	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-04		
Lab Sample ID:	JC38633-4	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	87.3
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	0.076	0.015	mg/kg	
218-01-9	Chrysene	0.0852	0.038	0.012	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.076	0.0081	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.076	0.016	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.076	0.014	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.076	0.012	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.038	0.012	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.038	0.019	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.076	0.032	mg/kg	
123-91-1	1,4-Dioxane	ND	0.038	0.025	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.038	0.017	mg/kg	
132-64-9	Dibenzofuran	ND	0.076	0.015	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.076	0.0062	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.076	0.0094	mg/kg	
84-66-2	Diethyl phthalate	ND	0.076	0.0081	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.076	0.0068	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.076	0.0089	mg/kg	
206-44-0	Fluoranthene	0.155	0.038	0.017	mg/kg	
86-73-7	Fluorene	ND	0.038	0.017	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.076	0.0096	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.038	0.015	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.38	0.015	mg/kg	
67-72-1	Hexachloroethane	ND	0.19	0.019	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	0.0625	0.038	0.018	mg/kg	
78-59-1	Isophorone	ND	0.076	0.0081	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.076	0.0086	mg/kg	
88-74-4	2-Nitroaniline	ND	0.19	0.0090	mg/kg	
99-09-2	3-Nitroaniline	ND	0.19	0.0095	mg/kg	
100-01-6	4-Nitroaniline	ND	0.19	0.0098	mg/kg	
91-20-3	Naphthalene	ND	0.038	0.011	mg/kg	
98-95-3	Nitrobenzene	ND	0.076	0.015	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.076	0.011	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.19	0.014	mg/kg	
85-01-8	Phenanthrene	0.107	0.038	0.013	mg/kg	
129-00-0	Pyrene	0.132	0.038	0.012	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.19	0.0096	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	73%		23-115%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-04		
Lab Sample ID:	JC38633-4	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	87.3
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	73%		27-114%
118-79-6	2,4,6-Tribromophenol	83%		19-152%
4165-60-0	Nitrobenzene-d5	75%		26-134%
321-60-8	2-Fluorobiphenyl	87%		39-124%
1718-51-0	Terphenyl-d14	85%		36-134%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-04		
Lab Sample ID:	JC38633-4	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8151 SW846 8151/3550C	**Percent Solids:**	87.3
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OA124469.D	1	03/18/17	VDT	03/17/17	OP1193	GOA4266
Run #2							

	Initial Weight	Final Volume
Run #1	16.4 g	5.0 ml
Run #2		

Herbicide List

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	0.017	0.0078	mg/kg	
93-72-1	2,4,5-TP (Silvex)	ND	0.0035	0.0013	mg/kg	
93-76-5	2,4,5-T	ND	0.0035	0.0013	mg/kg	
75-99-0	Dalapon	ND	0.0035	0.0024	mg/kg	
1918-00-9	Dicamba	ND	0.0035	0.0018	mg/kg	
120-36-5	Dichloroprop	ND	0.017	0.0049	mg/kg	
88-85-7	Dinoseb	ND	0.017	0.012	mg/kg	
94-74-6	MCPA	ND	1.7	0.40	mg/kg	
93-65-2	MCPP	ND	1.7	0.38	mg/kg	
87-86-5	Pentachlorophenol	ND	0.0017	0.0015	mg/kg	
94-82-6	2,4-DB	ND	0.017	0.0057	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	43%		10-159%
19719-28-9	2,4-DCAA	36%		10-159%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-04		
Lab Sample ID:	JC38633-4	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8081B SW846 3546	**Percent Solids:**	87.3
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G133058.D	1	03/13/17	RK	03/11/17	OP1060	G1G4254
Run #2							

	Initial Weight	Final Volume
Run #1	15.5 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.00074	0.00035	mg/kg	
319-84-6	alpha-BHC	ND	0.00074	0.00040	mg/kg	
319-85-7	beta-BHC	ND	0.00074	0.00046	mg/kg	
319-86-8	delta-BHC	ND	0.00074	0.00033	mg/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.00074	0.00033	mg/kg	
5103-71-9	alpha-Chlordane	ND	0.00074	0.00035	mg/kg	
5103-74-2	gamma-Chlordane	ND	0.00074	0.00033	mg/kg	
60-57-1	Dieldrin	ND	0.00074	0.00037	mg/kg	
72-54-8	4,4'-DDD	ND	0.00074	0.00047	mg/kg	
72-55-9	4,4'-DDE	ND	0.00074	0.00039	mg/kg	
50-29-3	4,4'-DDT	0.0015	0.00074	0.00044	mg/kg	
72-20-8	Endrin	ND	0.00074	0.00035	mg/kg	
1031-07-8	Endosulfan sulfate	ND	0.00074	0.00030	mg/kg	
7421-93-4	Endrin aldehyde	ND	0.00074	0.00044	mg/kg	
959-98-8	Endosulfan-I	ND	0.00074	0.00039	mg/kg	
33213-65-9	Endosulfan-II	ND	0.00074	0.00039	mg/kg	
76-44-8	Heptachlor	ND	0.00074	0.00036	mg/kg	
1024-57-3	Heptachlor epoxide	ND	0.00074	0.00040	mg/kg	
72-43-5	Methoxychlor	ND	0.0015	0.00037	mg/kg	
53494-70-5	Endrin ketone	ND	0.00074	0.00057	mg/kg	
8001-35-2	Toxaphene	ND	0.018	0.0077	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	67%		25-135%
877-09-8	Tetrachloro-m-xylene	75%		25-135%
2051-24-3	Decachlorobiphenyl	46%		10-156%
2051-24-3	Decachlorobiphenyl	61%		10-156%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-04		
Lab Sample ID:	JC38633-4	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8082A SW846 3546	**Percent Solids:**	87.3
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX206419.D	1	03/13/17	HB	03/11/17	OP1061	GXX5965
Run #2							

	Initial Weight	Final Volume
Run #1	15.5 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.037	0.018	mg/kg	
11104-28-2	Aroclor 1221	ND	0.037	0.018	mg/kg	
11141-16-5	Aroclor 1232	ND	0.037	0.015	mg/kg	
53469-21-9	Aroclor 1242	ND	0.037	0.013	mg/kg	
12672-29-6	Aroclor 1248	ND	0.037	0.023	mg/kg	
11097-69-1	Aroclor 1254	ND	0.037	0.018	mg/kg	
11096-82-5	Aroclor 1260	ND	0.037	0.016	mg/kg	
11100-14-4	Aroclor 1268	ND	0.037	0.013	mg/kg	
37324-23-5	Aroclor 1262	ND	0.037	0.025	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	84%		24-152%
877-09-8	Tetrachloro-m-xylene	93%		24-152%
2051-24-3	Decachlorobiphenyl	59%		10-166%
2051-24-3	Decachlorobiphenyl	92%		10-166%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-04		
Lab Sample ID:	JC38633-4	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	87.3
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	5380	57	mg/kg	1	03/11/17	03/13/17	GT	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 2.3	2.3	mg/kg	1	03/11/17	03/13/17	GT	SW846 6010C [2]	SW846 3050B [3]
Arsenic	26.8	2.3	mg/kg	1	03/11/17	03/13/17	GT	SW846 6010C [2]	SW846 3050B [3]
Barium	47.3	23	mg/kg	1	03/11/17	03/13/17	GT	SW846 6010C [2]	SW846 3050B [3]
Beryllium	0.34	0.23	mg/kg	1	03/11/17	03/13/17	GT	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.57	0.57	mg/kg	1	03/11/17	03/13/17	GT	SW846 6010C [2]	SW846 3050B [3]
Calcium	1530	570	mg/kg	1	03/11/17	03/13/17	GT	SW846 6010C [2]	SW846 3050B [3]
Chromium	16.8	1.1	mg/kg	1	03/11/17	03/13/17	GT	SW846 6010C [2]	SW846 3050B [3]
Cobalt	9.4	5.7	mg/kg	1	03/11/17	03/13/17	GT	SW846 6010C [2]	SW846 3050B [3]
Copper	16.3	2.8	mg/kg	1	03/11/17	03/13/17	GT	SW846 6010C [2]	SW846 3050B [3]
Iron	19300	57	mg/kg	1	03/11/17	03/13/17	GT	SW846 6010C [2]	SW846 3050B [3]
Lead	17.6	2.3	mg/kg	1	03/11/17	03/13/17	GT	SW846 6010C [2]	SW846 3050B [3]
Magnesium	1220	570	mg/kg	1	03/11/17	03/13/17	GT	SW846 6010C [2]	SW846 3050B [3]
Manganese	827	1.7	mg/kg	1	03/11/17	03/13/17	GT	SW846 6010C [2]	SW846 3050B [3]
Mercury	0.092	0.036	mg/kg	1	03/11/17	03/11/17	JA	SW846 7471B [1]	SW846 7471B [4]
Nickel	16.0	4.5	mg/kg	1	03/11/17	03/13/17	GT	SW846 6010C [2]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	03/11/17	03/13/17	GT	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 2.3	2.3	mg/kg	1	03/11/17	03/13/17	GT	SW846 6010C [2]	SW846 3050B [3]
Silver	< 0.57	0.57	mg/kg	1	03/11/17	03/13/17	GT	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	03/11/17	03/13/17	GT	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	03/11/17	03/13/17	GT	SW846 6010C [2]	SW846 3050B [3]
Vanadium	16.8	5.7	mg/kg	1	03/11/17	03/13/17	GT	SW846 6010C [2]	SW846 3050B [3]
Zinc	23.7	5.7	mg/kg	1	03/11/17	03/13/17	GT	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA41540
(2) Instrument QC Batch: MA41549
(3) Prep QC Batch: MP99155
(4) Prep QC Batch: MP99158

RL = Reporting Limit

Report of Analysis

Client Sample ID:	2ND-SB-04		
Lab Sample ID:	JC38633-4	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	87.3
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	< 0.27	0.27	mg/kg	1	03/13/17 09:10	YZ	SW846 9012B/LACHAT
Solids, Percent	87.3		%	1	03/10/17 16:30	TZW	SM2540 G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	2ND-SB-04		
Lab Sample ID:	JC38633-4A	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8260C SW846 1311	**Percent Solids:**	87.3
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B149059.D	5	03/13/17	EH	03/10/17	GP3819	V2B6616
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.0025	0.00070	mg/l	
78-93-3	2-Butanone (MEK)	ND	D035	200	0.10	0.0095	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.0050	0.0027	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.0050	0.00087	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.0050	0.0011	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.0050	0.0011	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.0050	0.0020	mg/l	
75-35-4	1,1-Dichloroethene	ND	D029	0.70	0.0050	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	D039	0.70	0.0050	0.0012	mg/l	
79-01-6	Trichloroethene	ND	D040	0.50	0.0050	0.0013	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.0050	0.0016	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	113%		76-120%
17060-07-0	1,2-Dichloroethane-D4	103%		64-135%
2037-26-5	Toluene-D8	100%		76-117%
460-00-4	4-Bromofluorobenzene	96%		72-122%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-04		
Lab Sample ID:	JC38633-4A	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	87.3
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6P35604.D	1	03/13/17	AC	03/12/17	OP1073	E6P1642
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.020	0.0089	mg/l	
	3&4-Methylphenol	ND	D024	200	0.020	0.0088	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.10	0.014	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.013	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0092	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.020	0.0017	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.020	0.0055	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.020	0.0033	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.010	0.0049	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0039	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.020	0.0064	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.020	0.0039	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	43%		14-88%
4165-62-2	Phenol-d5	28%		10-110%
118-79-6	2,4,6-Tribromophenol	86%		39-149%
4165-60-0	Nitrobenzene-d5	82%		32-128%
321-60-8	2-Fluorobiphenyl	88%		35-119%
1718-51-0	Terphenyl-d14	101%		10-126%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-04		
Lab Sample ID:	JC38633-4A	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8151 SW846 8151/3510C	**Percent Solids:**	87.3
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G106944.D	1	03/13/17	VDT	03/11/17	OP1072	G3G3736
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Herbicide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND	D016	10	0.0050	0.0039	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.0015	0.00047	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	106%		50-142%
19719-28-9	2,4-DCAA	90%		50-142%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-04		
Lab Sample ID:	JC38633-4A	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	87.3
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	8G3743.D	1	03/13/17	RK	03/12/17	OP1074	G8G110
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Pesticide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	D013	0.40	0.00010	0.000028	mg/l	
12789-03-6	Chlordane	ND	D020	0.030	0.0050	0.0011	mg/l	
72-20-8	Endrin	ND	D012	0.020	0.00010	0.000050	mg/l	
76-44-8	Heptachlor	ND	D031	0.0080	0.00010	0.000038	mg/l	
1024-57-3	Heptachlor epoxide	ND	D031	0.0080	0.00010	0.000065	mg/l	
72-43-5	Methoxychlor	ND	D014	10	0.00020	0.000057	mg/l	
8001-35-2	Toxaphene	ND	D015	0.50	0.0025	0.0018	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	82%		30-137%
877-09-8	Tetrachloro-m-xylene	86%		30-137%
2051-24-3	Decachlorobiphenyl	88%		10-137%
2051-24-3	Decachlorobiphenyl	88%		10-137%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	2ND-SB-04		
Lab Sample ID:	JC38633-4A	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	87.3
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 0.50	D004	5.0	0.50	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Barium	< 1.0	D005	100	1.0	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 0.025	D006	1.0	0.025	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 0.050	D007	5.0	0.050	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Lead	< 0.50	D008	5.0	0.50	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	03/13/17	03/13/17	JPM	SW846 7470A [1]	SW846 7470A [4]
Selenium	< 0.50	D010	1.0	0.50	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Silver	< 0.050	D011	5.0	0.050	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA41553
(2) Instrument QC Batch: MA41554
(3) Prep QC Batch: MP99157
(4) Prep QC Batch: MP99205

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID:	2ND-SB-04		
Lab Sample ID:	JC38633-4A	**Date Sampled:**	03/09/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	87.3
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Corrosivity as pH	7.87 NC		su	1	03/11/17 11:00	AT	SW846 9045D
Cyanide Reactivity	< 11	11	mg/kg	1	03/13/17 16:02	YZ	SW846 CHAP7/9012 B
Ignitability (Flashpoint)	> 200		Deg. F	1	03/11/17 15:00	AT	SW846 1010A/ASTM D93
Sulfide Reactivity	< 110	110	mg/kg	1	03/13/17 01:33	MP	SW846 CHAP7/9034

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

Parameter Certification Exceptions

Job Number: JC38633
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY

The following parameters included in this report are exceptions to NELAC certification.
The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Cyanide Reactivity		**SW846 CHAP7/9012 B**	SO	Accutest is not certified for this parameter.[a]
Sulfide Reactivity		**SW846 CHAP7/9034**	SO	Accutest is not certified for this parameter.[a]

(a) Reactivity analyzed following SW846 Chapter 7 is no longer recognized by regulatory agencies. Use of results should be verified through the program to which the data is being submitted.

Certification exceptions shown are based on the New Jersey DEP certifications. Applicability in other states may vary. Please contact your laboratory representative if additional information is required for a specific regulatory program.

SGS ACCUTEST SLL

CHAIN OF CUSTODY

SGS Accutest - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

PAGE 1 OF 1

FED-EX Tracking #
Bottle Order Control #
SGS Accutest Quote #
SGS Accutest Job # JC38633

Client / Reporting Information

Company Name: Matrix New World
Street Address: 150 W 30th St
City: NY State: NY Zip: 10001
Project Contact: Brian Crespi bcrespi@matrixnewworld.com
Phone #: 212-324-4251 / 973-240-1010 Fax #:
Sampler(s) Name(s): Lindsey Melichar 201-894-1953 Phone #:

Project Information

Project Name: Long Island Rail Road (LIRR)
Street: 2nd St.
City: Mineola State: NY
Project #: 16-144
Client Purchase Order #:
Project Manager: Brian Crespi
Attention:

Billing Information (If different from Report to)

Company Name:
Street Address:
City State Zip:

Requested Analysis (see TEST CODE sheet)

SGS Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	Ni Water	MEOH	ENCORE	FULTCLP	RCRA	FULTCL/TAL	Herbicide/Pesticide	VOS
1	2nd-SB-01		3/9/17	0740	LM	SO	6					3	2	1		X	X	X	X	X
2	2nd-SB-02		3/9/17	0900	LM	SO	6					3	2	1		X	X	X	X	X
3	2nd-SB-03		3/9/17	0955	LM	SO	6					3	2	1		X	X	X	X	X
4	2nd-SB-04		3/9/17	1055	LM	SO	6					3	2	1		X	X	X	X	X

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

LAB USE ONLY: C36, 814, 1405, 4074

D.I. slurry VOC vials frozen storage
Date: 3/9/17 Time: 2015 Initials:

INITIAL ASESSMENT 3B
LABEL VERIFICATION

Turnaround Time (Business days)

- ☐ Std. 10 Business Days
- ☐ 5 Day RUSH
- ☑ 3 Day RUSH
- ☐ 2 Day RUSH
- ☐ 1 Day RUSH
- ☐ other

Emergency & Rush T/A data available VIA Lablink

Approved by (SGS Accutest PM): / Date:

Data Deliverable Information

- ☐ Commercial "a" (Level 1)
- ☐ Commercial "b" *Level 2)
- ☐ FULLT1 (Level 3+4)
- ☐ NJ Reduced
- ☐ Commercial "C"
- ☐ *NJ Data of Known Quality Protocol Reporting*
- ☑ NYASP Category A
- ☐ NYASP Category B
- ☐ State Forms
- ☐ EDD Format
- ☐ Other

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Samples on ice
Custody Seal #612/614

Sample Custody must be documented below each time samples change possession, including courier delivery.

Sample inventory is verified upon receipt in the Laboratory

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	3/9/17 1500	1	2	3/9/17 1745	2
3		3	4		4
5		5			

Custody Seal # ☐ Intact ☐ Not intact

Preserved where applicable ☐

On Ice ✓ Cooler Temp. 2.5

SM088-01C Rev. Date: 9/13/16

JC38633: Chain of Custody
Page 1 of 4

SGS ACCUTEST

Soil VOC Vial Tracking Log

JOB NUMBER: JC38633

SAMPLE #	MeOH	MeOH	DIH2O / NaHSO4	DIH2O / NaHSO4
1		1004	294	293
2		1001	288	287
3		757	279	280
4		756	278	331

All strike outs must be initialed & dated. A reason code must be applied if not a transcription error.

Form: SM087-01

Rev Date: 6/1/16

JC38633: Chain of Custody

Page 2 of 4

SGS Accutest Sample Receipt Summary

Job Number: JC38633 **Client:** _____ **Project:** _____

Date / Time Received: 3/9/2017 5:15:00 PM **Delivery Method:** _____ **Airbill #'s:** _____

Cooler Temps (Raw Measured) °C: Cooler 1: (2.5);

Cooler Temps (Corrected) °C: Cooler 1: (3.9);

Cooler Security	Y	N		Y	N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:	IR Gun	
3. Cooler media:	Ice (Bag)	
4. No. Coolers:	1	

Quality Control Preservation	Y	N	N/A
1. Trip Blank present / cooler:	☐	☑	☐
2. Trip Blank listed on COC:	☐	☑	☐
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☐	☐	☑

Sample Integrity - Documentation	Y	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

SM089-02
Rev. Date 12/1/16

4.2
4

JC38633: Chain of Custody
Page 3 of 4

Job Change Order: JC38633

Requested Date:	3/17/2017	**Received Date:**	3/9/2017
Account Name:	Matrix New World Engineering, In	**Due Date:**	3/14/2017
Project Description:	LIRR, 2nd, Mineola, NY	**Deliverable:**	NYASPA
CSR:	rocus.peters	**TAT (Days):**	2

==========

Sample #: JC38633-all

Dept:

TAT: 2

Change:
Revise the project to MTXFPNJ71029, LIRR Expansion, Long Island, NY

==========

Above Changes Per: Lindsey Melicharek **Date/Time:** 3/17/2017 12:46:43 PM

To Client: This Change Order is confirmation of the revisions, previously discussed with the SGS Accutest Client Service Representative.

Internal Sample Tracking Chronicle

Matrix New World Engineering, Inc.

Job No: JC38633

LIRR Expansion, Long Island, NY
Project No: 16-144, 2nd Street Parking Lot, 161-163 2nd Street, Mineola

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC38633-1 2ND-SB-01	Collected: 09-MAR-17 07:40 By: LM		Received: 09-MAR-17 By: AS			
JC38633-1	SM2540 G-97	10-MAR-17 16:30	TZW			SOL104
JC38633-1	SW846 8270D	11-MAR-17 04:08	CS	10-MAR-17	NS	AB8270TCL20+
JC38633-1	SW846 7471B	11-MAR-17 09:24	JA	11-MAR-17	JA	HG
JC38633-1	SW846 6010C	12-MAR-17 23:47	GT	11-MAR-17	AA	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC38633-1	SW846 9012B/LACHAT	13-MAR-17 09:03	YZ	11-MAR-17	RP	CN
JC38633-1	SW846 8081B	13-MAR-17 13:44	RK	11-MAR-17	MS	P8081PESTTCL
JC38633-1	SW846 8260C	13-MAR-17 15:37	SY			V8260TCL20
JC38633-1	SW846 8082A	13-MAR-17 20:25	HB	11-MAR-17	MS	P8082PCB11AO
JC38633-1	SW846 8151	18-MAR-17 03:55	VDT	17-MAR-17	AQ	H8151STD
JC38633-2 2ND-SB-02	Collected: 09-MAR-17 09:00 By: LM		Received: 09-MAR-17 By: AS			
JC38633-2	SM2540 G-97	10-MAR-17 16:30	TZW			SOL104
JC38633-2	SW846 8270D	11-MAR-17 07:17	CS	10-MAR-17	NS	AB8270TCL20+
JC38633-2	SW846 7471B	11-MAR-17 09:25	JA	11-MAR-17	JA	HG
JC38633-2	SW846 6010C	12-MAR-17 23:51	GT	11-MAR-17	AA	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC38633-2	SW846 9012B/LACHAT	13-MAR-17 09:05	YZ	11-MAR-17	RP	CN
JC38633-2	SW846 8081B	13-MAR-17 14:00	RK	11-MAR-17	MS	P8081PESTTCL
JC38633-2	SW846 8260C	13-MAR-17 16:05	SY			V8260TCL20
JC38633-2	SW846 8082A	13-MAR-17 20:42	HB	11-MAR-17	MS	P8082PCB11AO
JC38633-2	SW846 8151	18-MAR-17 04:23	VDT	17-MAR-17	AQ	H8151STD
JC38633-3 2ND-SB-03	Collected: 09-MAR-17 09:55 By: LM		Received: 09-MAR-17 By: AS			
JC38633-3	SM2540 G-97	10-MAR-17 16:30	TZW			SOL104
JC38633-3	SW846 8270D	11-MAR-17 07:40	CS	10-MAR-17	NS	AB8270TCL20+
JC38633-3	SW846 7471B	11-MAR-17 09:27	JA	11-MAR-17	JA	HG
JC38633-3	SW846 6010C	12-MAR-17 23:56	GT	11-MAR-17	AA	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC38633-3	SW846 9012B/LACHAT	13-MAR-17 09:06	YZ	11-MAR-17	RP	CN

Internal Sample Tracking Chronicle

Matrix New World Engineering, Inc.

Job No: JC38633

LIRR Expansion, Long Island, NY
Project No: 16-144, 2nd Street Parking Lot, 161-163 2nd Street, Mineola

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC38633-3	SW846 8081B	13-MAR-17 14:17	RK	11-MAR-17	MS	P8081PESTTCL
JC38633-3	SW846 8260C	13-MAR-17 16:33	SY			V8260TCL20
JC38633-3	SW846 8082A	13-MAR-17 20:58	HB	11-MAR-17	MS	P8082PCB11AO
JC38633-3	SW846 8151	18-MAR-17 04:51	VDT	17-MAR-17	AQ	H8151STD
JC38633-4	Collected: 09-MAR-17 10:55 By: LM		Received: 09-MAR-17 By: AS			
2ND-SB-04						
JC38633-4	SM2540 G-97	10-MAR-17 16:30	TZW			SOL104
JC38633-4	SW846 8270D	11-MAR-17 08:04	CS	10-MAR-17	NS	AB8270TCL20+
JC38633-4	SW846 7471B	11-MAR-17 09:29	JA	11-MAR-17	JA	HG
JC38633-4	SW846 6010C	13-MAR-17	GT	11-MAR-17	AA	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC38633-4	SW846 9012B/LACHAT	13-MAR-17 09:10	YZ	11-MAR-17	RP	CN
JC38633-4	SW846 8081B	13-MAR-17 14:34	RK	11-MAR-17	MS	P8081PESTTCL
JC38633-4	SW846 8260C	13-MAR-17 17:02	SY			V8260TCL20
JC38633-4	SW846 8082A	13-MAR-17 21:15	HB	11-MAR-17	MS	P8082PCB11AO
JC38633-4	SW846 8151	18-MAR-17 05:19	VDT	17-MAR-17	AQ	H8151STD
JC38633-1A	Collected: 09-MAR-17 07:40 By: LM		Received: 09-MAR-17 By: AS			
2ND-SB-01						
JC38633-1A	SW846 9045D	11-MAR-17 11:00	AT			CORR
JC38633-1A	SW846 1010A/ASTM D93	13-MAR-17 15:00	AT			IGN
JC38633-1A	SW846 CHAP7/9034	13-MAR-17 01:33	MP	13-MAR-17	CD	SREAC
JC38633-1A	SW846 8270D	13-MAR-17 13:04	AC	12-MAR-17	NG	AB8270TCLP
JC38633-1A	SW846 6010C	13-MAR-17 13:14	ND	11-MAR-17	CSF	EAG,EAS,EBA,ECD,ECR,EPB,ESE
JC38633-1A	SW846 7470A	13-MAR-17 14:11	JPM	13-MAR-17	JPM	EHG
JC38633-1A	SW846 CHAP7/9012 B	13-MAR-17 15:56	YZ	13-MAR-17	CD	CREAC
JC38633-1A	SW846 8260C	13-MAR-17 15:57	EH	10-MAR-17	MS	V8260TCLP
JC38633-1A	SW846 8151	13-MAR-17 16:48	VDT	11-MAR-17	NG	H8151TCLP
JC38633-1A	SW846 8081B	13-MAR-17 19:42	RK	12-MAR-17	RC	P8081TCLP
JC38633-2A	Collected: 09-MAR-17 09:00 By: LM		Received: 09-MAR-17 By: AS			
2ND-SB-02						
JC38633-2A	SW846 9045D	11-MAR-17 11:00	AT			CORR
JC38633-2A	SW846 1010A/ASTM D93	13-MAR-17 15:00	AT			IGN
JC38633-2A	SW846 CHAP7/9034	13-MAR-17 01:33	MP	13-MAR-17	CD	SREAC

Internal Sample Tracking Chronicle

Matrix New World Engineering, Inc.

Job No: JC38633

LIRR Expansion, Long Island, NY
Project No: 16-144, 2nd Street Parking Lot, 161-163 2nd Street, Mineola

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC38633-2A	SW846 6010C	13-MAR-17 13:17	ND	11-MAR-17	CSF	EAG,EAS,EBA,ECD,ECR,EPB,ESE
JC38633-2A	SW846 8270D	13-MAR-17 13:27	AC	12-MAR-17	NG	AB8270TCLP
JC38633-2A	SW846 7470A	13-MAR-17 14:12	JPM	13-MAR-17	JPM	EHG
JC38633-2A	SW846 CHAP7/9012 B	13-MAR-17 15:57	YZ	13-MAR-17	CD	CREAC
JC38633-2A	SW846 8260C	13-MAR-17 16:27	EH	10-MAR-17	MS	V8260TCLP
JC38633-2A	SW846 8151	13-MAR-17 17:16	VDT	11-MAR-17	NG	H8151TCLP
JC38633-2A	SW846 8081B	13-MAR-17 19:57	RK	12-MAR-17	RC	P8081TCLP
JC38633-3A	Collected: 09-MAR-17 09:55 By: LM		Received: 09-MAR-17 By: AS			
2ND-SB-03						
JC38633-3A	SW846 9045D	11-MAR-17 11:00	AT			CORR
JC38633-3A	SW846 1010A/ASTM D93	13-MAR-17 15:00	AT			IGN
JC38633-3A	SW846 CHAP7/9034	13-MAR-17 01:33	MP	13-MAR-17	CD	SREAC
JC38633-3A	SW846 6010C	13-MAR-17 13:20	ND	11-MAR-17	CSF	EAG,EAS,EBA,ECD,ECR,EPB,ESE
JC38633-3A	SW846 8270D	13-MAR-17 13:50	AC	12-MAR-17	NG	AB8270TCLP
JC38633-3A	SW846 7470A	13-MAR-17 14:14	JPM	13-MAR-17	JPM	EHG
JC38633-3A	SW846 CHAP7/9012 B	13-MAR-17 16:01	YZ	13-MAR-17	CD	CREAC
JC38633-3A	SW846 8260C	13-MAR-17 16:58	EH	10-MAR-17	MS	V8260TCLP
JC38633-3A	SW846 8151	13-MAR-17 17:45	VDT	11-MAR-17	NG	H8151TCLP
JC38633-3A	SW846 8081B	13-MAR-17 20:12	RK	12-MAR-17	RC	P8081TCLP
JC38633-4A	Collected: 09-MAR-17 10:55 By: LM		Received: 09-MAR-17 By: AS			
2ND-SB-04						
JC38633-4A	SW846 9045D	11-MAR-17 11:00	AT			CORR
JC38633-4A	SW846 1010A/ASTM D93	13-MAR-17 15:00	AT			IGN
JC38633-4A	SW846 CHAP7/9034	13-MAR-17 01:33	MP	13-MAR-17	CD	SREAC
JC38633-4A	SW846 6010C	13-MAR-17 13:24	ND	11-MAR-17	CSF	EAG,EAS,EBA,ECD,ECR,EPB,ESE
JC38633-4A	SW846 8270D	13-MAR-17 14:13	AC	12-MAR-17	NG	AB8270TCLP
JC38633-4A	SW846 7470A	13-MAR-17 14:15	JPM	13-MAR-17	JPM	EHG
JC38633-4A	SW846 CHAP7/9012 B	13-MAR-17 16:02	YZ	13-MAR-17	CD	CREAC
JC38633-4A	SW846 8260C	13-MAR-17 17:29	EH	10-MAR-17	MS	V8260TCLP
JC38633-4A	SW846 8151	13-MAR-17 18:13	VDT	11-MAR-17	NG	H8151TCLP
JC38633-4A	SW846 8081B	13-MAR-17 20:27	RK	12-MAR-17	RC	P8081TCLP

SGS Accutest Internal Chain of Custody

Job Number: JC38633
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/09/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38633-1.1	Secured Storage	Mark Setaro	03/09/17 20:14	Retrieve from Storage
JC38633-1.1	Mark Setaro	Secured Storage	03/09/17 20:15	Return to Storage
JC38633-1.1	Secured Storage	Todd Shoemaker	03/10/17 13:16	Retrieve from Storage
JC38633-1.1	Todd Shoemaker	Secured Staging Area	03/10/17 13:17	Return to Storage
JC38633-1.1	Secured Staging Area	Todd Shoemaker	03/10/17 13:18	Retrieve from Storage
JC38633-1.1	Todd Shoemaker	Secured Storage	03/10/17 13:18	Return to Storage
JC38633-1.1	Secured Storage	Todd Shoemaker	03/10/17 14:34	Retrieve from Storage
JC38633-1.1	Todd Shoemaker	Secured Staging Area	03/10/17 14:35	Return to Storage
JC38633-1.1	Secured Staging Area	Luis Villanueva	03/10/17 16:16	Retrieve from Storage
JC38633-1.1	Luis Villanueva	Secured Storage	03/10/17 16:36	Return to Storage
JC38633-1.1	Secured Storage	Edwin Gonzalez	03/10/17 18:19	Retrieve from Storage
JC38633-1.1	Edwin Gonzalez	Secured Staging Area	03/10/17 18:19	Return to Storage
JC38633-1.1	Secured Staging Area	Amir Takla	03/11/17 06:13	Retrieve from Storage
JC38633-1.1	Amir Takla	Secured Storage	03/11/17 14:15	Return to Storage
JC38633-1.1	Secured Storage	Luis Villanueva	03/11/17 15:10	Retrieve from Storage
JC38633-1.1	Luis Villanueva	Secured Staging Area	03/11/17 15:10	Return to Storage
JC38633-1.1	Secured Staging Area	Courtney Dringus	03/13/17 07:30	Retrieve from Storage
JC38633-1.1	Courtney Dringus	Secured Storage	03/13/17 12:45	Return to Storage
JC38633-1.1	Secured Storage	Stephen Seuling	03/15/17 08:07	Retrieve from Storage
JC38633-1.1	Stephen Seuling	Albert Quayson	03/15/17 08:30	Custody Transfer
JC38633-1.1	Albert Quayson	Stephen Seuling	03/15/17 13:01	Custody Transfer
JC38633-1.1	Stephen Seuling	Mahendra Patel	03/15/17 13:05	Custody Transfer
JC38633-1.1	Mahendra Patel	Stephen Seuling	03/15/17 13:08	Custody Transfer
JC38633-1.1	Stephen Seuling	Secured Storage	03/15/17 13:09	Return to Storage
JC38633-1.1	Secured Storage	Sahara Feliciano	03/16/17 17:12	Retrieve from Storage
JC38633-1.1	Sahara Feliciano	Secured Staging Area	03/16/17 17:12	Return to Storage
JC38633-1.1	Secured Staging Area	Autumn Yun	03/16/17 18:13	Retrieve from Storage
JC38633-1.1	Autumn Yun	Secured Storage	03/16/17 20:56	Return to Storage
JC38633-1.1.1	Mark Setaro	TCLP	03/09/17 20:14	Leachate from JC38633-1.1
JC38633-1.1.1	TCLP	Mark Setaro	03/09/17 20:15	Leachate from JC38633-1.1
JC38633-1.1.1	Mark Setaro	Secured Storage	03/09/17 20:15	Return to Storage
JC38633-1.1.1	Secured Storage	Vikas Parikh	03/11/17 07:51	Retrieve from Storage
JC38633-1.1.1	Vikas Parikh	Secured Storage	03/11/17 15:54	Return to Storage
JC38633-1.1.1	Secured Storage	Nicholas Goydish	03/12/17 07:58	Retrieve from Storage
JC38633-1.1.1	Nicholas Goydish	Secured Storage	03/12/17 16:57	Return to Storage
JC38633-1.1.2	TCLP	Mark Setaro	03/09/17 20:15	Leachate from JC38633-1.1
JC38633-1.1.2	Mark Setaro	Secured Storage	03/09/17 20:15	Return to Storage
JC38633-1.1.2	Secured Storage	Ariel Alcala	03/11/17 09:02	Retrieve from Storage
JC38633-1.1.2	Ariel Alcala	Secured Storage	03/11/17 11:15	Return to Storage
JC38633-1.1.3	Vikas Parikh	Organics Prep	03/11/17 08:25	Extract from JC38633-1.1.1
JC38633-1.1.3	Organics Prep	Nicholas Goydish	03/12/17 15:54	Extract from JC38633-1.1.1

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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38633-1.1.3	Nicholas Goydish	Extract Storage	03/12/17 15:54	Return to Storage
JC38633-1.1.3	Extract Storage	Vincent Drago	03/13/17 11:57	Retrieve from Storage
JC38633-1.1.3	Vincent Drago	GC3G	03/13/17 11:57	Load on Instrument
JC38633-1.1.3	GC3G	Vincent Drago	03/16/17 09:49	Unload from Instrument
JC38633-1.1.3	Vincent Drago	Extract Freezer	03/16/17 09:49	Return to Storage
JC38633-1.1.4	Ariel Alcala	Metals Digestion	03/11/17 11:14	Digestate from JC38633-1.1.2
JC38633-1.1.4	Metals Digestion	Ariel Alcala	03/11/17 11:14	Digestate from JC38633-1.1.2
JC38633-1.1.4	Ariel Alcala	Metals Digestate Storage	03/11/17 11:14	Return to Storage
JC38633-1.1.5	Nicholas Goydish	Organics Prep	03/12/17 08:00	Extract from JC38633-1.1.1
JC38633-1.1.5	Organics Prep	Ryan Callaghan	03/12/17 19:10	Extract from JC38633-1.1.1
JC38633-1.1.5	Ryan Callaghan	Extract Storage	03/12/17 19:10	Return to Storage
JC38633-1.1.5	Extract Storage	Christine Phillips	03/13/17 16:56	Retrieve from Storage
JC38633-1.1.5	Christine Phillips	GC8G	03/13/17 16:56	Load on Instrument
JC38633-1.1.6	Nicholas Goydish	Organics Prep	03/12/17 08:11	Extract from JC38633-1.1.1
JC38633-1.1.6	Organics Prep	Nicholas Goydish	03/12/17 16:55	Extract from JC38633-1.1.1
JC38633-1.1.6	Nicholas Goydish	Extract Storage	03/12/17 16:55	Return to Storage
JC38633-1.1.6	Extract Storage	Arielle Cocozza	03/13/17 07:51	Retrieve from Storage
JC38633-1.1.6	Arielle Cocozza	GCMSZ	03/13/17 07:51	Load on Instrument
JC38633-1.1.6	GCMSZ	Arielle Cocozza	03/22/17 10:52	Unload from Instrument
JC38633-1.1.6	Arielle Cocozza	Extract Freezer	03/22/17 10:52	Return to Storage
JC38633-1.1.7	Albert Quayson	Organics Prep	03/15/17 08:34	Extract from JC38633-1.1
JC38633-1.1.7	Organics Prep	Ryan Fantasia	03/15/17 23:11	Extract from JC38633-1.1
JC38633-1.1.7	Ryan Fantasia	Extract Storage	03/15/17 23:11	Return to Storage
JC38633-1.1.8	Autumn Yun	Organics Prep	03/16/17 18:14	Extract from JC38633-1.1
JC38633-1.1.8	Organics Prep	Albert Quayson	03/17/17 13:20	Extract from JC38633-1.1
JC38633-1.1.8	Albert Quayson	Extract Storage	03/17/17 13:20	Return to Storage
JC38633-1.1.8	Extract Storage	Vincent Drago	03/17/17 18:00	Retrieve from Storage
JC38633-1.1.8	Vincent Drago	GCOA	03/17/17 18:00	Load on Instrument
JC38633-1.1.8	GCOA	Rebecca Krug	03/23/17 16:47	Unload from Instrument
JC38633-1.1.8	Rebecca Krug	Extract Freezer	03/23/17 16:47	Return to Storage
JC38633-1.2	Secured Storage	Martin Serwatka	03/10/17 11:35	Retrieve from Storage
JC38633-1.2	Martin Serwatka	Secured Storage	03/10/17 13:26	Return to Storage
JC38633-1.2	Secured Storage	Max Ponce	03/10/17 16:52	Retrieve from Storage
JC38633-1.2	Max Ponce	Secured Storage	03/10/17 18:56	Return to Storage
JC38633-1.2	Secured Storage	Sauvelson Auguste	03/11/17 06:20	Retrieve from Storage
JC38633-1.2	Sauvelson Auguste	Stephen Seuling	03/11/17 06:35	Custody Transfer
JC38633-1.2	Stephen Seuling	Rinku Patel	03/11/17 09:45	Custody Transfer
JC38633-1.2	Rinku Patel	Secured Storage	03/11/17 16:25	Return to Storage

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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38633-1.2.1	Max Ponce	Organics Prep	03/10/17 16:52	Extract from JC38633-1.2
JC38633-1.2.1	Organics Prep	Natalie Scanlan	03/10/17 21:53	Extract from JC38633-1.2
JC38633-1.2.1	Natalie Scanlan	Extract Storage	03/10/17 21:53	Return to Storage
JC38633-1.2.1	Extract Storage	Christopher Sowa	03/11/17 01:52	Retrieve from Storage
JC38633-1.2.1	Christopher Sowa	GCMS5P	03/11/17 01:52	Load on Instrument
JC38633-1.2.1	GCMS5P	Ashley Noble	03/12/17 13:06	Unload from Instrument
JC38633-1.2.1	Ashley Noble	Extract Freezer	03/12/17 13:06	Return to Storage
JC38633-1.2.2	Stephen Seuling	Organics Prep	03/11/17 06:44	Extract from JC38633-1.2
JC38633-1.2.2	Organics Prep	Matthew Stoecklin	03/11/17 16:00	Extract from JC38633-1.2
JC38633-1.2.2	Matthew Stoecklin	Extract Storage	03/11/17 16:00	Return to Storage
JC38633-1.2.2	Extract Storage	Christine Phillips	03/13/17 10:05	Retrieve from Storage
JC38633-1.2.2	Christine Phillips	GC1G	03/13/17 10:05	Load on Instrument
JC38633-1.2.2	GC1G	Rebecca Krug	03/13/17 16:17	Unload from Instrument
JC38633-1.2.2	Rebecca Krug	Extract Freezer	03/13/17 16:18	Return to Storage
JC38633-1.2.3	Stephen Seuling	Organics Prep	03/11/17 06:46	Extract from JC38633-1.2
JC38633-1.2.3	Organics Prep	Matthew Stoecklin	03/11/17 16:00	Extract from JC38633-1.2
JC38633-1.2.3	Matthew Stoecklin	Extract Storage	03/11/17 16:00	Return to Storage
JC38633-1.2.3	Extract Storage	Humarah Bano	03/13/17 16:53	Retrieve from Storage
JC38633-1.2.3	Humarah Bano	GCXX	03/13/17 16:53	Load on Instrument
JC38633-1.2.3	GCXX	Humarah Bano	03/17/17 12:16	Unload from Instrument
JC38633-1.2.3	Humarah Bano	Extract Freezer	03/17/17 12:16	Return to Storage
JC38633-1.3	Secured Storage	Todd Shoemaker	03/10/17 13:25	Retrieve from Storage
JC38633-1.3	Todd Shoemaker	Secured Staging Area	03/10/17 13:25	Return to Storage
JC38633-1.3	Secured Staging Area	Mark Setaro	03/10/17 14:10	Retrieve from Storage
JC38633-1.3	Mark Setaro	Secured Storage	03/10/17 15:55	Return to Storage
JC38633-1.3	Secured Storage	Edwin Gonzalez	03/10/17 18:27	Retrieve from Storage
JC38633-1.3	Edwin Gonzalez	Secured Staging Area	03/10/17 18:27	Return to Storage
JC38633-1.3	Secured Staging Area	Ariel Alcala	03/11/17 07:12	Retrieve from Storage
JC38633-1.3	Ariel Alcala	Secured Storage	03/11/17 11:15	Return to Storage
JC38633-1.3.1	Mark Setaro	TCLP	03/10/17 14:10	Leachate from JC38633-1.3
JC38633-1.3.1	TCLP	Minhaj Hashmi	03/11/17 08:34	Leachate from JC38633-1.3
JC38633-1.3.1	Minhaj Hashmi	Secured Storage	03/11/17 08:43	Return to Storage
JC38633-1.3.2	TCLP	Minhaj Hashmi	03/11/17 08:34	Leachate from JC38633-1.3
JC38633-1.3.2	Minhaj Hashmi	Secured Storage	03/11/17 08:43	Return to Storage
JC38633-1.3.2	Secured Storage	Eddie Huang	03/13/17 15:22	Retrieve from Storage
JC38633-1.3.2	Eddie Huang	GCMS2B	03/13/17 15:22	Load on Instrument
JC38633-1.3.2	GCMS2B	Eddie Huang	03/15/17 08:23	Unload from Instrument
JC38633-1.3.2	Eddie Huang	Secured Storage	03/15/17 08:23	Return to Storage

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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38633-1.3.3	Ariel Alcala	Metals Digestion	03/11/17 11:11	Digestate from JC38633-1.3
JC38633-1.3.3	Metals Digestion	Ariel Alcala	03/11/17 11:12	Digestate from JC38633-1.3
JC38633-1.3.3	Ariel Alcala	Metals Digestate Storage	03/11/17 11:12	Return to Storage
JC38633-1.5	Secured Storage	Prashant Shukla	03/13/17 13:42	Retrieve from Storage
JC38633-1.5	Prashant Shukla	GCMSC	03/13/17 13:42	Load on Instrument
JC38633-1.5	GCMSC	Sushila Yadav	03/15/17 10:15	Unload from Instrument
JC38633-1.5	Sushila Yadav		03/15/17 10:15	Depleted
JC38633-2.1	Secured Storage	Mark Setaro	03/09/17 20:14	Retrieve from Storage
JC38633-2.1	Mark Setaro	Secured Storage	03/09/17 20:15	Return to Storage
JC38633-2.1	Secured Storage	Todd Shoemaker	03/10/17 13:16	Retrieve from Storage
JC38633-2.1	Todd Shoemaker	Secured Staging Area	03/10/17 13:17	Return to Storage
JC38633-2.1	Secured Staging Area	Todd Shoemaker	03/10/17 13:18	Retrieve from Storage
JC38633-2.1	Todd Shoemaker	Secured Storage	03/10/17 13:18	Return to Storage
JC38633-2.1	Secured Storage	Todd Shoemaker	03/10/17 14:34	Retrieve from Storage
JC38633-2.1	Todd Shoemaker	Secured Staging Area	03/10/17 14:35	Return to Storage
JC38633-2.1	Secured Staging Area	Luis Villanueva	03/10/17 16:16	Retrieve from Storage
JC38633-2.1	Luis Villanueva	Secured Storage	03/10/17 16:36	Return to Storage
JC38633-2.1	Secured Storage	Edwin Gonzalez	03/10/17 18:19	Retrieve from Storage
JC38633-2.1	Edwin Gonzalez	Secured Staging Area	03/10/17 18:19	Return to Storage
JC38633-2.1	Secured Staging Area	Amir Takla	03/11/17 06:13	Retrieve from Storage
JC38633-2.1	Amir Takla	Secured Storage	03/11/17 14:15	Return to Storage
JC38633-2.1	Secured Storage	Luis Villanueva	03/11/17 15:10	Retrieve from Storage
JC38633-2.1	Luis Villanueva	Secured Staging Area	03/11/17 15:10	Return to Storage
JC38633-2.1	Secured Staging Area	Courtney Dringus	03/13/17 07:30	Retrieve from Storage
JC38633-2.1	Courtney Dringus	Secured Storage	03/13/17 12:45	Return to Storage
JC38633-2.1	Secured Storage	Stephen Seuling	03/15/17 08:07	Retrieve from Storage
JC38633-2.1	Stephen Seuling	Albert Quayson	03/15/17 08:30	Custody Transfer
JC38633-2.1	Albert Quayson	Stephen Seuling	03/15/17 13:01	Custody Transfer
JC38633-2.1	Stephen Seuling	Mahendra Patel	03/15/17 13:05	Custody Transfer
JC38633-2.1	Mahendra Patel	Stephen Seuling	03/15/17 13:08	Custody Transfer
JC38633-2.1	Stephen Seuling	Secured Storage	03/15/17 13:09	Return to Storage
JC38633-2.1	Secured Storage	Sahara Feliciano	03/16/17 17:12	Retrieve from Storage
JC38633-2.1	Sahara Feliciano	Secured Staging Area	03/16/17 17:12	Return to Storage
JC38633-2.1	Secured Staging Area	Autumn Yun	03/16/17 18:13	Retrieve from Storage
JC38633-2.1	Autumn Yun	Secured Storage	03/16/17 20:56	Return to Storage
JC38633-2.1.1	Mark Setaro	TCLP	03/09/17 20:14	Leachate from JC38633-2.1
JC38633-2.1.1	TCLP	Mark Setaro	03/09/17 20:15	Leachate from JC38633-2.1
JC38633-2.1.1	Mark Setaro	Secured Storage	03/09/17 20:15	Return to Storage
JC38633-2.1.1	Secured Storage	Vikas Parikh	03/11/17 07:51	Retrieve from Storage
JC38633-2.1.1	Vikas Parikh	Secured Storage	03/11/17 15:54	Return to Storage

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JC38633-2.1.1	Secured Storage	Nicholas Goydish	03/12/17 07:58	Retrieve from Storage
JC38633-2.1.1	Nicholas Goydish	Secured Storage	03/12/17 16:57	Return to Storage
JC38633-2.1.2	TCLP	Mark Setaro	03/09/17 20:15	Leachate from JC38633-2.1
JC38633-2.1.2	Mark Setaro	Secured Storage	03/09/17 20:15	Return to Storage
JC38633-2.1.2	Secured Storage	Ariel Alcala	03/11/17 09:02	Retrieve from Storage
JC38633-2.1.2	Ariel Alcala	Secured Storage	03/11/17 11:15	Return to Storage
JC38633-2.1.3	Vikas Parikh	Organics Prep	03/11/17 08:25	Extract from JC38633-2.1.1
JC38633-2.1.3	Organics Prep	Nicholas Goydish	03/12/17 15:54	Extract from JC38633-2.1.1
JC38633-2.1.3	Nicholas Goydish	Extract Storage	03/12/17 15:54	Return to Storage
JC38633-2.1.3	Extract Storage	Vincent Drago	03/13/17 11:57	Retrieve from Storage
JC38633-2.1.3	Vincent Drago	GC3G	03/13/17 11:57	Load on Instrument
JC38633-2.1.3	GC3G	Vincent Drago	03/16/17 09:49	Unload from Instrument
JC38633-2.1.3	Vincent Drago	Extract Freezer	03/16/17 09:49	Return to Storage
JC38633-2.1.4	Ariel Alcala	Metals Digestion	03/11/17 11:14	Digestate from JC38633-2.1.2
JC38633-2.1.4	Metals Digestion	Ariel Alcala	03/11/17 11:14	Digestate from JC38633-2.1.2
JC38633-2.1.4	Ariel Alcala	Metals Digestate Storage	03/11/17 11:14	Return to Storage
JC38633-2.1.5	Nicholas Goydish	Organics Prep	03/12/17 08:00	Extract from JC38633-2.1.1
JC38633-2.1.5	Organics Prep	Ryan Callaghan	03/12/17 19:10	Extract from JC38633-2.1.1
JC38633-2.1.5	Ryan Callaghan	Extract Storage	03/12/17 19:10	Return to Storage
JC38633-2.1.5	Extract Storage	Christine Phillips	03/13/17 16:56	Retrieve from Storage
JC38633-2.1.5	Christine Phillips	GC8G	03/13/17 16:56	Load on Instrument
JC38633-2.1.6	Nicholas Goydish	Organics Prep	03/12/17 08:11	Extract from JC38633-2.1.1
JC38633-2.1.6	Organics Prep	Nicholas Goydish	03/12/17 16:55	Extract from JC38633-2.1.1
JC38633-2.1.6	Nicholas Goydish	Extract Storage	03/12/17 16:55	Return to Storage
JC38633-2.1.6	Extract Storage	Arielle Cocozza	03/13/17 07:51	Retrieve from Storage
JC38633-2.1.6	Arielle Cocozza	GCMSZ	03/13/17 07:51	Load on Instrument
JC38633-2.1.6	GCMSZ	Arielle Cocozza	03/22/17 10:52	Unload from Instrument
JC38633-2.1.6	Arielle Cocozza	Extract Freezer	03/22/17 10:52	Return to Storage
JC38633-2.1.7	Albert Quayson	Organics Prep	03/15/17 08:34	Extract from JC38633-2.1
JC38633-2.1.7	Organics Prep	Ryan Fantasia	03/15/17 23:11	Extract from JC38633-2.1
JC38633-2.1.7	Ryan Fantasia	Extract Storage	03/15/17 23:11	Return to Storage
JC38633-2.1.8	Autumn Yun	Organics Prep	03/16/17 18:14	Extract from JC38633-2.1
JC38633-2.1.8	Organics Prep	Albert Quayson	03/17/17 13:20	Extract from JC38633-2.1
JC38633-2.1.8	Albert Quayson	Extract Storage	03/17/17 13:20	Return to Storage
JC38633-2.1.8	Extract Storage	Vincent Drago	03/17/17 18:00	Retrieve from Storage
JC38633-2.1.8	Vincent Drago	GCOA	03/17/17 18:00	Load on Instrument
JC38633-2.1.8	GCOA	Rebecca Krug	03/23/17 16:47	Unload from Instrument

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JC38633-2.1.8	Rebecca Krug	Extract Freezer	03/23/17 16:47	Return to Storage
JC38633-2.2	Secured Storage	Martin Serwatka	03/10/17 11:35	Retrieve from Storage
JC38633-2.2	Martin Serwatka	Secured Storage	03/10/17 13:26	Return to Storage
JC38633-2.2	Secured Storage	Max Ponce	03/10/17 16:52	Retrieve from Storage
JC38633-2.2	Max Ponce	Secured Storage	03/10/17 18:56	Return to Storage
JC38633-2.2	Secured Storage	Sauvelson Auguste	03/11/17 06:20	Retrieve from Storage
JC38633-2.2	Sauvelson Auguste	Stephen Seuling	03/11/17 06:35	Custody Transfer
JC38633-2.2	Stephen Seuling	Rinku Patel	03/11/17 09:45	Custody Transfer
JC38633-2.2	Rinku Patel	Secured Storage	03/11/17 16:25	Return to Storage
JC38633-2.2.1	Max Ponce	Organics Prep	03/10/17 16:52	Extract from JC38633-2.2
JC38633-2.2.1	Organics Prep	Natalie Scanlan	03/10/17 21:53	Extract from JC38633-2.2
JC38633-2.2.1	Natalie Scanlan	Extract Storage	03/10/17 21:53	Return to Storage
JC38633-2.2.1	Extract Storage	Christopher Sowa	03/11/17 01:52	Retrieve from Storage
JC38633-2.2.1	Christopher Sowa	GCMS5P	03/11/17 01:52	Load on Instrument
JC38633-2.2.1	GCMS5P	Ashley Noble	03/12/17 13:06	Unload from Instrument
JC38633-2.2.1	Ashley Noble	Extract Freezer	03/12/17 13:06	Return to Storage
JC38633-2.2.2	Stephen Seuling	Organics Prep	03/11/17 06:44	Extract from JC38633-2.2
JC38633-2.2.2	Organics Prep	Matthew Stoecklin	03/11/17 16:00	Extract from JC38633-2.2
JC38633-2.2.2	Matthew Stoecklin	Extract Storage	03/11/17 16:00	Return to Storage
JC38633-2.2.2	Extract Storage	Christine Phillips	03/13/17 10:05	Retrieve from Storage
JC38633-2.2.2	Christine Phillips	GC1G	03/13/17 10:05	Load on Instrument
JC38633-2.2.2	GC1G	Rebecca Krug	03/13/17 16:17	Unload from Instrument
JC38633-2.2.2	Rebecca Krug	Extract Freezer	03/13/17 16:18	Return to Storage
JC38633-2.2.3	Stephen Seuling	Organics Prep	03/11/17 06:46	Extract from JC38633-2.2
JC38633-2.2.3	Organics Prep	Matthew Stoecklin	03/11/17 16:00	Extract from JC38633-2.2
JC38633-2.2.3	Matthew Stoecklin	Extract Storage	03/11/17 16:00	Return to Storage
JC38633-2.2.3	Extract Storage	Humarah Bano	03/13/17 16:53	Retrieve from Storage
JC38633-2.2.3	Humarah Bano	GCXX	03/13/17 16:53	Load on Instrument
JC38633-2.2.3	GCXX	Humarah Bano	03/17/17 12:16	Unload from Instrument
JC38633-2.2.3	Humarah Bano	Extract Freezer	03/17/17 12:16	Return to Storage
JC38633-2.3	Secured Storage	Todd Shoemaker	03/10/17 13:25	Retrieve from Storage
JC38633-2.3	Todd Shoemaker	Secured Staging Area	03/10/17 13:25	Return to Storage
JC38633-2.3	Secured Staging Area	Mark Setaro	03/10/17 14:10	Retrieve from Storage
JC38633-2.3	Mark Setaro	Secured Storage	03/10/17 15:55	Return to Storage
JC38633-2.3	Secured Storage	Edwin Gonzalez	03/10/17 18:27	Retrieve from Storage
JC38633-2.3	Edwin Gonzalez	Secured Staging Area	03/10/17 18:27	Return to Storage
JC38633-2.3	Secured Staging Area	Ariel Alcala	03/11/17 07:12	Retrieve from Storage
JC38633-2.3	Ariel Alcala	Secured Storage	03/11/17 11:15	Return to Storage

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JC38633-2.3.1	Mark Setaro	TCLP	03/10/17 14:10	Leachate from JC38633-2.3
JC38633-2.3.1	TCLP	Minhaj Hashmi	03/11/17 08:34	Leachate from JC38633-2.3
JC38633-2.3.1	Minhaj Hashmi	Secured Storage	03/11/17 08:43	Return to Storage
JC38633-2.3.2	TCLP	Minhaj Hashmi	03/11/17 08:34	Leachate from JC38633-2.3
JC38633-2.3.2	Minhaj Hashmi	Secured Storage	03/11/17 08:43	Return to Storage
JC38633-2.3.2	Secured Storage	Eddie Huang	03/13/17 15:22	Retrieve from Storage
JC38633-2.3.2	Eddie Huang	GCMS2B	03/13/17 15:22	Load on Instrument
JC38633-2.3.2	GCMS2B	Eddie Huang	03/15/17 08:23	Unload from Instrument
JC38633-2.3.2	Eddie Huang	Secured Storage	03/15/17 08:23	Return to Storage
JC38633-2.3.3	Ariel Alcala	Metals Digestion	03/11/17 11:11	Digestate from JC38633-2.3
JC38633-2.3.3	Metals Digestion	Ariel Alcala	03/11/17 11:12	Digestate from JC38633-2.3
JC38633-2.3.3	Ariel Alcala	Metals Digestate Storage	03/11/17 11:12	Return to Storage
JC38633-2.5	Secured Storage	Prashant Shukla	03/13/17 13:42	Retrieve from Storage
JC38633-2.5	Prashant Shukla	GCMSC	03/13/17 13:42	Load on Instrument
JC38633-2.5	GCMSC	Sushila Yadav	03/15/17 10:15	Unload from Instrument
JC38633-2.5	Sushila Yadav		03/15/17 10:15	Depleted
JC38633-3.1	Secured Storage	Mark Setaro	03/09/17 20:14	Retrieve from Storage
JC38633-3.1	Mark Setaro	Secured Storage	03/09/17 20:15	Return to Storage
JC38633-3.1	Secured Storage	Todd Shoemaker	03/10/17 13:16	Retrieve from Storage
JC38633-3.1	Todd Shoemaker	Secured Staging Area	03/10/17 13:17	Return to Storage
JC38633-3.1	Secured Staging Area	Todd Shoemaker	03/10/17 13:18	Retrieve from Storage
JC38633-3.1	Todd Shoemaker	Secured Storage	03/10/17 13:18	Return to Storage
JC38633-3.1	Secured Storage	Todd Shoemaker	03/10/17 14:34	Retrieve from Storage
JC38633-3.1	Todd Shoemaker	Secured Staging Area	03/10/17 14:35	Return to Storage
JC38633-3.1	Secured Staging Area	Luis Villanueva	03/10/17 16:16	Retrieve from Storage
JC38633-3.1	Luis Villanueva	Secured Storage	03/10/17 16:36	Return to Storage
JC38633-3.1	Secured Storage	Edwin Gonzalez	03/10/17 18:19	Retrieve from Storage
JC38633-3.1	Edwin Gonzalez	Secured Staging Area	03/10/17 18:19	Return to Storage
JC38633-3.1	Secured Staging Area	Amir Takla	03/11/17 06:13	Retrieve from Storage
JC38633-3.1	Amir Takla	Secured Storage	03/11/17 14:15	Return to Storage
JC38633-3.1	Secured Storage	Luis Villanueva	03/11/17 15:10	Retrieve from Storage
JC38633-3.1	Luis Villanueva	Secured Staging Area	03/11/17 15:10	Return to Storage
JC38633-3.1	Secured Staging Area	Courtney Dringus	03/13/17 07:30	Retrieve from Storage
JC38633-3.1	Courtney Dringus	Secured Storage	03/13/17 12:45	Return to Storage
JC38633-3.1	Secured Storage	Stephen Seuling	03/15/17 08:07	Retrieve from Storage
JC38633-3.1	Stephen Seuling	Albert Quayson	03/15/17 08:30	Custody Transfer
JC38633-3.1	Albert Quayson	Stephen Seuling	03/15/17 13:01	Custody Transfer
JC38633-3.1	Stephen Seuling	Mahendra Patel	03/15/17 13:05	Custody Transfer
JC38633-3.1	Mahendra Patel	Stephen Seuling	03/15/17 13:08	Custody Transfer
JC38633-3.1	Stephen Seuling	Secured Storage	03/15/17 13:09	Return to Storage

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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38633-3.1	Secured Storage	Sahara Feliciano	03/16/17 17:12	Retrieve from Storage
JC38633-3.1	Sahara Feliciano	Secured Staging Area	03/16/17 17:12	Return to Storage
JC38633-3.1	Secured Staging Area	Autumn Yun	03/16/17 18:13	Retrieve from Storage
JC38633-3.1	Autumn Yun	Secured Storage	03/16/17 20:56	Return to Storage
JC38633-3.1.1	Mark Setaro	TCLP	03/09/17 20:14	Leachate from JC38633-3.1
JC38633-3.1.1	TCLP	Mark Setaro	03/09/17 20:15	Leachate from JC38633-3.1
JC38633-3.1.1	Mark Setaro	Secured Storage	03/09/17 20:15	Return to Storage
JC38633-3.1.1	Secured Storage	Vikas Parikh	03/11/17 07:51	Retrieve from Storage
JC38633-3.1.1	Vikas Parikh	Secured Storage	03/11/17 15:54	Return to Storage
JC38633-3.1.1	Secured Storage	Nicholas Goydish	03/12/17 07:58	Retrieve from Storage
JC38633-3.1.1	Nicholas Goydish	Secured Storage	03/12/17 16:57	Return to Storage
JC38633-3.1.2	TCLP	Mark Setaro	03/09/17 20:15	Leachate from JC38633-3.1
JC38633-3.1.2	Mark Setaro	Secured Storage	03/09/17 20:15	Return to Storage
JC38633-3.1.2	Secured Storage	Ariel Alcala	03/11/17 09:02	Retrieve from Storage
JC38633-3.1.2	Ariel Alcala	Secured Storage	03/11/17 11:15	Return to Storage
JC38633-3.1.3	Vikas Parikh	Organics Prep	03/11/17 08:25	Extract from JC38633-3.1.1
JC38633-3.1.3	Organics Prep	Nicholas Goydish	03/12/17 15:54	Extract from JC38633-3.1.1
JC38633-3.1.3	Nicholas Goydish	Extract Storage	03/12/17 15:54	Return to Storage
JC38633-3.1.3	Extract Storage	Vincent Drago	03/13/17 11:57	Retrieve from Storage
JC38633-3.1.3	Vincent Drago	GC3G	03/13/17 11:57	Load on Instrument
JC38633-3.1.3	GC3G	Vincent Drago	03/16/17 09:49	Unload from Instrument
JC38633-3.1.3	Vincent Drago	Extract Freezer	03/16/17 09:49	Return to Storage
JC38633-3.1.4	Ariel Alcala	Metals Digestion	03/11/17 11:14	Digestate from JC38633-3.1.2
JC38633-3.1.4	Metals Digestion	Ariel Alcala	03/11/17 11:14	Digestate from JC38633-3.1.2
JC38633-3.1.4	Ariel Alcala	Metals Digestate Storage	03/11/17 11:14	Return to Storage
JC38633-3.1.5	Nicholas Goydish	Organics Prep	03/12/17 08:00	Extract from JC38633-3.1.1
JC38633-3.1.5	Organics Prep	Ryan Callaghan	03/12/17 19:10	Extract from JC38633-3.1.1
JC38633-3.1.5	Ryan Callaghan	Extract Storage	03/12/17 19:10	Return to Storage
JC38633-3.1.5	Extract Storage	Christine Phillips	03/13/17 16:56	Retrieve from Storage
JC38633-3.1.5	Christine Phillips	GC8G	03/13/17 16:56	Load on Instrument
JC38633-3.1.6	Nicholas Goydish	Organics Prep	03/12/17 08:11	Extract from JC38633-3.1.1
JC38633-3.1.6	Organics Prep	Nicholas Goydish	03/12/17 16:55	Extract from JC38633-3.1.1
JC38633-3.1.6	Nicholas Goydish	Extract Storage	03/12/17 16:55	Return to Storage
JC38633-3.1.6	Extract Storage	Arielle Cocozza	03/13/17 07:51	Retrieve from Storage
JC38633-3.1.6	Arielle Cocozza	GCMSZ	03/13/17 07:51	Load on Instrument
JC38633-3.1.6	GCMSZ	Arielle Cocozza	03/22/17 10:52	Unload from Instrument
JC38633-3.1.6	Arielle Cocozza	Extract Freezer	03/22/17 10:52	Return to Storage

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JC38633-3.1.7	Albert Quayson	Organics Prep	03/15/17 08:34	Extract from JC38633-3.1
JC38633-3.1.7	Organics Prep	Ryan Fantasia	03/15/17 23:11	Extract from JC38633-3.1
JC38633-3.1.7	Ryan Fantasia	Extract Storage	03/15/17 23:11	Return to Storage
JC38633-3.1.8	Autumn Yun	Organics Prep	03/16/17 18:14	Extract from JC38633-3.1
JC38633-3.1.8	Organics Prep	Albert Quayson	03/17/17 13:20	Extract from JC38633-3.1
JC38633-3.1.8	Albert Quayson	Extract Storage	03/17/17 13:20	Return to Storage
JC38633-3.1.8	Extract Storage	Vincent Drago	03/17/17 18:00	Retrieve from Storage
JC38633-3.1.8	Vincent Drago	GCOA	03/17/17 18:00	Load on Instrument
JC38633-3.1.8	GCOA	Rebecca Krug	03/23/17 16:47	Unload from Instrument
JC38633-3.1.8	Rebecca Krug	Extract Freezer	03/23/17 16:47	Return to Storage
JC38633-3.2	Secured Storage	Martin Serwatka	03/10/17 11:35	Retrieve from Storage
JC38633-3.2	Martin Serwatka	Secured Storage	03/10/17 13:26	Return to Storage
JC38633-3.2	Secured Storage	Max Ponce	03/10/17 16:52	Retrieve from Storage
JC38633-3.2	Max Ponce	Secured Storage	03/10/17 18:56	Return to Storage
JC38633-3.2	Secured Storage	Sauvelson Auguste	03/11/17 06:20	Retrieve from Storage
JC38633-3.2	Sauvelson Auguste	Stephen Seuling	03/11/17 06:35	Custody Transfer
JC38633-3.2	Stephen Seuling	Rinku Patel	03/11/17 09:45	Custody Transfer
JC38633-3.2	Rinku Patel	Secured Storage	03/11/17 16:25	Return to Storage
JC38633-3.2.1	Max Ponce	Organics Prep	03/10/17 16:52	Extract from JC38633-3.2
JC38633-3.2.1	Organics Prep	Natalie Scanlan	03/10/17 21:53	Extract from JC38633-3.2
JC38633-3.2.1	Natalie Scanlan	Extract Storage	03/10/17 21:53	Return to Storage
JC38633-3.2.1	Extract Storage	Christopher Sowa	03/11/17 01:52	Retrieve from Storage
JC38633-3.2.1	Christopher Sowa	GCMS5P	03/11/17 01:52	Load on Instrument
JC38633-3.2.1	GCMS5P	Ashley Noble	03/12/17 13:06	Unload from Instrument
JC38633-3.2.1	Ashley Noble	Extract Freezer	03/12/17 13:06	Return to Storage
JC38633-3.2.2	Stephen Seuling	Organics Prep	03/11/17 06:44	Extract from JC38633-3.2
JC38633-3.2.2	Organics Prep	Matthew Stoecklin	03/11/17 16:00	Extract from JC38633-3.2
JC38633-3.2.2	Matthew Stoecklin	Extract Storage	03/11/17 16:00	Return to Storage
JC38633-3.2.2	Extract Storage	Christine Phillips	03/13/17 10:05	Retrieve from Storage
JC38633-3.2.2	Christine Phillips	GC1G	03/13/17 10:05	Load on Instrument
JC38633-3.2.2	GC1G	Rebecca Krug	03/13/17 16:17	Unload from Instrument
JC38633-3.2.2	Rebecca Krug	Extract Freezer	03/13/17 16:18	Return to Storage
JC38633-3.2.3	Stephen Seuling	Organics Prep	03/11/17 06:46	Extract from JC38633-3.2
JC38633-3.2.3	Organics Prep	Matthew Stoecklin	03/11/17 16:00	Extract from JC38633-3.2
JC38633-3.2.3	Matthew Stoecklin	Extract Storage	03/11/17 16:00	Return to Storage
JC38633-3.2.3	Extract Storage	Humarah Bano	03/13/17 16:53	Retrieve from Storage
JC38633-3.2.3	Humarah Bano	GCXX	03/13/17 16:53	Load on Instrument
JC38633-3.2.3	GCXX	Humarah Bano	03/17/17 12:16	Unload from Instrument
JC38633-3.2.3	Humarah Bano	Extract Freezer	03/17/17 12:16	Return to Storage

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JC38633-3.3	Secured Storage	Todd Shoemaker	03/10/17 13:25	Retrieve from Storage
JC38633-3.3	Todd Shoemaker	Secured Staging Area	03/10/17 13:25	Return to Storage
JC38633-3.3	Secured Staging Area	Mark Setaro	03/10/17 14:10	Retrieve from Storage
JC38633-3.3	Mark Setaro	Secured Storage	03/10/17 15:55	Return to Storage
JC38633-3.3	Secured Storage	Edwin Gonzalez	03/10/17 18:27	Retrieve from Storage
JC38633-3.3	Edwin Gonzalez	Secured Staging Area	03/10/17 18:27	Return to Storage
JC38633-3.3	Secured Staging Area	Ariel Alcala	03/11/17 07:12	Retrieve from Storage
JC38633-3.3	Ariel Alcala	Secured Storage	03/11/17 11:15	Return to Storage
JC38633-3.3.1	Mark Setaro	TCLP	03/10/17 14:10	Leachate from JC38633-3.3
JC38633-3.3.1	TCLP	Minhaj Hashmi	03/11/17 08:34	Leachate from JC38633-3.3
JC38633-3.3.1	Minhaj Hashmi	Secured Storage	03/11/17 08:43	Return to Storage
JC38633-3.3.1	Secured Storage	Eddie Huang	03/13/17 15:22	Retrieve from Storage
JC38633-3.3.1	Eddie Huang	GCMS2B	03/13/17 15:22	Load on Instrument
JC38633-3.3.1	GCMS2B	Eddie Huang	03/15/17 08:23	Unload from Instrument
JC38633-3.3.1	Eddie Huang	Secured Storage	03/15/17 08:23	Return to Storage
JC38633-3.3.2	TCLP	Minhaj Hashmi	03/11/17 08:34	Leachate from JC38633-3.3
JC38633-3.3.2	Minhaj Hashmi	Secured Storage	03/11/17 08:43	Return to Storage
JC38633-3.3.3	Ariel Alcala	Metals Digestion	03/11/17 11:11	Digestate from JC38633-3.3
JC38633-3.3.3	Ariel Alcala	Metals Digestate Storage	03/11/17 11:12	Return to Storage
JC38633-3.3.3	Metals Digestion	Ariel Alcala	03/11/17 11:12	Digestate from JC38633-3.3
JC38633-3.5	Secured Storage	Prashant Shukla	03/13/17 13:42	Retrieve from Storage
JC38633-3.5	Prashant Shukla	GCMSC	03/13/17 13:42	Load on Instrument
JC38633-3.5	GCMSC	Sushila Yadav	03/15/17 10:15	Unload from Instrument
JC38633-3.5	Sushila Yadav		03/15/17 10:15	Depleted
JC38633-4.1	Secured Storage	Mark Setaro	03/09/17 20:14	Retrieve from Storage
JC38633-4.1	Mark Setaro	Secured Storage	03/09/17 20:15	Return to Storage
JC38633-4.1	Secured Storage	Todd Shoemaker	03/10/17 13:16	Retrieve from Storage
JC38633-4.1	Todd Shoemaker	Secured Staging Area	03/10/17 13:17	Return to Storage
JC38633-4.1	Secured Staging Area	Todd Shoemaker	03/10/17 13:18	Retrieve from Storage
JC38633-4.1	Todd Shoemaker	Secured Storage	03/10/17 13:18	Return to Storage
JC38633-4.1	Secured Storage	Todd Shoemaker	03/10/17 14:34	Retrieve from Storage
JC38633-4.1	Todd Shoemaker	Secured Staging Area	03/10/17 14:35	Return to Storage
JC38633-4.1	Secured Staging Area	Luis Villanueva	03/10/17 16:16	Retrieve from Storage
JC38633-4.1	Luis Villanueva	Secured Storage	03/10/17 16:36	Return to Storage
JC38633-4.1	Secured Storage	Edwin Gonzalez	03/10/17 18:19	Retrieve from Storage
JC38633-4.1	Edwin Gonzalez	Secured Staging Area	03/10/17 18:19	Return to Storage
JC38633-4.1	Secured Staging Area	Amir Takla	03/11/17 06:13	Retrieve from Storage
JC38633-4.1	Amir Takla	Secured Storage	03/11/17 14:15	Return to Storage

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JC38633-4.1	Secured Storage	Luis Villanueva	03/11/17 15:10	Retrieve from Storage
JC38633-4.1	Luis Villanueva	Secured Staging Area	03/11/17 15:10	Return to Storage
JC38633-4.1	Secured Staging Area	Courtney Dringus	03/13/17 07:30	Retrieve from Storage
JC38633-4.1	Courtney Dringus	Secured Storage	03/13/17 12:45	Return to Storage
JC38633-4.1	Secured Storage	Stephen Seuling	03/15/17 08:07	Retrieve from Storage
JC38633-4.1	Stephen Seuling	Albert Quayson	03/15/17 08:30	Custody Transfer
JC38633-4.1	Albert Quayson	Stephen Seuling	03/15/17 13:01	Custody Transfer
JC38633-4.1	Stephen Seuling	Mahendra Patel	03/15/17 13:05	Custody Transfer
JC38633-4.1	Mahendra Patel	Stephen Seuling	03/15/17 13:08	Custody Transfer
JC38633-4.1	Stephen Seuling	Secured Storage	03/15/17 13:09	Return to Storage
JC38633-4.1	Secured Storage	Sahara Feliciano	03/16/17 17:12	Retrieve from Storage
JC38633-4.1	Sahara Feliciano	Secured Staging Area	03/16/17 17:12	Return to Storage
JC38633-4.1	Secured Staging Area	Autumn Yun	03/16/17 18:13	Retrieve from Storage
JC38633-4.1	Autumn Yun	Secured Storage	03/16/17 20:56	Return to Storage
JC38633-4.1.1	Mark Setaro	TCLP	03/09/17 20:14	Leachate from JC38633-4.1
JC38633-4.1.1	TCLP	Mark Setaro	03/09/17 20:15	Leachate from JC38633-4.1
JC38633-4.1.1	Mark Setaro	Secured Storage	03/09/17 20:15	Return to Storage
JC38633-4.1.1	Secured Storage	Vikas Parikh	03/11/17 07:51	Retrieve from Storage
JC38633-4.1.1	Vikas Parikh	Secured Storage	03/11/17 15:54	Return to Storage
JC38633-4.1.1	Secured Storage	Nicholas Goydish	03/12/17 07:58	Retrieve from Storage
JC38633-4.1.1	Nicholas Goydish	Secured Storage	03/12/17 16:57	Return to Storage
JC38633-4.1.2	TCLP	Mark Setaro	03/09/17 20:15	Leachate from JC38633-4.1
JC38633-4.1.2	Mark Setaro	Secured Storage	03/09/17 20:15	Return to Storage
JC38633-4.1.2	Secured Storage	Ariel Alcala	03/11/17 09:02	Retrieve from Storage
JC38633-4.1.2	Ariel Alcala	Secured Storage	03/11/17 11:15	Return to Storage
JC38633-4.1.3	Vikas Parikh	Organics Prep	03/11/17 08:25	Extract from JC38633-4.1.1
JC38633-4.1.3	Organics Prep	Nicholas Goydish	03/12/17 15:54	Extract from JC38633-4.1.1
JC38633-4.1.3	Nicholas Goydish	Extract Storage	03/12/17 15:54	Return to Storage
JC38633-4.1.3	Extract Storage	Vincent Drago	03/13/17 11:57	Retrieve from Storage
JC38633-4.1.3	Vincent Drago	GC3G	03/13/17 11:57	Load on Instrument
JC38633-4.1.3	GC3G	Vincent Drago	03/16/17 09:49	Unload from Instrument
JC38633-4.1.3	Vincent Drago	Extract Freezer	03/16/17 09:49	Return to Storage
JC38633-4.1.4	Ariel Alcala	Metals Digestion	03/11/17 11:14	Digestate from JC38633-4.1.2
JC38633-4.1.4	Metals Digestion	Ariel Alcala	03/11/17 11:14	Digestate from JC38633-4.1.2
JC38633-4.1.4	Ariel Alcala	Metals Digestate Storage	03/11/17 11:14	Return to Storage
JC38633-4.1.5	Nicholas Goydish	Organics Prep	03/12/17 08:00	Extract from JC38633-4.1.1
JC38633-4.1.5	Organics Prep	Ryan Callaghan	03/12/17 19:10	Extract from JC38633-4.1.1
JC38633-4.1.5	Ryan Callaghan	Extract Storage	03/12/17 19:10	Return to Storage
JC38633-4.1.5	Extract Storage	Christine Phillips	03/13/17 16:56	Retrieve from Storage

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JC38633-4.1.5	Christine Phillips	GC8G	03/13/17 16:56	Load on Instrument
JC38633-4.1.6	Nicholas Goydish	Organics Prep	03/12/17 08:11	Extract from JC38633-4.1.1
JC38633-4.1.6	Organics Prep	Nicholas Goydish	03/12/17 16:55	Extract from JC38633-4.1.1
JC38633-4.1.6	Nicholas Goydish	Extract Storage	03/12/17 16:55	Return to Storage
JC38633-4.1.6	Extract Storage	Arielle Cocozza	03/13/17 07:51	Retrieve from Storage
JC38633-4.1.6	Arielle Cocozza	GCMSZ	03/13/17 07:51	Load on Instrument
JC38633-4.1.6	GCMSZ	Arielle Cocozza	03/22/17 10:52	Unload from Instrument
JC38633-4.1.6	Arielle Cocozza	Extract Freezer	03/22/17 10:52	Return to Storage
JC38633-4.1.7	Albert Quayson	Organics Prep	03/15/17 08:34	Extract from JC38633-4.1
JC38633-4.1.7	Organics Prep	Ryan Fantasia	03/15/17 23:11	Extract from JC38633-4.1
JC38633-4.1.7	Ryan Fantasia	Extract Storage	03/15/17 23:11	Return to Storage
JC38633-4.1.8	Autumn Yun	Organics Prep	03/16/17 18:14	Extract from JC38633-4.1
JC38633-4.1.8	Organics Prep	Albert Quayson	03/17/17 13:20	Extract from JC38633-4.1
JC38633-4.1.8	Albert Quayson	Extract Storage	03/17/17 13:20	Return to Storage
JC38633-4.1.8	Extract Storage	Vincent Drago	03/17/17 18:00	Retrieve from Storage
JC38633-4.1.8	Vincent Drago	GCOA	03/17/17 18:00	Load on Instrument
JC38633-4.1.8	GCOA	Rebecca Krug	03/23/17 16:47	Unload from Instrument
JC38633-4.1.8	Rebecca Krug	Extract Freezer	03/23/17 16:47	Return to Storage
JC38633-4.2	Secured Storage	Martin Serwatka	03/10/17 11:35	Retrieve from Storage
JC38633-4.2	Martin Serwatka	Secured Storage	03/10/17 13:26	Return to Storage
JC38633-4.2	Secured Storage	Max Ponce	03/10/17 16:52	Retrieve from Storage
JC38633-4.2	Max Ponce	Secured Storage	03/10/17 18:56	Return to Storage
JC38633-4.2	Secured Storage	Sauvelson Auguste	03/11/17 06:20	Retrieve from Storage
JC38633-4.2	Sauvelson Auguste	Stephen Seuling	03/11/17 06:35	Custody Transfer
JC38633-4.2	Stephen Seuling	Rinku Patel	03/11/17 09:45	Custody Transfer
JC38633-4.2	Rinku Patel	Secured Storage	03/11/17 16:25	Return to Storage
JC38633-4.2.1	Max Ponce	Organics Prep	03/10/17 16:52	Extract from JC38633-4.2
JC38633-4.2.1	Organics Prep	Natalie Scanlan	03/10/17 21:53	Extract from JC38633-4.2
JC38633-4.2.1	Natalie Scanlan	Extract Storage	03/10/17 21:53	Return to Storage
JC38633-4.2.1	Extract Storage	Christopher Sowa	03/11/17 01:52	Retrieve from Storage
JC38633-4.2.1	Christopher Sowa	GCMS5P	03/11/17 01:52	Load on Instrument
JC38633-4.2.1	GCMS5P	Ashley Noble	03/12/17 13:06	Unload from Instrument
JC38633-4.2.1	Ashley Noble	Extract Freezer	03/12/17 13:06	Return to Storage
JC38633-4.2.2	Stephen Seuling	Organics Prep	03/11/17 06:44	Extract from JC38633-4.2
JC38633-4.2.2	Organics Prep	Matthew Stoecklin	03/11/17 16:00	Extract from JC38633-4.2
JC38633-4.2.2	Matthew Stoecklin	Extract Storage	03/11/17 16:00	Return to Storage
JC38633-4.2.2	Extract Storage	Christine Phillips	03/13/17 10:05	Retrieve from Storage
JC38633-4.2.2	Christine Phillips	GC1G	03/13/17 10:05	Load on Instrument

SGS Accutest Internal Chain of Custody

Job Number: JC38633
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/09/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38633-4.2.2	GC1G	Rebecca Krug	03/13/17 16:17	Unload from Instrument
JC38633-4.2.2	Rebecca Krug	Extract Freezer	03/13/17 16:18	Return to Storage
JC38633-4.2.3	Stephen Seuling	Organics Prep	03/11/17 06:46	Extract from JC38633-4.2
JC38633-4.2.3	Organics Prep	Matthew Stoecklin	03/11/17 16:00	Extract from JC38633-4.2
JC38633-4.2.3	Matthew Stoecklin	Extract Storage	03/11/17 16:00	Return to Storage
JC38633-4.2.3	Extract Storage	Humarah Bano	03/13/17 16:53	Retrieve from Storage
JC38633-4.2.3	Humarah Bano	GCXX	03/13/17 16:53	Load on Instrument
JC38633-4.2.3	GCXX	Humarah Bano	03/17/17 12:16	Unload from Instrument
JC38633-4.2.3	Humarah Bano	Extract Freezer	03/17/17 12:16	Return to Storage
JC38633-4.3	Secured Storage	Todd Shoemaker	03/10/17 13:25	Retrieve from Storage
JC38633-4.3	Todd Shoemaker	Secured Staging Area	03/10/17 13:25	Return to Storage
JC38633-4.3	Secured Staging Area	Mark Setaro	03/10/17 14:10	Retrieve from Storage
JC38633-4.3	Mark Setaro	Secured Storage	03/10/17 15:55	Return to Storage
JC38633-4.3	Secured Storage	Edwin Gonzalez	03/10/17 18:27	Retrieve from Storage
JC38633-4.3	Edwin Gonzalez	Secured Staging Area	03/10/17 18:27	Return to Storage
JC38633-4.3	Secured Staging Area	Ariel Alcala	03/11/17 07:12	Retrieve from Storage
JC38633-4.3	Ariel Alcala	Secured Storage	03/11/17 11:15	Return to Storage
JC38633-4.3.1	Mark Setaro	TCLP	03/10/17 14:10	Leachate from JC38633-4.3
JC38633-4.3.1	TCLP	Minhaj Hashmi	03/11/17 08:34	Leachate from JC38633-4.3
JC38633-4.3.1	Minhaj Hashmi	Secured Storage	03/11/17 08:43	Return to Storage
JC38633-4.3.1	Secured Storage	Eddie Huang	03/13/17 15:22	Retrieve from Storage
JC38633-4.3.1	Eddie Huang	GCMS2B	03/13/17 15:22	Load on Instrument
JC38633-4.3.1	GCMS2B	Eddie Huang	03/15/17 08:23	Unload from Instrument
JC38633-4.3.1	Eddie Huang	Secured Storage	03/15/17 08:23	Return to Storage
JC38633-4.3.2	TCLP	Minhaj Hashmi	03/11/17 08:34	Leachate from JC38633-4.3
JC38633-4.3.2	Minhaj Hashmi	Secured Storage	03/11/17 08:43	Return to Storage
JC38633-4.3.3	Ariel Alcala	Metals Digestion	03/11/17 11:11	Digestate from JC38633-4.3
JC38633-4.3.3	Metals Digestion	Ariel Alcala	03/11/17 11:12	Digestate from JC38633-4.3
JC38633-4.3.3	Ariel Alcala	Metals Digestate Storage	03/11/17 11:12	Return to Storage
JC38633-4.5	Secured Storage	Prashant Shukla	03/13/17 13:42	Retrieve from Storage
JC38633-4.5	Prashant Shukla	GCMSC	03/13/17 13:42	Load on Instrument
JC38633-4.5	GCMSC	Sushila Yadav	03/15/17 10:15	Unload from Instrument
JC38633-4.5	Sushila Yadav		03/15/17 10:15	Depleted

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e-Hardcopy 2.0
Automated Report

Technical Report for

Matrix New World Engineering, Inc.

LIRR Expansion, Long Island, NY

16-144, 3rd Avenue Parking Lot, 3rd Avenue, Mineola

SGS Accutest Job Number: JC38887

Sampling Date: 03/13/17

Report to:

Matrix New World Engineering, Inc.
26 Columbia Turnpike
Florham Park, NJ 07932
bcrespi@matrixneworld.com; mclelland@matrixneworld.com; mhorowitz@matrixneworld.com
ATTN: Brian Crespi

Total number of pages in report: 73

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Nancy Cole
Laboratory Director

Client Service contact: Tammy McCloskey 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (L-A-B L2248)

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Test results relate only to samples analyzed.

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March 24, 2017

Mr. Brian Crespi
Matrix New World Engineering, Inc.
26 Columbia Turnpike
Florham Park, NJ 07932

Re: SGS Accutest –Dayton, Jobs # JC38886 and JC38887 – Reissues

Dear Mr. Crespi,

The final report for SGS Accutest job numbers JC38886 and JC38887 have been edited to reflect requested revisions to the data package. These edits have been incorporated into the revised report attached.

Specifically, additional project information has been added per request by Mindy Chassin Horowitz on March 24, 2017. This information has been updated and is included in this revised report.

Please contact client services at (732) 355-4562 if I can be of further assistance in this matter.

Sincerely,

Tammy McCloskey

SGS Accutest

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SGS Accutest

Sample Summary

Matrix New World Engineering, Inc.

Job No: JC38887

LIRR Expansion, Long Island, NY
Project No: 16-144, 3rd Avenue Parking Lot, 3rd Avenue, Mineola

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC38887-1	03/13/17	08:10	LM	03/13/17	SO	Soil	3RD-SB-02
JC38887-1A	03/13/17	08:10	LM	03/13/17	SO	Soil	3RD-SB-02
JC38887-2	03/13/17	09:10	LM	03/13/17	SO	Soil	3RD-SB-03
JC38887-2A	03/13/17	09:10	LM	03/13/17	SO	Soil	3RD-SB-03
JC38887-3	03/13/17	10:15	LM	03/13/17	SO	Soil	3RD-SB-04
JC38887-3A	03/13/17	10:15	LM	03/13/17	SO	Soil	3RD-SB-04

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

2

Summary of Hits

Job Number: JC38887
Account: Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Collected: 03/13/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC38887-1	**3RD-SB-02**					
Acetone		0.0434	0.014	0.0070	mg/kg	SW846 8260C
Benzene		0.00050 J	0.00070	0.00017	mg/kg	SW846 8260C
2-Butanone (MEK)		0.0066 J	0.014	0.0025	mg/kg	SW846 8260C
Carbon disulfide		0.0039	0.0028	0.00024	mg/kg	SW846 8260C
Methyl Acetate		0.0053 J	0.0070	0.0028	mg/kg	SW846 8260C
Methylene chloride		0.0017 J	0.0070	0.0014	mg/kg	SW846 8260C
Toluene		0.00046 J	0.0014	0.00017	mg/kg	SW846 8260C
Benzo(a)anthracene		0.0172 J	0.034	0.0095	mg/kg	SW846 8270D
Benzo(a)pyrene		0.0197 J	0.034	0.015	mg/kg	SW846 8270D
Benzo(b)fluoranthene		0.0230 J	0.034	0.015	mg/kg	SW846 8270D
Chrysene		0.0308 J	0.034	0.011	mg/kg	SW846 8270D
bis(2-Ethylhexyl)phthalate		0.0752	0.067	0.0078	mg/kg	SW846 8270D
Fluoranthene		0.0284 J	0.034	0.015	mg/kg	SW846 8270D
Phenanthrene		0.0183 J	0.034	0.011	mg/kg	SW846 8270D
Pyrene		0.0363	0.034	0.011	mg/kg	SW846 8270D
Aluminum		3350	51		mg/kg	SW846 6010C
Arsenic		5.4	2.0		mg/kg	SW846 6010C
Barium		24.4	20		mg/kg	SW846 6010C
Beryllium		0.22	0.20		mg/kg	SW846 6010C
Calcium		6550	510		mg/kg	SW846 6010C
Chromium		18.6	1.0		mg/kg	SW846 6010C
Cobalt		5.4	5.1		mg/kg	SW846 6010C
Copper		8.9	2.5		mg/kg	SW846 6010C
Iron		10200	51		mg/kg	SW846 6010C
Lead		13.0	2.0		mg/kg	SW846 6010C
Magnesium		1210	510		mg/kg	SW846 6010C
Manganese		288	1.5		mg/kg	SW846 6010C
Nickel		16.6	4.0		mg/kg	SW846 6010C
Vanadium		11.4	5.1		mg/kg	SW846 6010C
Zinc		14.6	5.1		mg/kg	SW846 6010C
JC38887-1A	**3RD-SB-02**					
Corrosivity as pH		8.16 NC			su	SW846 9045D
Ignitability (Flashpoint)		> 200			Deg. F	SW846 1010A/ASTM D93
JC38887-2	**3RD-SB-03**					
Acetone		0.0136	0.011	0.0054	mg/kg	SW846 8260C
Methylene chloride		0.0034 J	0.0054	0.0011	mg/kg	SW846 8260C
Anthracene		0.0217 J	0.035	0.021	mg/kg	SW846 8270D
Benzo(a)anthracene		0.0545	0.035	0.0099	mg/kg	SW846 8270D
Benzo(a)pyrene		0.0526	0.035	0.016	mg/kg	SW846 8270D

Summary of Hits

Job Number: JC38887
Account: Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Collected: 03/13/17

Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
Benzo(b)fluoranthene	0.0694	0.035	0.015	mg/kg	SW846 8270D
Benzo(g,h,i)perylene	0.0383	0.035	0.017	mg/kg	SW846 8270D
Benzo(k)fluoranthene	0.0252 J	0.035	0.016	mg/kg	SW846 8270D
Carbazole	0.0149 J	0.070	0.0051	mg/kg	SW846 8270D
Chrysene	0.0707	0.035	0.011	mg/kg	SW846 8270D
bis(2-Ethylhexyl)phthalate	0.0526 J	0.070	0.0082	mg/kg	SW846 8270D
Fluoranthene	0.119	0.035	0.016	mg/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene	0.0394	0.035	0.016	mg/kg	SW846 8270D
Phenanthrene	0.0977	0.035	0.012	mg/kg	SW846 8270D
Pyrene	0.128	0.035	0.011	mg/kg	SW846 8270D
gamma-Chlordane	0.0013	0.00068	0.00030	mg/kg	SW846 8081B
Aluminum	3480	54		mg/kg	SW846 6010C
Arsenic	2.2	2.2		mg/kg	SW846 6010C
Barium	22.9	22		mg/kg	SW846 6010C
Calcium	9040	540		mg/kg	SW846 6010C
Chromium	13.7	1.1		mg/kg	SW846 6010C
Copper	7.4	2.7		mg/kg	SW846 6010C
Iron	8160	54		mg/kg	SW846 6010C
Lead	8.2	2.2		mg/kg	SW846 6010C
Magnesium	3460	540		mg/kg	SW846 6010C
Manganese	254	1.6		mg/kg	SW846 6010C
Nickel	10.4	4.3		mg/kg	SW846 6010C
Vanadium	10.6	5.4		mg/kg	SW846 6010C
Zinc	17.1	5.4		mg/kg	SW846 6010C
Cyanide	0.39	0.23		mg/kg	SW846 9012B/LACHAT
JC38887-2A 3RD-SB-03					
Corrosivity as pH	9.12 NC			su	SW846 9045D
Ignitability (Flashpoint)	> 200			Deg. F	SW846 1010A/ASTM D93
JC38887-3 3RD-SB-04					
Methylcyclohexane	0.00062 J	0.0019	0.00048	mg/kg	SW846 8260C
Methylene chloride	0.0016 J	0.0048	0.00095	mg/kg	SW846 8260C
Toluene	0.00019 J	0.00095	0.00012	mg/kg	SW846 8260C
Benzo(a)anthracene	0.0215 J	0.035	0.010	mg/kg	SW846 8270D
Benzo(a)pyrene	0.0217 J	0.035	0.016	mg/kg	SW846 8270D
Benzo(b)fluoranthene	0.0264 J	0.035	0.016	mg/kg	SW846 8270D
Chrysene	0.0257 J	0.035	0.011	mg/kg	SW846 8270D
bis(2-Ethylhexyl)phthalate	0.0646 J	0.071	0.0083	mg/kg	SW846 8270D
Fluoranthene	0.0407	0.035	0.016	mg/kg	SW846 8270D
Phenanthrene	0.0429	0.035	0.012	mg/kg	SW846 8270D
Pyrene	0.0486	0.035	0.011	mg/kg	SW846 8270D
Aluminum	3570	51		mg/kg	SW846 6010C

Summary of Hits

Job Number: JC38887
Account: Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Collected: 03/13/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Arsenic		2.1	2.1		mg/kg	SW846 6010C
Beryllium		0.28	0.21		mg/kg	SW846 6010C
Calcium		1340	510		mg/kg	SW846 6010C
Chromium		11.0	1.0		mg/kg	SW846 6010C
Copper		7.3	2.6		mg/kg	SW846 6010C
Iron		11600	51		mg/kg	SW846 6010C
Lead		4.3	2.1		mg/kg	SW846 6010C
Magnesium		976	510		mg/kg	SW846 6010C
Manganese		168	1.5		mg/kg	SW846 6010C
Nickel		8.8	4.1		mg/kg	SW846 6010C
Vanadium		10.7	5.1		mg/kg	SW846 6010C
Zinc		12.8	5.1		mg/kg	SW846 6010C
JC38887-3A	**3RD-SB-04**					
Corrosivity as pH		7.06 NC			su	SW846 9045D
Ignitability (Flashpoint)		> 200			Deg. F	SW846 1010A/ASTM D93

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	3RD-SB-02		
Lab Sample ID:	JC38887-1	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8260C	**Percent Solids:**	96.9
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y170723.D	1	03/15/17	PS	n/a	n/a	VY7392
Run #2							

	Initial Weight
Run #1	3.7 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0434	0.014	0.0070	mg/kg	
71-43-2	Benzene	0.00050	0.00070	0.00017	mg/kg	J
74-97-5	Bromochloromethane	ND	0.0070	0.00044	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0028	0.00021	mg/kg	
75-25-2	Bromoform	ND	0.0070	0.00037	mg/kg	
74-83-9	Bromomethane	ND	0.0070	0.00068	mg/kg	
78-93-3	2-Butanone (MEK)	0.0066	0.014	0.0025	mg/kg	J
75-15-0	Carbon disulfide	0.0039	0.0028	0.00024	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0028	0.00023	mg/kg	
108-90-7	Chlorobenzene	ND	0.0028	0.00023	mg/kg	
75-00-3	Chloroethane	ND	0.0070	0.00060	mg/kg	
67-66-3	Chloroform	ND	0.0028	0.00033	mg/kg	
74-87-3	Chloromethane	ND	0.0070	0.00029	mg/kg	
110-82-7	Cyclohexane	ND	0.0028	0.00076	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0028	0.00067	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0028	0.00021	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.0014	0.00034	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0014	0.00024	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0014	0.00019	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0014	0.00021	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0070	0.00076	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0014	0.00026	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0014	0.00024	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0014	0.00021	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0014	0.00061	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0014	0.00022	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0028	0.00043	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0028	0.00027	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0028	0.00031	mg/kg	
100-41-4	Ethylbenzene	ND	0.0014	0.00021	mg/kg	
76-13-1	Freon 113 [a]	ND	0.0070	0.00067	mg/kg	
591-78-6	2-Hexanone	ND	0.0070	0.0019	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-02		
Lab Sample ID:	JC38887-1	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8260C	**Percent Solids:**	96.9
Project:	LIRR Expansion, Long Island, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	0.0028	0.00021	mg/kg	
79-20-9	Methyl Acetate	0.0053	0.0070	0.0028	mg/kg	J
108-87-2	Methylcyclohexane	ND	0.0028	0.00070	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0014	0.00037	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0070	0.0012	mg/kg	
75-09-2	Methylene chloride	0.0017	0.0070	0.0014	mg/kg	J
100-42-5	Styrene	ND	0.0028	0.00020	mg/kg	
75-65-0	Tert Butyl Alcohol	ND	0.035	0.0042	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0028	0.00033	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0028	0.00039	mg/kg	
108-88-3	Toluene	0.00046	0.0014	0.00017	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0070	0.00070	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0070	0.00070	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0028	0.00023	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0028	0.00045	mg/kg	
79-01-6	Trichloroethene	ND	0.0014	0.00026	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0070	0.00088	mg/kg	
75-01-4	Vinyl chloride	ND	0.0028	0.00028	mg/kg	
	m,p-Xylene	ND	0.0014	0.00031	mg/kg	
95-47-6	o-Xylene	ND	0.0014	0.00028	mg/kg	
1330-20-7	Xylene (total)	ND	0.0014	0.00028	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		70-122%
17060-07-0	1,2-Dichloroethane-D4	100%		68-124%
2037-26-5	Toluene-D8	95%		77-125%
460-00-4	4-Bromofluorobenzene	102%		72-130%

(a) This compound in BS is outside in house QC limits bias high.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-02		
Lab Sample ID:	JC38887-1	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	96.9
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P67765.D	1	03/16/17	SB	03/15/17	OP1140	E2P2982
Run #2							

	Initial Weight	Final Volume
Run #1	30.8 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	0.067	0.017	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.17	0.021	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.17	0.029	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.17	0.060	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	0.17	0.13	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.17	0.036	mg/kg	
95-48-7	2-Methylphenol	ND	0.067	0.021	mg/kg	
	3&4-Methylphenol	ND	0.067	0.028	mg/kg	
88-75-5	2-Nitrophenol	ND	0.17	0.022	mg/kg	
100-02-7	4-Nitrophenol	ND	0.34	0.089	mg/kg	
87-86-5	Pentachlorophenol	ND	0.13	0.031	mg/kg	
108-95-2	Phenol	ND	0.067	0.017	mg/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.17	0.022	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.17	0.025	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.17	0.020	mg/kg	
83-32-9	Acenaphthene	ND	0.034	0.012	mg/kg	
208-96-8	Acenaphthylene	ND	0.034	0.017	mg/kg	
98-86-2	Acetophenone	ND	0.17	0.0072	mg/kg	
120-12-7	Anthracene	ND	0.034	0.021	mg/kg	
1912-24-9	Atrazine	ND	0.067	0.014	mg/kg	
56-55-3	Benzo(a)anthracene	0.0172	0.034	0.0095	mg/kg	J
50-32-8	Benzo(a)pyrene	0.0197	0.034	0.015	mg/kg	J
205-99-2	Benzo(b)fluoranthene	0.0230	0.034	0.015	mg/kg	J
191-24-2	Benzo(g,h,i)perylene	ND	0.034	0.017	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.034	0.016	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.067	0.013	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.067	0.0082	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.067	0.0046	mg/kg	
100-52-7	Benzaldehyde	ND	0.17	0.0083	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.067	0.0080	mg/kg	
106-47-8	4-Chloroaniline	ND	0.17	0.012	mg/kg	
86-74-8	Carbazole	ND	0.067	0.0049	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-02		
Lab Sample ID:	JC38887-1	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	96.9
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	0.067	0.013	mg/kg	
218-01-9	Chrysene	0.0308	0.034	0.011	mg/kg	J
111-91-1	bis(2-Chloroethoxy)methane	ND	0.067	0.0072	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.067	0.014	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.067	0.012	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.067	0.011	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.034	0.010	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.034	0.017	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.067	0.028	mg/kg	
123-91-1	1,4-Dioxane	ND	0.034	0.022	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.034	0.015	mg/kg	
132-64-9	Dibenzofuran	ND	0.067	0.014	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.067	0.0055	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.067	0.0083	mg/kg	
84-66-2	Diethyl phthalate	ND	0.067	0.0071	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.067	0.0060	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	0.0752	0.067	0.0078	mg/kg	
206-44-0	Fluoranthene	0.0284	0.034	0.015	mg/kg	J
86-73-7	Fluorene	ND	0.034	0.015	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.067	0.0085	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.034	0.013	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.34	0.013	mg/kg	
67-72-1	Hexachloroethane	ND	0.17	0.017	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.034	0.016	mg/kg	
78-59-1	Isophorone	ND	0.067	0.0072	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.067	0.0076	mg/kg	
88-74-4	2-Nitroaniline	ND	0.17	0.0079	mg/kg	
99-09-2	3-Nitroaniline	ND	0.17	0.0084	mg/kg	
100-01-6	4-Nitroaniline	ND	0.17	0.0087	mg/kg	
91-20-3	Naphthalene	ND	0.034	0.0094	mg/kg	
98-95-3	Nitrobenzene	ND	0.067	0.013	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.067	0.0097	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.17	0.012	mg/kg	
85-01-8	Phenanthrene	0.0183	0.034	0.011	mg/kg	J
129-00-0	Pyrene	0.0363	0.034	0.011	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.17	0.0085	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	55%		23-115%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-02		
Lab Sample ID:	JC38887-1	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	96.9
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	60%		27-114%
118-79-6	2,4,6-Tribromophenol	72%		19-152%
4165-60-0	Nitrobenzene-d5	66%		26-134%
321-60-8	2-Fluorobiphenyl	78%		39-124%
1718-51-0	Terphenyl-d14	78%		36-134%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-02		
Lab Sample ID:	JC38887-1	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8151 SW846 8151/3550C	**Percent Solids:**	96.9
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OA124453.D	2	03/17/17	VDT	03/17/17	OP1193	GOA4266
Run #2							

	Initial Weight	Final Volume
Run #1	15.6 g	5.0 ml
Run #2		

Herbicide List

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	0.033	0.015	mg/kg	
93-72-1	2,4,5-TP (Silvex)	ND	0.0066	0.0024	mg/kg	
93-76-5	2,4,5-T	ND	0.0066	0.0025	mg/kg	
75-99-0	Dalapon	ND	0.0066	0.0045	mg/kg	
1918-00-9	Dicamba	ND	0.0066	0.0033	mg/kg	
120-36-5	Dichloroprop	ND	0.033	0.0093	mg/kg	
88-85-7	Dinoseb	ND	0.033	0.022	mg/kg	
94-74-6	MCPA	ND	3.3	0.76	mg/kg	
93-65-2	MCPP	ND	3.3	0.72	mg/kg	
87-86-5	Pentachlorophenol	ND	0.0033	0.0029	mg/kg	
94-82-6	2,4-DB	ND	0.033	0.011	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	74%		10-159%
19719-28-9	2,4-DCAA	85%		10-159%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-02		
Lab Sample ID:	JC38887-1	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8081B SW846 3546	**Percent Solids:**	96.9
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4G78965.D	1	03/16/17	RK	03/15/17	OP1139	G4G2049
Run #2							

	Initial Weight	Final Volume
Run #1	15.3 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.00067	0.00032	mg/kg	
319-84-6	alpha-BHC	ND	0.00067	0.00036	mg/kg	
319-85-7	beta-BHC	ND	0.00067	0.00042	mg/kg	
319-86-8	delta-BHC	ND	0.00067	0.00030	mg/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.00067	0.00030	mg/kg	
5103-71-9	alpha-Chlordane	ND	0.00067	0.00032	mg/kg	
5103-74-2	gamma-Chlordane	ND	0.00067	0.00030	mg/kg	
60-57-1	Dieldrin	ND	0.00067	0.00034	mg/kg	
72-54-8	4,4'-DDD	ND	0.00067	0.00043	mg/kg	
72-55-9	4,4'-DDE	ND	0.00067	0.00035	mg/kg	
50-29-3	4,4'-DDT	ND	0.00067	0.00040	mg/kg	
72-20-8	Endrin	ND	0.00067	0.00032	mg/kg	
1031-07-8	Endosulfan sulfate	ND	0.00067	0.00027	mg/kg	
7421-93-4	Endrin aldehyde	ND	0.00067	0.00040	mg/kg	
959-98-8	Endosulfan-I	ND	0.00067	0.00035	mg/kg	
33213-65-9	Endosulfan-II	ND	0.00067	0.00035	mg/kg	
76-44-8	Heptachlor	ND	0.00067	0.00033	mg/kg	
1024-57-3	Heptachlor epoxide	ND	0.00067	0.00036	mg/kg	
72-43-5	Methoxychlor	ND	0.0013	0.00034	mg/kg	
53494-70-5	Endrin ketone	ND	0.00067	0.00052	mg/kg	
8001-35-2	Toxaphene	ND	0.017	0.0070	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	76%		25-135%
877-09-8	Tetrachloro-m-xylene	70%		25-135%
2051-24-3	Decachlorobiphenyl	62%		10-156%
2051-24-3	Decachlorobiphenyl	60%		10-156%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-02		
Lab Sample ID:	JC38887-1	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8082A SW846 3546	**Percent Solids:**	96.9
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX206545.D	1	03/16/17	HB	03/15/17	OP1138	GXX5968
Run #2							

	Initial Weight	Final Volume
Run #1	15.3 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.034	0.017	mg/kg	
11104-28-2	Aroclor 1221	ND	0.034	0.017	mg/kg	
11141-16-5	Aroclor 1232	ND	0.034	0.013	mg/kg	
53469-21-9	Aroclor 1242	ND	0.034	0.012	mg/kg	
12672-29-6	Aroclor 1248	ND	0.034	0.021	mg/kg	
11097-69-1	Aroclor 1254	ND	0.034	0.017	mg/kg	
11096-82-5	Aroclor 1260	ND	0.034	0.014	mg/kg	
11100-14-4	Aroclor 1268	ND	0.034	0.012	mg/kg	
37324-23-5	Aroclor 1262	ND	0.034	0.023	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	89%		24-152%
877-09-8	Tetrachloro-m-xylene	108%		24-152%
2051-24-3	Decachlorobiphenyl	75%		10-166%
2051-24-3	Decachlorobiphenyl	90%		10-166%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-02		
Lab Sample ID:	JC38887-1	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
		Percent Solids:	96.9
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	3350	51	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 2.0	2.0	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Arsenic	5.4	2.0	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Barium	24.4	20	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Beryllium	0.22	0.20	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.51	0.51	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Calcium	6550	510	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Chromium	18.6	1.0	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Cobalt	5.4	5.1	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Copper	8.9	2.5	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Iron	10200	51	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Lead	13.0	2.0	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Magnesium	1210	510	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Manganese	288	1.5	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Mercury	< 0.032	0.032	mg/kg	1	03/15/17	03/15/17	JPM	SW846 7471B [1]	SW846 7471B [4]
Nickel	16.6	4.0	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Potassium	< 1000	1000	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 2.0	2.0	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Silver	< 0.51	0.51	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 1000	1000	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 1.0	1.0	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Vanadium	11.4	5.1	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Zinc	14.6	5.1	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA41559
(2) Instrument QC Batch: MA41566
(3) Prep QC Batch: MP99220
(4) Prep QC Batch: MP99231

RL = Reporting Limit

Report of Analysis

Client Sample ID:	3RD-SB-02		
Lab Sample ID:	JC38887-1	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
		Percent Solids:	96.9
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	< 0.24	0.24	mg/kg	1	03/15/17 14:17	BM	SW846 9012B/LACHAT
Solids, Percent	96.9		%	1	03/15/17 16:40	TZW	SM2540 G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	3RD-SB-02		
Lab Sample ID:	JC38887-1A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8260C SW846 1311	**Percent Solids:**	96.9
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B149137.D	5	03/16/17	EH	03/15/17	GP3898	V2B6620
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.0025	0.00070	mg/l	
78-93-3	2-Butanone (MEK)	ND	D035	200	0.10	0.0095	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.0050	0.0027	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.0050	0.00087	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.0050	0.0011	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.0050	0.0011	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.0050	0.0020	mg/l	
75-35-4	1,1-Dichloroethene	ND	D029	0.70	0.0050	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	D039	0.70	0.0050	0.0012	mg/l	
79-01-6	Trichloroethene	ND	D040	0.50	0.0050	0.0013	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.0050	0.0016	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	112%		76-120%
17060-07-0	1,2-Dichloroethane-D4	101%		64-135%
2037-26-5	Toluene-D8	100%		76-117%
460-00-4	4-Bromofluorobenzene	98%		72-122%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-02		
Lab Sample ID:	JC38887-1A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	96.9
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6P35684.D	1	03/17/17	CS	03/16/17	OP1178	E6P1646
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.020	0.0089	mg/l	
	3&4-Methylphenol	ND	D024	200	0.020	0.0088	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.10	0.014	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.013	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0092	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.020	0.0017	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.020	0.0055	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.020	0.0033	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.010	0.0049	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0039	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.020	0.0064	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.020	0.0039	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	35%		14-88%
4165-62-2	Phenol-d5	20%		10-110%
118-79-6	2,4,6-Tribromophenol	85%		39-149%
4165-60-0	Nitrobenzene-d5	77%		32-128%
321-60-8	2-Fluorobiphenyl	85%		35-119%
1718-51-0	Terphenyl-d14	99%		10-126%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-02		
Lab Sample ID:	JC38887-1A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8151 SW846 8151/3510C	**Percent Solids:**	96.9
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OA124435.D	1	03/17/17	VDT	03/16/17	OP1179	GOA4266
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Herbicide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND	D016	10	0.0050	0.0039	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.0015	0.00047	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	95%		50-142%
19719-28-9	2,4-DCAA	75%		50-142%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-02		
Lab Sample ID:	JC38887-1A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	96.9
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	8G3872.D	1	03/17/17	RK	03/16/17	OP1180	G8G114
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Pesticide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	D013	0.40	0.00010	0.000028	mg/l	
12789-03-6	Chlordane	ND	D020	0.030	0.0050	0.0011	mg/l	
72-20-8	Endrin	ND	D012	0.020	0.00010	0.000050	mg/l	
76-44-8	Heptachlor	ND	D031	0.0080	0.00010	0.000038	mg/l	
1024-57-3	Heptachlor epoxide	ND	D031	0.0080	0.00010	0.000065	mg/l	
72-43-5	Methoxychlor	ND	D014	10	0.00020	0.000057	mg/l	
8001-35-2	Toxaphene	ND	D015	0.50	0.0025	0.0018	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	81%		30-137%
877-09-8	Tetrachloro-m-xylene	86%		30-137%
2051-24-3	Decachlorobiphenyl	109%		10-137%
2051-24-3	Decachlorobiphenyl	104%		10-137%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-02		
Lab Sample ID:	JC38887-1A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
		Percent Solids:	96.9
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 0.50	D004	5.0	0.50	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Barium	< 1.0	D005	100	1.0	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 0.025	D006	1.0	0.025	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 0.050	D007	5.0	0.050	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Lead	< 0.50	D008	5.0	0.50	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	03/16/17	03/16/17	JA	SW846 7470A [1]	SW846 7470A [4]
Selenium	< 0.50	D010	1.0	0.50	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Silver	< 0.050	D011	5.0	0.050	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA41573
(2) Instrument QC Batch: MA41581
(3) Prep QC Batch: MP99239
(4) Prep QC Batch: MP99275

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID:	3RD-SB-02		
Lab Sample ID:	JC38887-1A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
		Percent Solids:	96.9
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Corrosivity as pH	8.16 NC		su	1	03/16/17 12:00	AC	SW846 9045D
Cyanide Reactivity	< 10	10	mg/kg	1	03/15/17 14:34	BM	SW846 CHAP7/9012 B
Ignitability (Flashpoint)	> 200		Deg. F	1	03/16/17 20:45	AT	SW846 1010A/ASTM D93
Sulfide Reactivity	< 100	100	mg/kg	1	03/16/17 09:53	MP	SW846 CHAP7/9034

RL = Reporting Limit

Report of Analysis

Client Sample ID:	3RD-SB-03		
Lab Sample ID:	JC38887-2	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8260C	**Percent Solids:**	94.8
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X170763.D	1	03/14/17	TP	n/a	n/a	VX7257
Run #2							

	Initial Weight
Run #1	4.9 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0136	0.011	0.0054	mg/kg	
71-43-2	Benzene	ND	0.00054	0.00013	mg/kg	
74-97-5	Bromochloromethane	ND	0.0054	0.00034	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0022	0.00016	mg/kg	
75-25-2	Bromoform	ND	0.0054	0.00029	mg/kg	
74-83-9	Bromomethane	ND	0.0054	0.00052	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.011	0.0019	mg/kg	
75-15-0	Carbon disulfide	ND	0.0022	0.00018	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0022	0.00018	mg/kg	
108-90-7	Chlorobenzene	ND	0.0022	0.00017	mg/kg	
75-00-3	Chloroethane	ND	0.0054	0.00046	mg/kg	
67-66-3	Chloroform	ND	0.0022	0.00026	mg/kg	
74-87-3	Chloromethane	ND	0.0054	0.00023	mg/kg	
110-82-7	Cyclohexane	ND	0.0022	0.00059	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0022	0.00052	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0022	0.00016	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.0011	0.00026	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0011	0.00018	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0011	0.00015	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0011	0.00016	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0054	0.00059	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0011	0.00020	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0011	0.00018	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0011	0.00016	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0011	0.00047	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0011	0.00017	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0022	0.00033	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0022	0.00021	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0022	0.00024	mg/kg	
100-41-4	Ethylbenzene	ND	0.0011	0.00016	mg/kg	
76-13-1	Freon 113	ND	0.0054	0.00052	mg/kg	
591-78-6	2-Hexanone	ND	0.0054	0.0015	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-03		
Lab Sample ID:	JC38887-2	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8260C	**Percent Solids:**	94.8
Project:	LIRR Expansion, Long Island, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	0.0022	0.00017	mg/kg	
79-20-9	Methyl Acetate	ND	0.0054	0.0022	mg/kg	
108-87-2	Methylcyclohexane	ND	0.0022	0.00054	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0011	0.00029	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0054	0.00091	mg/kg	
75-09-2	Methylene chloride	0.0034	0.0054	0.0011	mg/kg	J
100-42-5	Styrene	ND	0.0022	0.00016	mg/kg	
75-65-0	Tert Butyl Alcohol	ND	0.027	0.0033	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0022	0.00026	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0022	0.00030	mg/kg	
108-88-3	Toluene	ND	0.0011	0.00013	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0054	0.00054	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0054	0.00054	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0022	0.00018	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0022	0.00035	mg/kg	
79-01-6	Trichloroethene	ND	0.0011	0.00020	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0054	0.00068	mg/kg	
75-01-4	Vinyl chloride	ND	0.0022	0.00022	mg/kg	
	m,p-Xylene	ND	0.0011	0.00024	mg/kg	
95-47-6	o-Xylene	ND	0.0011	0.00022	mg/kg	
1330-20-7	Xylene (total)	ND	0.0011	0.00022	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		70-122%
17060-07-0	1,2-Dichloroethane-D4	101%		68-124%
2037-26-5	Toluene-D8	100%		77-125%
460-00-4	4-Bromofluorobenzene	105%		72-130%

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E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-03		
Lab Sample ID:	JC38887-2	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	94.8
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P67766.D	1	03/16/17	SB	03/15/17	OP1140	E2P2982
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	0.070	0.017	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.17	0.021	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.17	0.030	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.17	0.062	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	0.17	0.13	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.17	0.037	mg/kg	
95-48-7	2-Methylphenol	ND	0.070	0.022	mg/kg	
	3&4-Methylphenol	ND	0.070	0.029	mg/kg	
88-75-5	2-Nitrophenol	ND	0.17	0.023	mg/kg	
100-02-7	4-Nitrophenol	ND	0.35	0.093	mg/kg	
87-86-5	Pentachlorophenol	ND	0.14	0.033	mg/kg	
108-95-2	Phenol	ND	0.070	0.018	mg/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.17	0.023	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.17	0.026	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.17	0.021	mg/kg	
83-32-9	Acenaphthene	ND	0.035	0.012	mg/kg	
208-96-8	Acenaphthylene	ND	0.035	0.018	mg/kg	
98-86-2	Acetophenone	ND	0.17	0.0075	mg/kg	
120-12-7	Anthracene	0.0217	0.035	0.021	mg/kg	J
1912-24-9	Atrazine	ND	0.070	0.015	mg/kg	
56-55-3	Benzo(a)anthracene	0.0545	0.035	0.0099	mg/kg	
50-32-8	Benzo(a)pyrene	0.0526	0.035	0.016	mg/kg	
205-99-2	Benzo(b)fluoranthene	0.0694	0.035	0.015	mg/kg	
191-24-2	Benzo(g,h,i)perylene	0.0383	0.035	0.017	mg/kg	
207-08-9	Benzo(k)fluoranthene	0.0252	0.035	0.016	mg/kg	J
101-55-3	4-Bromophenyl phenyl ether	ND	0.070	0.013	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.070	0.0085	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.070	0.0048	mg/kg	
100-52-7	Benzaldehyde	ND	0.17	0.0087	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.070	0.0083	mg/kg	
106-47-8	4-Chloroaniline	ND	0.17	0.013	mg/kg	
86-74-8	Carbazole	0.0149	0.070	0.0051	mg/kg	J

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-03		
Lab Sample ID:	JC38887-2	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	94.8
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	0.070	0.014	mg/kg	
218-01-9	Chrysene	0.0707	0.035	0.011	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.070	0.0075	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.070	0.015	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.070	0.013	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.070	0.011	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.035	0.011	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.035	0.018	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.070	0.029	mg/kg	
123-91-1	1,4-Dioxane	ND	0.035	0.023	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.035	0.015	mg/kg	
132-64-9	Dibenzofuran	ND	0.070	0.014	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.070	0.0057	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.070	0.0087	mg/kg	
84-66-2	Diethyl phthalate	ND	0.070	0.0074	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.070	0.0062	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	0.0526	0.070	0.0082	mg/kg	J
206-44-0	Fluoranthene	0.119	0.035	0.016	mg/kg	
86-73-7	Fluorene	ND	0.035	0.016	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.070	0.0088	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.035	0.014	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.35	0.014	mg/kg	
67-72-1	Hexachloroethane	ND	0.17	0.017	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	0.0394	0.035	0.016	mg/kg	
78-59-1	Isophorone	ND	0.070	0.0075	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.070	0.0079	mg/kg	
88-74-4	2-Nitroaniline	ND	0.17	0.0082	mg/kg	
99-09-2	3-Nitroaniline	ND	0.17	0.0087	mg/kg	
100-01-6	4-Nitroaniline	ND	0.17	0.0090	mg/kg	
91-20-3	Naphthalene	ND	0.035	0.0098	mg/kg	
98-95-3	Nitrobenzene	ND	0.070	0.013	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.070	0.010	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.17	0.013	mg/kg	
85-01-8	Phenanthrene	0.0977	0.035	0.012	mg/kg	
129-00-0	Pyrene	0.128	0.035	0.011	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.17	0.0089	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	55%		23-115%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-03		
Lab Sample ID:	JC38887-2	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	94.8
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	61%		27-114%
118-79-6	2,4,6-Tribromophenol	76%		19-152%
4165-60-0	Nitrobenzene-d5	66%		26-134%
321-60-8	2-Fluorobiphenyl	80%		39-124%
1718-51-0	Terphenyl-d14	82%		36-134%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-03		
Lab Sample ID:	JC38887-2	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8151 SW846 8151/3550C	**Percent Solids:**	94.8
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OA124454.D	1	03/17/17	VDT	03/17/17	OP1193	GOA4266
Run #2							

	Initial Weight	Final Volume
Run #1	16.2 g	5.0 ml
Run #2		

Herbicide List

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	0.016	0.0073	mg/kg	
93-72-1	2,4,5-TP (Silvex)	ND	0.0033	0.0012	mg/kg	
93-76-5	2,4,5-T	ND	0.0033	0.0013	mg/kg	
75-99-0	Dalapon	ND	0.0033	0.0022	mg/kg	
1918-00-9	Dicamba	ND	0.0033	0.0016	mg/kg	
120-36-5	Dichloroprop	ND	0.016	0.0046	mg/kg	
88-85-7	Dinoseb	ND	0.016	0.011	mg/kg	
94-74-6	MCPA	ND	1.6	0.37	mg/kg	
93-65-2	MCPP	ND	1.6	0.35	mg/kg	
87-86-5	Pentachlorophenol	ND	0.0016	0.0014	mg/kg	
94-82-6	2,4-DB	ND	0.016	0.0053	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	63%		10-159%
19719-28-9	2,4-DCAA	53%		10-159%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-03		
Lab Sample ID:	JC38887-2	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8081B SW846 3546	**Percent Solids:**	94.8
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4G78966.D	1	03/16/17	RK	03/15/17	OP1139	G4G2049
Run #2							

	Initial Weight	Final Volume
Run #1	15.5 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.00068	0.00033	mg/kg	
319-84-6	alpha-BHC	ND	0.00068	0.00036	mg/kg	
319-85-7	beta-BHC	ND	0.00068	0.00043	mg/kg	
319-86-8	delta-BHC	ND	0.00068	0.00031	mg/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.00068	0.00030	mg/kg	
5103-71-9	alpha-Chlordane	ND	0.00068	0.00032	mg/kg	
5103-74-2	gamma-Chlordane	0.0013	0.00068	0.00030	mg/kg	
60-57-1	Dieldrin	ND	0.00068	0.00034	mg/kg	
72-54-8	4,4'-DDD	ND	0.00068	0.00044	mg/kg	
72-55-9	4,4'-DDE	ND	0.00068	0.00035	mg/kg	
50-29-3	4,4'-DDT	ND	0.00068	0.00040	mg/kg	
72-20-8	Endrin	ND	0.00068	0.00032	mg/kg	
1031-07-8	Endosulfan sulfate	ND	0.00068	0.00027	mg/kg	
7421-93-4	Endrin aldehyde	ND	0.00068	0.00040	mg/kg	
959-98-8	Endosulfan-I	ND	0.00068	0.00036	mg/kg	
33213-65-9	Endosulfan-II	ND	0.00068	0.00036	mg/kg	
76-44-8	Heptachlor	ND	0.00068	0.00033	mg/kg	
1024-57-3	Heptachlor epoxide	ND	0.00068	0.00037	mg/kg	
72-43-5	Methoxychlor	ND	0.0014	0.00034	mg/kg	
53494-70-5	Endrin ketone	ND	0.00068	0.00052	mg/kg	
8001-35-2	Toxaphene	ND	0.017	0.0071	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	95%		25-135%
877-09-8	Tetrachloro-m-xylene	75%		25-135%
2051-24-3	Decachlorobiphenyl	69%		10-156%
2051-24-3	Decachlorobiphenyl	69%		10-156%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-03		
Lab Sample ID:	JC38887-2	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8082A SW846 3546	**Percent Solids:**	94.8
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX206546.D	1	03/16/17	HB	03/15/17	OP1138	GXX5968
Run #2							

	Initial Weight	Final Volume
Run #1	15.5 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.034	0.017	mg/kg	
11104-28-2	Aroclor 1221	ND	0.034	0.017	mg/kg	
11141-16-5	Aroclor 1232	ND	0.034	0.013	mg/kg	
53469-21-9	Aroclor 1242	ND	0.034	0.012	mg/kg	
12672-29-6	Aroclor 1248	ND	0.034	0.022	mg/kg	
11097-69-1	Aroclor 1254	ND	0.034	0.017	mg/kg	
11096-82-5	Aroclor 1260	ND	0.034	0.014	mg/kg	
11100-14-4	Aroclor 1268	ND	0.034	0.012	mg/kg	
37324-23-5	Aroclor 1262	ND	0.034	0.023	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	95%		24-152%
877-09-8	Tetrachloro-m-xylene	110%		24-152%
2051-24-3	Decachlorobiphenyl	77%		10-166%
2051-24-3	Decachlorobiphenyl	103%		10-166%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-03		
Lab Sample ID:	JC38887-2	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
		Percent Solids:	94.8
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	3480	54	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 2.2	2.2	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Arsenic	2.2	2.2	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Barium	22.9	22	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Beryllium	< 0.22	0.22	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.54	0.54	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Calcium	9040	540	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Chromium	13.7	1.1	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Cobalt	< 5.4	5.4	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Copper	7.4	2.7	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Iron	8160	54	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Lead	8.2	2.2	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Magnesium	3460	540	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Manganese	254	1.6	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Mercury	< 0.032	0.032	mg/kg	1	03/15/17	03/15/17	JPM	SW846 7471B [1]	SW846 7471B [4]
Nickel	10.4	4.3	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 2.2	2.2	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Silver	< 0.54	0.54	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Vanadium	10.6	5.4	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Zinc	17.1	5.4	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA41559
(2) Instrument QC Batch: MA41566
(3) Prep QC Batch: MP99220
(4) Prep QC Batch: MP99231

RL = Reporting Limit

Report of Analysis

Client Sample ID:	3RD-SB-03		
Lab Sample ID:	JC38887-2	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
		Percent Solids:	94.8
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	0.39	0.23	mg/kg	1	03/15/17 14:18	BM	SW846 9012B/LACHAT
Solids, Percent	94.8		%	1	03/15/17 16:40	TZW	SM2540 G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	3RD-SB-03		
Lab Sample ID:	JC38887-2A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8260C SW846 1311	**Percent Solids:**	94.8
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B149138.D	5	03/16/17	EH	03/15/17	GP3898	V2B6620
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.0025	0.00070	mg/l	
78-93-3	2-Butanone (MEK)	ND	D035	200	0.10	0.0095	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.0050	0.0027	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.0050	0.00087	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.0050	0.0011	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.0050	0.0011	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.0050	0.0020	mg/l	
75-35-4	1,1-Dichloroethene	ND	D029	0.70	0.0050	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	D039	0.70	0.0050	0.0012	mg/l	
79-01-6	Trichloroethene	ND	D040	0.50	0.0050	0.0013	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.0050	0.0016	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	113%		76-120%
17060-07-0	1,2-Dichloroethane-D4	101%		64-135%
2037-26-5	Toluene-D8	99%		76-117%
460-00-4	4-Bromofluorobenzene	96%		72-122%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-03		
Lab Sample ID:	JC38887-2A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	94.8
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6P35685.D	1	03/17/17	CS	03/16/17	OP1178	E6P1646
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.020	0.0089	mg/l	
	3&4-Methylphenol	ND	D024	200	0.020	0.0088	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.10	0.014	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.013	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0092	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.020	0.0017	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.020	0.0055	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.020	0.0033	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.010	0.0049	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0039	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.020	0.0064	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.020	0.0039	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	27%		14-88%
4165-62-2	Phenol-d5	16%		10-110%
118-79-6	2,4,6-Tribromophenol	87%		39-149%
4165-60-0	Nitrobenzene-d5	76%		32-128%
321-60-8	2-Fluorobiphenyl	85%		35-119%
1718-51-0	Terphenyl-d14	105%		10-126%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-03		
Lab Sample ID:	JC38887-2A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8151 SW846 8151/3510C	**Percent Solids:**	94.8
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OA124436.D	1	03/17/17	VDT	03/16/17	OP1179	GOA4266
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Herbicide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND	D016	10	0.0050	0.0039	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.0015	0.00047	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	97%		50-142%
19719-28-9	2,4-DCAA	83%		50-142%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-03		
Lab Sample ID:	JC38887-2A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	94.8
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	8G3873.D	1	03/17/17	RK	03/16/17	OP1180	G8G114
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Pesticide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	D013	0.40	0.00010	0.000028	mg/l	
12789-03-6	Chlordane	ND	D020	0.030	0.0050	0.0011	mg/l	
72-20-8	Endrin	ND	D012	0.020	0.00010	0.000050	mg/l	
76-44-8	Heptachlor	ND	D031	0.0080	0.00010	0.000038	mg/l	
1024-57-3	Heptachlor epoxide	ND	D031	0.0080	0.00010	0.000065	mg/l	
72-43-5	Methoxychlor	ND	D014	10	0.00020	0.000057	mg/l	
8001-35-2	Toxaphene	ND	D015	0.50	0.0025	0.0018	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	73%		30-137%
877-09-8	Tetrachloro-m-xylene	78%		30-137%
2051-24-3	Decachlorobiphenyl	114%		10-137%
2051-24-3	Decachlorobiphenyl	109%		10-137%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-03		
Lab Sample ID:	JC38887-2A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
		Percent Solids:	94.8
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 0.50	D004	5.0	0.50	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Barium	< 1.0	D005	100	1.0	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 0.025	D006	1.0	0.025	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 0.050	D007	5.0	0.050	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Lead	< 0.50	D008	5.0	0.50	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	03/16/17	03/16/17	JA	SW846 7470A [1]	SW846 7470A [4]
Selenium	< 0.50	D010	1.0	0.50	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Silver	< 0.050	D011	5.0	0.050	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA41573
(2) Instrument QC Batch: MA41581
(3) Prep QC Batch: MP99239
(4) Prep QC Batch: MP99275

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID:	3RD-SB-03		
Lab Sample ID:	JC38887-2A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
		Percent Solids:	94.8
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Corrosivity as pH	9.12 NC		su	1	03/16/17 12:00	AC	SW846 9045D
Cyanide Reactivity	< 10	10	mg/kg	1	03/15/17 14:35	BM	SW846 CHAP7/9012 B
Ignitability (Flashpoint)	> 200		Deg. F	1	03/16/17 20:45	AT	SW846 1010A/ASTM D93
Sulfide Reactivity	< 100	100	mg/kg	1	03/16/17 09:53	MP	SW846 CHAP7/9034

RL = Reporting Limit

Report of Analysis

Client Sample ID:	3RD-SB-04		
Lab Sample ID:	JC38887-3	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8260C	**Percent Solids:**	93.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X170764.D	1	03/14/17	TP	n/a	n/a	VX7257
Run #2							

	Initial Weight
Run #1	5.6 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.0095	0.0048	mg/kg	
71-43-2	Benzene	ND	0.00048	0.00011	mg/kg	
74-97-5	Bromochloromethane	ND	0.0048	0.00030	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0019	0.00014	mg/kg	
75-25-2	Bromoform	ND	0.0048	0.00025	mg/kg	
74-83-9	Bromomethane	ND	0.0048	0.00046	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.0095	0.0017	mg/kg	
75-15-0	Carbon disulfide	ND	0.0019	0.00016	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0019	0.00016	mg/kg	
108-90-7	Chlorobenzene	ND	0.0019	0.00015	mg/kg	
75-00-3	Chloroethane	ND	0.0048	0.00041	mg/kg	
67-66-3	Chloroform	ND	0.0019	0.00023	mg/kg	
74-87-3	Chloromethane	ND	0.0048	0.00020	mg/kg	
110-82-7	Cyclohexane	ND	0.0019	0.00052	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0019	0.00046	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0019	0.00014	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.00095	0.00023	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.00095	0.00016	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.00095	0.00013	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.00095	0.00015	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0048	0.00052	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.00095	0.00018	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.00095	0.00016	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.00095	0.00015	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.00095	0.00042	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.00095	0.00015	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0019	0.00029	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0019	0.00019	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0019	0.00021	mg/kg	
100-41-4	Ethylbenzene	ND	0.00095	0.00014	mg/kg	
76-13-1	Freon 113	ND	0.0048	0.00046	mg/kg	
591-78-6	2-Hexanone	ND	0.0048	0.0013	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-04		
Lab Sample ID:	JC38887-3	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8260C	**Percent Solids:**	93.6
Project:	LIRR Expansion, Long Island, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	0.0019	0.00015	mg/kg	
79-20-9	Methyl Acetate	ND	0.0048	0.0019	mg/kg	
108-87-2	Methylcyclohexane	0.00062	0.0019	0.00048	mg/kg	J
1634-04-4	Methyl Tert Butyl Ether	ND	0.00095	0.00025	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0048	0.00081	mg/kg	
75-09-2	Methylene chloride	0.0016	0.0048	0.00095	mg/kg	J
100-42-5	Styrene	ND	0.0019	0.00014	mg/kg	
75-65-0	Tert Butyl Alcohol	ND	0.024	0.0029	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0019	0.00023	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0019	0.00027	mg/kg	
108-88-3	Toluene	0.00019	0.00095	0.00012	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0048	0.00048	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0048	0.00048	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0019	0.00016	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0019	0.00031	mg/kg	
79-01-6	Trichloroethene	ND	0.00095	0.00018	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0048	0.00060	mg/kg	
75-01-4	Vinyl chloride	ND	0.0019	0.00019	mg/kg	
	m,p-Xylene	ND	0.00095	0.00021	mg/kg	
95-47-6	o-Xylene	ND	0.00095	0.00019	mg/kg	
1330-20-7	Xylene (total)	ND	0.00095	0.00019	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		70-122%
17060-07-0	1,2-Dichloroethane-D4	102%		68-124%
2037-26-5	Toluene-D8	100%		77-125%
460-00-4	4-Bromofluorobenzene	106%		72-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-04		
Lab Sample ID:	JC38887-3	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	93.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P67767.D	1	03/16/17	SB	03/15/17	OP1140	E2P2982
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	0.071	0.017	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.18	0.022	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.18	0.030	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.18	0.063	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	0.18	0.13	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.18	0.038	mg/kg	
95-48-7	2-Methylphenol	ND	0.071	0.023	mg/kg	
	3&4-Methylphenol	ND	0.071	0.029	mg/kg	
88-75-5	2-Nitrophenol	ND	0.18	0.023	mg/kg	
100-02-7	4-Nitrophenol	ND	0.35	0.094	mg/kg	
87-86-5	Pentachlorophenol	ND	0.14	0.033	mg/kg	
108-95-2	Phenol	ND	0.071	0.018	mg/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.18	0.023	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.18	0.026	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.18	0.021	mg/kg	
83-32-9	Acenaphthene	ND	0.035	0.012	mg/kg	
208-96-8	Acenaphthylene	ND	0.035	0.018	mg/kg	
98-86-2	Acetophenone	ND	0.18	0.0076	mg/kg	
120-12-7	Anthracene	ND	0.035	0.022	mg/kg	
1912-24-9	Atrazine	ND	0.071	0.015	mg/kg	
56-55-3	Benzo(a)anthracene	0.0215	0.035	0.010	mg/kg	J
50-32-8	Benzo(a)pyrene	0.0217	0.035	0.016	mg/kg	J
205-99-2	Benzo(b)fluoranthene	0.0264	0.035	0.016	mg/kg	J
191-24-2	Benzo(g,h,i)perylene	ND	0.035	0.018	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.035	0.017	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.071	0.014	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.071	0.0086	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.071	0.0048	mg/kg	
100-52-7	Benzaldehyde	ND	0.18	0.0088	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.071	0.0084	mg/kg	
106-47-8	4-Chloroaniline	ND	0.18	0.013	mg/kg	
86-74-8	Carbazole	ND	0.071	0.0051	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-04		
Lab Sample ID:	JC38887-3	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	93.6
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	0.071	0.014	mg/kg	
218-01-9	Chrysene	0.0257	0.035	0.011	mg/kg	J
111-91-1	bis(2-Chloroethoxy)methane	ND	0.071	0.0076	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.071	0.015	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.071	0.013	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.071	0.011	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.035	0.011	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.035	0.018	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.071	0.030	mg/kg	
123-91-1	1,4-Dioxane	ND	0.035	0.023	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.035	0.016	mg/kg	
132-64-9	Dibenzofuran	ND	0.071	0.014	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.071	0.0058	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.071	0.0088	mg/kg	
84-66-2	Diethyl phthalate	ND	0.071	0.0075	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.071	0.0063	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	0.0646	0.071	0.0083	mg/kg	J
206-44-0	Fluoranthene	0.0407	0.035	0.016	mg/kg	
86-73-7	Fluorene	ND	0.035	0.016	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.071	0.0090	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.035	0.014	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.35	0.014	mg/kg	
67-72-1	Hexachloroethane	ND	0.18	0.018	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.035	0.017	mg/kg	
78-59-1	Isophorone	ND	0.071	0.0076	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.071	0.0080	mg/kg	
88-74-4	2-Nitroaniline	ND	0.18	0.0083	mg/kg	
99-09-2	3-Nitroaniline	ND	0.18	0.0088	mg/kg	
100-01-6	4-Nitroaniline	ND	0.18	0.0092	mg/kg	
91-20-3	Naphthalene	ND	0.035	0.010	mg/kg	
98-95-3	Nitrobenzene	ND	0.071	0.014	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.071	0.010	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.18	0.013	mg/kg	
85-01-8	Phenanthrene	0.0429	0.035	0.012	mg/kg	
129-00-0	Pyrene	0.0486	0.035	0.011	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.18	0.0090	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	57%		23-115%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-04		
Lab Sample ID:	JC38887-3	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	93.6
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	63%		27-114%
118-79-6	2,4,6-Tribromophenol	78%		19-152%
4165-60-0	Nitrobenzene-d5	64%		26-134%
321-60-8	2-Fluorobiphenyl	83%		39-124%
1718-51-0	Terphenyl-d14	88%		36-134%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-04		
Lab Sample ID:	JC38887-3	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8151 SW846 8151/3550C	**Percent Solids:**	93.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OA124455.D	1	03/17/17	VDT	03/17/17	OP1193	GOA4266
Run #2							

	Initial Weight	Final Volume
Run #1	15.5 g	5.0 ml
Run #2		

Herbicide List

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	0.017	0.0077	mg/kg	
93-72-1	2,4,5-TP (Silvex)	ND	0.0034	0.0013	mg/kg	
93-76-5	2,4,5-T	ND	0.0034	0.0013	mg/kg	
75-99-0	Dalapon	ND	0.0034	0.0023	mg/kg	
1918-00-9	Dicamba	ND	0.0034	0.0017	mg/kg	
120-36-5	Dichloroprop	ND	0.017	0.0049	mg/kg	
88-85-7	Dinoseb	ND	0.017	0.012	mg/kg	
94-74-6	MCPA	ND	1.7	0.40	mg/kg	
93-65-2	MCPP	ND	1.7	0.38	mg/kg	
87-86-5	Pentachlorophenol	ND	0.0017	0.0015	mg/kg	
94-82-6	2,4-DB	ND	0.017	0.0056	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	79%		10-159%
19719-28-9	2,4-DCAA	64%		10-159%

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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-04		
Lab Sample ID:	JC38887-3	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8081B SW846 3546	**Percent Solids:**	93.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4G78967.D	1	03/16/17	RK	03/15/17	OP1139	G4G2049
Run #2							

	Initial Weight	Final Volume
Run #1	15.7 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.00068	0.00033	mg/kg	
319-84-6	alpha-BHC	ND	0.00068	0.00036	mg/kg	
319-85-7	beta-BHC	ND	0.00068	0.00043	mg/kg	
319-86-8	delta-BHC	ND	0.00068	0.00031	mg/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.00068	0.00030	mg/kg	
5103-71-9	alpha-Chlordane	ND	0.00068	0.00032	mg/kg	
5103-74-2	gamma-Chlordane	ND	0.00068	0.00030	mg/kg	
60-57-1	Dieldrin	ND	0.00068	0.00034	mg/kg	
72-54-8	4,4'-DDD	ND	0.00068	0.00044	mg/kg	
72-55-9	4,4'-DDE	ND	0.00068	0.00035	mg/kg	
50-29-3	4,4'-DDT	ND	0.00068	0.00040	mg/kg	
72-20-8	Endrin	ND	0.00068	0.00032	mg/kg	
1031-07-8	Endosulfan sulfate	ND	0.00068	0.00027	mg/kg	
7421-93-4	Endrin aldehyde	ND	0.00068	0.00040	mg/kg	
959-98-8	Endosulfan-I	ND	0.00068	0.00036	mg/kg	
33213-65-9	Endosulfan-II	ND	0.00068	0.00036	mg/kg	
76-44-8	Heptachlor	ND	0.00068	0.00033	mg/kg	
1024-57-3	Heptachlor epoxide	ND	0.00068	0.00037	mg/kg	
72-43-5	Methoxychlor	ND	0.0014	0.00034	mg/kg	
53494-70-5	Endrin ketone	ND	0.00068	0.00052	mg/kg	
8001-35-2	Toxaphene	ND	0.017	0.0071	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	88%		25-135%
877-09-8	Tetrachloro-m-xylene	80%		25-135%
2051-24-3	Decachlorobiphenyl	67%		10-156%
2051-24-3	Decachlorobiphenyl	73%		10-156%

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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-04		
Lab Sample ID:	JC38887-3	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8082A SW846 3546	**Percent Solids:**	93.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX206547.D	1	03/16/17	HB	03/15/17	OP1138	GXX5968
Run #2							

	Initial Weight	Final Volume
Run #1	15.7 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.034	0.017	mg/kg	
11104-28-2	Aroclor 1221	ND	0.034	0.017	mg/kg	
11141-16-5	Aroclor 1232	ND	0.034	0.013	mg/kg	
53469-21-9	Aroclor 1242	ND	0.034	0.012	mg/kg	
12672-29-6	Aroclor 1248	ND	0.034	0.022	mg/kg	
11097-69-1	Aroclor 1254	ND	0.034	0.017	mg/kg	
11096-82-5	Aroclor 1260	ND	0.034	0.014	mg/kg	
11100-14-4	Aroclor 1268	ND	0.034	0.012	mg/kg	
37324-23-5	Aroclor 1262	ND	0.034	0.023	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	101%		24-152%
877-09-8	Tetrachloro-m-xylene	115%		24-152%
2051-24-3	Decachlorobiphenyl	80%		10-166%
2051-24-3	Decachlorobiphenyl	125%		10-166%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-04		
Lab Sample ID:	JC38887-3	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
		Percent Solids:	93.6
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	3570	51	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 2.1	2.1	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Arsenic	2.1	2.1	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Barium	< 21	21	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Beryllium	0.28	0.21	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.51	0.51	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Calcium	1340	510	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Chromium	11.0	1.0	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Cobalt	< 5.1	5.1	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Copper	7.3	2.6	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Iron	11600	51	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Lead	4.3	2.1	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Magnesium	976	510	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Manganese	168	1.5	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Mercury	< 0.034	0.034	mg/kg	1	03/15/17	03/15/17	JPM	SW846 7471B [1]	SW846 7471B [4]
Nickel	8.8	4.1	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Potassium	< 1000	1000	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 2.1	2.1	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Silver	< 0.51	0.51	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 1000	1000	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 1.0	1.0	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Vanadium	10.7	5.1	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Zinc	12.8	5.1	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA41559
(2) Instrument QC Batch: MA41566
(3) Prep QC Batch: MP99220
(4) Prep QC Batch: MP99231

RL = Reporting Limit

Report of Analysis

Client Sample ID:	3RD-SB-04		
Lab Sample ID:	JC38887-3	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
		Percent Solids:	93.6
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	< 0.26	0.26	mg/kg	1	03/15/17 14:19	BM	SW846 9012B/LACHAT
Solids, Percent	93.6		%	1	03/15/17 16:40	TZW	SM2540 G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	3RD-SB-04		
Lab Sample ID:	JC38887-3A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8260C SW846 1311	**Percent Solids:**	93.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B149139.D	5	03/16/17	EH	03/15/17	GP3898	V2B6620
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.0025	0.00070	mg/l	
78-93-3	2-Butanone (MEK)	ND	D035	200	0.10	0.0095	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.0050	0.0027	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.0050	0.00087	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.0050	0.0011	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.0050	0.0011	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.0050	0.0020	mg/l	
75-35-4	1,1-Dichloroethene	ND	D029	0.70	0.0050	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	D039	0.70	0.0050	0.0012	mg/l	
79-01-6	Trichloroethene	ND	D040	0.50	0.0050	0.0013	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.0050	0.0016	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	113%		76-120%
17060-07-0	1,2-Dichloroethane-D4	103%		64-135%
2037-26-5	Toluene-D8	100%		76-117%
460-00-4	4-Bromofluorobenzene	96%		72-122%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-04		
Lab Sample ID:	JC38887-3A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	93.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6P35686.D	1	03/17/17	CS	03/16/17	OP1178	E6P1646
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.020	0.0089	mg/l	
	3&4-Methylphenol	ND	D024	200	0.020	0.0088	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.10	0.014	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.013	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0092	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.020	0.0017	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.020	0.0055	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.020	0.0033	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.010	0.0049	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0039	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.020	0.0064	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.020	0.0039	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	36%		14-88%
4165-62-2	Phenol-d5	21%		10-110%
118-79-6	2,4,6-Tribromophenol	88%		39-149%
4165-60-0	Nitrobenzene-d5	81%		32-128%
321-60-8	2-Fluorobiphenyl	91%		35-119%
1718-51-0	Terphenyl-d14	98%		10-126%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-04		
Lab Sample ID:	JC38887-3A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8151 SW846 8151/3510C	**Percent Solids:**	93.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OA124437.D	1	03/17/17	VDT	03/16/17	OP1179	GOA4266
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Herbicide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND	D016	10	0.0050	0.0039	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.0015	0.00047	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	97%		50-142%
19719-28-9	2,4-DCAA	79%		50-142%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-04		
Lab Sample ID:	JC38887-3A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	93.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	8G3874.D	1	03/17/17	RK	03/16/17	OP1180	G8G114
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Pesticide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	D013	0.40	0.00010	0.000028	mg/l	
12789-03-6	Chlordane	ND	D020	0.030	0.0050	0.0011	mg/l	
72-20-8	Endrin	ND	D012	0.020	0.00010	0.000050	mg/l	
76-44-8	Heptachlor	ND	D031	0.0080	0.00010	0.000038	mg/l	
1024-57-3	Heptachlor epoxide	ND	D031	0.0080	0.00010	0.000065	mg/l	
72-43-5	Methoxychlor	ND	D014	10	0.00020	0.000057	mg/l	
8001-35-2	Toxaphene	ND	D015	0.50	0.0025	0.0018	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	72%		30-137%
877-09-8	Tetrachloro-m-xylene	75%		30-137%
2051-24-3	Decachlorobiphenyl	98%		10-137%
2051-24-3	Decachlorobiphenyl	92%		10-137%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	3RD-SB-04		
Lab Sample ID:	JC38887-3A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
		Percent Solids:	93.6
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 0.50	D004	5.0	0.50	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Barium	< 1.0	D005	100	1.0	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 0.025	D006	1.0	0.025	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 0.050	D007	5.0	0.050	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Lead	< 0.50	D008	5.0	0.50	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	03/16/17	03/16/17	JA	SW846 7470A [1]	SW846 7470A [4]
Selenium	< 0.50	D010	1.0	0.50	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Silver	< 0.050	D011	5.0	0.050	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA41573
(2) Instrument QC Batch: MA41581
(3) Prep QC Batch: MP99239
(4) Prep QC Batch: MP99275

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID:	3RD-SB-04		
Lab Sample ID:	JC38887-3A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
		Percent Solids:	93.6
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Corrosivity as pH	7.06 NC		su	1	03/16/17 12:00	AC	SW846 9045D
Cyanide Reactivity	< 11	11	mg/kg	1	03/15/17 14:36	BM	SW846 CHAP7/9012 B
Ignitability (Flashpoint)	> 200		Deg. F	1	03/16/17 20:45	AT	SW846 1010A/ASTM D93
Sulfide Reactivity	< 110	110	mg/kg	1	03/16/17 09:53	MP	SW846 CHAP7/9034

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

Parameter Certification Exceptions

Job Number: JC38887
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY

The following parameters included in this report are exceptions to NELAC certification.
The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Cyanide Reactivity		**SW846 CHAP7/9012 B**	SO	Accutest is not certified for this parameter.[a]
Sulfide Reactivity		**SW846 CHAP7/9034**	SO	Accutest is not certified for this parameter.[a]

(a) Reactivity analyzed following SW846 Chapter 7 is no longer recognized by regulatory agencies. Use of results should be verified through the program to which the data is being submitted.

Certification exceptions shown are based on the New Jersey DEP certifications. Applicability in other states may vary. Please contact your laboratory representative if additional information is required for a specific regulatory program.

SGS ACCUTEST SLC

CHAIN OF CUSTODY

SGS Accutest - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

PAGE 1 OF 1

FED-EX Tracking #
Bottle Order Control #
SGS Accutest Quote #
SGS Accutest Job # JC38887

Client / Reporting Information

Company Name: Matrix New World
Street Address: 150 W 30th St.
City: NY State: NY Zip: 10001
Project Contact: Brian Crespi E-mail:
Phone #: 212-324-4251 Fax #: 973-240-1518
Sampler(s) Name(s): Linkey Melichareb 201-599-1635
Phone #:

Project Information

Project Name: Long Island Rail Road (LIRR)
Street: 3rd Ave
City: Mineola State: NY
Project #: 16-144
Client Purchase Order #:
Project Manager: Brian Crespi

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet): Full TCL, RCRA, Full TCLP, Pest

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

SGS Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	NI Water	MEOH	ENCORE	LAB USE ONLY
1	3rd-SB-02		3/13/17	0810	LM	SO	6					3	2	1		D52
2	3rd-SB-03			0910			6					3	2	1		819
3	3rd-SB-04			1015			6					3	2	1		14E1
																4087

D.I slurry voc vials frozen storage
Date: 3/13/17 **Time:** 19:37 **Initials:** JK

Turnaround Time (Business days)
- ☐ Std. 10 Business Days
- ☐ 5 Day RUSH
- ☑ 3 Day RUSH
- ☐ 2 Day RUSH
- ☐ 1 Day RUSH
- ☐ other

Emergency & Rush T/A data available VIA Lablink

Approved by (SGS Accutest PM): / Date:
INITIAL ASSESSMENT Am 13
LABEL VERIFICATION JK

Data Deliverable Information
- ☐ Commercial "a" (Level 1)
- ☐ Commercial "b" (Level 2)
- ☐ FULLT1 (Level 3+4)
- ☐ NJ Reduced
- ☐ Commercial "C"
- ☐ NJ Data of Known Quality Protocol Reporting
- ☑ NYASP Category A
- ☐ NYASP Category B
- ☐ State Forms
- ☐ EDD Format
- ☐ Other

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions: CS#6116

Sample inventory is verified upon receipt in the Laboratory

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	3/13/17 / 1654	1 Chris Lau	2 Chris Lau	3/13/17 / 18:10	2
3		3	4		4
5		5			

Custody Seal # 6116 ☑ Intact ☐ Not intact
Preserved where applicable ☐
On Ice ☒ Cooler Temp. 2.9°C

4.2
4

JC38887: Chain of Custody
Page 1 of 3

SGS ACCUTEST

Soil VOC Vial Tracking Log

JOB NUMBER: JC 38887

SAMPLE #	MeOH	MeOH	DIH2O / NaHSO4	DIH2O / NaHSO4
1	753		294	275
2	1016		317	318
3	1011		307	308

All strike outs must be initialed & dated. A reason code must be applied if not a transcription error.

Form: SM087-01

Rev Date: 6/1/16

JC38887: Chain of Custody

Page 2 of 3

4.2 4

SGS Accutest Sample Receipt Summary

Job Number: JC38887 **Client:** _____ **Project:** _____

Date / Time Received: 3/13/2017 6:10:00 PM **Delivery Method:** _____ **Airbill #'s:** _____

Cooler Temps (Raw Measured) °C: Cooler 1: (2.9);

Cooler Temps (Corrected) °C: Cooler 1: (4.3);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

SM089-02
Rev. Date 12/1/16

JC38887: Chain of Custody
Page 3 of 3

Internal Sample Tracking Chronicle

Matrix New World Engineering, Inc.

Job No: JC38887

LIRR Expansion, Long Island, NY
Project No: 16-144, 3rd Avenue Parking Lot, 3rd Avenue, Mineola

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC38887-1 3RD-SB-02	Collected: 13-MAR-17 08:10 By: LM		Received: 13-MAR-17 By: AS			
JC38887-1	SW846 7471B	15-MAR-17 12:42	JPM	15-MAR-17	JPM	HG
JC38887-1	SW846 8260C	15-MAR-17 14:09	PS			V8260TCL20
JC38887-1	SW846 9012B/LACHAT	15-MAR-17 14:17	BM	15-MAR-17	RP	CN
JC38887-1	SM2540 G-97	15-MAR-17 16:40	TZW			SOL104
JC38887-1	SW846 6010C	15-MAR-17 19:30	DE	15-MAR-17	RM	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC38887-1	SW846 8270D	16-MAR-17 00:31	SB	15-MAR-17	FN	AB8270TCL20
JC38887-1	SW846 8081B	16-MAR-17 11:35	RK	15-MAR-17	SS	P8081PESTTCL
JC38887-1	SW846 8082A	16-MAR-17 13:57	HB	15-MAR-17	SS	P8082PCB11AO
JC38887-1	SW846 8151	17-MAR-17 21:47	VDT	17-MAR-17	AQ	H8151FL
JC38887-2 3RD-SB-03	Collected: 13-MAR-17 09:10 By: LM		Received: 13-MAR-17 By: AS			
JC38887-2	SW846 8260C	14-MAR-17 19:17	TP			V8260TCL20
JC38887-2	SW846 7471B	15-MAR-17 12:43	JPM	15-MAR-17	JPM	HG
JC38887-2	SW846 9012B/LACHAT	15-MAR-17 14:18	BM	15-MAR-17	RP	CN
JC38887-2	SM2540 G-97	15-MAR-17 16:40	TZW			SOL104
JC38887-2	SW846 6010C	15-MAR-17 19:35	DE	15-MAR-17	RM	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC38887-2	SW846 8270D	16-MAR-17 00:53	SB	15-MAR-17	FN	AB8270TCL20
JC38887-2	SW846 8081B	16-MAR-17 11:49	RK	15-MAR-17	SS	P8081PESTTCL
JC38887-2	SW846 8082A	16-MAR-17 14:13	HB	15-MAR-17	SS	P8082PCB11AO
JC38887-2	SW846 8151	17-MAR-17 22:15	VDT	17-MAR-17	AQ	H8151FL
JC38887-3 3RD-SB-04	Collected: 13-MAR-17 10:15 By: LM		Received: 13-MAR-17 By: AS			
JC38887-3	SW846 8260C	14-MAR-17 19:47	TP			V8260TCL20
JC38887-3	SW846 7471B	15-MAR-17 12:45	JPM	15-MAR-17	JPM	HG
JC38887-3	SW846 9012B/LACHAT	15-MAR-17 14:19	BM	15-MAR-17	RP	CN
JC38887-3	SM2540 G-97	15-MAR-17 16:40	TZW			SOL104
JC38887-3	SW846 6010C	15-MAR-17 19:39	DE	15-MAR-17	RM	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN

Internal Sample Tracking Chronicle

Matrix New World Engineering, Inc.

Job No: JC38887

LIRR Expansion, Long Island, NY
Project No: 16-144, 3rd Avenue Parking Lot, 3rd Avenue, Mineola

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC38887-3	SW846 8270D	16-MAR-17 01:15	SB	15-MAR-17	FN	AB8270TCL20
JC38887-3	SW846 8081B	16-MAR-17 12:03	RK	15-MAR-17	SS	P8081PESTTCL
JC38887-3	SW846 8082A	16-MAR-17 14:30	HB	15-MAR-17	SS	P8082PCB11AO
JC38887-3	SW846 8151	17-MAR-17 22:44	VDT	17-MAR-17	AQ	H8151FL
JC38887-1A	Collected: 13-MAR-17 08:10 By: LM		Received: 13-MAR-17 By: AS			
3RD-SB-02						
JC38887-1A	SW846 CHAP7/9012 B	15-MAR-17 14:34	BM	15-MAR-17	CD	CREAC
JC38887-1A	SW846 CHAP7/9034	16-MAR-17 09:53	MP	15-MAR-17	CD	SREAC
JC38887-1A	SW846 9045D	16-MAR-17 12:00	AC			CORR
JC38887-1A	SW846 8260C	16-MAR-17 14:11	EH	15-MAR-17	MH	V8260TCLP
JC38887-1A	SW846 7470A	16-MAR-17 14:16	JA	16-MAR-17	JA	EHG
JC38887-1A	SW846 1010A/ASTM D93	16-MAR-17 20:45	AT			IGN
JC38887-1A	SW846 6010C	16-MAR-17 22:44	MET	16-MAR-17	DM	EAG,EAS,EBA,ECD,ECR,EPB,ESE
JC38887-1A	SW846 8270D	17-MAR-17 05:48	CS	16-MAR-17	AF	AB8270TCLP
JC38887-1A	SW846 8151	17-MAR-17 11:19	VDT	16-MAR-17	AF	H8151TCLP
JC38887-1A	SW846 8081B	17-MAR-17 12:35	RK	16-MAR-17	AF	P8081TCLP
JC38887-2A	Collected: 13-MAR-17 09:10 By: LM		Received: 13-MAR-17 By: AS			
3RD-SB-03						
JC38887-2A	SW846 CHAP7/9012 B	15-MAR-17 14:35	BM	15-MAR-17	CD	CREAC
JC38887-2A	SW846 CHAP7/9034	16-MAR-17 09:53	MP	15-MAR-17	CD	SREAC
JC38887-2A	SW846 9045D	16-MAR-17 12:00	AC			CORR
JC38887-2A	SW846 7470A	16-MAR-17 14:18	JA	16-MAR-17	JA	EHG
JC38887-2A	SW846 8260C	16-MAR-17 14:42	EH	15-MAR-17	MH	V8260TCLP
JC38887-2A	SW846 1010A/ASTM D93	16-MAR-17 20:45	AT			IGN
JC38887-2A	SW846 6010C	16-MAR-17 22:47	MET	16-MAR-17	DM	EAG,EAS,EBA,ECD,ECR,EPB,ESE
JC38887-2A	SW846 8270D	17-MAR-17 06:11	CS	16-MAR-17	AF	AB8270TCLP
JC38887-2A	SW846 8151	17-MAR-17 11:48	VDT	16-MAR-17	AF	H8151TCLP
JC38887-2A	SW846 8081B	17-MAR-17 12:50	RK	16-MAR-17	AF	P8081TCLP
JC38887-3A	Collected: 13-MAR-17 10:15 By: LM		Received: 13-MAR-17 By: AS			
3RD-SB-04						
JC38887-3A	SW846 CHAP7/9012 B	15-MAR-17 14:36	BM	15-MAR-17	CD	CREAC
JC38887-3A	SW846 CHAP7/9034	16-MAR-17 09:53	MP	15-MAR-17	CD	SREAC
JC38887-3A	SW846 9045D	16-MAR-17 12:00	AC			CORR
JC38887-3A	SW846 7470A	16-MAR-17 14:19	JA	16-MAR-17	JA	EHG

Internal Sample Tracking Chronicle

Matrix New World Engineering, Inc.

Job No: JC38887

LIRR Expansion, Long Island, NY
Project No: 16-144, 3rd Avenue Parking Lot, 3rd Avenue, Mineola

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC38887-3A	SW846 8260C	16-MAR-17 15:15	EH	15-MAR-17	MH	V8260TCLP
JC38887-3A	SW846 1010A/ASTM D93	16-MAR-17 20:45	AT			IGN
JC38887-3A	SW846 6010C	16-MAR-17 22:50	MET	16-MAR-17	DM	EAG,EAS,EBA,ECD,ECR,EPB,ESE
JC38887-3A	SW846 8270D	17-MAR-17 07:09	CS	16-MAR-17	AF	AB8270TCLP
JC38887-3A	SW846 8151	17-MAR-17 12:16	VDT	16-MAR-17	AF	H8151TCLP
JC38887-3A	SW846 8081B	17-MAR-17 13:06	RK	16-MAR-17	AF	P8081TCLP

SGS Accutest Internal Chain of Custody

Job Number: JC38887
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/13/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38887-1.1	Secured Storage	Diana Mathes	03/15/17 08:10	Retrieve from Storage
JC38887-1.1	Diana Mathes	Stephen Seuling	03/15/17 08:21	Custody Transfer
JC38887-1.1	Stephen Seuling	Albert Quayson	03/15/17 08:30	Custody Transfer
JC38887-1.1	Secured Storage	Luis Villanueva	03/15/17 11:12	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JC38887-1.1	Luis Villanueva	Secured Storage	03/15/17 16:42	Return to Storage
JC38887-1.1	Secured Storage	Jennifer Voitovitch	03/15/17 23:36	Retrieve from Storage
JC38887-1.1	Jennifer Voitovitch	Secured Staging Area	03/15/17 23:36	Return to Storage
JC38887-1.1	Secured Staging Area	Andrew Csimbok	03/16/17 08:25	Retrieve from Storage
JC38887-1.1	Andrew Csimbok	Amir Takla	03/16/17 16:38	Custody Transfer
JC38887-1.1	Amir Takla	Secured Storage	03/16/17 21:09	Return to Storage
JC38887-1.1.1	Stephen Seuling	Organics Prep	03/15/17 08:23	Extract from JC38887-1.1
JC38887-1.1.1	Organics Prep	Stephen Seuling	03/15/17 16:08	Extract from JC38887-1.1
JC38887-1.1.1	Stephen Seuling	Extract Storage	03/15/17 16:08	Return to Storage
JC38887-1.1.1	Extract Storage	Humarah Bano	03/15/17 17:07	Retrieve from Storage
JC38887-1.1.1	Humarah Bano	GCXX	03/15/17 17:07	Load on Instrument
JC38887-1.1.1	GCXX	Humarah Bano	03/17/17 12:16	Unload from Instrument
JC38887-1.1.1	Humarah Bano	Extract Freezer	03/17/17 12:16	Return to Storage
JC38887-1.1.2	Stephen Seuling	Organics Prep	03/15/17 08:24	Extract from JC38887-1.1
JC38887-1.1.2	Organics Prep	Stephen Seuling	03/15/17 16:08	Extract from JC38887-1.1
JC38887-1.1.2	Stephen Seuling	Extract Storage	03/15/17 16:08	Return to Storage
JC38887-1.1.2	Extract Storage	Christine Phillips	03/16/17 09:29	Retrieve from Storage
JC38887-1.1.2	Christine Phillips	GC4G	03/16/17 09:29	Load on Instrument
JC38887-1.1.3	Albert Quayson	Organics Prep	03/15/17 08:34	Extract from JC38887-1.1
JC38887-1.1.3	Organics Prep	Ryan Fantasia	03/15/17 23:11	Extract from JC38887-1.1
JC38887-1.1.3	Ryan Fantasia	Extract Storage	03/15/17 23:11	Return to Storage
JC38887-1.1.4	Albert Quayson	Organics Prep	03/15/17 08:36	Extract from JC38887-1.1
JC38887-1.1.4	Organics Prep	Finley Nyaata	03/15/17 16:31	Extract from JC38887-1.1
JC38887-1.1.4	Finley Nyaata	Extract Storage	03/15/17 16:31	Return to Storage
JC38887-1.1.4	Extract Storage	Sean Block	03/15/17 18:24	Retrieve from Storage
JC38887-1.1.4	Sean Block	GCMS2P	03/15/17 18:24	Load on Instrument
JC38887-1.1.4	GCMS2P	Arielle Cocozza	03/16/17 10:18	Unload from Instrument
JC38887-1.1.4	Arielle Cocozza	Extract Freezer	03/16/17 10:18	Return to Storage
JC38887-1.1.5	Albert Quayson	Diana Mathes	03/15/17 09:29	Aliquot from JC38887-1.1
JC38887-1.1.5	Diana Mathes		03/15/17 10:31	Depleted
JC38887-1.1.6	Diana Mathes	Metals Digestion	03/15/17 10:02	Digestate from JC38887-1.1.5
JC38887-1.1.6	Metals Digestion	Diana Mathes	03/15/17 10:03	Digestate from JC38887-1.1.5
JC38887-1.1.6	Diana Mathes	Metals Digestate Storage	03/15/17 10:03	Return to Storage

SGS Accutest Internal Chain of Custody

Job Number: JC38887
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/13/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38887-1.2	Secured Storage	Dwayne Johnson	03/15/17 09:11	Retrieve from Storage
JC38887-1.2	Dwayne Johnson	Secured Staging Area	03/15/17 09:11	Return to Storage
JC38887-1.2	Secured Staging Area	Rinku Patel	03/15/17 09:54	Retrieve from Storage
JC38887-1.2	Rinku Patel	Minhaj Hashmi	03/15/17 14:40	Custody Transfer
JC38887-1.2	Minhaj Hashmi	Secured Storage	03/15/17 15:49	Return to Storage
JC38887-1.2	Secured Storage	Sahara Feliciano	03/16/17 17:12	Retrieve from Storage
JC38887-1.2	Sahara Feliciano	Secured Staging Area	03/16/17 17:12	Return to Storage
JC38887-1.2	Secured Staging Area	Autumn Yun	03/16/17 18:13	Retrieve from Storage
JC38887-1.2	Autumn Yun	Secured Storage	03/16/17 20:56	Return to Storage
JC38887-1.2.1	Minhaj Hashmi	TCLP	03/15/17 15:49	Leachate from JC38887-1.2
JC38887-1.2.1	TCLP	Mark Setaro	03/15/17 17:46	Leachate from JC38887-1.2
JC38887-1.2.1	Mark Setaro	Secured Storage	03/15/17 17:55	Return to Storage
JC38887-1.2.1	Secured Storage	Eddie Huang	03/16/17 16:56	Retrieve from Storage
JC38887-1.2.1	Eddie Huang	GCMS2B	03/16/17 16:56	Load on Instrument
JC38887-1.2.1	GCMS2B	Eddie Huang	03/17/17 08:44	Unload from Instrument
JC38887-1.2.1	Eddie Huang	Secured Storage	03/17/17 08:44	Return to Storage
JC38887-1.2.2	TCLP	Mark Setaro	03/15/17 17:46	Leachate from JC38887-1.2
JC38887-1.2.2	Mark Setaro	Secured Storage	03/15/17 17:55	Return to Storage
JC38887-1.2.3	Autumn Yun	Organics Prep	03/16/17 18:14	Extract from JC38887-1.2
JC38887-1.2.3	Organics Prep	Albert Quayson	03/17/17 13:20	Extract from JC38887-1.2
JC38887-1.2.3	Albert Quayson	Extract Storage	03/17/17 13:20	Return to Storage
JC38887-1.2.3	Extract Storage	Vincent Drago	03/17/17 18:00	Retrieve from Storage
JC38887-1.2.3	Vincent Drago	GCOA	03/17/17 18:00	Load on Instrument
JC38887-1.2.3	GCOA	Rebecca Krug	03/23/17 16:47	Unload from Instrument
JC38887-1.2.3	Rebecca Krug	Extract Freezer	03/23/17 16:47	Return to Storage
JC38887-1.3	Secured Storage	Sahara Feliciano	03/15/17 11:16	Retrieve from Storage
JC38887-1.3	Sahara Feliciano	Secured Staging Area	03/15/17 11:16	Return to Storage
JC38887-1.3	Secured Staging Area	Minhaj Hashmi	03/15/17 11:18	Retrieve from Storage
JC38887-1.3	Minhaj Hashmi	Secured Storage	03/15/17 15:49	Return to Storage
JC38887-1.3.1	Minhaj Hashmi	TCLP	03/15/17 15:49	Leachate from JC38887-1.3
JC38887-1.3.1	TCLP	Mark Setaro	03/15/17 17:50	Leachate from JC38887-1.3
JC38887-1.3.1	Mark Setaro	Secured Storage	03/15/17 17:55	Return to Storage
JC38887-1.3.1	Secured Storage	Ryan Fantasia	03/16/17 15:10	Retrieve from Storage
JC38887-1.3.1	Ryan Fantasia	Secured Storage	03/16/17 21:19	Return to Storage
JC38887-1.3.2	TCLP	Mark Setaro	03/15/17 17:50	Leachate from JC38887-1.3
JC38887-1.3.2	Mark Setaro	Secured Storage	03/15/17 17:55	Return to Storage
JC38887-1.3.2	Secured Storage	Deval Patel	03/16/17 16:17	Retrieve from Storage

SGS Accutest Internal Chain of Custody

Job Number: JC38887
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/13/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38887-1.3.2	Deval Patel	Secured Storage	03/16/17 17:03	Return to Storage
JC38887-1.3.3	Ryan Fantasia	Organics Prep	03/16/17 15:18	Extract from JC38887-1.3.1
JC38887-1.3.3	Organics Prep	Yaw Britwum	03/17/17 00:12	Extract from JC38887-1.3.1
JC38887-1.3.3	Yaw Britwum	Extract Storage	03/17/17 00:12	Return to Storage
JC38887-1.3.3	Extract Storage	Christine Phillips	03/17/17 10:05	Retrieve from Storage
JC38887-1.3.3	Christine Phillips	GC8G	03/17/17 10:05	Load on Instrument
JC38887-1.3.4	Ryan Fantasia	Organics Prep	03/16/17 15:24	Extract from JC38887-1.3.1
JC38887-1.3.4	Organics Prep	Amanda Furka	03/16/17 23:20	Extract from JC38887-1.3.1
JC38887-1.3.4	Amanda Furka	Extract Storage	03/16/17 23:20	Return to Storage
JC38887-1.3.4	Extract Storage	Vincent Drago	03/17/17 10:26	Retrieve from Storage
JC38887-1.3.4	Vincent Drago	GCOA	03/17/17 10:26	Load on Instrument
JC38887-1.3.4	GCOA	Rebecca Krug	03/23/17 16:47	Unload from Instrument
JC38887-1.3.4	Rebecca Krug	Extract Freezer	03/23/17 16:47	Return to Storage
JC38887-1.3.5	Ryan Fantasia	Organics Prep	03/16/17 15:30	Extract from JC38887-1.3.1
JC38887-1.3.5	Organics Prep	Amanda Furka	03/16/17 23:22	Extract from JC38887-1.3.1
JC38887-1.3.5	Amanda Furka	Extract Storage	03/16/17 23:22	Return to Storage
JC38887-1.3.5	Extract Storage	Christopher Sowa	03/17/17 01:06	Retrieve from Storage
JC38887-1.3.5	Christopher Sowa	GCMS6P	03/17/17 01:06	Load on Instrument
JC38887-1.3.6	Deval Patel	Metals Digestion	03/16/17 17:00	Digestate from JC38887-1.3.2
JC38887-1.3.6	Metals Digestion	Deval Patel	03/16/17 17:00	Digestate from JC38887-1.3.2
JC38887-1.3.6	Deval Patel	Metals Digestate Storage	03/16/17 17:00	Return to Storage
JC38887-1.5	Secured Storage	Toan Pham	03/14/17 12:45	Retrieve from Storage
JC38887-1.5	Toan Pham	GCMSX	03/14/17 12:45	Load on Instrument
JC38887-1.6	Secured Storage	Prashant Shukla	03/15/17 11:58	Retrieve from Storage
JC38887-1.6	Prashant Shukla	GCMSY	03/15/17 11:58	Load on Instrument
JC38887-1.6	GCMSY	Prashant Shukla	03/18/17 09:45	Unload from Instrument
JC38887-1.6	Prashant Shukla		03/18/17 09:46	Depleted
JC38887-2.1	Secured Storage	Albert Quayson	03/15/17 08:31	Retrieve from Storage
JC38887-2.1	Albert Quayson	Rinku Patel	03/15/17 10:58	Custody Transfer
JC38887-2.1	Secured Storage	Luis Villanueva	03/15/17 11:12	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JC38887-2.1	Luis Villanueva	Secured Storage	03/15/17 16:42	Return to Storage
JC38887-2.1	Secured Storage	Jennifer Voitovitch	03/15/17 23:36	Retrieve from Storage
JC38887-2.1	Jennifer Voitovitch	Secured Staging Area	03/15/17 23:36	Return to Storage
JC38887-2.1	Secured Staging Area	Andrew Csimbok	03/16/17 08:25	Retrieve from Storage
JC38887-2.1	Andrew Csimbok	Amir Takla	03/16/17 16:38	Custody Transfer
JC38887-2.1	Amir Takla	Secured Storage	03/16/17 21:09	Return to Storage

SGS Accutest Internal Chain of Custody

Job Number: JC38887
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/13/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38887-2.1.1	Albert Quayson	Organics Prep	03/15/17 08:34	Extract from JC38887-2.1
JC38887-2.1.1	Organics Prep	Ryan Fantasia	03/15/17 23:11	Extract from JC38887-2.1
JC38887-2.1.1	Ryan Fantasia	Extract Storage	03/15/17 23:11	Return to Storage
JC38887-2.1.2	Albert Quayson	Organics Prep	03/15/17 08:36	Extract from JC38887-2.1
JC38887-2.1.2	Organics Prep	Finley Nyaata	03/15/17 16:31	Extract from JC38887-2.1
JC38887-2.1.2	Finley Nyaata	Extract Storage	03/15/17 16:31	Return to Storage
JC38887-2.1.2	Extract Storage	Sean Block	03/15/17 18:24	Retrieve from Storage
JC38887-2.1.2	Sean Block	GCMS2P	03/15/17 18:24	Load on Instrument
JC38887-2.1.2	GCMS2P	Arielle Cocozza	03/16/17 10:18	Unload from Instrument
JC38887-2.1.2	Arielle Cocozza	Extract Freezer	03/16/17 10:18	Return to Storage
JC38887-2.1.3	Albert Quayson	James Patrick McIlvaine	03/15/17 09:24	Aliquot from JC38887-2.1
JC38887-2.1.3	James Patrick McIlvaine		03/15/17 11:13	Disposed
JC38887-2.2	Secured Storage	Diana Mathes	03/15/17 08:10	Retrieve from Storage
JC38887-2.2	Diana Mathes	Stephen Seuling	03/15/17 08:21	Custody Transfer
JC38887-2.2	Stephen Seuling	Albert Quayson	03/15/17 08:30	Custody Transfer
JC38887-2.2	Albert Quayson	Stephen Seuling	03/15/17 13:01	Custody Transfer
JC38887-2.2	Stephen Seuling	Mahendra Patel	03/15/17 13:05	Custody Transfer
JC38887-2.2	Mahendra Patel	Stephen Seuling	03/15/17 13:08	Custody Transfer
JC38887-2.2	Stephen Seuling	Secured Storage	03/15/17 13:09	Return to Storage
JC38887-2.2	Secured Storage	Minhaj Hashmi	03/15/17 14:41	Retrieve from Storage
JC38887-2.2	Minhaj Hashmi	Secured Storage	03/15/17 15:49	Return to Storage
JC38887-2.2	Secured Storage	Sahara Feliciano	03/16/17 17:12	Retrieve from Storage
JC38887-2.2	Sahara Feliciano	Secured Staging Area	03/16/17 17:12	Return to Storage
JC38887-2.2	Secured Staging Area	Autumn Yun	03/16/17 18:13	Retrieve from Storage
JC38887-2.2	Autumn Yun	Secured Storage	03/16/17 20:56	Return to Storage
JC38887-2.2.1	Stephen Seuling	Organics Prep	03/15/17 08:23	Extract from JC38887-2.2
JC38887-2.2.1	Organics Prep	Stephen Seuling	03/15/17 16:08	Extract from JC38887-2.2
JC38887-2.2.1	Stephen Seuling	Extract Storage	03/15/17 16:08	Return to Storage
JC38887-2.2.2	Stephen Seuling	Organics Prep	03/15/17 08:24	Extract from JC38887-2.2
JC38887-2.2.2	Organics Prep	Stephen Seuling	03/15/17 16:08	Extract from JC38887-2.2
JC38887-2.2.2	Stephen Seuling	Extract Storage	03/15/17 16:08	Return to Storage
JC38887-2.2.2	Extract Storage	Christine Phillips	03/16/17 09:29	Retrieve from Storage
JC38887-2.2.2	Christine Phillips	GC4G	03/16/17 09:29	Load on Instrument
JC38887-2.2.3	Albert Quayson	Diana Mathes	03/15/17 09:29	Aliquot from JC38887-2.2
JC38887-2.2.3	Diana Mathes		03/15/17 10:31	Depleted
JC38887-2.2.4	Diana Mathes	Metals Digestion	03/15/17 10:02	Digestate from JC38887-2.2.3

SGS Accutest Internal Chain of Custody

Job Number: JC38887
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/13/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38887-2.2.4	Metals Digestion	Diana Mathes	03/15/17 10:03	Digestate from JC38887-2.2.3
JC38887-2.2.4	Diana Mathes	Metals Digestate Storage	03/15/17 10:03	Return to Storage
JC38887-2.2.5	Minhaj Hashmi	TCLP	03/15/17 15:49	Leachate from JC38887-2.2
JC38887-2.2.5	TCLP	Mark Setaro	03/15/17 17:46	Leachate from JC38887-2.2
JC38887-2.2.5	Mark Setaro	Secured Storage	03/15/17 17:55	Return to Storage
JC38887-2.2.5	Secured Storage	Eddie Huang	03/16/17 16:56	Retrieve from Storage
JC38887-2.2.5	Eddie Huang	GCMS2B	03/16/17 16:56	Load on Instrument
JC38887-2.2.5	GCMS2B	Eddie Huang	03/17/17 08:44	Unload from Instrument
JC38887-2.2.5	Eddie Huang	Secured Storage	03/17/17 08:44	Return to Storage
JC38887-2.2.6	TCLP	Mark Setaro	03/15/17 17:46	Leachate from JC38887-2.2
JC38887-2.2.6	Mark Setaro	Secured Storage	03/15/17 17:55	Return to Storage
JC38887-2.2.7	Autumn Yun	Organics Prep	03/16/17 18:14	Extract from JC38887-2.2
JC38887-2.2.7	Organics Prep	Albert Quayson	03/17/17 13:20	Extract from JC38887-2.2
JC38887-2.2.7	Albert Quayson	Extract Storage	03/17/17 13:20	Return to Storage
JC38887-2.2.7	Extract Storage	Vincent Drago	03/17/17 18:00	Retrieve from Storage
JC38887-2.2.7	Vincent Drago	GCOA	03/17/17 18:00	Load on Instrument
JC38887-2.2.7	GCOA	Rebecca Krug	03/23/17 16:47	Unload from Instrument
JC38887-2.2.7	Rebecca Krug	Extract Freezer	03/23/17 16:47	Return to Storage
JC38887-2.3	Secured Storage	Sahara Feliciano	03/15/17 11:16	Retrieve from Storage
JC38887-2.3	Sahara Feliciano	Secured Staging Area	03/15/17 11:16	Return to Storage
JC38887-2.3	Secured Staging Area	Minhaj Hashmi	03/15/17 11:18	Retrieve from Storage
JC38887-2.3	Minhaj Hashmi	Secured Storage	03/15/17 15:49	Return to Storage
JC38887-2.3.1	Minhaj Hashmi	TCLP	03/15/17 15:49	Leachate from JC38887-2.3
JC38887-2.3.1	TCLP	Mark Setaro	03/15/17 17:50	Leachate from JC38887-2.3
JC38887-2.3.1	Mark Setaro	Secured Storage	03/15/17 17:55	Return to Storage
JC38887-2.3.1	Secured Storage	Ryan Fantasia	03/16/17 15:10	Retrieve from Storage
JC38887-2.3.1	Ryan Fantasia	Secured Storage	03/16/17 21:19	Return to Storage
JC38887-2.3.2	TCLP	Mark Setaro	03/15/17 17:50	Leachate from JC38887-2.3
JC38887-2.3.2	Mark Setaro	Secured Storage	03/15/17 17:55	Return to Storage
JC38887-2.3.2	Secured Storage	Deval Patel	03/16/17 16:17	Retrieve from Storage
JC38887-2.3.2	Deval Patel	Secured Storage	03/16/17 17:03	Return to Storage
JC38887-2.3.3	Ryan Fantasia	Organics Prep	03/16/17 15:18	Extract from JC38887-2.3.1
JC38887-2.3.3	Organics Prep	Yaw Britwum	03/17/17 00:12	Extract from JC38887-2.3.1
JC38887-2.3.3	Yaw Britwum	Extract Storage	03/17/17 00:12	Return to Storage
JC38887-2.3.3	Extract Storage	Christine Phillips	03/17/17 10:05	Retrieve from Storage
JC38887-2.3.3	Christine Phillips	GC8G	03/17/17 10:05	Load on Instrument

SGS Accutest Internal Chain of Custody

Job Number: JC38887
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/13/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38887-2.3.4	Ryan Fantasia	Organics Prep	03/16/17 15:24	Extract from JC38887-2.3.1
JC38887-2.3.4	Organics Prep	Amanda Furka	03/16/17 23:20	Extract from JC38887-2.3.1
JC38887-2.3.4	Amanda Furka	Extract Storage	03/16/17 23:20	Return to Storage
JC38887-2.3.4	Extract Storage	Vincent Drago	03/17/17 10:26	Retrieve from Storage
JC38887-2.3.4	Vincent Drago	GCOA	03/17/17 10:26	Load on Instrument
JC38887-2.3.4	GCOA	Rebecca Krug	03/23/17 16:47	Unload from Instrument
JC38887-2.3.4	Rebecca Krug	Extract Freezer	03/23/17 16:47	Return to Storage
JC38887-2.3.5	Ryan Fantasia	Organics Prep	03/16/17 15:30	Extract from JC38887-2.3.1
JC38887-2.3.5	Organics Prep	Amanda Furka	03/16/17 23:22	Extract from JC38887-2.3.1
JC38887-2.3.5	Amanda Furka	Extract Storage	03/16/17 23:22	Return to Storage
JC38887-2.3.5	Extract Storage	Christopher Sowa	03/17/17 01:06	Retrieve from Storage
JC38887-2.3.5	Christopher Sowa	GCMS6P	03/17/17 01:06	Load on Instrument
JC38887-2.3.6	Deval Patel	Metals Digestion	03/16/17 17:00	Digestate from JC38887-2.3.2
JC38887-2.3.6	Metals Digestion	Deval Patel	03/16/17 17:00	Digestate from JC38887-2.3.2
JC38887-2.3.6	Deval Patel	Metals Digestate Storage	03/16/17 17:00	Return to Storage
JC38887-2.5	Secured Storage	Toan Pham	03/14/17 12:45	Retrieve from Storage
JC38887-2.5	Toan Pham	GCMSX	03/14/17 12:45	Load on Instrument
JC38887-2.6	Secured Storage	Toan Pham	03/24/17 14:31	Retrieve from Storage
JC38887-2.6	Toan Pham	GCMSX	03/24/17 14:31	Load on Instrument
JC38887-3.1	Secured Storage	Diana Mathes	03/15/17 08:10	Retrieve from Storage
JC38887-3.1	Diana Mathes	Stephen Seuling	03/15/17 08:21	Custody Transfer
JC38887-3.1	Stephen Seuling	Albert Quayson	03/15/17 08:30	Custody Transfer
JC38887-3.1	Secured Storage	Luis Villanueva	03/15/17 11:12	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JC38887-3.1	Luis Villanueva	Secured Storage	03/15/17 16:42	Return to Storage
JC38887-3.1	Secured Storage	Jennifer Voitovitch	03/15/17 23:36	Retrieve from Storage
JC38887-3.1	Jennifer Voitovitch	Secured Staging Area	03/15/17 23:36	Return to Storage
JC38887-3.1	Secured Staging Area	Andrew Csimbok	03/16/17 08:25	Retrieve from Storage
JC38887-3.1	Andrew Csimbok	Amir Takla	03/16/17 16:38	Custody Transfer
JC38887-3.1	Amir Takla	Secured Storage	03/16/17 21:09	Return to Storage
JC38887-3.1.1	Stephen Seuling	Organics Prep	03/15/17 08:23	Extract from JC38887-3.1
JC38887-3.1.1	Organics Prep	Stephen Seuling	03/15/17 16:08	Extract from JC38887-3.1
JC38887-3.1.1	Stephen Seuling	Extract Storage	03/15/17 16:08	Return to Storage
JC38887-3.1.1	Extract Storage	Humarah Bano	03/15/17 17:07	Retrieve from Storage
JC38887-3.1.1	Humarah Bano	GCXX	03/15/17 17:07	Load on Instrument
JC38887-3.1.1	GCXX	Humarah Bano	03/17/17 12:16	Unload from Instrument
JC38887-3.1.1	Humarah Bano	Extract Freezer	03/17/17 12:16	Return to Storage

SGS Accutest Internal Chain of Custody

Job Number: JC38887
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/13/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38887-3.1.2	Stephen Seuling	Organics Prep	03/15/17 08:24	Extract from JC38887-3.1
JC38887-3.1.2	Organics Prep	Stephen Seuling	03/15/17 16:08	Extract from JC38887-3.1
JC38887-3.1.2	Stephen Seuling	Extract Storage	03/15/17 16:08	Return to Storage
JC38887-3.1.2	Extract Storage	Christine Phillips	03/16/17 09:29	Retrieve from Storage
JC38887-3.1.2	Christine Phillips	GC4G	03/16/17 09:29	Load on Instrument
JC38887-3.1.3	Albert Quayson	Organics Prep	03/15/17 08:34	Extract from JC38887-3.1
JC38887-3.1.3	Organics Prep	Ryan Fantasia	03/15/17 23:11	Extract from JC38887-3.1
JC38887-3.1.3	Ryan Fantasia	Extract Storage	03/15/17 23:11	Return to Storage
JC38887-3.1.4	Albert Quayson	Organics Prep	03/15/17 08:36	Extract from JC38887-3.1
JC38887-3.1.4	Organics Prep	Finley Nyaata	03/15/17 16:31	Extract from JC38887-3.1
JC38887-3.1.4	Finley Nyaata	Extract Storage	03/15/17 16:31	Return to Storage
JC38887-3.1.4	Extract Storage	Sean Block	03/15/17 18:24	Retrieve from Storage
JC38887-3.1.4	Sean Block	GCMS2P	03/15/17 18:24	Load on Instrument
JC38887-3.1.4	GCMS2P	Arielle Cocozza	03/16/17 10:18	Unload from Instrument
JC38887-3.1.4	Arielle Cocozza	Extract Freezer	03/16/17 10:18	Return to Storage
JC38887-3.1.5	Albert Quayson	James Patrick McIlvaine	03/15/17 09:24	Aliquot from JC38887-3.1
JC38887-3.1.5	James Patrick McIlvaine		03/15/17 11:13	Disposed
JC38887-3.1.6	Albert Quayson	Diana Mathes	03/15/17 09:29	Aliquot from JC38887-3.1
JC38887-3.1.6	Diana Mathes		03/15/17 10:31	Depleted
JC38887-3.1.7	Diana Mathes	Metals Digestion	03/15/17 10:02	Digestate from JC38887-3.1.6
JC38887-3.1.7	Metals Digestion	Diana Mathes	03/15/17 10:03	Digestate from JC38887-3.1.6
JC38887-3.1.7	Diana Mathes	Metals Digestate Storage	03/15/17 10:03	Return to Storage
JC38887-3.2	Secured Storage	Dwayne Johnson	03/15/17 09:11	Retrieve from Storage
JC38887-3.2	Dwayne Johnson	Secured Staging Area	03/15/17 09:11	Return to Storage
JC38887-3.2	Secured Staging Area	Rinku Patel	03/15/17 09:54	Retrieve from Storage
JC38887-3.2	Rinku Patel	Minhaj Hashmi	03/15/17 14:40	Custody Transfer
JC38887-3.2	Minhaj Hashmi	Secured Storage	03/15/17 15:49	Return to Storage
JC38887-3.2	Secured Storage	Sahara Feliciano	03/16/17 17:12	Retrieve from Storage
JC38887-3.2	Sahara Feliciano	Secured Staging Area	03/16/17 17:12	Return to Storage
JC38887-3.2	Secured Staging Area	Autumn Yun	03/16/17 18:13	Retrieve from Storage
JC38887-3.2	Autumn Yun	Secured Storage	03/16/17 20:56	Return to Storage
JC38887-3.2.1	Minhaj Hashmi	TCLP	03/15/17 15:49	Leachate from JC38887-3.2
JC38887-3.2.1	TCLP	Mark Setaro	03/15/17 17:46	Leachate from JC38887-3.2
JC38887-3.2.1	Mark Setaro	Secured Storage	03/15/17 17:55	Return to Storage
JC38887-3.2.1	Secured Storage	Eddie Huang	03/16/17 16:56	Retrieve from Storage
JC38887-3.2.1	Eddie Huang	GCMS2B	03/16/17 16:56	Load on Instrument
JC38887-3.2.1	GCMS2B	Eddie Huang	03/17/17 08:44	Unload from Instrument

SGS Accutest Internal Chain of Custody

Job Number: JC38887
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/13/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38887-3.2.1	Eddie Huang	Secured Storage	03/17/17 08:44	Return to Storage
JC38887-3.2.2	TCLP	Mark Setaro	03/15/17 17:46	Leachate from JC38887-3.2
JC38887-3.2.2	Mark Setaro	Secured Storage	03/15/17 17:55	Return to Storage
JC38887-3.2.3	Autumn Yun	Organics Prep	03/16/17 18:14	Extract from JC38887-3.2
JC38887-3.2.3	Organics Prep	Albert Quayson	03/17/17 13:20	Extract from JC38887-3.2
JC38887-3.2.3	Albert Quayson	Extract Storage	03/17/17 13:20	Return to Storage
JC38887-3.2.3	Extract Storage	Vincent Drago	03/17/17 18:00	Retrieve from Storage
JC38887-3.2.3	Vincent Drago	GCOA	03/17/17 18:00	Load on Instrument
JC38887-3.2.3	GCOA	Rebecca Krug	03/23/17 16:47	Unload from Instrument
JC38887-3.2.3	Rebecca Krug	Extract Freezer	03/23/17 16:47	Return to Storage
JC38887-3.3	Secured Storage	Sahara Feliciano	03/15/17 11:16	Retrieve from Storage
JC38887-3.3	Sahara Feliciano	Secured Staging Area	03/15/17 11:16	Return to Storage
JC38887-3.3	Secured Staging Area	Minhaj Hashmi	03/15/17 11:18	Retrieve from Storage
JC38887-3.3	Minhaj Hashmi	Secured Storage	03/15/17 15:49	Return to Storage
JC38887-3.3.1	Minhaj Hashmi	TCLP	03/15/17 15:49	Leachate from JC38887-3.3
JC38887-3.3.1	TCLP	Mark Setaro	03/15/17 17:50	Leachate from JC38887-3.3
JC38887-3.3.1	Mark Setaro	Secured Storage	03/15/17 17:55	Return to Storage
JC38887-3.3.1	Secured Storage	Ryan Fantasia	03/16/17 15:10	Retrieve from Storage
JC38887-3.3.1	Ryan Fantasia	Secured Storage	03/16/17 21:19	Return to Storage
JC38887-3.3.2	TCLP	Mark Setaro	03/15/17 17:50	Leachate from JC38887-3.3
JC38887-3.3.2	Mark Setaro	Secured Storage	03/15/17 17:55	Return to Storage
JC38887-3.3.2	Secured Storage	Deval Patel	03/16/17 16:17	Retrieve from Storage
JC38887-3.3.2	Deval Patel	Secured Storage	03/16/17 17:03	Return to Storage
JC38887-3.3.3	Ryan Fantasia	Organics Prep	03/16/17 15:18	Extract from JC38887-3.3.1
JC38887-3.3.3	Organics Prep	Yaw Britwum	03/17/17 00:12	Extract from JC38887-3.3.1
JC38887-3.3.3	Yaw Britwum	Extract Storage	03/17/17 00:12	Return to Storage
JC38887-3.3.3	Extract Storage	Christine Phillips	03/17/17 10:05	Retrieve from Storage
JC38887-3.3.3	Christine Phillips	GC8G	03/17/17 10:05	Load on Instrument
JC38887-3.3.4	Ryan Fantasia	Organics Prep	03/16/17 15:24	Extract from JC38887-3.3.1
JC38887-3.3.4	Organics Prep	Amanda Furka	03/16/17 23:20	Extract from JC38887-3.3.1
JC38887-3.3.4	Amanda Furka	Extract Storage	03/16/17 23:20	Return to Storage
JC38887-3.3.4	Extract Storage	Vincent Drago	03/17/17 10:26	Retrieve from Storage
JC38887-3.3.4	Vincent Drago	GCOA	03/17/17 10:26	Load on Instrument
JC38887-3.3.4	GCOA	Rebecca Krug	03/23/17 16:47	Unload from Instrument
JC38887-3.3.4	Rebecca Krug	Extract Freezer	03/23/17 16:47	Return to Storage
JC38887-3.3.5	Ryan Fantasia	Organics Prep	03/16/17 15:30	Extract from JC38887-3.3.1

SGS Accutest Internal Chain of Custody

Job Number: JC38887
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/13/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38887-3.3.5	Organics Prep	Amanda Furka	03/16/17 23:22	Extract from JC38887-3.3.1
JC38887-3.3.5	Amanda Furka	Extract Storage	03/16/17 23:22	Return to Storage
JC38887-3.3.5	Extract Storage	Christopher Sowa	03/17/17 01:06	Retrieve from Storage
JC38887-3.3.5	Christopher Sowa	GCMS6P	03/17/17 01:06	Load on Instrument
JC38887-3.3.6	Deval Patel	Metals Digestion	03/16/17 17:00	Digestate from JC38887-3.3.2
JC38887-3.3.6	Metals Digestion	Deval Patel	03/16/17 17:00	Digestate from JC38887-3.3.2
JC38887-3.3.6	Deval Patel	Metals Digestate Storage	03/16/17 17:00	Return to Storage
JC38887-3.5	Secured Storage	Toan Pham	03/24/17 14:31	Retrieve from Storage
JC38887-3.5	Toan Pham	GCMSX	03/24/17 14:31	Load on Instrument
JC38887-3.6	Secured Storage	Toan Pham	03/14/17 12:45	Retrieve from Storage
JC38887-3.6	Toan Pham	GCMSX	03/14/17 12:45	Load on Instrument

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Automated Report

Technical Report for

Matrix New World Engineering, Inc.

LIRR Expansion, Long Island, NY

16-144, Barclay St. Parking Lot, Barclay St., Hicksville, NY

SGS Accutest Job Number: JC38886

Sampling Date: 03/13/17

Report to:

Matrix New World Engineering, Inc.
26 Columbia Turnpike
Florham Park, NJ 07932
bcrespi@matrixneworld.com; mclelland@matrixneworld.com;
mhorowitz@matrixneworld.com
ATTN: Brian Crespi

Total number of pages in report: **96**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Nancy Cole
Laboratory Director

Client Service contact: Tammy McCloskey 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (L-A-B L2248)

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Test results relate only to samples analyzed.

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SGS ACCUTEST

March 24, 2017

Mr. Brian Crespi
Matrix New World Engineering, Inc.
26 Columbia Turnpike
Florham Park, NJ 07932

Re: SGS Accutest –Dayton, Jobs # JC38886 and JC38887 – Reissues

Dear Mr. Crespi,

The final report for SGS Accutest job numbers JC38886 and JC38887 have been edited to reflect requested revisions to the data package. These edits have been incorporated into the revised report attached.

Specifically, additional project information has been added per request by Mindy Chassin Horowitz on March 24, 2017. This information has been updated and is included in this revised report.

Please contact client services at (732) 355-4562 if I can be of further assistance in this matter.

Sincerely,

Tammy McCloskey

SGS Accutest

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SGS Accutest

Sample Summary

Matrix New World Engineering, Inc.

Job No: JC38886

LIRR Expansion, Long Island, NY
Project No: 16-144, Barclay St. Parking Lot, Barclay St., Hicksville, NY

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC38886-1	03/13/17	12:10	LM	03/13/17	SO	Soil	BARC-SB-01
JC38886-1A	03/13/17	12:10	LM	03/13/17	SO	Soil	BARC-SB-01
JC38886-2	03/13/17	13:10	LM	03/13/17	SO	Soil	BARC-SB-02
JC38886-2A	03/13/17	13:10	LM	03/13/17	SO	Soil	BARC-SB-02
JC38886-3	03/13/17	14:05	LM	03/13/17	SO	Soil	BARC-SB-03
JC38886-3A	03/13/17	14:05	LM	03/13/17	SO	Soil	BARC-SB-03
JC38886-4	03/13/17	14:55	LM	03/13/17	SO	Soil	BARC-SB-04
JC38886-4A	03/13/17	14:55	LM	03/13/17	SO	Soil	BARC-SB-04

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

2

Summary of Hits

Job Number: JC38886
Account: Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Collected: 03/13/17

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC38886-1	**BARC-SB-01**					
Acetone		0.0799	0.0085	0.0042	mg/kg	SW846 8260C
Benzene		0.00027 J	0.00042	0.00010	mg/kg	SW846 8260C
2-Butanone (MEK)		0.0112	0.0085	0.0015	mg/kg	SW846 8260C
Carbon disulfide		0.0026	0.0017	0.00014	mg/kg	SW846 8260C
Ethylbenzene		0.0012	0.00085	0.00013	mg/kg	SW846 8260C
Methylene chloride		0.0019 J	0.0042	0.00085	mg/kg	SW846 8260C
Toluene		0.00018 J	0.00085	0.00011	mg/kg	SW846 8260C
m,p-Xylene		0.0044	0.00085	0.00019	mg/kg	SW846 8260C
o-Xylene		0.0026	0.00085	0.00017	mg/kg	SW846 8260C
Xylene (total)		0.0070	0.00085	0.00017	mg/kg	SW846 8260C
Acenaphthylene		0.0608	0.036	0.018	mg/kg	SW846 8270D
Anthracene		0.0794	0.036	0.022	mg/kg	SW846 8270D
Benzo(a)anthracene		0.261	0.036	0.010	mg/kg	SW846 8270D
Benzo(a)pyrene		0.296	0.036	0.016	mg/kg	SW846 8270D
Benzo(b)fluoranthene		0.357	0.036	0.016	mg/kg	SW846 8270D
Benzo(g,h,i)perylene		0.259	0.036	0.018	mg/kg	SW846 8270D
Benzo(k)fluoranthene		0.137	0.036	0.017	mg/kg	SW846 8270D
Carbazole		0.0290 J	0.072	0.0052	mg/kg	SW846 8270D
Chrysene		0.334	0.036	0.011	mg/kg	SW846 8270D
Dibenzo(a,h)anthracene		0.0686	0.036	0.016	mg/kg	SW846 8270D
Fluoranthene		0.352	0.036	0.016	mg/kg	SW846 8270D
Fluorene		0.0179 J	0.036	0.017	mg/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		0.233	0.036	0.017	mg/kg	SW846 8270D
2-Methylnaphthalene		0.0364 J	0.072	0.0081	mg/kg	SW846 8270D
Naphthalene		0.0484	0.036	0.010	mg/kg	SW846 8270D
Phenanthrene		0.167	0.036	0.012	mg/kg	SW846 8270D
Pyrene		0.420	0.036	0.012	mg/kg	SW846 8270D
alpha-Chlordane [a]		0.00060 J	0.00066	0.00031	mg/kg	SW846 8081B
gamma-Chlordane		0.0012	0.00066	0.00029	mg/kg	SW846 8081B
4,4'-DDE [a]		0.0010	0.00066	0.00034	mg/kg	SW846 8081B
Aluminum		6880	54		mg/kg	SW846 6010C
Arsenic		4.6	2.1		mg/kg	SW846 6010C
Barium		32.9	21		mg/kg	SW846 6010C
Beryllium		0.28	0.21		mg/kg	SW846 6010C
Calcium		7270	540		mg/kg	SW846 6010C
Chromium		18.4	1.1		mg/kg	SW846 6010C
Cobalt		5.6	5.4		mg/kg	SW846 6010C
Copper		22.4	2.7		mg/kg	SW846 6010C
Iron		10100	54		mg/kg	SW846 6010C
Lead		49.3	2.1		mg/kg	SW846 6010C
Magnesium		1910	540		mg/kg	SW846 6010C
Manganese		125	1.6		mg/kg	SW846 6010C
Mercury		0.034	0.034		mg/kg	SW846 7471B

Summary of Hits

Job Number: JC38886
Account: Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Collected: 03/13/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Nickel		18.8	4.3		mg/kg	SW846 6010C
Silver		0.83	0.54		mg/kg	SW846 6010C
Vanadium		23.8	5.4		mg/kg	SW846 6010C
Zinc		47.5	5.4		mg/kg	SW846 6010C
JC38886-1A	**BARC-SB-01**					
Corrosivity as pH		7.69 NC			su	SW846 9045D
Ignitability (Flashpoint)		> 200			Deg. F	SW846 1010A/ASTM D93
JC38886-2	**BARC-SB-02**					
Acetone		0.0184	0.0091	0.0045	mg/kg	SW846 8260C
Ethylbenzene		0.0025	0.00091	0.00014	mg/kg	SW846 8260C
Methylene chloride		0.0018 J	0.0045	0.00091	mg/kg	SW846 8260C
Toluene		0.00019 J	0.00091	0.00011	mg/kg	SW846 8260C
m,p-Xylene		0.0096	0.00091	0.00020	mg/kg	SW846 8260C
o-Xylene		0.0043	0.00091	0.00018	mg/kg	SW846 8260C
Xylene (total)		0.0139	0.00091	0.00018	mg/kg	SW846 8260C
Benzo(b)fluoranthene		0.0193 J	0.038	0.017	mg/kg	SW846 8270D
Benzo(g,h,i)perylene		0.0209 J	0.038	0.019	mg/kg	SW846 8270D
Chrysene		0.0170 J	0.038	0.012	mg/kg	SW846 8270D
Pyrene		0.0173 J	0.038	0.012	mg/kg	SW846 8270D
gamma-Chlordane [a]		0.0011	0.00071	0.00031	mg/kg	SW846 8081B
Aluminum		9890	57		mg/kg	SW846 6010C
Arsenic		3.4	2.3		mg/kg	SW846 6010C
Beryllium		0.24	0.23		mg/kg	SW846 6010C
Calcium		3940	570		mg/kg	SW846 6010C
Chromium		12.9	1.1		mg/kg	SW846 6010C
Copper		3.7	2.8		mg/kg	SW846 6010C
Iron		12700	57		mg/kg	SW846 6010C
Lead		9.6	2.3		mg/kg	SW846 6010C
Magnesium		1450	570		mg/kg	SW846 6010C
Manganese		139	1.7		mg/kg	SW846 6010C
Nickel		6.2	4.6		mg/kg	SW846 6010C
Vanadium		22.1	5.7		mg/kg	SW846 6010C
Zinc		21.0	5.7		mg/kg	SW846 6010C
JC38886-2A	**BARC-SB-02**					
Corrosivity as pH		7.39 NC			su	SW846 9045D
Ignitability (Flashpoint)		> 200			Deg. F	SW846 1010A/ASTM D93

2

Summary of Hits

Job Number: JC38886
Account: Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Collected: 03/13/17

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC38886-3	**BARC-SB-03**					
Acetone		0.102	0.0092	0.0046	mg/kg	SW846 8260C
2-Butanone (MEK)		0.0213	0.0092	0.0016	mg/kg	SW846 8260C
Carbon disulfide		0.00023 J	0.0018	0.00016	mg/kg	SW846 8260C
Methylene chloride		0.0012 J	0.0046	0.00092	mg/kg	SW846 8260C
3&4-Methylphenol		0.0364 J	0.080	0.033	mg/kg	SW846 8270D
Acenaphthene		0.0605	0.040	0.014	mg/kg	SW846 8270D
Acenaphthylene		0.0449	0.040	0.020	mg/kg	SW846 8270D
Anthracene		0.191	0.040	0.025	mg/kg	SW846 8270D
Benzo(a)anthracene		0.519	0.040	0.011	mg/kg	SW846 8270D
Benzo(a)pyrene		0.578	0.040	0.018	mg/kg	SW846 8270D
Benzo(b)fluoranthene		0.700	0.040	0.018	mg/kg	SW846 8270D
Benzo(g,h,i)perylene		0.392	0.040	0.020	mg/kg	SW846 8270D
Benzo(k)fluoranthene		0.268	0.040	0.019	mg/kg	SW846 8270D
Benzaldehyde		0.0508 J	0.20	0.0099	mg/kg	SW846 8270D
Carbazole		0.0584 J	0.080	0.0058	mg/kg	SW846 8270D
Chrysene		0.587	0.040	0.013	mg/kg	SW846 8270D
Dibenzo(a,h)anthracene		0.105	0.040	0.018	mg/kg	SW846 8270D
Dibenzofuran		0.0555 J	0.080	0.016	mg/kg	SW846 8270D
Fluoranthene		0.993	0.040	0.018	mg/kg	SW846 8270D
Fluorene		0.0730	0.040	0.018	mg/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		0.459	0.040	0.019	mg/kg	SW846 8270D
2-Methylnaphthalene		0.0625 J	0.080	0.0090	mg/kg	SW846 8270D
Naphthalene		0.108	0.040	0.011	mg/kg	SW846 8270D
Phenanthrene		0.596	0.040	0.013	mg/kg	SW846 8270D
Pyrene		0.854	0.040	0.013	mg/kg	SW846 8270D
4,4'-DDD		0.951	0.080	0.051	mg/kg	SW846 8081B
4,4'-DDE [a]		0.0938	0.0080	0.0042	mg/kg	SW846 8081B
4,4'-DDT		0.0666	0.00080	0.00047	mg/kg	SW846 8081B
Aluminum		11000	61		mg/kg	SW846 6010C
Arsenic		13.4	2.4		mg/kg	SW846 6010C
Barium		72.9	24		mg/kg	SW846 6010C
Beryllium		0.38	0.24		mg/kg	SW846 6010C
Cadmium		0.76	0.61		mg/kg	SW846 6010C
Calcium		1840	610		mg/kg	SW846 6010C
Chromium		19.5	1.2		mg/kg	SW846 6010C
Copper		43.0	3.0		mg/kg	SW846 6010C
Iron		11400	61		mg/kg	SW846 6010C
Lead		113	2.4		mg/kg	SW846 6010C
Magnesium		1140	610		mg/kg	SW846 6010C
Manganese		191	1.8		mg/kg	SW846 6010C
Mercury		3.0	0.19		mg/kg	SW846 7471B
Nickel		9.2	4.9		mg/kg	SW846 6010C
Silver		0.63	0.61		mg/kg	SW846 6010C

2

Summary of Hits

Job Number: JC38886
Account: Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Collected: 03/13/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Vanadium		26.8	6.1		mg/kg	SW846 6010C
Zinc		101	6.1		mg/kg	SW846 6010C
JC38886-3A	**BARC-SB-03**					
Corrosivity as pH		6.91 NC			su	SW846 9045D
Ignitability (Flashpoint)		> 200			Deg. F	SW846 1010A/ASTM D93
JC38886-4	**BARC-SB-04**					
Acetone		0.0148	0.010	0.0052	mg/kg	SW846 8260C
Benzene		0.00018 J	0.00052	0.00013	mg/kg	SW846 8260C
Methylene chloride		0.0020 J	0.0052	0.0010	mg/kg	SW846 8260C
Acenaphthene		0.0291 J	0.040	0.014	mg/kg	SW846 8270D
Anthracene		0.0849	0.040	0.024	mg/kg	SW846 8270D
Benzo(a)anthracene		0.206	0.040	0.011	mg/kg	SW846 8270D
Benzo(a)pyrene		0.194	0.040	0.018	mg/kg	SW846 8270D
Benzo(b)fluoranthene		0.243	0.040	0.018	mg/kg	SW846 8270D
Benzo(g,h,i)perylene		0.113	0.040	0.020	mg/kg	SW846 8270D
Benzo(k)fluoranthene		0.107	0.040	0.019	mg/kg	SW846 8270D
Carbazole		0.0248 J	0.079	0.0058	mg/kg	SW846 8270D
Chrysene		0.229	0.040	0.013	mg/kg	SW846 8270D
Dibenzo(a,h)anthracene		0.0366 J	0.040	0.018	mg/kg	SW846 8270D
Dibenzofuran		0.0186 J	0.079	0.016	mg/kg	SW846 8270D
Fluoranthene		0.403	0.040	0.018	mg/kg	SW846 8270D
Fluorene		0.0337 J	0.040	0.018	mg/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		0.128	0.040	0.019	mg/kg	SW846 8270D
Phenanthrene		0.320	0.040	0.013	mg/kg	SW846 8270D
Pyrene		0.360	0.040	0.013	mg/kg	SW846 8270D
4,4'-DDD		0.0066	0.00073	0.00047	mg/kg	SW846 8081B
4,4'-DDE		0.0117	0.00073	0.00038	mg/kg	SW846 8081B
4,4'-DDT		0.0099	0.00073	0.00044	mg/kg	SW846 8081B
Aluminum		11700	57		mg/kg	SW846 6010C
Arsenic		6.4	2.3		mg/kg	SW846 6010C
Barium		62.2	23		mg/kg	SW846 6010C
Beryllium		0.40	0.23		mg/kg	SW846 6010C
Calcium		1410	570		mg/kg	SW846 6010C
Chromium		14.1	1.1		mg/kg	SW846 6010C
Copper		13.8	2.8		mg/kg	SW846 6010C
Iron		12100	57		mg/kg	SW846 6010C
Lead		39.8	2.3		mg/kg	SW846 6010C
Magnesium		1150	570		mg/kg	SW846 6010C
Manganese		681	1.7		mg/kg	SW846 6010C
Mercury		0.94	0.039		mg/kg	SW846 7471B
Nickel		7.8	4.6		mg/kg	SW846 6010C

Summary of Hits

Job Number: JC38886
Account: Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Collected: 03/13/17

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Vanadium		23.4	5.7		mg/kg	SW846 6010C
Zinc		50.1	5.7		mg/kg	SW846 6010C
JC38886-4A	**BARC-SB-04**					
Corrosivity as pH		7.13 NC			su	SW846 9045D
Ignitability (Flashpoint)		> 200			Deg. F	SW846 1010A/ASTM D93

(a) More than 40 % RPD for detected concentrations between the two GC columns.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	BARC-SB-01		
Lab Sample ID:	JC38886-1	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8260C	**Percent Solids:**	92.4
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X170765.D	1	03/14/17	TP	n/a	n/a	VX7257
Run #2							

	Initial Weight
Run #1	6.4 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0799	0.0085	0.0042	mg/kg	
71-43-2	Benzene	0.00027	0.00042	0.00010	mg/kg	J
74-97-5	Bromochloromethane	ND	0.0042	0.00027	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0017	0.00013	mg/kg	
75-25-2	Bromoform	ND	0.0042	0.00022	mg/kg	
74-83-9	Bromomethane	ND	0.0042	0.00041	mg/kg	
78-93-3	2-Butanone (MEK)	0.0112	0.0085	0.0015	mg/kg	
75-15-0	Carbon disulfide	0.0026	0.0017	0.00014	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0017	0.00014	mg/kg	
108-90-7	Chlorobenzene	ND	0.0017	0.00014	mg/kg	
75-00-3	Chloroethane	ND	0.0042	0.00036	mg/kg	
67-66-3	Chloroform	ND	0.0017	0.00020	mg/kg	
74-87-3	Chloromethane	ND	0.0042	0.00018	mg/kg	
110-82-7	Cyclohexane	ND	0.0017	0.00046	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0017	0.00041	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0017	0.00013	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.00085	0.00020	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.00085	0.00014	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.00085	0.00012	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.00085	0.00013	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0042	0.00046	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.00085	0.00016	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.00085	0.00014	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.00085	0.00013	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.00085	0.00037	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.00085	0.00013	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0017	0.00026	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0017	0.00017	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0017	0.00019	mg/kg	
100-41-4	Ethylbenzene	0.0012	0.00085	0.00013	mg/kg	
76-13-1	Freon 113	ND	0.0042	0.00041	mg/kg	
591-78-6	2-Hexanone	ND	0.0042	0.0012	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-01		
Lab Sample ID:	JC38886-1	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8260C	**Percent Solids:**	92.4
Project:	LIRR Expansion, Long Island, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	0.0017	0.00013	mg/kg	
79-20-9	Methyl Acetate	ND	0.0042	0.0017	mg/kg	
108-87-2	Methylcyclohexane	ND	0.0017	0.00043	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.00085	0.00022	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0042	0.00072	mg/kg	
75-09-2	Methylene chloride	0.0019	0.0042	0.00085	mg/kg	J
100-42-5	Styrene	ND	0.0017	0.00012	mg/kg	
75-65-0	Tert Butyl Alcohol	ND	0.021	0.0026	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0017	0.00020	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0017	0.00024	mg/kg	
108-88-3	Toluene	0.00018	0.00085	0.00011	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0042	0.00042	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0042	0.00042	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0017	0.00014	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0017	0.00027	mg/kg	
79-01-6	Trichloroethene	ND	0.00085	0.00016	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0042	0.00053	mg/kg	
75-01-4	Vinyl chloride	ND	0.0017	0.00017	mg/kg	
	m,p-Xylene	0.0044	0.00085	0.00019	mg/kg	
95-47-6	o-Xylene	0.0026	0.00085	0.00017	mg/kg	
1330-20-7	Xylene (total)	0.0070	0.00085	0.00017	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		70-122%
17060-07-0	1,2-Dichloroethane-D4	100%		68-124%
2037-26-5	Toluene-D8	101%		77-125%
460-00-4	4-Bromofluorobenzene	106%		72-130%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-01		
Lab Sample ID:	JC38886-1	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	92.4
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P67761.D	1	03/15/17	SB	03/15/17	OP1140	E2P2982
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	0.072	0.018	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.18	0.022	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.18	0.031	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.18	0.064	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	0.18	0.14	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.18	0.038	mg/kg	
95-48-7	2-Methylphenol	ND	0.072	0.023	mg/kg	
	3&4-Methylphenol	ND	0.072	0.030	mg/kg	
88-75-5	2-Nitrophenol	ND	0.18	0.024	mg/kg	
100-02-7	4-Nitrophenol	ND	0.36	0.096	mg/kg	
87-86-5	Pentachlorophenol	ND	0.14	0.034	mg/kg	
108-95-2	Phenol	ND	0.072	0.019	mg/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.18	0.024	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.18	0.027	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.18	0.021	mg/kg	
83-32-9	Acenaphthene	ND	0.036	0.012	mg/kg	
208-96-8	Acenaphthylene	0.0608	0.036	0.018	mg/kg	
98-86-2	Acetophenone	ND	0.18	0.0077	mg/kg	
120-12-7	Anthracene	0.0794	0.036	0.022	mg/kg	
1912-24-9	Atrazine	ND	0.072	0.015	mg/kg	
56-55-3	Benzo(a)anthracene	0.261	0.036	0.010	mg/kg	
50-32-8	Benzo(a)pyrene	0.296	0.036	0.016	mg/kg	
205-99-2	Benzo(b)fluoranthene	0.357	0.036	0.016	mg/kg	
191-24-2	Benzo(g,h,i)perylene	0.259	0.036	0.018	mg/kg	
207-08-9	Benzo(k)fluoranthene	0.137	0.036	0.017	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.072	0.014	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.072	0.0088	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.072	0.0049	mg/kg	
100-52-7	Benzaldehyde	ND	0.18	0.0089	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.072	0.0086	mg/kg	
106-47-8	4-Chloroaniline	ND	0.18	0.013	mg/kg	
86-74-8	Carbazole	0.0290	0.072	0.0052	mg/kg	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-01		
Lab Sample ID:	JC38886-1	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	92.4
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	0.072	0.014	mg/kg	
218-01-9	Chrysene	0.334	0.036	0.011	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.072	0.0077	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.072	0.015	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.072	0.013	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.072	0.012	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.036	0.011	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.036	0.018	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.072	0.030	mg/kg	
123-91-1	1,4-Dioxane	ND	0.036	0.024	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	0.0686	0.036	0.016	mg/kg	
132-64-9	Dibenzofuran	ND	0.072	0.015	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.072	0.0059	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.072	0.0090	mg/kg	
84-66-2	Diethyl phthalate	ND	0.072	0.0077	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.072	0.0064	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.072	0.0084	mg/kg	
206-44-0	Fluoranthene	0.352	0.036	0.016	mg/kg	
86-73-7	Fluorene	0.0179	0.036	0.017	mg/kg	J
118-74-1	Hexachlorobenzene	ND	0.072	0.0091	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.036	0.014	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.36	0.014	mg/kg	
67-72-1	Hexachloroethane	ND	0.18	0.018	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	0.233	0.036	0.017	mg/kg	
78-59-1	Isophorone	ND	0.072	0.0077	mg/kg	
91-57-6	2-Methylnaphthalene	0.0364	0.072	0.0081	mg/kg	J
88-74-4	2-Nitroaniline	ND	0.18	0.0085	mg/kg	
99-09-2	3-Nitroaniline	ND	0.18	0.0090	mg/kg	
100-01-6	4-Nitroaniline	ND	0.18	0.0093	mg/kg	
91-20-3	Naphthalene	0.0484	0.036	0.010	mg/kg	
98-95-3	Nitrobenzene	ND	0.072	0.014	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.072	0.010	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.18	0.013	mg/kg	
85-01-8	Phenanthrene	0.167	0.036	0.012	mg/kg	
129-00-0	Pyrene	0.420	0.036	0.012	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.18	0.0091	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	73%		23-115%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-01		
Lab Sample ID:	JC38886-1	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	92.4
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	78%		27-114%
118-79-6	2,4,6-Tribromophenol	89%		19-152%
4165-60-0	Nitrobenzene-d5	88%		26-134%
321-60-8	2-Fluorobiphenyl	100%		39-124%
1718-51-0	Terphenyl-d14	91%		36-134%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-01		
Lab Sample ID:	JC38886-1	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8151 SW846 8151/3550C	**Percent Solids:**	92.4
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OA124445.D	1	03/17/17	VDT	03/17/17	OP1193	GOA4266
Run #2							

	Initial Weight	Final Volume
Run #1	16.0 g	5.0 ml
Run #2		

Herbicide List

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	0.017	0.0076	mg/kg	
93-72-1	2,4,5-TP (Silvex)	ND	0.0034	0.0012	mg/kg	
93-76-5	2,4,5-T	ND	0.0034	0.0013	mg/kg	
75-99-0	Dalapon	ND	0.0034	0.0023	mg/kg	
1918-00-9	Dicamba	ND	0.0034	0.0017	mg/kg	
120-36-5	Dichloroprop	ND	0.017	0.0048	mg/kg	
88-85-7	Dinoseb	ND	0.017	0.011	mg/kg	
94-74-6	MCPA	ND	1.7	0.39	mg/kg	
93-65-2	MCPP	ND	1.7	0.37	mg/kg	
87-86-5	Pentachlorophenol	ND	0.0017	0.0015	mg/kg	
94-82-6	2,4-DB	ND	0.017	0.0055	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	68%		10-159%
19719-28-9	2,4-DCAA	54%		10-159%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-01		
Lab Sample ID:	JC38886-1	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8081B SW846 3546	**Percent Solids:**	92.4
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4G78971.D	1	03/16/17	RK	03/15/17	OP1139	G4G2049
Run #2							

	Initial Weight	Final Volume
Run #1	16.5 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.00066	0.00031	mg/kg	
319-84-6	alpha-BHC	ND	0.00066	0.00035	mg/kg	
319-85-7	beta-BHC	ND	0.00066	0.00041	mg/kg	
319-86-8	delta-BHC	ND	0.00066	0.00030	mg/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.00066	0.00029	mg/kg	
5103-71-9	alpha-Chlordane [a]	0.00060	0.00066	0.00031	mg/kg	J
5103-74-2	gamma-Chlordane	0.0012	0.00066	0.00029	mg/kg	
60-57-1	Dieldrin	ND	0.00066	0.00033	mg/kg	
72-54-8	4,4'-DDD	ND	0.00066	0.00042	mg/kg	
72-55-9	4,4'-DDE [a]	0.0010	0.00066	0.00034	mg/kg	
50-29-3	4,4'-DDT	ND	0.00066	0.00039	mg/kg	
72-20-8	Endrin	ND	0.00066	0.00031	mg/kg	
1031-07-8	Endosulfan sulfate	ND	0.00066	0.00026	mg/kg	
7421-93-4	Endrin aldehyde	ND	0.00066	0.00039	mg/kg	
959-98-8	Endosulfan-I	ND	0.00066	0.00034	mg/kg	
33213-65-9	Endosulfan-II	ND	0.00066	0.00034	mg/kg	
76-44-8	Heptachlor	ND	0.00066	0.00032	mg/kg	
1024-57-3	Heptachlor epoxide	ND	0.00066	0.00035	mg/kg	
72-43-5	Methoxychlor	ND	0.0013	0.00033	mg/kg	
53494-70-5	Endrin ketone	ND	0.00066	0.00051	mg/kg	
8001-35-2	Toxaphene	ND	0.016	0.0068	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	79%		25-135%
877-09-8	Tetrachloro-m-xylene	69%		25-135%
2051-24-3	Decachlorobiphenyl	76%		10-156%
2051-24-3	Decachlorobiphenyl	68%		10-156%

(a) More than 40 % RPD for detected concentrations between the two GC columns.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-01		
Lab Sample ID:	JC38886-1	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8082A SW846 3546	**Percent Solids:**	92.4
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX206539.D	1	03/16/17	HB	03/15/17	OP1138	GXX5968
Run #2							

	Initial Weight	Final Volume
Run #1	16.5 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.033	0.016	mg/kg	
11104-28-2	Aroclor 1221	ND	0.033	0.016	mg/kg	
11141-16-5	Aroclor 1232	ND	0.033	0.013	mg/kg	
53469-21-9	Aroclor 1242	ND	0.033	0.012	mg/kg	
12672-29-6	Aroclor 1248	ND	0.033	0.021	mg/kg	
11097-69-1	Aroclor 1254	ND	0.033	0.016	mg/kg	
11096-82-5	Aroclor 1260	ND	0.033	0.014	mg/kg	
11100-14-4	Aroclor 1268	ND	0.033	0.012	mg/kg	
37324-23-5	Aroclor 1262	ND	0.033	0.022	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	84%		24-152%
877-09-8	Tetrachloro-m-xylene	221% [a]		24-152%
2051-24-3	Decachlorobiphenyl	73%		10-166%
2051-24-3	Decachlorobiphenyl	108%		10-166%

(a) Outside control limits due to matrix interference.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-01		
Lab Sample ID:	JC38886-1	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
		Percent Solids:	92.4
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	6880	54	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 2.1	2.1	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Arsenic	4.6	2.1	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Barium	32.9	21	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Beryllium	0.28	0.21	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.54	0.54	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Calcium	7270	540	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Chromium	18.4	1.1	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Cobalt	5.6	5.4	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Copper	22.4	2.7	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Iron	10100	54	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Lead	49.3	2.1	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Magnesium	1910	540	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Manganese	125	1.6	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Mercury	0.034	0.034	mg/kg	1	03/15/17	03/15/17	JPM	SW846 7471B [1]	SW846 7471B [4]
Nickel	18.8	4.3	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 2.1	2.1	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Silver	0.83	0.54	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Vanadium	23.8	5.4	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Zinc	47.5	5.4	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA41559
(2) Instrument QC Batch: MA41566
(3) Prep QC Batch: MP99220
(4) Prep QC Batch: MP99231

RL = Reporting Limit

Report of Analysis

Client Sample ID:	BARC-SB-01		
Lab Sample ID:	JC38886-1	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
		Percent Solids:	92.4
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	< 0.25	0.25	mg/kg	1	03/15/17 14:11	BM	SW846 9012B/LACHAT
Solids, Percent	92.4		%	1	03/15/17 16:40	TZW	SM2540 G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	BARC-SB-01		
Lab Sample ID:	JC38886-1A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8260C SW846 1311	**Percent Solids:**	92.4
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B149133.D	5	03/16/17	EH	03/15/17	GP3898	V2B6620
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.0025	0.00070	mg/l	
78-93-3	2-Butanone (MEK)	ND	D035	200	0.10	0.0095	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.0050	0.0027	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.0050	0.00087	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.0050	0.0011	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.0050	0.0011	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.0050	0.0020	mg/l	
75-35-4	1,1-Dichloroethene	ND	D029	0.70	0.0050	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	D039	0.70	0.0050	0.0012	mg/l	
79-01-6	Trichloroethene	ND	D040	0.50	0.0050	0.0013	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.0050	0.0016	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		76-120%
17060-07-0	1,2-Dichloroethane-D4	101%		64-135%
2037-26-5	Toluene-D8	100%		76-117%
460-00-4	4-Bromofluorobenzene	97%		72-122%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-01		
Lab Sample ID:	JC38886-1A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	92.4
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6P35680.D	1	03/17/17	CS	03/16/17	OP1178	E6P1646
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.020	0.0089	mg/l	
	3&4-Methylphenol	ND	D024	200	0.020	0.0088	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.10	0.014	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.013	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0092	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.020	0.0017	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.020	0.0055	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.020	0.0033	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.010	0.0049	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0039	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.020	0.0064	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.020	0.0039	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	32%		14-88%
4165-62-2	Phenol-d5	19%		10-110%
118-79-6	2,4,6-Tribromophenol	66%		39-149%
4165-60-0	Nitrobenzene-d5	60%		32-128%
321-60-8	2-Fluorobiphenyl	67%		35-119%
1718-51-0	Terphenyl-d14	85%		10-126%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-01		
Lab Sample ID:	JC38886-1A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8151 SW846 8151/3510C	**Percent Solids:**	92.4
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G107045.D	1	03/17/17	VDT	03/16/17	OP1179	G3G3739
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Herbicide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND	D016	10	0.0050	0.0039	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.0015	0.00047	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	82%		50-142%
19719-28-9	2,4-DCAA	87%		50-142%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-01		
Lab Sample ID:	JC38886-1A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	92.4
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	8G3866.D	1	03/17/17	RK	03/16/17	OP1180	G8G114
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Pesticide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	D013	0.40	0.00010	0.000028	mg/l	
12789-03-6	Chlordane	ND	D020	0.030	0.0050	0.0011	mg/l	
72-20-8	Endrin	ND	D012	0.020	0.00010	0.000050	mg/l	
76-44-8	Heptachlor	ND	D031	0.0080	0.00010	0.000038	mg/l	
1024-57-3	Heptachlor epoxide	ND	D031	0.0080	0.00010	0.000065	mg/l	
72-43-5	Methoxychlor	ND	D014	10	0.00020	0.000057	mg/l	
8001-35-2	Toxaphene	ND	D015	0.50	0.0025	0.0018	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	95%		30-137%
877-09-8	Tetrachloro-m-xylene	96%		30-137%
2051-24-3	Decachlorobiphenyl	119%		10-137%
2051-24-3	Decachlorobiphenyl	105%		10-137%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-01		
Lab Sample ID:	JC38886-1A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
		Percent Solids:	92.4
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 0.50	D004	5.0	0.50	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Barium	< 1.0	D005	100	1.0	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 0.025	D006	1.0	0.025	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 0.050	D007	5.0	0.050	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Lead	< 0.50	D008	5.0	0.50	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	03/16/17	03/16/17	JA	SW846 7470A [1]	SW846 7470A [4]
Selenium	< 0.50	D010	1.0	0.50	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Silver	< 0.050	D011	5.0	0.050	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA41573
(2) Instrument QC Batch: MA41581
(3) Prep QC Batch: MP99239
(4) Prep QC Batch: MP99275

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID:	BARC-SB-01		
Lab Sample ID:	JC38886-1A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
		Percent Solids:	92.4
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Corrosivity as pH	7.69 NC		su	1	03/16/17 12:00	AC	SW846 9045D
Cyanide Reactivity	< 11	11	mg/kg	1	03/15/17 14:30	BM	SW846 CHAP7/9012 B
Ignitability (Flashpoint)	> 200		Deg. F	1	03/16/17 20:45	AT	SW846 1010A/ASTM D93
Sulfide Reactivity	< 110	110	mg/kg	1	03/16/17 09:53	MP	SW846 CHAP7/9034

RL = Reporting Limit

Report of Analysis

Client Sample ID:	BARC-SB-02		
Lab Sample ID:	JC38886-2	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8260C	**Percent Solids:**	86.0
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X170766.D	1	03/14/17	TP	n/a	n/a	VX7257
Run #2							

	Initial Weight
Run #1	6.4 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0184	0.0091	0.0045	mg/kg	
71-43-2	Benzene	ND	0.00045	0.00011	mg/kg	
74-97-5	Bromochloromethane	ND	0.0045	0.00029	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0018	0.00014	mg/kg	
75-25-2	Bromoform	ND	0.0045	0.00024	mg/kg	
74-83-9	Bromomethane	ND	0.0045	0.00044	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.0091	0.0016	mg/kg	
75-15-0	Carbon disulfide	ND	0.0018	0.00015	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0018	0.00015	mg/kg	
108-90-7	Chlorobenzene	ND	0.0018	0.00015	mg/kg	
75-00-3	Chloroethane	ND	0.0045	0.00039	mg/kg	
67-66-3	Chloroform	ND	0.0018	0.00022	mg/kg	
74-87-3	Chloromethane	ND	0.0045	0.00019	mg/kg	
110-82-7	Cyclohexane	ND	0.0018	0.00050	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0018	0.00044	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0018	0.00014	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.00091	0.00022	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.00091	0.00016	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.00091	0.00012	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.00091	0.00014	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0045	0.00050	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.00091	0.00017	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.00091	0.00016	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.00091	0.00014	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.00091	0.00040	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.00091	0.00014	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0018	0.00028	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0018	0.00018	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0018	0.00020	mg/kg	
100-41-4	Ethylbenzene	0.0025	0.00091	0.00014	mg/kg	
76-13-1	Freon 113	ND	0.0045	0.00044	mg/kg	
591-78-6	2-Hexanone	ND	0.0045	0.0013	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-02		
Lab Sample ID:	JC38886-2	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8260C	**Percent Solids:**	86.0
Project:	LIRR Expansion, Long Island, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	0.0018	0.00014	mg/kg	
79-20-9	Methyl Acetate	ND	0.0045	0.0018	mg/kg	
108-87-2	Methylcyclohexane	ND	0.0018	0.00046	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.00091	0.00024	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0045	0.00077	mg/kg	
75-09-2	Methylene chloride	0.0018	0.0045	0.00091	mg/kg	J
100-42-5	Styrene	ND	0.0018	0.00013	mg/kg	
75-65-0	Tert Butyl Alcohol	ND	0.023	0.0028	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0018	0.00022	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0018	0.00026	mg/kg	
108-88-3	Toluene	0.00019	0.00091	0.00011	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0045	0.00045	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0045	0.00045	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0018	0.00015	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0018	0.00029	mg/kg	
79-01-6	Trichloroethene	ND	0.00091	0.00017	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0045	0.00057	mg/kg	
75-01-4	Vinyl chloride	ND	0.0018	0.00018	mg/kg	
	m,p-Xylene	0.0096	0.00091	0.00020	mg/kg	
95-47-6	o-Xylene	0.0043	0.00091	0.00018	mg/kg	
1330-20-7	Xylene (total)	0.0139	0.00091	0.00018	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		70-122%
17060-07-0	1,2-Dichloroethane-D4	100%		68-124%
2037-26-5	Toluene-D8	101%		77-125%
460-00-4	4-Bromofluorobenzene	107%		72-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-02		
Lab Sample ID:	JC38886-2	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	86.0
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P67762.D	1	03/15/17	SB	03/15/17	OP1140	E2P2982
Run #2							

	Initial Weight	Final Volume
Run #1	30.7 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	0.076	0.019	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.19	0.023	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.19	0.032	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.19	0.067	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	0.19	0.14	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.19	0.041	mg/kg	
95-48-7	2-Methylphenol	ND	0.076	0.024	mg/kg	
	3&4-Methylphenol	ND	0.076	0.031	mg/kg	
88-75-5	2-Nitrophenol	ND	0.19	0.025	mg/kg	
100-02-7	4-Nitrophenol	ND	0.38	0.10	mg/kg	
87-86-5	Pentachlorophenol	ND	0.15	0.036	mg/kg	
108-95-2	Phenol	ND	0.076	0.020	mg/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.19	0.025	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.19	0.028	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.19	0.023	mg/kg	
83-32-9	Acenaphthene	ND	0.038	0.013	mg/kg	
208-96-8	Acenaphthylene	ND	0.038	0.019	mg/kg	
98-86-2	Acetophenone	ND	0.19	0.0081	mg/kg	
120-12-7	Anthracene	ND	0.038	0.023	mg/kg	
1912-24-9	Atrazine	ND	0.076	0.016	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.038	0.011	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.038	0.017	mg/kg	
205-99-2	Benzo(b)fluoranthene	0.0193	0.038	0.017	mg/kg	J
191-24-2	Benzo(g,h,i)perylene	0.0209	0.038	0.019	mg/kg	J
207-08-9	Benzo(k)fluoranthene	ND	0.038	0.018	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.076	0.015	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.076	0.0092	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.076	0.0052	mg/kg	
100-52-7	Benzaldehyde	ND	0.19	0.0094	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.076	0.0090	mg/kg	
106-47-8	4-Chloroaniline	ND	0.19	0.014	mg/kg	
86-74-8	Carbazole	ND	0.076	0.0055	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-02		
Lab Sample ID:	JC38886-2	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	86.0
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	0.076	0.015	mg/kg	
218-01-9	Chrysene	0.0170	0.038	0.012	mg/kg	J
111-91-1	bis(2-Chloroethoxy)methane	ND	0.076	0.0081	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.076	0.016	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.076	0.014	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.076	0.012	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.038	0.012	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.038	0.019	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.076	0.032	mg/kg	
123-91-1	1,4-Dioxane	ND	0.038	0.025	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.038	0.017	mg/kg	
132-64-9	Dibenzofuran	ND	0.076	0.015	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.076	0.0062	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.076	0.0094	mg/kg	
84-66-2	Diethyl phthalate	ND	0.076	0.0081	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.076	0.0067	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.076	0.0089	mg/kg	
206-44-0	Fluoranthene	ND	0.038	0.017	mg/kg	
86-73-7	Fluorene	ND	0.038	0.017	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.076	0.0096	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.038	0.015	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.38	0.015	mg/kg	
67-72-1	Hexachloroethane	ND	0.19	0.019	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.038	0.018	mg/kg	
78-59-1	Isophorone	ND	0.076	0.0081	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.076	0.0086	mg/kg	
88-74-4	2-Nitroaniline	ND	0.19	0.0089	mg/kg	
99-09-2	3-Nitroaniline	ND	0.19	0.0095	mg/kg	
100-01-6	4-Nitroaniline	ND	0.19	0.0098	mg/kg	
91-20-3	Naphthalene	ND	0.038	0.011	mg/kg	
98-95-3	Nitrobenzene	ND	0.076	0.015	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.076	0.011	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.19	0.014	mg/kg	
85-01-8	Phenanthrene	ND	0.038	0.013	mg/kg	
129-00-0	Pyrene	0.0173	0.038	0.012	mg/kg	J
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.19	0.0096	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	63%		23-115%

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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-02		
Lab Sample ID:	JC38886-2	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	86.0
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	68%		27-114%
118-79-6	2,4,6-Tribromophenol	88%		19-152%
4165-60-0	Nitrobenzene-d5	72%		26-134%
321-60-8	2-Fluorobiphenyl	90%		39-124%
1718-51-0	Terphenyl-d14	85%		36-134%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-02		
Lab Sample ID:	JC38886-2	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8151 SW846 8151/3550C	**Percent Solids:**	86.0
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OA124446.D	1	03/17/17	VDT	03/17/17	OP1193	GOA4266
Run #2							

	Initial Weight	Final Volume
Run #1	15.4 g	5.0 ml
Run #2		

Herbicide List

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	0.019	0.0085	mg/kg	
93-72-1	2,4,5-TP (Silvex)	ND	0.0038	0.0014	mg/kg	
93-76-5	2,4,5-T	ND	0.0038	0.0015	mg/kg	
75-99-0	Dalapon	ND	0.0038	0.0025	mg/kg	
1918-00-9	Dicamba	ND	0.0038	0.0019	mg/kg	
120-36-5	Dichloroprop	ND	0.019	0.0053	mg/kg	
88-85-7	Dinoseb	ND	0.019	0.013	mg/kg	
94-74-6	MCPA	ND	1.9	0.43	mg/kg	
93-65-2	MCPP	ND	1.9	0.41	mg/kg	
87-86-5	Pentachlorophenol	ND	0.0019	0.0017	mg/kg	
94-82-6	2,4-DB	ND	0.019	0.0061	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	66%		10-159%
19719-28-9	2,4-DCAA	66%		10-159%

ND = Not detected MDL = Method Detection Limit
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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-02		
Lab Sample ID:	JC38886-2	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8081B SW846 3546	**Percent Solids:**	86.0
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4G78962.D	1	03/16/17	RK	03/15/17	OP1139	G4G2049
Run #2							

	Initial Weight	Final Volume
Run #1	16.3 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.00071	0.00034	mg/kg	
319-84-6	alpha-BHC	ND	0.00071	0.00038	mg/kg	
319-85-7	beta-BHC	ND	0.00071	0.00045	mg/kg	
319-86-8	delta-BHC	ND	0.00071	0.00032	mg/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.00071	0.00032	mg/kg	
5103-71-9	alpha-Chlordane	ND	0.00071	0.00034	mg/kg	
5103-74-2	gamma-Chlordane [a]	0.0011	0.00071	0.00031	mg/kg	
60-57-1	Dieldrin	ND	0.00071	0.00036	mg/kg	
72-54-8	4,4'-DDD	ND	0.00071	0.00046	mg/kg	
72-55-9	4,4'-DDE	ND	0.00071	0.00037	mg/kg	
50-29-3	4,4'-DDT	ND	0.00071	0.00042	mg/kg	
72-20-8	Endrin	ND	0.00071	0.00033	mg/kg	
1031-07-8	Endosulfan sulfate	ND	0.00071	0.00029	mg/kg	
7421-93-4	Endrin aldehyde	ND	0.00071	0.00042	mg/kg	
959-98-8	Endosulfan-I	ND	0.00071	0.00037	mg/kg	
33213-65-9	Endosulfan-II	ND	0.00071	0.00037	mg/kg	
76-44-8	Heptachlor	ND	0.00071	0.00035	mg/kg	
1024-57-3	Heptachlor epoxide	ND	0.00071	0.00038	mg/kg	
72-43-5	Methoxychlor	ND	0.0014	0.00036	mg/kg	
53494-70-5	Endrin ketone	ND	0.00071	0.00055	mg/kg	
8001-35-2	Toxaphene	ND	0.018	0.0074	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	81%		25-135%
877-09-8	Tetrachloro-m-xylene	79%		25-135%
2051-24-3	Decachlorobiphenyl	86%		10-156%
2051-24-3	Decachlorobiphenyl	77%		10-156%

(a) More than 40 % RPD for detected concentrations between the two GC columns.

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RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-02		
Lab Sample ID:	JC38886-2	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8082A SW846 3546	**Percent Solids:**	86.0
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX206540.D	1	03/16/17	HB	03/15/17	OP1138	GXX5968
Run #2							

	Initial Weight	Final Volume
Run #1	16.3 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.036	0.018	mg/kg	
11104-28-2	Aroclor 1221	ND	0.036	0.017	mg/kg	
11141-16-5	Aroclor 1232	ND	0.036	0.014	mg/kg	
53469-21-9	Aroclor 1242	ND	0.036	0.013	mg/kg	
12672-29-6	Aroclor 1248	ND	0.036	0.023	mg/kg	
11097-69-1	Aroclor 1254	ND	0.036	0.018	mg/kg	
11096-82-5	Aroclor 1260	ND	0.036	0.015	mg/kg	
11100-14-4	Aroclor 1268	ND	0.036	0.013	mg/kg	
37324-23-5	Aroclor 1262	ND	0.036	0.024	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	93%		24-152%
877-09-8	Tetrachloro-m-xylene	107%		24-152%
2051-24-3	Decachlorobiphenyl	82%		10-166%
2051-24-3	Decachlorobiphenyl	116%		10-166%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-02		
Lab Sample ID:	JC38886-2	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
		Percent Solids:	86.0
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	9890	57	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 2.3	2.3	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Arsenic	3.4	2.3	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Barium	< 23	23	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Beryllium	0.24	0.23	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.57	0.57	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Calcium	3940	570	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Chromium	12.9	1.1	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Cobalt	< 5.7	5.7	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Copper	3.7	2.8	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Iron	12700	57	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Lead	9.6	2.3	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Magnesium	1450	570	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Manganese	139	1.7	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Mercury	< 0.038	0.038	mg/kg	1	03/15/17	03/15/17	JPM	SW846 7471B [1]	SW846 7471B [4]
Nickel	6.2	4.6	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 2.3	2.3	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Silver	< 0.57	0.57	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Vanadium	22.1	5.7	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Zinc	21.0	5.7	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA41559
(2) Instrument QC Batch: MA41566
(3) Prep QC Batch: MP99220
(4) Prep QC Batch: MP99231

RL = Reporting Limit

Report of Analysis

Client Sample ID:	BARC-SB-02		
Lab Sample ID:	JC38886-2	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
		Percent Solids:	86.0
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	< 0.27	0.27	mg/kg	1	03/15/17 14:12	BM	SW846 9012B/LACHAT
Solids, Percent	86		%	1	03/15/17 16:40	TZW	SM2540 G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	BARC-SB-02		
Lab Sample ID:	JC38886-2A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8260C SW846 1311	**Percent Solids:**	86.0
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B149134.D	5	03/16/17	EH	03/15/17	GP3898	V2B6620
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.0025	0.00070	mg/l	
78-93-3	2-Butanone (MEK)	ND	D035	200	0.10	0.0095	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.0050	0.0027	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.0050	0.00087	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.0050	0.0011	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.0050	0.0011	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.0050	0.0020	mg/l	
75-35-4	1,1-Dichloroethene	ND	D029	0.70	0.0050	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	D039	0.70	0.0050	0.0012	mg/l	
79-01-6	Trichloroethene	ND	D040	0.50	0.0050	0.0013	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.0050	0.0016	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		76-120%
17060-07-0	1,2-Dichloroethane-D4	102%		64-135%
2037-26-5	Toluene-D8	99%		76-117%
460-00-4	4-Bromofluorobenzene	96%		72-122%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-02		
Lab Sample ID:	JC38886-2A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	86.0
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6P35681.D	1	03/17/17	CS	03/16/17	OP1178	E6P1646
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.020	0.0089	mg/l	
	3&4-Methylphenol	ND	D024	200	0.020	0.0088	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.10	0.014	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.013	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0092	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.020	0.0017	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.020	0.0055	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.020	0.0033	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.010	0.0049	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0039	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.020	0.0064	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.020	0.0039	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	33%		14-88%
4165-62-2	Phenol-d5	20%		10-110%
118-79-6	2,4,6-Tribromophenol	66%		39-149%
4165-60-0	Nitrobenzene-d5	65%		32-128%
321-60-8	2-Fluorobiphenyl	70%		35-119%
1718-51-0	Terphenyl-d14	85%		10-126%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-02		
Lab Sample ID:	JC38886-2A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8151 SW846 8151/3510C	**Percent Solids:**	86.0
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G107046.D	1	03/17/17	VDT	03/16/17	OP1179	G3G3739
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Herbicide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND	D016	10	0.0050	0.0039	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.0015	0.00047	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	91%		50-142%
19719-28-9	2,4-DCAA	72%		50-142%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-02		
Lab Sample ID:	JC38886-2A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	86.0
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	8G3867.D	1	03/17/17	RK	03/16/17	OP1180	G8G114
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Pesticide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	D013	0.40	0.00010	0.000028	mg/l	
12789-03-6	Chlordane	ND	D020	0.030	0.0050	0.0011	mg/l	
72-20-8	Endrin	ND	D012	0.020	0.00010	0.000050	mg/l	
76-44-8	Heptachlor	ND	D031	0.0080	0.00010	0.000038	mg/l	
1024-57-3	Heptachlor epoxide	ND	D031	0.0080	0.00010	0.000065	mg/l	
72-43-5	Methoxychlor	ND	D014	10	0.00020	0.000057	mg/l	
8001-35-2	Toxaphene	ND	D015	0.50	0.0025	0.0018	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	94%		30-137%
877-09-8	Tetrachloro-m-xylene	94%		30-137%
2051-24-3	Decachlorobiphenyl	106%		10-137%
2051-24-3	Decachlorobiphenyl	97%		10-137%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-02		
Lab Sample ID:	JC38886-2A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
		Percent Solids:	86.0
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 0.50	D004	5.0	0.50	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Barium	< 1.0	D005	100	1.0	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 0.025	D006	1.0	0.025	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 0.050	D007	5.0	0.050	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Lead	< 0.50	D008	5.0	0.50	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	03/16/17	03/16/17	JA	SW846 7470A [1]	SW846 7470A [4]
Selenium	< 0.50	D010	1.0	0.50	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Silver	< 0.050	D011	5.0	0.050	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA41573
(2) Instrument QC Batch: MA41581
(3) Prep QC Batch: MP99239
(4) Prep QC Batch: MP99275

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID:	BARC-SB-02		
Lab Sample ID:	JC38886-2A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
		Percent Solids:	86.0
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Corrosivity as pH	7.39 NC		su	1	03/16/17 12:00	AC	SW846 9045D
Cyanide Reactivity	< 12	12	mg/kg	1	03/15/17 14:31	BM	SW846 CHAP7/9012 B
Ignitability (Flashpoint)	> 200		Deg. F	1	03/16/17 20:45	AT	SW846 1010A/ASTM D93
Sulfide Reactivity	< 120	120	mg/kg	1	03/16/17 09:53	MP	SW846 CHAP7/9034

RL = Reporting Limit

Report of Analysis

Client Sample ID:	BARC-SB-03		
Lab Sample ID:	JC38886-3	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8260C	**Percent Solids:**	82.0
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X170767.D	1	03/14/17	TP	n/a	n/a	VX7257
Run #2							

	Initial Weight
Run #1	6.6 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.102	0.0092	0.0046	mg/kg	
71-43-2	Benzene	ND	0.00046	0.00011	mg/kg	
74-97-5	Bromochloromethane	ND	0.0046	0.00029	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0018	0.00014	mg/kg	
75-25-2	Bromoform	ND	0.0046	0.00025	mg/kg	
74-83-9	Bromomethane	ND	0.0046	0.00045	mg/kg	
78-93-3	2-Butanone (MEK)	0.0213	0.0092	0.0016	mg/kg	
75-15-0	Carbon disulfide	0.00023	0.0018	0.00016	mg/kg	J
56-23-5	Carbon tetrachloride	ND	0.0018	0.00015	mg/kg	
108-90-7	Chlorobenzene	ND	0.0018	0.00015	mg/kg	
75-00-3	Chloroethane	ND	0.0046	0.00040	mg/kg	
67-66-3	Chloroform	ND	0.0018	0.00022	mg/kg	
74-87-3	Chloromethane	ND	0.0046	0.00019	mg/kg	
110-82-7	Cyclohexane	ND	0.0018	0.00050	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0018	0.00045	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0018	0.00014	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.00092	0.00022	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.00092	0.00016	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.00092	0.00013	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.00092	0.00014	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0046	0.00050	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.00092	0.00017	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.00092	0.00016	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.00092	0.00014	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.00092	0.00040	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.00092	0.00015	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0018	0.00029	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0018	0.00018	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0018	0.00020	mg/kg	
100-41-4	Ethylbenzene	ND	0.00092	0.00014	mg/kg	
76-13-1	Freon 113	ND	0.0046	0.00045	mg/kg	
591-78-6	2-Hexanone	ND	0.0046	0.0013	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-03		
Lab Sample ID:	JC38886-3	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8260C	**Percent Solids:**	82.0
Project:	LIRR Expansion, Long Island, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	0.0018	0.00014	mg/kg	
79-20-9	Methyl Acetate	ND	0.0046	0.0019	mg/kg	
108-87-2	Methylcyclohexane	ND	0.0018	0.00047	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.00092	0.00024	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0046	0.00078	mg/kg	
75-09-2	Methylene chloride	0.0012	0.0046	0.00092	mg/kg	J
100-42-5	Styrene	ND	0.0018	0.00013	mg/kg	
75-65-0	Tert Butyl Alcohol	ND	0.023	0.0028	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0018	0.00022	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0018	0.00026	mg/kg	
108-88-3	Toluene	ND	0.00092	0.00012	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0046	0.00046	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0046	0.00046	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0018	0.00015	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0018	0.00030	mg/kg	
79-01-6	Trichloroethene	ND	0.00092	0.00018	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0046	0.00058	mg/kg	
75-01-4	Vinyl chloride	ND	0.0018	0.00019	mg/kg	
	m,p-Xylene	ND	0.00092	0.00020	mg/kg	
95-47-6	o-Xylene	ND	0.00092	0.00019	mg/kg	
1330-20-7	Xylene (total)	ND	0.00092	0.00019	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		70-122%
17060-07-0	1,2-Dichloroethane-D4	99%		68-124%
2037-26-5	Toluene-D8	103%		77-125%
460-00-4	4-Bromofluorobenzene	103%		72-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-03		
Lab Sample ID:	JC38886-3	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	82.0
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P112130.D	1	03/16/17	CS	03/15/17	OP1140	EP4996
Run #2							

	Initial Weight	Final Volume
Run #1	30.5 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	0.080	0.020	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.20	0.025	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.20	0.034	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.20	0.071	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	0.20	0.15	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.20	0.043	mg/kg	
95-48-7	2-Methylphenol	ND	0.080	0.026	mg/kg	
	3&4-Methylphenol	0.0364	0.080	0.033	mg/kg	J
88-75-5	2-Nitrophenol	ND	0.20	0.026	mg/kg	
100-02-7	4-Nitrophenol	ND	0.40	0.11	mg/kg	
87-86-5	Pentachlorophenol	ND	0.16	0.038	mg/kg	
108-95-2	Phenol	ND	0.080	0.021	mg/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.20	0.026	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.20	0.030	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.20	0.024	mg/kg	
83-32-9	Acenaphthene	0.0605	0.040	0.014	mg/kg	
208-96-8	Acenaphthylene	0.0449	0.040	0.020	mg/kg	
98-86-2	Acetophenone	ND	0.20	0.0086	mg/kg	
120-12-7	Anthracene	0.191	0.040	0.025	mg/kg	
1912-24-9	Atrazine	ND	0.080	0.017	mg/kg	
56-55-3	Benzo(a)anthracene	0.519	0.040	0.011	mg/kg	
50-32-8	Benzo(a)pyrene	0.578	0.040	0.018	mg/kg	
205-99-2	Benzo(b)fluoranthene	0.700	0.040	0.018	mg/kg	
191-24-2	Benzo(g,h,i)perylene	0.392	0.040	0.020	mg/kg	
207-08-9	Benzo(k)fluoranthene	0.268	0.040	0.019	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.080	0.015	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.080	0.0098	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.080	0.0055	mg/kg	
100-52-7	Benzaldehyde	0.0508	0.20	0.0099	mg/kg	J
91-58-7	2-Chloronaphthalene	ND	0.080	0.0095	mg/kg	
106-47-8	4-Chloroaniline	ND	0.20	0.014	mg/kg	
86-74-8	Carbazole	0.0584	0.080	0.0058	mg/kg	J

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-03		
Lab Sample ID:	JC38886-3	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	82.0
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	0.080	0.016	mg/kg	
218-01-9	Chrysene	0.587	0.040	0.013	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.080	0.0086	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.080	0.017	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.080	0.014	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.080	0.013	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.040	0.012	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.040	0.020	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.080	0.033	mg/kg	
123-91-1	1,4-Dioxane	ND	0.040	0.026	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	0.105	0.040	0.018	mg/kg	
132-64-9	Dibenzofuran	0.0555	0.080	0.016	mg/kg	J
84-74-2	Di-n-butyl phthalate	ND	0.080	0.0065	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.080	0.010	mg/kg	
84-66-2	Diethyl phthalate	ND	0.080	0.0085	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.080	0.0071	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.080	0.0094	mg/kg	
206-44-0	Fluoranthene	0.993	0.040	0.018	mg/kg	
86-73-7	Fluorene	0.0730	0.040	0.018	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.080	0.010	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.040	0.016	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.40	0.016	mg/kg	
67-72-1	Hexachloroethane	ND	0.20	0.020	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	0.459	0.040	0.019	mg/kg	
78-59-1	Isophorone	ND	0.080	0.0086	mg/kg	
91-57-6	2-Methylnaphthalene	0.0625	0.080	0.0090	mg/kg	J
88-74-4	2-Nitroaniline	ND	0.20	0.0094	mg/kg	
99-09-2	3-Nitroaniline	ND	0.20	0.010	mg/kg	
100-01-6	4-Nitroaniline	ND	0.20	0.010	mg/kg	
91-20-3	Naphthalene	0.108	0.040	0.011	mg/kg	
98-95-3	Nitrobenzene	ND	0.080	0.015	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.080	0.012	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.20	0.015	mg/kg	
85-01-8	Phenanthrene	0.596	0.040	0.013	mg/kg	
129-00-0	Pyrene	0.854	0.040	0.013	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.20	0.010	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	42%		23-115%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-03		
Lab Sample ID:	JC38886-3	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	82.0
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	43%		27-114%
118-79-6	2,4,6-Tribromophenol	61%		19-152%
4165-60-0	Nitrobenzene-d5	47%		26-134%
321-60-8	2-Fluorobiphenyl	55%		39-124%
1718-51-0	Terphenyl-d14	50%		36-134%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-03		
Lab Sample ID:	JC38886-3	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8151 SW846 8151/3550C	**Percent Solids:**	82.0
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OA124447.D	2	03/17/17	VDT	03/17/17	OP1193	GOA4266
Run #2							

	Initial Weight	Final Volume
Run #1	12.2 g	5.0 ml
Run #2		

Herbicide List

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	0.050	0.022	mg/kg	
93-72-1	2,4,5-TP (Silvex)	ND	0.010	0.0036	mg/kg	
93-76-5	2,4,5-T	ND	0.010	0.0038	mg/kg	
75-99-0	Dalapon	ND	0.010	0.0067	mg/kg	
1918-00-9	Dicamba	ND	0.010	0.0050	mg/kg	
120-36-5	Dichloroprop	ND	0.050	0.014	mg/kg	
88-85-7	Dinoseb	ND	0.050	0.034	mg/kg	
94-74-6	MCPA	ND	5.0	1.1	mg/kg	
93-65-2	MCPP	ND	5.0	1.1	mg/kg	
87-86-5	Pentachlorophenol	ND	0.0050	0.0044	mg/kg	
94-82-6	2,4-DB	ND	0.050	0.016	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	49%		10-159%
19719-28-9	2,4-DCAA	47%		10-159%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-03		
Lab Sample ID:	JC38886-3	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8081B SW846 3546	**Percent Solids:**	82.0
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4G78963.D	1	03/16/17	RK	03/15/17	OP1139	G4G2049
Run #2	4G78982.D	10	03/16/17	RK	03/15/17	OP1139	G4G2049
Run #3	4G78983.D	100	03/16/17	RK	03/15/17	OP1139	G4G2049

	Initial Weight	Final Volume
Run #1	15.3 g	10.0 ml
Run #2	15.3 g	10.0 ml
Run #3	15.3 g	10.0 ml

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.00080	0.00038	mg/kg	
319-84-6	alpha-BHC	ND	0.00080	0.00043	mg/kg	
319-85-7	beta-BHC	ND	0.00080	0.00050	mg/kg	
319-86-8	delta-BHC	ND	0.00080	0.00036	mg/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.00080	0.00035	mg/kg	
5103-71-9	alpha-Chlordane	ND	0.00080	0.00038	mg/kg	
5103-74-2	gamma-Chlordane	ND	0.00080	0.00035	mg/kg	
60-57-1	Dieldrin	ND	0.00080	0.00040	mg/kg	
72-54-8	4,4'-DDD	0.951 [a]	0.080	0.051	mg/kg	
72-55-9	4,4'-DDE [b]	0.0938 [c]	0.0080	0.0042	mg/kg	
50-29-3	4,4'-DDT	0.0666	0.00080	0.00047	mg/kg	
72-20-8	Endrin	ND	0.00080	0.00037	mg/kg	
1031-07-8	Endosulfan sulfate	ND	0.00080	0.00032	mg/kg	
7421-93-4	Endrin aldehyde	ND	0.00080	0.00047	mg/kg	
959-98-8	Endosulfan-I	ND	0.00080	0.00042	mg/kg	
33213-65-9	Endosulfan-II	ND	0.00080	0.00042	mg/kg	
76-44-8	Heptachlor	ND	0.00080	0.00039	mg/kg	
1024-57-3	Heptachlor epoxide	ND	0.00080	0.00043	mg/kg	
72-43-5	Methoxychlor	ND	0.0016	0.00040	mg/kg	
53494-70-5	Endrin ketone	ND	0.00080	0.00061	mg/kg	
8001-35-2	Toxaphene	ND	0.020	0.0083	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
877-09-8	Tetrachloro-m-xylene	77%	96%	0% [d]	25-135%
877-09-8	Tetrachloro-m-xylene	79%	98%	0% [d]	25-135%
2051-24-3	Decachlorobiphenyl	75%	66%	0% [d]	10-156%
2051-24-3	Decachlorobiphenyl	79%	88%	0% [d]	10-156%

(a) Result is from Run# 3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-03		
Lab Sample ID:	JC38886-3	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8081B SW846 3546	**Percent Solids:**	82.0
Project:	LIRR Expansion, Long Island, NY		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q

(b) More than 40 % RPD for detected concentrations between the two GC columns.
(c) Result is from Run# 2
(d) Outside control limits due to dilution.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-03		
Lab Sample ID:	JC38886-3	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8082A SW846 3546	**Percent Solids:**	82.0
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX206541.D	1	03/16/17	HB	03/15/17	OP1138	GXX5968
Run #2							

	Initial Weight	Final Volume
Run #1	15.3 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.040	0.020	mg/kg	
11104-28-2	Aroclor 1221	ND	0.040	0.020	mg/kg	
11141-16-5	Aroclor 1232	ND	0.040	0.016	mg/kg	
53469-21-9	Aroclor 1242	ND	0.040	0.014	mg/kg	
12672-29-6	Aroclor 1248	ND	0.040	0.025	mg/kg	
11097-69-1	Aroclor 1254	ND	0.040	0.020	mg/kg	
11096-82-5	Aroclor 1260	ND	0.040	0.017	mg/kg	
11100-14-4	Aroclor 1268	ND	0.040	0.014	mg/kg	
37324-23-5	Aroclor 1262	ND	0.040	0.027	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	87%		24-152%
877-09-8	Tetrachloro-m-xylene	201% [a]		24-152%
2051-24-3	Decachlorobiphenyl	87%		10-166%
2051-24-3	Decachlorobiphenyl	155%		10-166%

(a) Outside control limits due to matrix interference.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-03		
Lab Sample ID:	JC38886-3	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
		Percent Solids:	82.0
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	11000	61	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Arsenic	13.4	2.4	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Barium	72.9	24	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Beryllium	0.38	0.24	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Cadmium	0.76	0.61	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Calcium	1840	610	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Chromium	19.5	1.2	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Cobalt	< 6.1	6.1	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Copper	43.0	3.0	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Iron	11400	61	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Lead	113	2.4	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Magnesium	1140	610	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Manganese	191	1.8	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Mercury	3.0	0.19	mg/kg	5	03/15/17	03/15/17	JPM	SW846 7471B [1]	SW846 7471B [4]
Nickel	9.2	4.9	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Silver	0.63	0.61	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Vanadium	26.8	6.1	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Zinc	101	6.1	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA41559
(2) Instrument QC Batch: MA41566
(3) Prep QC Batch: MP99220
(4) Prep QC Batch: MP99231

RL = Reporting Limit

Report of Analysis

Client Sample ID:	BARC-SB-03		
Lab Sample ID:	JC38886-3	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
		Percent Solids:	82.0
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	< 0.28	0.28	mg/kg	1	03/15/17 14:13	BM	SW846 9012B/LACHAT
Solids, Percent	82		%	1	03/15/17 16:40	TZW	SM2540 G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	BARC-SB-03		
Lab Sample ID:	JC38886-3A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8260C SW846 1311	**Percent Solids:**	82.0
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B149135.D	5	03/16/17	EH	03/15/17	GP3898	V2B6620
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.0025	0.00070	mg/l	
78-93-3	2-Butanone (MEK)	ND	D035	200	0.10	0.0095	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.0050	0.0027	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.0050	0.00087	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.0050	0.0011	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.0050	0.0011	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.0050	0.0020	mg/l	
75-35-4	1,1-Dichloroethene	ND	D029	0.70	0.0050	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	D039	0.70	0.0050	0.0012	mg/l	
79-01-6	Trichloroethene	ND	D040	0.50	0.0050	0.0013	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.0050	0.0016	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	112%		76-120%
17060-07-0	1,2-Dichloroethane-D4	102%		64-135%
2037-26-5	Toluene-D8	99%		76-117%
460-00-4	4-Bromofluorobenzene	96%		72-122%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-03		
Lab Sample ID:	JC38886-3A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	82.0
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6P35682.D	1	03/17/17	CS	03/16/17	OP1178	E6P1646
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.020	0.0089	mg/l	
	3&4-Methylphenol	ND	D024	200	0.020	0.0088	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.10	0.014	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.013	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0092	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.020	0.0017	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.020	0.0055	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.020	0.0033	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.010	0.0049	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0039	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.020	0.0064	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.020	0.0039	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	44%		14-88%
4165-62-2	Phenol-d5	25%		10-110%
118-79-6	2,4,6-Tribromophenol	92%		39-149%
4165-60-0	Nitrobenzene-d5	85%		32-128%
321-60-8	2-Fluorobiphenyl	97%		35-119%
1718-51-0	Terphenyl-d14	105%		10-126%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-03		
Lab Sample ID:	JC38886-3A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8151 SW846 8151/3510C	**Percent Solids:**	82.0
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G107047.D	1	03/17/17	VDT	03/16/17	OP1179	G3G3739
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Herbicide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND	D016	10	0.0050	0.0039	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.0015	0.00047	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	98%		50-142%
19719-28-9	2,4-DCAA	83%		50-142%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-03		
Lab Sample ID:	JC38886-3A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	82.0
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	8G3868.D	1	03/17/17	RK	03/16/17	OP1180	G8G114
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Pesticide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	D013	0.40	0.00010	0.000028	mg/l	
12789-03-6	Chlordane	ND	D020	0.030	0.0050	0.0011	mg/l	
72-20-8	Endrin	ND	D012	0.020	0.00010	0.000050	mg/l	
76-44-8	Heptachlor	ND	D031	0.0080	0.00010	0.000038	mg/l	
1024-57-3	Heptachlor epoxide	ND	D031	0.0080	0.00010	0.000065	mg/l	
72-43-5	Methoxychlor	ND	D014	10	0.00020	0.000057	mg/l	
8001-35-2	Toxaphene	ND	D015	0.50	0.0025	0.0018	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	89%		30-137%
877-09-8	Tetrachloro-m-xylene	94%		30-137%
2051-24-3	Decachlorobiphenyl	117%		10-137%
2051-24-3	Decachlorobiphenyl	112%		10-137%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-03		
Lab Sample ID:	JC38886-3A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
		Percent Solids:	82.0
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 0.50	D004	5.0	0.50	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Barium	< 1.0	D005	100	1.0	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 0.025	D006	1.0	0.025	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 0.050	D007	5.0	0.050	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Lead	< 0.50	D008	5.0	0.50	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	03/16/17	03/16/17	JA	SW846 7470A [1]	SW846 7470A [4]
Selenium	< 0.50	D010	1.0	0.50	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Silver	< 0.050	D011	5.0	0.050	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA41573
(2) Instrument QC Batch: MA41581
(3) Prep QC Batch: MP99239
(4) Prep QC Batch: MP99275

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID:	BARC-SB-03		
Lab Sample ID:	JC38886-3A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
		Percent Solids:	82.0
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Corrosivity as pH	6.91 NC		su	1	03/16/17 12:00	AC	SW846 9045D
Cyanide Reactivity	< 12	12	mg/kg	1	03/15/17 14:32	BM	SW846 CHAP7/9012 B
Ignitability (Flashpoint)	> 200		Deg. F	1	03/16/17 20:45	AT	SW846 1010A/ASTM D93
Sulfide Reactivity	< 120	120	mg/kg	1	03/16/17 09:53	MP	SW846 CHAP7/9034

RL = Reporting Limit

Report of Analysis

Client Sample ID:	BARC-SB-04		
Lab Sample ID:	JC38886-4	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8260C	**Percent Solids:**	83.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X170768.D	1	03/14/17	TP	n/a	n/a	VX7257
Run #2							

	Initial Weight
Run #1	5.7 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0148	0.010	0.0052	mg/kg	
71-43-2	Benzene	0.00018	0.00052	0.00013	mg/kg	J
74-97-5	Bromochloromethane	ND	0.0052	0.00033	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0021	0.00016	mg/kg	
75-25-2	Bromoform	ND	0.0052	0.00028	mg/kg	
74-83-9	Bromomethane	ND	0.0052	0.00051	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.010	0.0018	mg/kg	
75-15-0	Carbon disulfide	ND	0.0021	0.00018	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0021	0.00017	mg/kg	
108-90-7	Chlorobenzene	ND	0.0021	0.00017	mg/kg	
75-00-3	Chloroethane	ND	0.0052	0.00045	mg/kg	
67-66-3	Chloroform	ND	0.0021	0.00025	mg/kg	
74-87-3	Chloromethane	ND	0.0052	0.00022	mg/kg	
110-82-7	Cyclohexane	ND	0.0021	0.00057	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0021	0.00051	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0021	0.00016	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.0010	0.00025	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0010	0.00018	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0010	0.00014	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0010	0.00016	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0052	0.00057	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00020	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00018	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00016	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00046	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00017	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0021	0.00032	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0021	0.00021	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0021	0.00023	mg/kg	
100-41-4	Ethylbenzene	ND	0.0010	0.00016	mg/kg	
76-13-1	Freon 113	ND	0.0052	0.00051	mg/kg	
591-78-6	2-Hexanone	ND	0.0052	0.0015	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-04		
Lab Sample ID:	JC38886-4	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8260C	**Percent Solids:**	83.6
Project:	LIRR Expansion, Long Island, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	0.0021	0.00016	mg/kg	
79-20-9	Methyl Acetate	ND	0.0052	0.0021	mg/kg	
108-87-2	Methylcyclohexane	ND	0.0021	0.00053	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0010	0.00028	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0052	0.00089	mg/kg	
75-09-2	Methylene chloride	0.0020	0.0052	0.0010	mg/kg	J
100-42-5	Styrene	ND	0.0021	0.00015	mg/kg	
75-65-0	Tert Butyl Alcohol	ND	0.026	0.0032	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0021	0.00025	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0021	0.00029	mg/kg	
108-88-3	Toluene	ND	0.0010	0.00013	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0052	0.00052	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0052	0.00052	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0021	0.00018	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0021	0.00034	mg/kg	
79-01-6	Trichloroethene	ND	0.0010	0.00020	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0052	0.00066	mg/kg	
75-01-4	Vinyl chloride	ND	0.0021	0.00021	mg/kg	
	m,p-Xylene	ND	0.0010	0.00023	mg/kg	
95-47-6	o-Xylene	ND	0.0010	0.00021	mg/kg	
1330-20-7	Xylene (total)	ND	0.0010	0.00021	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		70-122%
17060-07-0	1,2-Dichloroethane-D4	102%		68-124%
2037-26-5	Toluene-D8	100%		77-125%
460-00-4	4-Bromofluorobenzene	104%		72-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-04		
Lab Sample ID:	JC38886-4	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	83.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P112131.D	1	03/16/17	CS	03/15/17	OP1140	EP4996
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	0.079	0.020	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.20	0.024	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.20	0.034	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.20	0.071	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	0.20	0.15	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.20	0.043	mg/kg	
95-48-7	2-Methylphenol	ND	0.079	0.025	mg/kg	
	3&4-Methylphenol	ND	0.079	0.033	mg/kg	
88-75-5	2-Nitrophenol	ND	0.20	0.026	mg/kg	
100-02-7	4-Nitrophenol	ND	0.40	0.11	mg/kg	
87-86-5	Pentachlorophenol	ND	0.16	0.037	mg/kg	
108-95-2	Phenol	ND	0.079	0.021	mg/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.20	0.026	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.20	0.030	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.20	0.024	mg/kg	
83-32-9	Acenaphthene	0.0291	0.040	0.014	mg/kg	J
208-96-8	Acenaphthylene	ND	0.040	0.020	mg/kg	
98-86-2	Acetophenone	ND	0.20	0.0085	mg/kg	
120-12-7	Anthracene	0.0849	0.040	0.024	mg/kg	
1912-24-9	Atrazine	ND	0.079	0.017	mg/kg	
56-55-3	Benzo(a)anthracene	0.206	0.040	0.011	mg/kg	
50-32-8	Benzo(a)pyrene	0.194	0.040	0.018	mg/kg	
205-99-2	Benzo(b)fluoranthene	0.243	0.040	0.018	mg/kg	
191-24-2	Benzo(g,h,i)perylene	0.113	0.040	0.020	mg/kg	
207-08-9	Benzo(k)fluoranthene	0.107	0.040	0.019	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.079	0.015	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.079	0.0097	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.079	0.0054	mg/kg	
100-52-7	Benzaldehyde	ND	0.20	0.0099	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.079	0.0095	mg/kg	
106-47-8	4-Chloroaniline	ND	0.20	0.014	mg/kg	
86-74-8	Carbazole	0.0248	0.079	0.0058	mg/kg	J

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-04		
Lab Sample ID:	JC38886-4	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	83.6
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	0.079	0.016	mg/kg	
218-01-9	Chrysene	0.229	0.040	0.013	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.079	0.0085	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.079	0.017	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.079	0.014	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.079	0.013	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.040	0.012	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.040	0.020	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.079	0.033	mg/kg	
123-91-1	1,4-Dioxane	ND	0.040	0.026	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	0.0366	0.040	0.018	mg/kg	J
132-64-9	Dibenzofuran	0.0186	0.079	0.016	mg/kg	J
84-74-2	Di-n-butyl phthalate	ND	0.079	0.0065	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.079	0.0099	mg/kg	
84-66-2	Diethyl phthalate	ND	0.079	0.0085	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.079	0.0071	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.079	0.0093	mg/kg	
206-44-0	Fluoranthene	0.403	0.040	0.018	mg/kg	
86-73-7	Fluorene	0.0337	0.040	0.018	mg/kg	J
118-74-1	Hexachlorobenzene	ND	0.079	0.010	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.040	0.016	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.40	0.016	mg/kg	
67-72-1	Hexachloroethane	ND	0.20	0.020	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	0.128	0.040	0.019	mg/kg	
78-59-1	Isophorone	ND	0.079	0.0085	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.079	0.0090	mg/kg	
88-74-4	2-Nitroaniline	ND	0.20	0.0094	mg/kg	
99-09-2	3-Nitroaniline	ND	0.20	0.0099	mg/kg	
100-01-6	4-Nitroaniline	ND	0.20	0.010	mg/kg	
91-20-3	Naphthalene	ND	0.040	0.011	mg/kg	
98-95-3	Nitrobenzene	ND	0.079	0.015	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.079	0.011	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.20	0.015	mg/kg	
85-01-8	Phenanthrene	0.320	0.040	0.013	mg/kg	
129-00-0	Pyrene	0.360	0.040	0.013	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.20	0.010	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	42%		23-115%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-04		
Lab Sample ID:	JC38886-4	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	83.6
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	44%		27-114%
118-79-6	2,4,6-Tribromophenol	63%		19-152%
4165-60-0	Nitrobenzene-d5	48%		26-134%
321-60-8	2-Fluorobiphenyl	57%		39-124%
1718-51-0	Terphenyl-d14	53%		36-134%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-04		
Lab Sample ID:	JC38886-4	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8151 SW846 8151/3550C	**Percent Solids:**	83.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OA124448.D	1	03/17/17	VDT	03/17/17	OP1193	GOA4266
Run #2							

	Initial Weight	Final Volume
Run #1	15.4 g	5.0 ml
Run #2		

Herbicide List

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	0.019	0.0087	mg/kg	
93-72-1	2,4,5-TP (Silvex)	ND	0.0039	0.0014	mg/kg	
93-76-5	2,4,5-T	ND	0.0039	0.0015	mg/kg	
75-99-0	Dalapon	ND	0.0039	0.0026	mg/kg	
1918-00-9	Dicamba	ND	0.0039	0.0020	mg/kg	
120-36-5	Dichloroprop	ND	0.019	0.0055	mg/kg	
88-85-7	Dinoseb	ND	0.019	0.013	mg/kg	
94-74-6	MCPA	ND	1.9	0.45	mg/kg	
93-65-2	MCPP	ND	1.9	0.42	mg/kg	
87-86-5	Pentachlorophenol	ND	0.0019	0.0017	mg/kg	
94-82-6	2,4-DB	ND	0.019	0.0063	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	34%		10-159%
19719-28-9	2,4-DCAA	37%		10-159%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-04		
Lab Sample ID:	JC38886-4	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8081B SW846 3546	**Percent Solids:**	83.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4G78964.D	1	03/16/17	RK	03/15/17	OP1139	G4G2049
Run #2							

	Initial Weight	Final Volume
Run #1	16.3 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.00073	0.00035	mg/kg	
319-84-6	alpha-BHC	ND	0.00073	0.00039	mg/kg	
319-85-7	beta-BHC	ND	0.00073	0.00046	mg/kg	
319-86-8	delta-BHC	ND	0.00073	0.00033	mg/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.00073	0.00032	mg/kg	
5103-71-9	alpha-Chlordane	ND	0.00073	0.00035	mg/kg	
5103-74-2	gamma-Chlordane	ND	0.00073	0.00032	mg/kg	
60-57-1	Dieldrin	ND	0.00073	0.00037	mg/kg	
72-54-8	4,4'-DDD	0.0066	0.00073	0.00047	mg/kg	
72-55-9	4,4'-DDE	0.0117	0.00073	0.00038	mg/kg	
50-29-3	4,4'-DDT	0.0099	0.00073	0.00044	mg/kg	
72-20-8	Endrin	ND	0.00073	0.00034	mg/kg	
1031-07-8	Endosulfan sulfate	ND	0.00073	0.00029	mg/kg	
7421-93-4	Endrin aldehyde	ND	0.00073	0.00044	mg/kg	
959-98-8	Endosulfan-I	ND	0.00073	0.00038	mg/kg	
33213-65-9	Endosulfan-II	ND	0.00073	0.00038	mg/kg	
76-44-8	Heptachlor	ND	0.00073	0.00036	mg/kg	
1024-57-3	Heptachlor epoxide	ND	0.00073	0.00039	mg/kg	
72-43-5	Methoxychlor	ND	0.0015	0.00037	mg/kg	
53494-70-5	Endrin ketone	ND	0.00073	0.00057	mg/kg	
8001-35-2	Toxaphene	ND	0.018	0.0076	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	95%		25-135%
877-09-8	Tetrachloro-m-xylene	94%		25-135%
2051-24-3	Decachlorobiphenyl	72%		10-156%
2051-24-3	Decachlorobiphenyl	82%		10-156%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-04		
Lab Sample ID:	JC38886-4	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8082A SW846 3546	**Percent Solids:**	83.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX206542.D	1	03/16/17	HB	03/15/17	OP1138	GXX5968
Run #2							

	Initial Weight	Final Volume
Run #1	16.3 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.037	0.018	mg/kg	
11104-28-2	Aroclor 1221	ND	0.037	0.018	mg/kg	
11141-16-5	Aroclor 1232	ND	0.037	0.014	mg/kg	
53469-21-9	Aroclor 1242	ND	0.037	0.013	mg/kg	
12672-29-6	Aroclor 1248	ND	0.037	0.023	mg/kg	
11097-69-1	Aroclor 1254	ND	0.037	0.018	mg/kg	
11096-82-5	Aroclor 1260	ND	0.037	0.016	mg/kg	
11100-14-4	Aroclor 1268	ND	0.037	0.013	mg/kg	
37324-23-5	Aroclor 1262	ND	0.037	0.025	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	103%		24-152%
877-09-8	Tetrachloro-m-xylene	111%		24-152%
2051-24-3	Decachlorobiphenyl	81%		10-166%
2051-24-3	Decachlorobiphenyl	122%		10-166%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-04		
Lab Sample ID:	JC38886-4	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
		Percent Solids:	83.6
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	11700	57	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 2.3	2.3	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Arsenic	6.4	2.3	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Barium	62.2	23	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Beryllium	0.40	0.23	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.57	0.57	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Calcium	1410	570	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Chromium	14.1	1.1	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Cobalt	< 5.7	5.7	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Copper	13.8	2.8	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Iron	12100	57	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Lead	39.8	2.3	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Magnesium	1150	570	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Manganese	681	1.7	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Mercury	0.94	0.039	mg/kg	1	03/15/17	03/15/17	JPM	SW846 7471B [1]	SW846 7471B [4]
Nickel	7.8	4.6	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 2.3	2.3	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Silver	< 0.57	0.57	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Vanadium	23.4	5.7	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]
Zinc	50.1	5.7	mg/kg	1	03/15/17	03/15/17	DE	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA41559
(2) Instrument QC Batch: MA41566
(3) Prep QC Batch: MP99220
(4) Prep QC Batch: MP99231

RL = Reporting Limit

Report of Analysis

Client Sample ID:	BARC-SB-04		
Lab Sample ID:	JC38886-4	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
		Percent Solids:	83.6
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	< 0.27	0.27	mg/kg	1	03/15/17 14:16	BM	SW846 9012B/LACHAT
Solids, Percent	83.6		%	1	03/15/17 16:40	TZW	SM2540 G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	BARC-SB-04		
Lab Sample ID:	JC38886-4A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8260C SW846 1311	**Percent Solids:**	83.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B149136.D	5	03/16/17	EH	03/15/17	GP3898	V2B6620
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.0025	0.00070	mg/l	
78-93-3	2-Butanone (MEK)	ND	D035	200	0.10	0.0095	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.0050	0.0027	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.0050	0.00087	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.0050	0.0011	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.0050	0.0011	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.0050	0.0020	mg/l	
75-35-4	1,1-Dichloroethene	ND	D029	0.70	0.0050	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	D039	0.70	0.0050	0.0012	mg/l	
79-01-6	Trichloroethene	ND	D040	0.50	0.0050	0.0013	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.0050	0.0016	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	112%		76-120%
17060-07-0	1,2-Dichloroethane-D4	102%		64-135%
2037-26-5	Toluene-D8	99%		76-117%
460-00-4	4-Bromofluorobenzene	97%		72-122%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-04		
Lab Sample ID:	JC38886-4A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	83.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6P35683.D	1	03/17/17	CS	03/16/17	OP1178	E6P1646
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.020	0.0089	mg/l	
	3&4-Methylphenol	ND	D024	200	0.020	0.0088	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.10	0.014	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.013	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0092	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.020	0.0017	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.020	0.0055	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.020	0.0033	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.010	0.0049	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0039	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.020	0.0064	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.020	0.0039	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	40%		14-88%
4165-62-2	Phenol-d5	23%		10-110%
118-79-6	2,4,6-Tribromophenol	82%		39-149%
4165-60-0	Nitrobenzene-d5	79%		32-128%
321-60-8	2-Fluorobiphenyl	87%		35-119%
1718-51-0	Terphenyl-d14	95%		10-126%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-04		
Lab Sample ID:	JC38886-4A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8151 SW846 8151/3510C	**Percent Solids:**	83.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G107048.D	1	03/17/17	VDT	03/16/17	OP1179	G3G3739
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Herbicide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND	D016	10	0.0050	0.0039	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.0015	0.00047	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	95%		50-142%
19719-28-9	2,4-DCAA	74%		50-142%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-04		
Lab Sample ID:	JC38886-4A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	83.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	8G3871.D	1	03/17/17	RK	03/16/17	OP1180	G8G114
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Pesticide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	D013	0.40	0.00010	0.000028	mg/l	
12789-03-6	Chlordane	ND	D020	0.030	0.0050	0.0011	mg/l	
72-20-8	Endrin	ND	D012	0.020	0.00010	0.000050	mg/l	
76-44-8	Heptachlor	ND	D031	0.0080	0.00010	0.000038	mg/l	
1024-57-3	Heptachlor epoxide	ND	D031	0.0080	0.00010	0.000065	mg/l	
72-43-5	Methoxychlor	ND	D014	10	0.00020	0.000057	mg/l	
8001-35-2	Toxaphene	ND	D015	0.50	0.0025	0.0018	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	84%		30-137%
877-09-8	Tetrachloro-m-xylene	86%		30-137%
2051-24-3	Decachlorobiphenyl	111%		10-137%
2051-24-3	Decachlorobiphenyl	103%		10-137%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	BARC-SB-04		
Lab Sample ID:	JC38886-4A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
		Percent Solids:	83.6
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 0.50	D004	5.0	0.50	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Barium	< 1.0	D005	100	1.0	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 0.025	D006	1.0	0.025	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 0.050	D007	5.0	0.050	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Lead	< 0.50	D008	5.0	0.50	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	03/16/17	03/16/17	JA	SW846 7470A [1]	SW846 7470A [4]
Selenium	< 0.50	D010	1.0	0.50	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]
Silver	< 0.050	D011	5.0	0.050	mg/l	5	03/16/17	03/16/17	MET	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA41573
(2) Instrument QC Batch: MA41581
(3) Prep QC Batch: MP99239
(4) Prep QC Batch: MP99275

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID:	BARC-SB-04		
Lab Sample ID:	JC38886-4A	**Date Sampled:**	03/13/17
Matrix:	SO - Soil	**Date Received:**	03/13/17
		Percent Solids:	83.6
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Corrosivity as pH	7.13 NC		su	1	03/16/17 12:00	AC	SW846 9045D
Cyanide Reactivity	< 12	12	mg/kg	1	03/15/17 14:33	BM	SW846 CHAP7/9012 B
Ignitability (Flashpoint)	> 200		Deg. F	1	03/16/17 20:45	AT	SW846 1010A/ASTM D93
Sulfide Reactivity	< 120	120	mg/kg	1	03/16/17 09:53	MP	SW846 CHAP7/9034

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

Parameter Certification Exceptions

Job Number: JC38886
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY

The following parameters included in this report are exceptions to NELAC certification.
The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Cyanide Reactivity		**SW846 CHAP7/9012 B**	SO	Accutest is not certified for this parameter.[a]
Sulfide Reactivity		**SW846 CHAP7/9034**	SO	Accutest is not certified for this parameter.[a]

(a) Reactivity analyzed following SW846 Chapter 7 is no longer recognized by regulatory agencies. Use of results should be verified through the program to which the data is being submitted.

Certification exceptions shown are based on the New Jersey DEP certifications. Applicability in other states may vary. Please contact your laboratory representative if additional information is required for a specific regulatory program.

SGS ACCUTEST SLL

CHAIN OF CUSTODY

SGS Accutest - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

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FED-EX Tracking #:
Bottle Order Control #:
SGS Accutest Quote #:
SGS Accutest Job #: JC38886

Client / Reporting Information

Company Name: Matrix New World
Street Address: 150 W 30th St
City: NY State: NY Zip: 10001
Project Contact: Brian Crespi E-mail:
Phone #: 212-321-4251 Fax #: 973-240-1818
Sampler(s) Name(s): Lindsey Helichreck Phone #: 201-889-1953

Project Information

Project Name: Long Island Rail Road (LIRR)
Street: Bartley
City: Hicksville State: NY
Project #: 16-144
Client Purchase Order #:
Project Manager: Brian Crespi

Billing Information (if different from Report to)

Company Name:
Street Address:
City State Zip:
Attention:

Requested Analysis (see TEST CODE sheet): FULLT1P, RCRA, FULLT1FAL, HFID Rest, HFID

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

SGS Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	NI Water	MEOH	ENCORE	FULLT1P	RCRA	FULLT1FAL	HFID Rest	HFID	LAB USE ONLY
1	BARC-SB-01		3/13/17	1210	LH	SO	6						321			X	X	X	X	X	D52
2	BARC-SB-02			1310									321			X	X	X	X	X	819
3	BARC-SB-03			1405									321			X	X	X	X	X	14F2
4	BARC-SB-04			1455									321			X	X	X	X	X	4087

Turnaround Time (Business days)

- ☐ Std. 10 Business Days
- ☐ 5 Day RUSH
- ☑ 3 Day RUSH
- ☐ 2 Day RUSH
- ☐ 1 Day RUSH
- ☐ other_____

Emergency & Rush T/A data available VIA Lablink

Approved by (SGS Accutest PM): / Date:

INITIAL ASSESSMENT Tu 18

LABEL VERIFICATION JK

Data Deliverable Information

- ☐ Commercial "a" (Level 1)
- ☐ Commercial "b" *Level 2)
- ☐ FULLT1 (Level 3+4)
- ☐ NJ Reduced
- ☐ Commercial "C"
- ☐ *NJ Data of Known Quality Protocol Reporting*
- ☑ NYASP Category A
- ☐ NYASP Category B
- ☐ State Forms
- ☐ EDD Format _____
- ☐ Other _____

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

CS#6116

D.I. slurry voc vials frozen storage
Date: 3/13/17 Time: 19:49 Initials: JK

Sample inventory is verified upon receipt in the Laboratory

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
	3/13/17 1650	1 Chris Law	2 Chris Law	3/13/17 1810	2
Relinquished by Sampler: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by Sampler: 5	Date Time:	Received By: 5	Custody Seal # 6116 ☑ Intact ☐ Not intact	Preserved where applicable ☐	On Ice ☑ Cooler Temp. 2.9°C

JC38886: Chain of Custody
Page 1 of 3

SGS ACCUTEST

Soil VOC Vial Tracking Log

JOB NUMBER: JC38886

SAMPLE #	MeOH	MeOH	DIH2O / NaHSO4	DIH2O / NaHSO4
1	1015		315	316
2	1012		309	310
3	1013		311	312
4	1014		313	314

All strike outs must be initialed & dated. A reason code must be applied if not a transcription error.

Form: SM087-01

Rev Date: 6/1/16

JC38886: Chain of Custody

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SGS Accutest Sample Receipt Summary

Job Number: JC38886 **Client:** _____ **Project:** _____

Date / Time Received: 3/13/2017 6:10:00 PM **Delivery Method:** _____ **Airbill #'s:** _____

Cooler Temps (Raw Measured) °C: Cooler 1: (2.9);

Cooler Temps (Corrected) °C: Cooler 1: (4.3);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

SM089-02
Rev. Date 12/1/16

JC38886: Chain of Custody
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Internal Sample Tracking Chronicle

Matrix New World Engineering, Inc.

Job No: JC38886

LIRR Expansion, Long Island, NY
Project No: 16-144, Barclay St. Parking Lot, Barclay St., Hicksville, NY

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC38886-1 Collected: 13-MAR-17 12:10 By: LM Received: 13-MAR-17 By: AS BARC-SB-01						
JC38886-1	SW846 8260C	14-MAR-17 20:17	TP			V8260TCL20
JC38886-1	SW846 7471B	15-MAR-17 12:35	JPM	15-MAR-17	JPM	HG
JC38886-1	SW846 9012B/LACHAT	15-MAR-17 14:11	BM	15-MAR-17	RP	CN
JC38886-1	SM2540 G-97	15-MAR-17 16:40	TZW			SOL104
JC38886-1	SW846 6010C	15-MAR-17 19:13	DE	15-MAR-17	RM	AG,AL,AS,BA,BE,CA,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN
JC38886-1	SW846 8270D	15-MAR-17 23:03	SB	15-MAR-17	FN	AB8270TCL20
JC38886-1	SW846 8082A	16-MAR-17 11:53	HB	15-MAR-17	SS	P8082PCB11AO
JC38886-1	SW846 8081B	16-MAR-17 13:00	RK	15-MAR-17	SS	P8081PESTTCL
JC38886-1	SW846 8151	17-MAR-17 18:00	VDT	17-MAR-17	AQ	H8151FL
JC38886-2 Collected: 13-MAR-17 13:10 By: LM Received: 13-MAR-17 By: AS BARC-SB-02						
JC38886-2	SW846 8260C	14-MAR-17 20:47	TP			V8260TCL20
JC38886-2	SW846 7471B	15-MAR-17 12:37	JPM	15-MAR-17	JPM	HG
JC38886-2	SW846 9012B/LACHAT	15-MAR-17 14:12	BM	15-MAR-17	RP	CN
JC38886-2	SM2540 G-97	15-MAR-17 16:40	TZW			SOL104
JC38886-2	SW846 6010C	15-MAR-17 19:18	DE	15-MAR-17	RM	AG,AL,AS,BA,BE,CA,CD,CO,CU,FE,K,MG,NA,NI,PB,SB,SE,TL,V,ZN
JC38886-2	SW846 6010C	15-MAR-17 23:21	DE	15-MAR-17	RM	CR,MN
JC38886-2	SW846 8270D	15-MAR-17 23:25	SB	15-MAR-17	FN	AB8270TCL20
JC38886-2	SW846 8081B	16-MAR-17 10:53	RK	15-MAR-17	SS	P8081PESTTCL
JC38886-2	SW846 8082A	16-MAR-17 12:10	HB	15-MAR-17	SS	P8082PCB11AO
JC38886-2	SW846 8151	17-MAR-17 18:29	VDT	17-MAR-17	AQ	H8151FL
JC38886-3 Collected: 13-MAR-17 14:05 By: LM Received: 13-MAR-17 By: AS BARC-SB-03						
JC38886-3	SW846 8260C	14-MAR-17 21:17	TP			V8260TCL20
JC38886-3	SW846 9012B/LACHAT	15-MAR-17 14:13	BM	15-MAR-17	RP	CN
JC38886-3	SW846 7471B	15-MAR-17 14:29	JPM	15-MAR-17	JPM	HG
JC38886-3	SM2540 G-97	15-MAR-17 16:40	TZW			SOL104

Internal Sample Tracking Chronicle

Matrix New World Engineering, Inc.

Job No: JC38886

LIRR Expansion, Long Island, NY
Project No: 16-144, Barclay St. Parking Lot, Barclay St., Hicksville, NY

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC38886-3	SW846 6010C	15-MAR-17 19:22	DE	15-MAR-17	RM	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC38886-3	SW846 8270D	16-MAR-17 08:47	CS	15-MAR-17	FN	AB8270TCL20
JC38886-3	SW846 8081B	16-MAR-17 11:07	RK	15-MAR-17	SS	P8081PESTTCL
JC38886-3	SW846 8082A	16-MAR-17 12:27	HB	15-MAR-17	SS	P8082PCB11AO
JC38886-3	SW846 8081B	16-MAR-17 18:01	RK	15-MAR-17	SS	P8081PESTTCL
JC38886-3	SW846 8081B	16-MAR-17 18:15	RK	15-MAR-17	SS	P8081PESTTCL
JC38886-3	SW846 8151	17-MAR-17 18:57	VDT	17-MAR-17	AQ	H8151FL
JC38886-4	Collected: 13-MAR-17 14:55 By: LM		Received: 13-MAR-17 By: AS			
BARC-SB-04						
JC38886-4	SW846 8260C	14-MAR-17 21:47	TP			V8260TCL20
JC38886-4	SW846 7471B	15-MAR-17 12:40	JPM	15-MAR-17	JPM	HG
JC38886-4	SW846 9012B/LACHAT	15-MAR-17 14:16	BM	15-MAR-17	RP	CN
JC38886-4	SM2540 G-97	15-MAR-17 16:40	TZW			SOL104
JC38886-4	SW846 6010C	15-MAR-17 19:26	DE	15-MAR-17	RM	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC38886-4	SW846 8270D	16-MAR-17 09:16	CS	15-MAR-17	FN	AB8270TCL20
JC38886-4	SW846 8081B	16-MAR-17 11:21	RK	15-MAR-17	SS	P8081PESTTCL
JC38886-4	SW846 8082A	16-MAR-17 12:43	HB	15-MAR-17	SS	P8082PCB11AO
JC38886-4	SW846 8151	17-MAR-17 19:25	VDT	17-MAR-17	AQ	H8151FL
JC38886-1A	Collected: 13-MAR-17 12:10 By: LM		Received: 13-MAR-17 By: AS			
BARC-SB-01						
JC38886-1A	SW846 CHAP7/9012 B	15-MAR-17 14:30	BM	15-MAR-17	CD	CREAC
JC38886-1A	SW846 CHAP7/9034	16-MAR-17 09:53	MP	15-MAR-17	CD	SREAC
JC38886-1A	SW846 9045D	16-MAR-17 12:00	AC			CORR
JC38886-1A	SW846 8260C	16-MAR-17 12:07	EH	15-MAR-17	MH	V8260TCLP
JC38886-1A	SW846 7470A	16-MAR-17 14:11	JA	16-MAR-17	JA	EHG
JC38886-1A	SW846 1010A/ASTM D93	16-MAR-17 20:45	AT			IGN
JC38886-1A	SW846 6010C	16-MAR-17 22:32	MET	16-MAR-17	DM	EAG,EAS,EBA,ECD,ECR,EPB,ESE
JC38886-1A	SW846 8270D	17-MAR-17 04:16	CS	16-MAR-17	AF	AB8270TCLP
JC38886-1A	SW846 8081B	17-MAR-17 11:05	RK	16-MAR-17	AF	P8081TCLP
JC38886-1A	SW846 8151	17-MAR-17 12:18	VDT	16-MAR-17	AF	H8151TCLP

Internal Sample Tracking Chronicle

Matrix New World Engineering, Inc.

Job No: JC38886

LIRR Expansion, Long Island, NY
Project No: 16-144, Barclay St. Parking Lot, Barclay St., Hicksville, NY

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC38886-2A	Collected: 13-MAR-17 13:10 By: LM		Received: 13-MAR-17 By: AS			
BARC-SB-02						
JC38886-2A	SW846 CHAP7/9012 B	15-MAR-17 14:31	BM	15-MAR-17	CD	CREAC
JC38886-2A	SW846 CHAP7/9034	16-MAR-17 09:53	MP	15-MAR-17	CD	SREAC
JC38886-2A	SW846 9045D	16-MAR-17 12:00	AC			CORR
JC38886-2A	SW846 8260C	16-MAR-17 12:38	EH	15-MAR-17	MH	V8260TCLP
JC38886-2A	SW846 7470A	16-MAR-17 14:13	JA	16-MAR-17	JA	EHG
JC38886-2A	SW846 1010A/ASTM D93	16-MAR-17 20:45	AT			IGN
JC38886-2A	SW846 6010C	16-MAR-17 22:35	MET	16-MAR-17	DM	EAG,EAS,EBA,ECD,ECR,EPB,ESE
JC38886-2A	SW846 8270D	17-MAR-17 04:39	CS	16-MAR-17	AF	AB8270TCLP
JC38886-2A	SW846 8081B	17-MAR-17 11:20	RK	16-MAR-17	AF	P8081TCLP
JC38886-2A	SW846 8151	17-MAR-17 12:46	VDT	16-MAR-17	AF	H8151TCLP
JC38886-3A	Collected: 13-MAR-17 14:05 By: LM		Received: 13-MAR-17 By: AS			
BARC-SB-03						
JC38886-3A	SW846 CHAP7/9012 B	15-MAR-17 14:32	BM	15-MAR-17	CD	CREAC
JC38886-3A	SW846 CHAP7/9034	16-MAR-17 09:53	MP	15-MAR-17	CD	SREAC
JC38886-3A	SW846 9045D	16-MAR-17 12:00	AC			CORR
JC38886-3A	SW846 8260C	16-MAR-17 13:09	EH	15-MAR-17	MH	V8260TCLP
JC38886-3A	SW846 7470A	16-MAR-17 14:14	JA	16-MAR-17	JA	EHG
JC38886-3A	SW846 1010A/ASTM D93	16-MAR-17 20:45	AT			IGN
JC38886-3A	SW846 6010C	16-MAR-17 22:38	MET	16-MAR-17	DM	EAG,EAS,EBA,ECD,ECR,EPB,ESE
JC38886-3A	SW846 8270D	17-MAR-17 05:02	CS	16-MAR-17	AF	AB8270TCLP
JC38886-3A	SW846 8081B	17-MAR-17 11:35	RK	16-MAR-17	AF	P8081TCLP
JC38886-3A	SW846 8151	17-MAR-17 13:15	VDT	16-MAR-17	AF	H8151TCLP
JC38886-4A	Collected: 13-MAR-17 14:55 By: LM		Received: 13-MAR-17 By: AS			
BARC-SB-04						
JC38886-4A	SW846 CHAP7/9012 B	15-MAR-17 14:33	BM	15-MAR-17	CD	CREAC
JC38886-4A	SW846 CHAP7/9034	16-MAR-17 09:53	MP	15-MAR-17	CD	SREAC
JC38886-4A	SW846 9045D	16-MAR-17 12:00	AC			CORR
JC38886-4A	SW846 8260C	16-MAR-17 13:40	EH	15-MAR-17	MH	V8260TCLP
JC38886-4A	SW846 7470A	16-MAR-17 14:15	JA	16-MAR-17	JA	EHG
JC38886-4A	SW846 1010A/ASTM D93	16-MAR-17 20:45	AT			IGN
JC38886-4A	SW846 6010C	16-MAR-17 22:41	MET	16-MAR-17	DM	EAG,EAS,EBA,ECD,ECR,EPB,ESE
JC38886-4A	SW846 8270D	17-MAR-17 05:25	CS	16-MAR-17	AF	AB8270TCLP

Internal Sample Tracking Chronicle

Matrix New World Engineering, Inc.

Job No: JC38886

LIRR Expansion, Long Island, NY
Project No: 16-144, Barclay St. Parking Lot, Barclay St., Hicksville, NY

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC38886-4A	SW846 8081B	17-MAR-17 12:20	RK	16-MAR-17	AF	P8081TCLP
JC38886-4A	SW846 8151	17-MAR-17 13:43	VDT	16-MAR-17	AF	H8151TCLP

SGS Accutest Internal Chain of Custody

Job Number: JC38886
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/13/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38886-1.1	Secured Storage	Stephen Seuling	03/15/17 08:07	Retrieve from Storage
JC38886-1.1	Stephen Seuling	Albert Quayson	03/15/17 08:30	Custody Transfer
JC38886-1.1	Albert Quayson	Rinku Patel	03/15/17 10:58	Custody Transfer
JC38886-1.1	Rinku Patel	Minhaj Hashmi	03/15/17 14:40	Custody Transfer
JC38886-1.1	Minhaj Hashmi	Secured Storage	03/15/17 15:49	Return to Storage
JC38886-1.1	Secured Storage	Jennifer Voitovitch	03/15/17 23:36	Retrieve from Storage
JC38886-1.1	Jennifer Voitovitch	Secured Staging Area	03/15/17 23:36	Return to Storage
JC38886-1.1	Secured Staging Area	Andrew Csimbok	03/16/17 08:25	Retrieve from Storage
JC38886-1.1	Andrew Csimbok	Amir Takla	03/16/17 16:38	Custody Transfer
JC38886-1.1	Amir Takla	Secured Storage	03/16/17 21:09	Return to Storage
JC38886-1.1.1	Stephen Seuling	Organics Prep	03/15/17 08:10	Extract from JC38886-1.1
JC38886-1.1.1	Organics Prep	Stephen Seuling	03/15/17 16:08	Extract from JC38886-1.1
JC38886-1.1.1	Stephen Seuling	Extract Storage	03/15/17 16:08	Return to Storage
JC38886-1.1.1	Extract Storage	Humarah Bano	03/15/17 17:07	Retrieve from Storage
JC38886-1.1.1	Humarah Bano	GCXX	03/15/17 17:07	Load on Instrument
JC38886-1.1.1	GCXX	Humarah Bano	03/17/17 12:16	Unload from Instrument
JC38886-1.1.1	Humarah Bano	Extract Freezer	03/17/17 12:16	Return to Storage
JC38886-1.1.2	Stephen Seuling	Organics Prep	03/15/17 08:14	Extract from JC38886-1.1
JC38886-1.1.2	Organics Prep	Stephen Seuling	03/15/17 16:08	Extract from JC38886-1.1
JC38886-1.1.2	Stephen Seuling	Extract Storage	03/15/17 16:08	Return to Storage
JC38886-1.1.2	Extract Storage	Humarah Bano	03/15/17 17:07	Retrieve from Storage
JC38886-1.1.2	Humarah Bano	GCXX	03/15/17 17:07	Load on Instrument
JC38886-1.1.2	GCXX	Humarah Bano	03/17/17 12:16	Unload from Instrument
JC38886-1.1.2	Humarah Bano	Extract Freezer	03/17/17 12:16	Return to Storage
JC38886-1.1.3	Stephen Seuling	Organics Prep	03/15/17 08:15	Extract from JC38886-1.1
JC38886-1.1.3	Organics Prep	Stephen Seuling	03/15/17 16:08	Extract from JC38886-1.1
JC38886-1.1.3	Stephen Seuling	Extract Storage	03/15/17 16:08	Return to Storage
JC38886-1.1.3	Extract Storage	Christine Phillips	03/16/17 09:29	Retrieve from Storage
JC38886-1.1.3	Christine Phillips	GC4G	03/16/17 09:29	Load on Instrument
JC38886-1.1.4	Albert Quayson	Organics Prep	03/15/17 08:34	Extract from JC38886-1.1
JC38886-1.1.4	Organics Prep	Ryan Fantasia	03/15/17 23:11	Extract from JC38886-1.1
JC38886-1.1.4	Ryan Fantasia	Extract Storage	03/15/17 23:11	Return to Storage
JC38886-1.1.5	Albert Quayson	Organics Prep	03/15/17 08:36	Extract from JC38886-1.1
JC38886-1.1.5	Organics Prep	Finley Nyaata	03/15/17 16:31	Extract from JC38886-1.1
JC38886-1.1.5	Finley Nyaata	Extract Storage	03/15/17 16:31	Return to Storage
JC38886-1.1.5	Extract Storage	Sean Block	03/15/17 18:24	Retrieve from Storage
JC38886-1.1.5	Sean Block	GCMS2P	03/15/17 18:24	Load on Instrument
JC38886-1.1.5	GCMS2P	Arielle Cocozza	03/16/17 10:18	Unload from Instrument
JC38886-1.1.5	Arielle Cocozza	Extract Freezer	03/16/17 10:18	Return to Storage

SGS Accutest Internal Chain of Custody

Job Number: JC38886
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/13/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38886-1.1.6	Albert Quayson	James Patrick McIlvaine	03/15/17 09:24	Aliquot from JC38886-1.1
JC38886-1.1.6	James Patrick McIlvaine		03/15/17 11:13	Disposed
JC38886-1.1.7	Albert Quayson	Diana Mathes	03/15/17 09:29	Aliquot from JC38886-1.1
JC38886-1.1.7	Diana Mathes		03/15/17 10:31	Depleted
JC38886-1.1.8	Diana Mathes	Metals Digestion	03/15/17 10:02	Digestate from JC38886-1.1.7
JC38886-1.1.8	Metals Digestion	Diana Mathes	03/15/17 10:03	Digestate from JC38886-1.1.7
JC38886-1.1.8	Diana Mathes	Metals Digestate Storage	03/15/17 10:03	Return to Storage
JC38886-1.1.9	Minhaj Hashmi	TCLP	03/15/17 15:49	Leachate from JC38886-1.1
JC38886-1.1.9	TCLP	Mark Setaro	03/15/17 17:46	Leachate from JC38886-1.1
JC38886-1.1.9	Mark Setaro	Secured Storage	03/15/17 17:55	Return to Storage
JC38886-1.1.10	TCLP	Mark Setaro	03/15/17 17:46	Leachate from JC38886-1.1
JC38886-1.1.10	Mark Setaro	Secured Storage	03/15/17 17:55	Return to Storage
JC38886-1.1.10	Secured Storage	Eddie Huang	03/16/17 16:56	Retrieve from Storage
JC38886-1.1.10	Eddie Huang	GCMS2B	03/16/17 16:56	Load on Instrument
JC38886-1.1.10	GCMS2B	Eddie Huang	03/17/17 08:44	Unload from Instrument
JC38886-1.1.10	Eddie Huang	Secured Storage	03/17/17 08:44	Return to Storage
JC38886-1.2	Secured Storage	Stephen Seuling	03/15/17 08:07	Retrieve from Storage
JC38886-1.2	Stephen Seuling	Albert Quayson	03/15/17 08:30	Custody Transfer
JC38886-1.2	Secured Storage	Luis Villanueva	03/15/17 11:12	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JC38886-1.2	Luis Villanueva	Secured Storage	03/15/17 16:42	Return to Storage
JC38886-1.2	Secured Storage	Sahara Feliciano	03/16/17 17:12	Retrieve from Storage
JC38886-1.2	Sahara Feliciano	Secured Staging Area	03/16/17 17:12	Return to Storage
JC38886-1.2	Secured Staging Area	Autumn Yun	03/16/17 18:13	Retrieve from Storage
JC38886-1.2	Autumn Yun	Secured Storage	03/16/17 20:56	Return to Storage
JC38886-1.2.1	Autumn Yun	Organics Prep	03/16/17 18:14	Extract from JC38886-1.2
JC38886-1.2.1	Organics Prep	Albert Quayson	03/17/17 13:20	Extract from JC38886-1.2
JC38886-1.2.1	Albert Quayson	Extract Storage	03/17/17 13:20	Return to Storage
JC38886-1.2.1	Extract Storage	Vincent Drago	03/17/17 18:00	Retrieve from Storage
JC38886-1.2.1	Vincent Drago	GCOA	03/17/17 18:00	Load on Instrument
JC38886-1.2.1	GCOA	Rebecca Krug	03/23/17 16:47	Unload from Instrument
JC38886-1.2.1	Rebecca Krug	Extract Freezer	03/23/17 16:47	Return to Storage
JC38886-1.3	Secured Storage	Sahara Feliciano	03/15/17 11:16	Retrieve from Storage
JC38886-1.3	Sahara Feliciano	Secured Staging Area	03/15/17 11:16	Return to Storage
JC38886-1.3	Secured Staging Area	Minhaj Hashmi	03/15/17 11:18	Retrieve from Storage
JC38886-1.3	Minhaj Hashmi	Secured Storage	03/15/17 15:49	Return to Storage

SGS Accutest Internal Chain of Custody

Job Number: JC38886
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/13/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38886-1.3.1	Minhaj Hashmi	TCLP	03/15/17 15:49	Leachate from JC38886-1.3
JC38886-1.3.1	TCLP	Mark Setaro	03/15/17 17:50	Leachate from JC38886-1.3
JC38886-1.3.1	Mark Setaro	Secured Storage	03/15/17 17:55	Return to Storage
JC38886-1.3.1	Secured Storage	Ryan Fantasia	03/16/17 15:10	Retrieve from Storage
JC38886-1.3.1	Ryan Fantasia	Secured Storage	03/16/17 21:19	Return to Storage
JC38886-1.3.2	TCLP	Mark Setaro	03/15/17 17:50	Leachate from JC38886-1.3
JC38886-1.3.2	Mark Setaro	Secured Storage	03/15/17 17:55	Return to Storage
JC38886-1.3.2	Secured Storage	Deval Patel	03/16/17 16:17	Retrieve from Storage
JC38886-1.3.2	Deval Patel	Secured Storage	03/16/17 17:03	Return to Storage
JC38886-1.3.3	Ryan Fantasia	Organics Prep	03/16/17 15:18	Extract from JC38886-1.3.1
JC38886-1.3.3	Organics Prep	Yaw Britwum	03/17/17 00:12	Extract from JC38886-1.3.1
JC38886-1.3.3	Yaw Britwum	Extract Storage	03/17/17 00:12	Return to Storage
JC38886-1.3.3	Extract Storage	Christine Phillips	03/17/17 10:05	Retrieve from Storage
JC38886-1.3.3	Christine Phillips	GC8G	03/17/17 10:05	Load on Instrument
JC38886-1.3.4	Ryan Fantasia	Organics Prep	03/16/17 15:24	Extract from JC38886-1.3.1
JC38886-1.3.4	Organics Prep	Amanda Furka	03/16/17 23:20	Extract from JC38886-1.3.1
JC38886-1.3.4	Amanda Furka	Extract Storage	03/16/17 23:20	Return to Storage
JC38886-1.3.4	Extract Storage	Vincent Drago	03/17/17 10:26	Retrieve from Storage
JC38886-1.3.4	Vincent Drago	GC3G	03/17/17 10:26	Load on Instrument
JC38886-1.3.4	GC3G	Rebecca Krug	03/23/17 16:15	Unload from Instrument
JC38886-1.3.4	Rebecca Krug	Extract Freezer	03/23/17 16:15	Return to Storage
JC38886-1.3.5	Ryan Fantasia	Organics Prep	03/16/17 15:30	Extract from JC38886-1.3.1
JC38886-1.3.5	Organics Prep	Amanda Furka	03/16/17 23:22	Extract from JC38886-1.3.1
JC38886-1.3.5	Amanda Furka	Extract Storage	03/16/17 23:22	Return to Storage
JC38886-1.3.5	Extract Storage	Christopher Sowa	03/17/17 01:06	Retrieve from Storage
JC38886-1.3.5	Christopher Sowa	GCMS6P	03/17/17 01:06	Load on Instrument
JC38886-1.3.6	Deval Patel	Metals Digestion	03/16/17 17:00	Digestate from JC38886-1.3.2
JC38886-1.3.6	Metals Digestion	Deval Patel	03/16/17 17:00	Digestate from JC38886-1.3.2
JC38886-1.3.6	Deval Patel	Metals Digestate Storage	03/16/17 17:00	Return to Storage
JC38886-1.5	Toan Pham	GCMSY	03/24/17 13:51	Load on Instrument
JC38886-1.5	Secured Storage	Toan Pham	03/24/17 13:51	Retrieve from Storage
JC38886-1.6	Secured Storage	Toan Pham	03/14/17 12:45	Retrieve from Storage
JC38886-1.6	Toan Pham	GCMSX	03/14/17 12:45	Load on Instrument
JC38886-2.1	Secured Storage	Stephen Seuling	03/15/17 08:07	Retrieve from Storage
JC38886-2.1	Stephen Seuling	Albert Quayson	03/15/17 08:30	Custody Transfer

SGS Accutest Internal Chain of Custody

Job Number: JC38886
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38886-2.1	Albert Quayson	Rinku Patel	03/15/17 10:58	Custody Transfer
JC38886-2.1	Rinku Patel	Minhaj Hashmi	03/15/17 14:40	Custody Transfer
JC38886-2.1	Minhaj Hashmi	Secured Storage	03/15/17 15:49	Return to Storage
JC38886-2.1	Secured Storage	Jennifer Voitovitch	03/15/17 23:36	Retrieve from Storage
JC38886-2.1	Jennifer Voitovitch	Secured Staging Area	03/15/17 23:36	Return to Storage
JC38886-2.1	Secured Staging Area	Andrew Csimbok	03/16/17 08:25	Retrieve from Storage
JC38886-2.1	Andrew Csimbok	Amir Takla	03/16/17 16:38	Custody Transfer
JC38886-2.1	Amir Takla	Secured Storage	03/16/17 21:09	Return to Storage
JC38886-2.1.1	Stephen Seuling	Organics Prep	03/15/17 08:10	Extract from JC38886-2.1
JC38886-2.1.1	Organics Prep	Stephen Seuling	03/15/17 16:08	Extract from JC38886-2.1
JC38886-2.1.1	Stephen Seuling	Extract Storage	03/15/17 16:08	Return to Storage
JC38886-2.1.1	Extract Storage	Humarah Bano	03/15/17 17:07	Retrieve from Storage
JC38886-2.1.1	Humarah Bano	GCXX	03/15/17 17:07	Load on Instrument
JC38886-2.1.1	GCXX	Humarah Bano	03/17/17 12:16	Unload from Instrument
JC38886-2.1.1	Humarah Bano	Extract Freezer	03/17/17 12:16	Return to Storage
JC38886-2.1.2	Stephen Seuling	Organics Prep	03/15/17 08:14	Extract from JC38886-2.1
JC38886-2.1.2	Organics Prep	Stephen Seuling	03/15/17 16:08	Extract from JC38886-2.1
JC38886-2.1.2	Stephen Seuling	Extract Storage	03/15/17 16:08	Return to Storage
JC38886-2.1.3	Stephen Seuling	Organics Prep	03/15/17 08:15	Extract from JC38886-2.1
JC38886-2.1.3	Organics Prep	Stephen Seuling	03/15/17 16:08	Extract from JC38886-2.1
JC38886-2.1.3	Stephen Seuling	Extract Storage	03/15/17 16:08	Return to Storage
JC38886-2.1.3	Extract Storage	Christine Phillips	03/16/17 09:29	Retrieve from Storage
JC38886-2.1.3	Christine Phillips	GC4G	03/16/17 09:29	Load on Instrument
JC38886-2.1.4	Albert Quayson	Organics Prep	03/15/17 08:34	Extract from JC38886-2.1
JC38886-2.1.4	Organics Prep	Ryan Fantasia	03/15/17 23:11	Extract from JC38886-2.1
JC38886-2.1.4	Ryan Fantasia	Extract Storage	03/15/17 23:11	Return to Storage
JC38886-2.1.5	Albert Quayson	Organics Prep	03/15/17 08:36	Extract from JC38886-2.1
JC38886-2.1.5	Organics Prep	Finley Nyaata	03/15/17 16:31	Extract from JC38886-2.1
JC38886-2.1.5	Finley Nyaata	Extract Storage	03/15/17 16:31	Return to Storage
JC38886-2.1.5	Extract Storage	Sean Block	03/15/17 18:24	Retrieve from Storage
JC38886-2.1.5	Sean Block	GCMS2P	03/15/17 18:24	Load on Instrument
JC38886-2.1.5	GCMS2P	Arielle Cocozza	03/16/17 10:18	Unload from Instrument
JC38886-2.1.5	Arielle Cocozza	Extract Freezer	03/16/17 10:18	Return to Storage
JC38886-2.1.6	Albert Quayson	James Patrick McIlvaine	03/15/17 09:24	Aliquot from JC38886-2.1
JC38886-2.1.6	James Patrick McIlvaine		03/15/17 11:13	Disposed
JC38886-2.1.7	Albert Quayson	Diana Mathes	03/15/17 09:29	Aliquot from JC38886-2.1
JC38886-2.1.7	Diana Mathes		03/15/17 10:31	Depleted

SGS Accutest Internal Chain of Custody

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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38886-2.1.8	Diana Mathes	Metals Digestion	03/15/17 10:02	Digestate from JC38886-2.1.7
JC38886-2.1.8	Metals Digestion	Diana Mathes	03/15/17 10:03	Digestate from JC38886-2.1.7
JC38886-2.1.8	Diana Mathes	Metals Digestate Storage	03/15/17 10:03	Return to Storage
JC38886-2.1.9	Minhaj Hashmi	TCLP	03/15/17 15:49	Leachate from JC38886-2.1
JC38886-2.1.9	TCLP	Mark Setaro	03/15/17 17:46	Leachate from JC38886-2.1
JC38886-2.1.9	Mark Setaro	Secured Storage	03/15/17 17:55	Return to Storage
JC38886-2.1.9	Secured Storage	Eddie Huang	03/16/17 16:56	Retrieve from Storage
JC38886-2.1.9	Eddie Huang	GCMS2B	03/16/17 16:56	Load on Instrument
JC38886-2.1.9	GCMS2B	Eddie Huang	03/17/17 08:44	Unload from Instrument
JC38886-2.1.9	Eddie Huang	Secured Storage	03/17/17 08:44	Return to Storage
JC38886-2.1.10	TCLP	Mark Setaro	03/15/17 17:46	Leachate from JC38886-2.1
JC38886-2.1.10	Mark Setaro	Secured Storage	03/15/17 17:55	Return to Storage
JC38886-2.2	Secured Storage	Stephen Seuling	03/15/17 08:07	Retrieve from Storage
JC38886-2.2	Stephen Seuling	Albert Quayson	03/15/17 08:30	Custody Transfer
JC38886-2.2	Secured Storage	Luis Villanueva	03/15/17 11:12	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JC38886-2.2	Luis Villanueva	Secured Storage	03/15/17 16:42	Return to Storage
JC38886-2.2	Secured Storage	Sahara Feliciano	03/16/17 17:12	Retrieve from Storage
JC38886-2.2	Sahara Feliciano	Secured Staging Area	03/16/17 17:12	Return to Storage
JC38886-2.2	Secured Staging Area	Autumn Yun	03/16/17 18:13	Retrieve from Storage
JC38886-2.2	Autumn Yun	Secured Storage	03/16/17 20:56	Return to Storage
JC38886-2.2.1	Autumn Yun	Organics Prep	03/16/17 18:14	Extract from JC38886-2.2
JC38886-2.2.1	Organics Prep	Albert Quayson	03/17/17 13:20	Extract from JC38886-2.2
JC38886-2.2.1	Albert Quayson	Extract Storage	03/17/17 13:20	Return to Storage
JC38886-2.2.1	Extract Storage	Vincent Drago	03/17/17 18:00	Retrieve from Storage
JC38886-2.2.1	Vincent Drago	GCOA	03/17/17 18:00	Load on Instrument
JC38886-2.2.1	GCOA	Rebecca Krug	03/23/17 16:47	Unload from Instrument
JC38886-2.2.1	Rebecca Krug	Extract Freezer	03/23/17 16:47	Return to Storage
JC38886-2.3	Secured Storage	Sahara Feliciano	03/15/17 11:16	Retrieve from Storage
JC38886-2.3	Sahara Feliciano	Secured Staging Area	03/15/17 11:16	Return to Storage
JC38886-2.3	Secured Staging Area	Minhaj Hashmi	03/15/17 11:18	Retrieve from Storage
JC38886-2.3	Minhaj Hashmi	Secured Storage	03/15/17 15:49	Return to Storage
JC38886-2.3.1	Minhaj Hashmi	TCLP	03/15/17 15:49	Leachate from JC38886-2.3
JC38886-2.3.1	TCLP	Mark Setaro	03/15/17 17:50	Leachate from JC38886-2.3
JC38886-2.3.1	Mark Setaro	Secured Storage	03/15/17 17:55	Return to Storage
JC38886-2.3.1	Secured Storage	Ryan Fantasia	03/16/17 15:10	Retrieve from Storage
JC38886-2.3.1	Ryan Fantasia	Secured Storage	03/16/17 21:19	Return to Storage

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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38886-2.3.2	TCLP	Mark Setaro	03/15/17 17:50	Leachate from JC38886-2.3
JC38886-2.3.2	Mark Setaro	Secured Storage	03/15/17 17:55	Return to Storage
JC38886-2.3.2	Secured Storage	Deval Patel	03/16/17 16:17	Retrieve from Storage
JC38886-2.3.2	Deval Patel	Secured Storage	03/16/17 17:03	Return to Storage
JC38886-2.3.3	Ryan Fantasia	Organics Prep	03/16/17 15:18	Extract from JC38886-2.3.1
JC38886-2.3.3	Organics Prep	Yaw Britwum	03/17/17 00:12	Extract from JC38886-2.3.1
JC38886-2.3.3	Yaw Britwum	Extract Storage	03/17/17 00:12	Return to Storage
JC38886-2.3.3	Extract Storage	Christine Phillips	03/17/17 10:05	Retrieve from Storage
JC38886-2.3.3	Christine Phillips	GC8G	03/17/17 10:05	Load on Instrument
JC38886-2.3.4	Ryan Fantasia	Organics Prep	03/16/17 15:24	Extract from JC38886-2.3.1
JC38886-2.3.4	Organics Prep	Amanda Furka	03/16/17 23:20	Extract from JC38886-2.3.1
JC38886-2.3.4	Amanda Furka	Extract Storage	03/16/17 23:20	Return to Storage
JC38886-2.3.4	Extract Storage	Vincent Drago	03/17/17 10:26	Retrieve from Storage
JC38886-2.3.4	Vincent Drago	GC3G	03/17/17 10:26	Load on Instrument
JC38886-2.3.4	GC3G	Rebecca Krug	03/23/17 16:15	Unload from Instrument
JC38886-2.3.4	Rebecca Krug	Extract Freezer	03/23/17 16:15	Return to Storage
JC38886-2.3.5	Ryan Fantasia	Organics Prep	03/16/17 15:30	Extract from JC38886-2.3.1
JC38886-2.3.5	Organics Prep	Amanda Furka	03/16/17 23:22	Extract from JC38886-2.3.1
JC38886-2.3.5	Amanda Furka	Extract Storage	03/16/17 23:22	Return to Storage
JC38886-2.3.5	Extract Storage	Christopher Sowa	03/17/17 01:06	Retrieve from Storage
JC38886-2.3.5	Christopher Sowa	GCMS6P	03/17/17 01:06	Load on Instrument
JC38886-2.3.6	Deval Patel	Metals Digestion	03/16/17 17:00	Digestate from JC38886-2.3.2
JC38886-2.3.6	Metals Digestion	Deval Patel	03/16/17 17:00	Digestate from JC38886-2.3.2
JC38886-2.3.6	Deval Patel	Metals Digestate Storage	03/16/17 17:00	Return to Storage
JC38886-2.5	Toan Pham	GCMSY	03/24/17 13:51	Load on Instrument
JC38886-2.5	Secured Storage	Toan Pham	03/24/17 13:51	Retrieve from Storage
JC38886-2.6	Secured Storage	Toan Pham	03/14/17 12:45	Retrieve from Storage
JC38886-2.6	Toan Pham	GCMSX	03/14/17 12:45	Load on Instrument
JC38886-3.1	Secured Storage	Stephen Seuling	03/15/17 08:07	Retrieve from Storage
JC38886-3.1	Stephen Seuling	Albert Quayson	03/15/17 08:30	Custody Transfer
JC38886-3.1	Albert Quayson	Rinku Patel	03/15/17 10:58	Custody Transfer
JC38886-3.1	Rinku Patel	Minhaj Hashmi	03/15/17 14:40	Custody Transfer
JC38886-3.1	Minhaj Hashmi	Secured Storage	03/15/17 15:49	Return to Storage
JC38886-3.1	Secured Storage	Jennifer Voitovitch	03/15/17 23:36	Retrieve from Storage
JC38886-3.1	Jennifer Voitovitch	Secured Staging Area	03/15/17 23:36	Return to Storage
JC38886-3.1	Secured Staging Area	Andrew Csimbok	03/16/17 08:25	Retrieve from Storage

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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38886-3.1	Andrew Csimbok	Amir Takla	03/16/17 16:38	Custody Transfer
JC38886-3.1	Amir Takla	Secured Storage	03/16/17 21:09	Return to Storage
JC38886-3.1.1	Stephen Seuling	Organics Prep	03/15/17 08:10	Extract from JC38886-3.1
JC38886-3.1.1	Organics Prep	Stephen Seuling	03/15/17 16:08	Extract from JC38886-3.1
JC38886-3.1.1	Stephen Seuling	Extract Storage	03/15/17 16:08	Return to Storage
JC38886-3.1.1	Extract Storage	Humarah Bano	03/15/17 17:07	Retrieve from Storage
JC38886-3.1.1	Humarah Bano	GCXX	03/15/17 17:07	Load on Instrument
JC38886-3.1.1	GCXX	Humarah Bano	03/17/17 12:16	Unload from Instrument
JC38886-3.1.1	Humarah Bano	Extract Freezer	03/17/17 12:16	Return to Storage
JC38886-3.1.2	Stephen Seuling	Organics Prep	03/15/17 08:14	Extract from JC38886-3.1
JC38886-3.1.2	Organics Prep	Stephen Seuling	03/15/17 16:08	Extract from JC38886-3.1
JC38886-3.1.2	Stephen Seuling	Extract Storage	03/15/17 16:08	Return to Storage
JC38886-3.1.3	Stephen Seuling	Organics Prep	03/15/17 08:15	Extract from JC38886-3.1
JC38886-3.1.3	Organics Prep	Stephen Seuling	03/15/17 16:08	Extract from JC38886-3.1
JC38886-3.1.3	Stephen Seuling	Extract Storage	03/15/17 16:08	Return to Storage
JC38886-3.1.3	Extract Storage	Christine Phillips	03/16/17 09:29	Retrieve from Storage
JC38886-3.1.3	Christine Phillips	GC4G	03/16/17 09:29	Load on Instrument
JC38886-3.1.4	Albert Quayson	Organics Prep	03/15/17 08:34	Extract from JC38886-3.1
JC38886-3.1.4	Organics Prep	Ryan Fantasia	03/15/17 23:11	Extract from JC38886-3.1
JC38886-3.1.4	Ryan Fantasia	Extract Storage	03/15/17 23:11	Return to Storage
JC38886-3.1.5	Albert Quayson	Organics Prep	03/15/17 08:36	Extract from JC38886-3.1
JC38886-3.1.5	Organics Prep	Finley Nyaata	03/15/17 16:31	Extract from JC38886-3.1
JC38886-3.1.5	Finley Nyaata	Extract Storage	03/15/17 16:31	Return to Storage
JC38886-3.1.5	Extract Storage	Sean Block	03/15/17 18:24	Retrieve from Storage
JC38886-3.1.5	Sean Block	GCMS2P	03/15/17 18:24	Load on Instrument
JC38886-3.1.5	GCMS2P	Arielle Cocozza	03/16/17 08:22	Unload from Instrument
JC38886-3.1.5	Arielle Cocozza	GCMSP	03/16/17 08:22	Load on Instrument
JC38886-3.1.5	GCMSP	Robert LaPosta	03/17/17 16:02	Unload from Instrument
JC38886-3.1.5	Robert LaPosta	Extract Freezer	03/17/17 16:02	Return to Storage
JC38886-3.1.6	Albert Quayson	James Patrick McIlvaine	03/15/17 09:24	Aliquot from JC38886-3.1
JC38886-3.1.6	James Patrick McIlvaine		03/15/17 11:13	Disposed
JC38886-3.1.7	Albert Quayson	Diana Mathes	03/15/17 09:29	Aliquot from JC38886-3.1
JC38886-3.1.7	Diana Mathes		03/15/17 10:31	Depleted
JC38886-3.1.8	Diana Mathes	Metals Digestion	03/15/17 10:02	Digestate from JC38886-3.1.7
JC38886-3.1.8	Metals Digestion	Diana Mathes	03/15/17 10:03	Digestate from JC38886-3.1.7
JC38886-3.1.8	Diana Mathes	Metals Digestate Storage	03/15/17 10:03	Return to Storage

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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38886-3.1.9	Minhaj Hashmi	TCLP	03/15/17 15:49	Leachate from JC38886-3.1
JC38886-3.1.9	TCLP	Mark Setaro	03/15/17 17:46	Leachate from JC38886-3.1
JC38886-3.1.9	Mark Setaro	Secured Storage	03/15/17 17:55	Return to Storage
JC38886-3.1.9	Secured Storage	Eddie Huang	03/16/17 16:56	Retrieve from Storage
JC38886-3.1.9	Eddie Huang	GCMS2B	03/16/17 16:56	Load on Instrument
JC38886-3.1.9	GCMS2B	Eddie Huang	03/17/17 08:44	Unload from Instrument
JC38886-3.1.9	Eddie Huang	Secured Storage	03/17/17 08:44	Return to Storage
JC38886-3.1.10	TCLP	Mark Setaro	03/15/17 17:46	Leachate from JC38886-3.1
JC38886-3.1.10	Mark Setaro	Secured Storage	03/15/17 17:55	Return to Storage
JC38886-3.2	Secured Storage	Stephen Seuling	03/15/17 08:07	Retrieve from Storage
JC38886-3.2	Stephen Seuling	Albert Quayson	03/15/17 08:30	Custody Transfer
JC38886-3.2	Secured Storage	Luis Villanueva	03/15/17 11:12	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JC38886-3.2	Luis Villanueva	Secured Storage	03/15/17 16:42	Return to Storage
JC38886-3.2	Secured Storage	Sahara Feliciano	03/16/17 17:12	Retrieve from Storage
JC38886-3.2	Sahara Feliciano	Secured Staging Area	03/16/17 17:12	Return to Storage
JC38886-3.2	Secured Staging Area	Autumn Yun	03/16/17 18:13	Retrieve from Storage
JC38886-3.2	Autumn Yun	Secured Storage	03/16/17 20:56	Return to Storage
JC38886-3.2.1	Autumn Yun	Organics Prep	03/16/17 18:14	Extract from JC38886-3.2
JC38886-3.2.1	Organics Prep	Albert Quayson	03/17/17 13:20	Extract from JC38886-3.2
JC38886-3.2.1	Albert Quayson	Extract Storage	03/17/17 13:20	Return to Storage
JC38886-3.2.1	Extract Storage	Vincent Drago	03/17/17 18:00	Retrieve from Storage
JC38886-3.2.1	Vincent Drago	GCOA	03/17/17 18:00	Load on Instrument
JC38886-3.2.1	GCOA	Rebecca Krug	03/23/17 16:47	Unload from Instrument
JC38886-3.2.1	Rebecca Krug	Extract Freezer	03/23/17 16:47	Return to Storage
JC38886-3.3	Secured Storage	Sahara Feliciano	03/15/17 11:16	Retrieve from Storage
JC38886-3.3	Sahara Feliciano	Secured Staging Area	03/15/17 11:16	Return to Storage
JC38886-3.3	Secured Staging Area	Minhaj Hashmi	03/15/17 11:18	Retrieve from Storage
JC38886-3.3	Minhaj Hashmi	Secured Storage	03/15/17 15:49	Return to Storage
JC38886-3.3.1	Minhaj Hashmi	TCLP	03/15/17 15:49	Leachate from JC38886-3.3
JC38886-3.3.1	TCLP	Mark Setaro	03/15/17 17:50	Leachate from JC38886-3.3
JC38886-3.3.1	Mark Setaro	Secured Storage	03/15/17 17:55	Return to Storage
JC38886-3.3.1	Secured Storage	Ryan Fantasia	03/16/17 15:10	Retrieve from Storage
JC38886-3.3.1	Ryan Fantasia	Secured Storage	03/16/17 21:19	Return to Storage
JC38886-3.3.2	TCLP	Mark Setaro	03/15/17 17:50	Leachate from JC38886-3.3
JC38886-3.3.2	Mark Setaro	Secured Storage	03/15/17 17:55	Return to Storage
JC38886-3.3.2	Secured Storage	Deval Patel	03/16/17 16:17	Retrieve from Storage

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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38886-3.3.2	Deval Patel	Secured Storage	03/16/17 17:03	Return to Storage
JC38886-3.3.3	Ryan Fantasia	Organics Prep	03/16/17 15:18	Extract from JC38886-3.3.1
JC38886-3.3.3	Organics Prep	Yaw Britwum	03/17/17 00:12	Extract from JC38886-3.3.1
JC38886-3.3.3	Yaw Britwum	Extract Storage	03/17/17 00:12	Return to Storage
JC38886-3.3.3	Extract Storage	Christine Phillips	03/17/17 10:05	Retrieve from Storage
JC38886-3.3.3	Christine Phillips	GC8G	03/17/17 10:05	Load on Instrument
JC38886-3.3.4	Ryan Fantasia	Organics Prep	03/16/17 15:24	Extract from JC38886-3.3.1
JC38886-3.3.4	Organics Prep	Amanda Furka	03/16/17 23:20	Extract from JC38886-3.3.1
JC38886-3.3.4	Amanda Furka	Extract Storage	03/16/17 23:20	Return to Storage
JC38886-3.3.4	Extract Storage	Vincent Drago	03/17/17 10:26	Retrieve from Storage
JC38886-3.3.4	Vincent Drago	GC3G	03/17/17 10:26	Load on Instrument
JC38886-3.3.4	GC3G	Rebecca Krug	03/23/17 16:15	Unload from Instrument
JC38886-3.3.4	Rebecca Krug	Extract Freezer	03/23/17 16:15	Return to Storage
JC38886-3.3.5	Ryan Fantasia	Organics Prep	03/16/17 15:30	Extract from JC38886-3.3.1
JC38886-3.3.5	Organics Prep	Amanda Furka	03/16/17 23:22	Extract from JC38886-3.3.1
JC38886-3.3.5	Amanda Furka	Extract Storage	03/16/17 23:22	Return to Storage
JC38886-3.3.5	Extract Storage	Christopher Sowa	03/17/17 01:06	Retrieve from Storage
JC38886-3.3.5	Christopher Sowa	GCMS6P	03/17/17 01:06	Load on Instrument
JC38886-3.3.6	Deval Patel	Metals Digestion	03/16/17 17:00	Digestate from JC38886-3.3.2
JC38886-3.3.6	Metals Digestion	Deval Patel	03/16/17 17:00	Digestate from JC38886-3.3.2
JC38886-3.3.6	Deval Patel	Metals Digestate Storage	03/16/17 17:00	Return to Storage
JC38886-3.5	Toan Pham	GCMSY	03/24/17 13:51	Load on Instrument
JC38886-3.5	Secured Storage	Toan Pham	03/24/17 13:51	Retrieve from Storage
JC38886-3.6	Secured Storage	Toan Pham	03/14/17 12:45	Retrieve from Storage
JC38886-3.6	Toan Pham	GCMSX	03/14/17 12:45	Load on Instrument
JC38886-4.1	Secured Storage	Albert Quayson	03/15/17 08:31	Retrieve from Storage
JC38886-4.1	Albert Quayson	Stephen Seuling	03/15/17 13:01	Custody Transfer
JC38886-4.1	Stephen Seuling	Mahendra Patel	03/15/17 13:05	Custody Transfer
JC38886-4.1	Mahendra Patel	Stephen Seuling	03/15/17 13:08	Custody Transfer
JC38886-4.1	Stephen Seuling	Secured Storage	03/15/17 13:09	Return to Storage
JC38886-4.1	Secured Storage	Minhaj Hashmi	03/15/17 14:41	Retrieve from Storage
JC38886-4.1	Minhaj Hashmi	Secured Storage	03/15/17 15:49	Return to Storage
JC38886-4.1	Secured Storage	Jennifer Voitovitch	03/15/17 23:36	Retrieve from Storage
JC38886-4.1	Jennifer Voitovitch	Secured Staging Area	03/15/17 23:36	Return to Storage
JC38886-4.1	Secured Staging Area	Andrew Csimbok	03/16/17 08:25	Retrieve from Storage
JC38886-4.1	Andrew Csimbok	Amir Takla	03/16/17 16:38	Custody Transfer
JC38886-4.1	Amir Takla	Secured Storage	03/16/17 21:09	Return to Storage

SGS Accutest Internal Chain of Custody

Job Number: JC38886
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/13/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38886-4.1.1	Albert Quayson	Organics Prep	03/15/17 08:34	Extract from JC38886-4.1
JC38886-4.1.1	Organics Prep	Ryan Fantasia	03/15/17 23:11	Extract from JC38886-4.1
JC38886-4.1.1	Ryan Fantasia	Extract Storage	03/15/17 23:11	Return to Storage
JC38886-4.1.2	Albert Quayson	Organics Prep	03/15/17 08:36	Extract from JC38886-4.1
JC38886-4.1.2	Organics Prep	Finley Nyaata	03/15/17 16:31	Extract from JC38886-4.1
JC38886-4.1.2	Finley Nyaata	Extract Storage	03/15/17 16:31	Return to Storage
JC38886-4.1.2	Extract Storage	Sean Block	03/15/17 18:24	Retrieve from Storage
JC38886-4.1.2	Sean Block	GCMS2P	03/15/17 18:24	Load on Instrument
JC38886-4.1.2	GCMS2P	Arielle Cocozza	03/16/17 08:22	Unload from Instrument
JC38886-4.1.2	Arielle Cocozza	GCMSP	03/16/17 08:22	Load on Instrument
JC38886-4.1.2	GCMSP	Robert LaPosta	03/17/17 16:02	Unload from Instrument
JC38886-4.1.2	Robert LaPosta	Extract Freezer	03/17/17 16:02	Return to Storage
JC38886-4.1.3	Albert Quayson	James Patrick McIlvaine	03/15/17 09:24	Aliquot from JC38886-4.1
JC38886-4.1.3	James Patrick McIlvaine		03/15/17 11:13	Disposed
JC38886-4.1.4	Albert Quayson	Diana Mathes	03/15/17 09:29	Aliquot from JC38886-4.1
JC38886-4.1.4	Diana Mathes		03/15/17 10:31	Depleted
JC38886-4.1.5	Diana Mathes	Metals Digestion	03/15/17 10:02	Digestate from JC38886-4.1.4
JC38886-4.1.5	Metals Digestion	Diana Mathes	03/15/17 10:03	Digestate from JC38886-4.1.4
JC38886-4.1.5	Diana Mathes	Metals Digestate Storage	03/15/17 10:03	Return to Storage
JC38886-4.1.6	Minhaj Hashmi	TCLP	03/15/17 15:49	Leachate from JC38886-4.1
JC38886-4.1.6	TCLP	Mark Setaro	03/15/17 17:46	Leachate from JC38886-4.1
JC38886-4.1.6	Mark Setaro	Secured Storage	03/15/17 17:55	Return to Storage
JC38886-4.1.6	Secured Storage	Eddie Huang	03/16/17 16:56	Retrieve from Storage
JC38886-4.1.6	Eddie Huang	GCMS2B	03/16/17 16:56	Load on Instrument
JC38886-4.1.6	GCMS2B	Eddie Huang	03/17/17 08:44	Unload from Instrument
JC38886-4.1.6	Eddie Huang	Secured Storage	03/17/17 08:44	Return to Storage
JC38886-4.1.7	TCLP	Mark Setaro	03/15/17 17:46	Leachate from JC38886-4.1
JC38886-4.1.7	Mark Setaro	Secured Storage	03/15/17 17:55	Return to Storage
JC38886-4.2	Secured Storage	Stephen Seuling	03/15/17 08:07	Retrieve from Storage
JC38886-4.2	Stephen Seuling	Albert Quayson	03/15/17 08:30	Custody Transfer
JC38886-4.2	Secured Storage	Luis Villanueva	03/15/17 11:12	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JC38886-4.2	Luis Villanueva	Secured Storage	03/15/17 16:42	Return to Storage
JC38886-4.2	Secured Storage	Sahara Feliciano	03/16/17 17:12	Retrieve from Storage
JC38886-4.2	Sahara Feliciano	Secured Staging Area	03/16/17 17:12	Return to Storage
JC38886-4.2	Secured Staging Area	Autumn Yun	03/16/17 18:13	Retrieve from Storage

SGS Accutest Internal Chain of Custody

Job Number: JC38886
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/13/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38886-4.2	Autumn Yun	Secured Storage	03/16/17 20:56	Return to Storage
JC38886-4.2.1	Stephen Seuling	Organics Prep	03/15/17 08:10	Extract from JC38886-4.2
JC38886-4.2.1	Organics Prep	Stephen Seuling	03/15/17 16:08	Extract from JC38886-4.2
JC38886-4.2.1	Stephen Seuling	Extract Storage	03/15/17 16:08	Return to Storage
JC38886-4.2.1	Extract Storage	Humarah Bano	03/15/17 17:07	Retrieve from Storage
JC38886-4.2.1	Humarah Bano	GCXX	03/15/17 17:07	Load on Instrument
JC38886-4.2.1	GCXX	Humarah Bano	03/17/17 12:16	Unload from Instrument
JC38886-4.2.1	Humarah Bano	Extract Freezer	03/17/17 12:16	Return to Storage
JC38886-4.2.2	Stephen Seuling	Organics Prep	03/15/17 08:14	Extract from JC38886-4.2
JC38886-4.2.2	Organics Prep	Stephen Seuling	03/15/17 16:08	Extract from JC38886-4.2
JC38886-4.2.2	Stephen Seuling	Extract Storage	03/15/17 16:08	Return to Storage
JC38886-4.2.3	Stephen Seuling	Organics Prep	03/15/17 08:15	Extract from JC38886-4.2
JC38886-4.2.3	Organics Prep	Stephen Seuling	03/15/17 16:08	Extract from JC38886-4.2
JC38886-4.2.3	Stephen Seuling	Extract Storage	03/15/17 16:08	Return to Storage
JC38886-4.2.3	Extract Storage	Christine Phillips	03/16/17 09:29	Retrieve from Storage
JC38886-4.2.3	Christine Phillips	GC4G	03/16/17 09:29	Load on Instrument
JC38886-4.2.4	Autumn Yun	Organics Prep	03/16/17 18:14	Extract from JC38886-4.2
JC38886-4.2.4	Organics Prep	Albert Quayson	03/17/17 13:20	Extract from JC38886-4.2
JC38886-4.2.4	Albert Quayson	Extract Storage	03/17/17 13:20	Return to Storage
JC38886-4.2.4	Extract Storage	Vincent Drago	03/17/17 18:00	Retrieve from Storage
JC38886-4.2.4	Vincent Drago	GCOA	03/17/17 18:00	Load on Instrument
JC38886-4.2.4	GCOA	Rebecca Krug	03/23/17 16:47	Unload from Instrument
JC38886-4.2.4	Rebecca Krug	Extract Freezer	03/23/17 16:47	Return to Storage
JC38886-4.3	Secured Storage	Sahara Feliciano	03/15/17 11:16	Retrieve from Storage
JC38886-4.3	Sahara Feliciano	Secured Staging Area	03/15/17 11:16	Return to Storage
JC38886-4.3	Secured Staging Area	Minhaj Hashmi	03/15/17 11:18	Retrieve from Storage
JC38886-4.3	Minhaj Hashmi	Secured Storage	03/15/17 15:49	Return to Storage
JC38886-4.3.1	Minhaj Hashmi	TCLP	03/15/17 15:49	Leachate from JC38886-4.3
JC38886-4.3.1	TCLP	Mark Setaro	03/15/17 17:50	Leachate from JC38886-4.3
JC38886-4.3.1	Mark Setaro	Secured Storage	03/15/17 17:55	Return to Storage
JC38886-4.3.1	Secured Storage	Ryan Fantasia	03/16/17 15:10	Retrieve from Storage
JC38886-4.3.1	Ryan Fantasia	Secured Storage	03/16/17 21:19	Return to Storage
JC38886-4.3.2	TCLP	Mark Setaro	03/15/17 17:50	Leachate from JC38886-4.3
JC38886-4.3.2	Mark Setaro	Secured Storage	03/15/17 17:55	Return to Storage
JC38886-4.3.2	Secured Storage	Deval Patel	03/16/17 16:17	Retrieve from Storage
JC38886-4.3.2	Deval Patel	Secured Storage	03/16/17 17:03	Return to Storage

SGS Accutest Internal Chain of Custody

Job Number: JC38886
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/13/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38886-4.3.3	Ryan Fantasia	Organics Prep	03/16/17 15:18	Extract from JC38886-4.3.1
JC38886-4.3.3	Organics Prep	Yaw Britwum	03/17/17 00:12	Extract from JC38886-4.3.1
JC38886-4.3.3	Yaw Britwum	Extract Storage	03/17/17 00:12	Return to Storage
JC38886-4.3.3	Extract Storage	Christine Phillips	03/17/17 10:05	Retrieve from Storage
JC38886-4.3.3	Christine Phillips	GC8G	03/17/17 10:05	Load on Instrument
JC38886-4.3.4	Ryan Fantasia	Organics Prep	03/16/17 15:24	Extract from JC38886-4.3.1
JC38886-4.3.4	Organics Prep	Amanda Furka	03/16/17 23:20	Extract from JC38886-4.3.1
JC38886-4.3.4	Amanda Furka	Extract Storage	03/16/17 23:20	Return to Storage
JC38886-4.3.4	Extract Storage	Vincent Drago	03/17/17 10:26	Retrieve from Storage
JC38886-4.3.4	Vincent Drago	GC3G	03/17/17 10:26	Load on Instrument
JC38886-4.3.4	GC3G	Rebecca Krug	03/23/17 16:15	Unload from Instrument
JC38886-4.3.4	Rebecca Krug	Extract Freezer	03/23/17 16:15	Return to Storage
JC38886-4.3.5	Ryan Fantasia	Organics Prep	03/16/17 15:30	Extract from JC38886-4.3.1
JC38886-4.3.5	Organics Prep	Amanda Furka	03/16/17 23:22	Extract from JC38886-4.3.1
JC38886-4.3.5	Amanda Furka	Extract Storage	03/16/17 23:22	Return to Storage
JC38886-4.3.5	Extract Storage	Christopher Sowa	03/17/17 01:06	Retrieve from Storage
JC38886-4.3.5	Christopher Sowa	GCMS6P	03/17/17 01:06	Load on Instrument
JC38886-4.3.6	Deval Patel	Metals Digestion	03/16/17 17:00	Digestate from JC38886-4.3.2
JC38886-4.3.6	Metals Digestion	Deval Patel	03/16/17 17:00	Digestate from JC38886-4.3.2
JC38886-4.3.6	Deval Patel	Metals Digestate Storage	03/16/17 17:00	Return to Storage
JC38886-4.5	Toan Pham	GCMSY	03/24/17 13:51	Load on Instrument
JC38886-4.5	Secured Storage	Toan Pham	03/24/17 13:51	Retrieve from Storage
JC38886-4.6	Secured Storage	Toan Pham	03/14/17 12:45	Retrieve from Storage
JC38886-4.6	Toan Pham	GCMSX	03/14/17 12:45	Load on Instrument

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Automated Report

Technical Report for

Matrix New World Engineering, Inc.

LIRR Expansion, Long Island, NY

16-144, John Street Parking Lot, John Street, Hicksville

SGS Accutest Job Number: JC39017

Sampling Date: 03/15/17

Report to:

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Total number of pages in report: 97

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Nancy Cole
Laboratory Director

Client Service contact: Tammy McCloskey 732-329-0200

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SGS Accutest

Sample Summary

Matrix New World Engineering, Inc.

Job No: JC39017

LIRR Expansion, Long Island, NY
Project No: 16-144, John Street Parking Lot, John Street, Hicksville

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC39017-1	03/15/17	08:15	LM	03/16/17	SO	Soil	JOHN-SB-01
JC39017-1A	03/15/17	08:15	LM	03/16/17	SO	Soil	JOHN-SB-01
JC39017-2	03/15/17	08:55	LM	03/16/17	SO	Soil	JOHN-SB-02
JC39017-2A	03/15/17	08:55	LM	03/16/17	SO	Soil	JOHN-SB-02
JC39017-3	03/15/17	10:20	LM	03/16/17	SO	Soil	JOHN-SB-03
JC39017-3A	03/15/17	10:20	LM	03/16/17	SO	Soil	JOHN-SB-03
JC39017-4	03/15/17	11:00	LM	03/16/17	SO	Soil	JOHN-SB-04
JC39017-4A	03/15/17	11:00	LM	03/16/17	SO	Soil	JOHN-SB-04

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Summary of Hits

Job Number: JC39017
Account: Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Collected: 03/15/17

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC39017-1	**JOHN-SB-01**					
Acetone		0.0408	0.011	0.0055	mg/kg	SW846 8260C
Benzene		0.00066	0.00055	0.00013	mg/kg	SW846 8260C
2-Butanone (MEK)		0.0075 J	0.011	0.0019	mg/kg	SW846 8260C
Carbon disulfide		0.00034 J	0.0022	0.00019	mg/kg	SW846 8260C
Ethylbenzene		0.00058 J	0.0011	0.00016	mg/kg	SW846 8260C
Methylene chloride		0.0019 J	0.0055	0.0011	mg/kg	SW846 8260C
Toluene		0.00039 J	0.0011	0.00014	mg/kg	SW846 8260C
m,p-Xylene		0.0024	0.0011	0.00024	mg/kg	SW846 8260C
o-Xylene		0.0012	0.0011	0.00022	mg/kg	SW846 8260C
Xylene (total)		0.0036	0.0011	0.00022	mg/kg	SW846 8260C
Acenaphthene		0.0160 J	0.037	0.013	mg/kg	SW846 8270D
Anthracene		0.0439	0.037	0.023	mg/kg	SW846 8270D
Benzo(a)anthracene		0.130	0.037	0.011	mg/kg	SW846 8270D
Benzo(a)pyrene		0.117	0.037	0.017	mg/kg	SW846 8270D
Benzo(b)fluoranthene		0.160	0.037	0.017	mg/kg	SW846 8270D
Benzo(g,h,i)perylene		0.108	0.037	0.019	mg/kg	SW846 8270D
Benzo(k)fluoranthene		0.0397	0.037	0.017	mg/kg	SW846 8270D
Chrysene		0.143	0.037	0.012	mg/kg	SW846 8270D
Dibenzo(a,h)anthracene		0.0316 J	0.037	0.017	mg/kg	SW846 8270D
Fluoranthene		0.215	0.037	0.017	mg/kg	SW846 8270D
Fluorene		0.0200 J	0.037	0.017	mg/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		0.100	0.037	0.018	mg/kg	SW846 8270D
2-Methylnaphthalene		0.0235 J	0.075	0.0084	mg/kg	SW846 8270D
Naphthalene		0.0191 J	0.037	0.011	mg/kg	SW846 8270D
Phenanthrene		0.156	0.037	0.013	mg/kg	SW846 8270D
Pyrene		0.216	0.037	0.012	mg/kg	SW846 8270D
Aluminum		5430	56		mg/kg	SW846 6010C
Arsenic		3.9	2.3		mg/kg	SW846 6010C
Barium		40.7	23		mg/kg	SW846 6010C
Calcium		11200	560		mg/kg	SW846 6010C
Chromium		20.1	1.1		mg/kg	SW846 6010C
Cobalt		7.7	5.6		mg/kg	SW846 6010C
Copper		28.5	2.8		mg/kg	SW846 6010C
Iron		12400	56		mg/kg	SW846 6010C
Lead		27.9	2.3		mg/kg	SW846 6010C
Magnesium		3040	560		mg/kg	SW846 6010C
Manganese		156	1.7		mg/kg	SW846 6010C
Nickel		29.7	4.5		mg/kg	SW846 6010C
Silver		1.1	0.56		mg/kg	SW846 6010C
Vanadium		27.9	5.6		mg/kg	SW846 6010C
Zinc		32.3	5.6		mg/kg	SW846 6010C

2

Summary of Hits

Job Number: JC39017
Account: Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Collected: 03/15/17

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC39017-1A	**JOHN-SB-01**					
Corrosivity as pH		7.95 NC			su	SW846 9045D
Ignitability (Flashpoint)		> 200			Deg. F	SW846 1010A/ASTM D93
JC39017-2	**JOHN-SB-02**					
Acetone		0.0312	0.012	0.0059	mg/kg	SW846 8260C
Benzene		0.00064	0.00059	0.00014	mg/kg	SW846 8260C
2-Butanone (MEK)		0.0040 J	0.012	0.0021	mg/kg	SW846 8260C
Carbon disulfide		0.0010 J	0.0024	0.00020	mg/kg	SW846 8260C
Ethylbenzene		0.0029	0.0012	0.00018	mg/kg	SW846 8260C
Methylene chloride		0.0016 J	0.0059	0.0012	mg/kg	SW846 8260C
Toluene		0.00025 J	0.0012	0.00015	mg/kg	SW846 8260C
m,p-Xylene		0.0145	0.0012	0.00026	mg/kg	SW846 8260C
o-Xylene		0.0067	0.0012	0.00024	mg/kg	SW846 8260C
Xylene (total)		0.0212	0.0012	0.00024	mg/kg	SW846 8260C
Acenaphthene		0.0156 J	0.035	0.012	mg/kg	SW846 8270D
Acenaphthylene		0.0352	0.035	0.018	mg/kg	SW846 8270D
Anthracene		0.0775	0.035	0.022	mg/kg	SW846 8270D
Benzo(a)anthracene		0.281	0.035	0.0099	mg/kg	SW846 8270D
Benzo(a)pyrene		0.257	0.035	0.016	mg/kg	SW846 8270D
Benzo(b)fluoranthene		0.313	0.035	0.016	mg/kg	SW846 8270D
Benzo(g,h,i)perylene		0.188	0.035	0.018	mg/kg	SW846 8270D
Benzo(k)fluoranthene		0.112	0.035	0.016	mg/kg	SW846 8270D
Carbazole		0.0217 J	0.070	0.0051	mg/kg	SW846 8270D
Chrysene		0.255	0.035	0.011	mg/kg	SW846 8270D
Dibenzo(a,h)anthracene		0.0604	0.035	0.016	mg/kg	SW846 8270D
Fluoranthene		0.454	0.035	0.016	mg/kg	SW846 8270D
Fluorene		0.0194 J	0.035	0.016	mg/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		0.208	0.035	0.016	mg/kg	SW846 8270D
Phenanthrene		0.205	0.035	0.012	mg/kg	SW846 8270D
Pyrene		0.455	0.035	0.011	mg/kg	SW846 8270D
gamma-Chlordane		0.00030 J	0.00064	0.00028	mg/kg	SW846 8081B
4,4'-DDE		0.00046 J	0.00064	0.00034	mg/kg	SW846 8081B
4,4'-DDT		0.0044	0.00064	0.00038	mg/kg	SW846 8081B
Aluminum		5520	53		mg/kg	SW846 6010C
Arsenic		3.7	2.1		mg/kg	SW846 6010C
Barium		29.2	21		mg/kg	SW846 6010C
Beryllium		0.22	0.21		mg/kg	SW846 6010C
Calcium		19500	530		mg/kg	SW846 6010C
Chromium		19.3	1.1		mg/kg	SW846 6010C
Cobalt		9.2	5.3		mg/kg	SW846 6010C
Copper		21.4	2.6		mg/kg	SW846 6010C
Iron		9580	53		mg/kg	SW846 6010C

Summary of Hits

Job Number: JC39017
Account: Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Collected: 03/15/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Lead		54.2	2.1		mg/kg	SW846 6010C
Magnesium		5970	530		mg/kg	SW846 6010C
Manganese		137	1.6		mg/kg	SW846 6010C
Nickel		26.1	4.2		mg/kg	SW846 6010C
Silver		1.3	0.53		mg/kg	SW846 6010C
Sodium		1500	1100		mg/kg	SW846 6010C
Vanadium		25.5	5.3		mg/kg	SW846 6010C
Zinc		28.5	5.3		mg/kg	SW846 6010C
JC39017-2A	**JOHN-SB-02**					
Corrosivity as pH		8.43 NC			su	SW846 9045D
Ignitability (Flashpoint)		> 200			Deg. F	SW846 1010A/ASTM D93
JC39017-3	**JOHN-SB-03**					
Acetone		0.0609	0.0097	0.0048	mg/kg	SW846 8260C
Benzene		0.00026 J	0.00048	0.00012	mg/kg	SW846 8260C
2-Butanone (MEK)		0.0112	0.0097	0.0017	mg/kg	SW846 8260C
Carbon disulfide		0.00058 J	0.0019	0.00016	mg/kg	SW846 8260C
Ethylbenzene		0.0059	0.00097	0.00014	mg/kg	SW846 8260C
Methylene chloride		0.0014 J	0.0048	0.00097	mg/kg	SW846 8260C
Toluene		0.00025 J	0.00097	0.00012	mg/kg	SW846 8260C
m,p-Xylene		0.0272	0.00097	0.00021	mg/kg	SW846 8260C
o-Xylene		0.0098	0.00097	0.00020	mg/kg	SW846 8260C
Xylene (total)		0.0370	0.00097	0.00020	mg/kg	SW846 8260C
Anthracene		0.0592	0.038	0.023	mg/kg	SW846 8270D
Benzo(a)anthracene		0.192	0.038	0.011	mg/kg	SW846 8270D
Benzo(a)pyrene		0.181	0.038	0.017	mg/kg	SW846 8270D
Benzo(b)fluoranthene		0.208	0.038	0.017	mg/kg	SW846 8270D
Benzo(g,h,i)perylene		0.148	0.038	0.019	mg/kg	SW846 8270D
Benzo(k)fluoranthene		0.0798	0.038	0.018	mg/kg	SW846 8270D
Chrysene		0.185	0.038	0.012	mg/kg	SW846 8270D
Dibenzo(a,h)anthracene		0.0434	0.038	0.017	mg/kg	SW846 8270D
Fluoranthene		0.299	0.038	0.017	mg/kg	SW846 8270D
Fluorene		0.0172 J	0.038	0.017	mg/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		0.158	0.038	0.018	mg/kg	SW846 8270D
Phenanthrene		0.194	0.038	0.013	mg/kg	SW846 8270D
Pyrene		0.296	0.038	0.012	mg/kg	SW846 8270D
Aluminum		13700	57		mg/kg	SW846 6010C
Arsenic		3.4	2.3		mg/kg	SW846 6010C
Barium		31.1	23		mg/kg	SW846 6010C
Beryllium		0.32	0.23		mg/kg	SW846 6010C
Calcium		6100	570		mg/kg	SW846 6010C
Chromium		16.0	1.1		mg/kg	SW846 6010C

2

Summary of Hits

Job Number: JC39017
Account: Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Collected: 03/15/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Cobalt		5.7	5.7		mg/kg	SW846 6010C
Copper		8.3	2.9		mg/kg	SW846 6010C
Iron		10800	57		mg/kg	SW846 6010C
Lead		8.9	2.3		mg/kg	SW846 6010C
Magnesium		2510	570		mg/kg	SW846 6010C
Manganese		187	1.7		mg/kg	SW846 6010C
Nickel		12.2	4.6		mg/kg	SW846 6010C
Vanadium		26.7	5.7		mg/kg	SW846 6010C
Zinc		25.3	5.7		mg/kg	SW846 6010C
JC39017-3A	**JOHN-SB-03**					
Corrosivity as pH		8.22 NC			su	SW846 9045D
Ignitability (Flashpoint)		> 200			Deg. F	SW846 1010A/ASTM D93
JC39017-4	**JOHN-SB-04**					
Acetone		0.0119	0.0085	0.0042	mg/kg	SW846 8260C
Ethylbenzene		0.0014	0.00085	0.00013	mg/kg	SW846 8260C
Tetrachloroethene		0.00034 J	0.0017	0.00024	mg/kg	SW846 8260C
m,p-Xylene		0.0059	0.00085	0.00019	mg/kg	SW846 8260C
o-Xylene		0.0020	0.00085	0.00017	mg/kg	SW846 8260C
Xylene (total)		0.0079	0.00085	0.00017	mg/kg	SW846 8260C
Benzo(a)anthracene		0.0299 J	0.036	0.010	mg/kg	SW846 8270D
Benzo(a)pyrene		0.0347 J	0.036	0.017	mg/kg	SW846 8270D
Benzo(b)fluoranthene		0.0434	0.036	0.016	mg/kg	SW846 8270D
Benzo(g,h,i)perylene		0.0399	0.036	0.018	mg/kg	SW846 8270D
Chrysene		0.0426	0.036	0.011	mg/kg	SW846 8270D
Fluoranthene		0.0344 J	0.036	0.016	mg/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		0.0376	0.036	0.017	mg/kg	SW846 8270D
Phenanthrene		0.0166 J	0.036	0.012	mg/kg	SW846 8270D
Pyrene		0.0424	0.036	0.012	mg/kg	SW846 8270D
alpha-Chlordane [a]		0.00072	0.00071	0.00034	mg/kg	SW846 8081B
gamma-Chlordane		0.00060 J	0.00071	0.00031	mg/kg	SW846 8081B
Aluminum		8920	55		mg/kg	SW846 6010C
Arsenic		4.2	2.2		mg/kg	SW846 6010C
Barium		29.9	22		mg/kg	SW846 6010C
Beryllium		0.25	0.22		mg/kg	SW846 6010C
Calcium		6600	550		mg/kg	SW846 6010C
Chromium		12.2	1.1		mg/kg	SW846 6010C
Cobalt		5.5	5.5		mg/kg	SW846 6010C
Copper		27.8	2.8		mg/kg	SW846 6010C
Iron		13400	55		mg/kg	SW846 6010C
Lead		18.9	2.2		mg/kg	SW846 6010C
Magnesium		2370	550		mg/kg	SW846 6010C

Summary of Hits

Job Number: JC39017
Account: Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Collected: 03/15/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Manganese		179	1.7		mg/kg	SW846 6010C
Nickel		13.5	4.4		mg/kg	SW846 6010C
Silver		1.2	0.55		mg/kg	SW846 6010C
Sodium		4160	1100		mg/kg	SW846 6010C
Vanadium		27.5	5.5		mg/kg	SW846 6010C
Zinc		34.1	5.5		mg/kg	SW846 6010C
JC39017-4A	**JOHN-SB-04**					
Corrosivity as pH		8.03 NC			su	SW846 9045D
Ignitability (Flashpoint)		> 200			Deg. F	SW846 1010A/ASTM D93

(a) More than 40 % RPD for detected concentrations between the two GC columns.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	JOHN-SB-01		
Lab Sample ID:	JC39017-1	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8260C	**Percent Solids:**	87.7
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V167279.D	1	03/17/17	SY	n/a	n/a	VV7034
Run #2							

	Initial Weight
Run #1	5.2 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0408	0.011	0.0055	mg/kg	
71-43-2	Benzene	0.00066	0.00055	0.00013	mg/kg	
74-97-5	Bromochloromethane	ND	0.0055	0.00035	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0022	0.00017	mg/kg	
75-25-2	Bromoform	ND	0.0055	0.00029	mg/kg	
74-83-9	Bromomethane	ND	0.0055	0.00053	mg/kg	
78-93-3	2-Butanone (MEK)	0.0075	0.011	0.0019	mg/kg	J
75-15-0	Carbon disulfide	0.00034	0.0022	0.00019	mg/kg	J
56-23-5	Carbon tetrachloride	ND	0.0022	0.00018	mg/kg	
108-90-7	Chlorobenzene	ND	0.0022	0.00018	mg/kg	
75-00-3	Chloroethane	ND	0.0055	0.00047	mg/kg	
67-66-3	Chloroform	ND	0.0022	0.00026	mg/kg	
74-87-3	Chloromethane	ND	0.0055	0.00023	mg/kg	
110-82-7	Cyclohexane	ND	0.0022	0.00060	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0022	0.00053	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0022	0.00016	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.0011	0.00027	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0011	0.00019	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0011	0.00015	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0011	0.00017	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0055	0.00060	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0011	0.00021	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0011	0.00019	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0011	0.00017	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0011	0.00048	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0011	0.00017	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0022	0.00034	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0022	0.00021	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0022	0.00024	mg/kg	
100-41-4	Ethylbenzene	0.00058	0.0011	0.00016	mg/kg	J
76-13-1	Freon 113	ND	0.0055	0.00053	mg/kg	
591-78-6	2-Hexanone	ND	0.0055	0.0015	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-01		
Lab Sample ID:	JC39017-1	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8260C	**Percent Solids:**	87.7
Project:	LIRR Expansion, Long Island, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	0.0022	0.00017	mg/kg	
79-20-9	Methyl Acetate	ND	0.0055	0.0022	mg/kg	
108-87-2	Methylcyclohexane	ND	0.0022	0.00055	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0011	0.00029	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0055	0.00093	mg/kg	
75-09-2	Methylene chloride	0.0019	0.0055	0.0011	mg/kg	J
100-42-5	Styrene	ND	0.0022	0.00016	mg/kg	
75-65-0	Tert Butyl Alcohol	ND	0.027	0.0033	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0022	0.00026	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0022	0.00031	mg/kg	
108-88-3	Toluene	0.00039	0.0011	0.00014	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0055	0.00055	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0055	0.00055	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0022	0.00018	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0022	0.00035	mg/kg	
79-01-6	Trichloroethene	ND	0.0011	0.00021	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0055	0.00069	mg/kg	
75-01-4	Vinyl chloride	ND	0.0022	0.00022	mg/kg	
	m,p-Xylene	0.0024	0.0011	0.00024	mg/kg	
95-47-6	o-Xylene	0.0012	0.0011	0.00022	mg/kg	
1330-20-7	Xylene (total)	0.0036	0.0011	0.00022	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	114%		70-122%
17060-07-0	1,2-Dichloroethane-D4	105%		68-124%
2037-26-5	Toluene-D8	95%		77-125%
460-00-4	4-Bromofluorobenzene	93%		72-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-01		
Lab Sample ID:	JC39017-1	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	87.7
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5P36639.D	1	03/19/17	SB	03/18/17	OP1202	E5P1831
Run #2							

	Initial Weight	Final Volume
Run #1	30.5 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	0.075	0.018	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.19	0.023	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.19	0.032	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.19	0.067	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	0.19	0.14	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.19	0.040	mg/kg	
95-48-7	2-Methylphenol	ND	0.075	0.024	mg/kg	
	3&4-Methylphenol	ND	0.075	0.031	mg/kg	
88-75-5	2-Nitrophenol	ND	0.19	0.025	mg/kg	
100-02-7	4-Nitrophenol	ND	0.37	0.10	mg/kg	
87-86-5	Pentachlorophenol	ND	0.15	0.035	mg/kg	
108-95-2	Phenol	ND	0.075	0.020	mg/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.19	0.025	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.19	0.028	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.19	0.022	mg/kg	
83-32-9	Acenaphthene	0.0160	0.037	0.013	mg/kg	J
208-96-8	Acenaphthylene	ND	0.037	0.019	mg/kg	
98-86-2	Acetophenone	ND	0.19	0.0080	mg/kg	
120-12-7	Anthracene	0.0439	0.037	0.023	mg/kg	
1912-24-9	Atrazine	ND	0.075	0.016	mg/kg	
56-55-3	Benzo(a)anthracene	0.130	0.037	0.011	mg/kg	
50-32-8	Benzo(a)pyrene	0.117	0.037	0.017	mg/kg	
205-99-2	Benzo(b)fluoranthene	0.160	0.037	0.017	mg/kg	
191-24-2	Benzo(g,h,i)perylene	0.108	0.037	0.019	mg/kg	
207-08-9	Benzo(k)fluoranthene	0.0397	0.037	0.017	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.075	0.014	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.075	0.0091	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.075	0.0051	mg/kg	
100-52-7	Benzaldehyde	ND	0.19	0.0093	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.075	0.0089	mg/kg	
106-47-8	4-Chloroaniline	ND	0.19	0.013	mg/kg	
86-74-8	Carbazole	ND	0.075	0.0054	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-01		
Lab Sample ID:	JC39017-1	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	87.7
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	0.075	0.015	mg/kg	
218-01-9	Chrysene	0.143	0.037	0.012	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.075	0.0080	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.075	0.016	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.075	0.013	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.075	0.012	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.037	0.012	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.037	0.019	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.075	0.031	mg/kg	
123-91-1	1,4-Dioxane	ND	0.037	0.025	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	0.0316	0.037	0.017	mg/kg	J
132-64-9	Dibenzofuran	ND	0.075	0.015	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.075	0.0061	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.075	0.0093	mg/kg	
84-66-2	Diethyl phthalate	ND	0.075	0.0080	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.075	0.0067	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.075	0.0087	mg/kg	
206-44-0	Fluoranthene	0.215	0.037	0.017	mg/kg	
86-73-7	Fluorene	0.0200	0.037	0.017	mg/kg	J
118-74-1	Hexachlorobenzene	ND	0.075	0.0095	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.037	0.015	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.37	0.015	mg/kg	
67-72-1	Hexachloroethane	ND	0.19	0.019	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	0.100	0.037	0.018	mg/kg	
78-59-1	Isophorone	ND	0.075	0.0080	mg/kg	
91-57-6	2-Methylnaphthalene	0.0235	0.075	0.0084	mg/kg	J
88-74-4	2-Nitroaniline	ND	0.19	0.0088	mg/kg	
99-09-2	3-Nitroaniline	ND	0.19	0.0093	mg/kg	
100-01-6	4-Nitroaniline	ND	0.19	0.0097	mg/kg	
91-20-3	Naphthalene	0.0191	0.037	0.011	mg/kg	J
98-95-3	Nitrobenzene	ND	0.075	0.014	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.075	0.011	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.19	0.014	mg/kg	
85-01-8	Phenanthrene	0.156	0.037	0.013	mg/kg	
129-00-0	Pyrene	0.216	0.037	0.012	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.19	0.0095	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	76%		23-115%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-01		
Lab Sample ID:	JC39017-1	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	87.7
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	73%		27-114%
118-79-6	2,4,6-Tribromophenol	73%		19-152%
4165-60-0	Nitrobenzene-d5	87%		26-134%
321-60-8	2-Fluorobiphenyl	84%		39-124%
1718-51-0	Terphenyl-d14	85%		36-134%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-01		
Lab Sample ID:	JC39017-1	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8151 SW846 8151/3550C	**Percent Solids:**	87.7
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OA124604.D	1	03/23/17	RK	03/21/17	OP1206	GOA4269
Run #2	OA124727.D	1	03/26/17	RK	03/25/17	OP1390	GOA4272

	Initial Weight	Final Volume
Run #1	15.6 g	5.0 ml
Run #2	15.4 g	5.0 ml

Herbicide List

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	0.018	0.0082	mg/kg	
93-72-1	2,4,5-TP (Silvex)	ND	0.0037	0.0013	mg/kg	
93-76-5	2,4,5-T	ND	0.0037	0.0014	mg/kg	
75-99-0	Dalapon	ND	0.0037	0.0025	mg/kg	
1918-00-9	Dicamba	ND	0.0037	0.0018	mg/kg	
120-36-5	Dichloroprop	ND	0.018	0.0052	mg/kg	
88-85-7	Dinoseb	ND [a]	0.019	0.012	mg/kg	
94-74-6	MCPA	ND	1.8	0.42	mg/kg	
93-65-2	MCPP	ND	1.8	0.40	mg/kg	
87-86-5	Pentachlorophenol	ND	0.0018	0.0016	mg/kg	
94-82-6	2,4-DB	ND	0.018	0.0059	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	99%	122%	10-159%
19719-28-9	2,4-DCAA	70%	91%	10-159%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-01		
Lab Sample ID:	JC39017-1	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8081B SW846 3546	**Percent Solids:**	87.7
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G133172.D	1	03/20/17	KD	03/18/17	OP1208	G1G4257
Run #2							

	Initial Weight	Final Volume
Run #1	16.8 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.00068	0.00032	mg/kg	
319-84-6	alpha-BHC	ND	0.00068	0.00036	mg/kg	
319-85-7	beta-BHC	ND	0.00068	0.00043	mg/kg	
319-86-8	delta-BHC	ND	0.00068	0.00031	mg/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.00068	0.00030	mg/kg	
5103-71-9	alpha-Chlordane	ND	0.00068	0.00032	mg/kg	
5103-74-2	gamma-Chlordane	ND	0.00068	0.00030	mg/kg	
60-57-1	Dieldrin	ND	0.00068	0.00034	mg/kg	
72-54-8	4,4'-DDD	ND	0.00068	0.00044	mg/kg	
72-55-9	4,4'-DDE	ND	0.00068	0.00035	mg/kg	
50-29-3	4,4'-DDT	ND	0.00068	0.00040	mg/kg	
72-20-8	Endrin	ND	0.00068	0.00032	mg/kg	
1031-07-8	Endosulfan sulfate	ND	0.00068	0.00027	mg/kg	
7421-93-4	Endrin aldehyde	ND	0.00068	0.00040	mg/kg	
959-98-8	Endosulfan-I	ND	0.00068	0.00035	mg/kg	
33213-65-9	Endosulfan-II	ND	0.00068	0.00035	mg/kg	
76-44-8	Heptachlor	ND	0.00068	0.00033	mg/kg	
1024-57-3	Heptachlor epoxide	ND	0.00068	0.00037	mg/kg	
72-43-5	Methoxychlor	ND	0.0014	0.00034	mg/kg	
53494-70-5	Endrin ketone	ND	0.00068	0.00052	mg/kg	
8001-35-2	Toxaphene	ND	0.017	0.0071	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	61%		25-135%
877-09-8	Tetrachloro-m-xylene	61%		25-135%
2051-24-3	Decachlorobiphenyl	45%		10-156%
2051-24-3	Decachlorobiphenyl	60%		10-156%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-01		
Lab Sample ID:	JC39017-1	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8082A SW846 3546	**Percent Solids:**	87.7
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5G67724.D	1	03/21/17	HB	03/18/17	OP1207	G5G1587
Run #2							

	Initial Weight	Final Volume
Run #1	16.8 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.034	0.017	mg/kg	
11104-28-2	Aroclor 1221	ND	0.034	0.017	mg/kg	
11141-16-5	Aroclor 1232	ND	0.034	0.013	mg/kg	
53469-21-9	Aroclor 1242	ND	0.034	0.012	mg/kg	
12672-29-6	Aroclor 1248	ND	0.034	0.021	mg/kg	
11097-69-1	Aroclor 1254	ND	0.034	0.017	mg/kg	
11096-82-5	Aroclor 1260	ND	0.034	0.014	mg/kg	
11100-14-4	Aroclor 1268	ND	0.034	0.012	mg/kg	
37324-23-5	Aroclor 1262	ND	0.034	0.023	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	68%		24-152%
877-09-8	Tetrachloro-m-xylene	72%		24-152%
2051-24-3	Decachlorobiphenyl	69%		10-166%
2051-24-3	Decachlorobiphenyl	77%		10-166%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-01		
Lab Sample ID:	JC39017-1	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	87.7
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	5430	56	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Antimony	< 2.3	2.3	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Arsenic	3.9	2.3	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Barium	40.7	23	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Beryllium	< 0.23	0.23	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Cadmium	< 0.56	0.56	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Calcium	11200	560	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Chromium	20.1	1.1	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Cobalt	7.7	5.6	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Copper	28.5	2.8	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Iron	12400	56	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Lead	27.9	2.3	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Magnesium	3040	560	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Manganese	156	1.7	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Mercury	< 0.036	0.036	mg/kg	1	03/17/17	03/18/17	JA	SW846 7471B [2]	SW846 7471B [4]
Nickel	29.7	4.5	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Selenium	< 2.3	2.3	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Silver	1.1	0.56	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Vanadium	27.9	5.6	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Zinc	32.3	5.6	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA41584
(2) Instrument QC Batch: MA41588
(3) Prep QC Batch: MP99298
(4) Prep QC Batch: MP99318

RL = Reporting Limit

Report of Analysis

Client Sample ID:	JOHN-SB-01		
Lab Sample ID:	JC39017-1	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	87.7
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	< 0.26	0.26	mg/kg	1	03/21/17 11:24	BM	SW846 9012B/LACHAT
Solids, Percent	87.7		%	1	03/17/17 09:50	TZW	SM2540 G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	JOHN-SB-01		
Lab Sample ID:	JC39017-1A	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8260C SW846 1311	**Percent Solids:**	87.7
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B149252.D	5	03/21/17	EH	03/17/17	GP3959	V2B6624
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.0025	0.00070	mg/l	
78-93-3	2-Butanone (MEK)	ND	D035	200	0.10	0.0095	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.0050	0.0027	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.0050	0.00087	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.0050	0.0011	mg/l	
106-46-7	1,4-Dichlorobenzene [a]	ND	D027	7.5	0.0050	0.0011	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.0050	0.0020	mg/l	
75-35-4	1,1-Dichloroethene	ND	D029	0.70	0.0050	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	D039	0.70	0.0050	0.0012	mg/l	
79-01-6	Trichloroethene	ND	D040	0.50	0.0050	0.0013	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.0050	0.0016	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	112%		76-120%
17060-07-0	1,2-Dichloroethane-D4	101%		64-135%
2037-26-5	Toluene-D8	98%		76-117%
460-00-4	4-Bromofluorobenzene	95%		72-122%

(a) This compound in BS is outside in house QC limits bias high.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-01		
Lab Sample ID:	JC39017-1A	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	87.7
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2M92698.D	1	03/21/17	SB	03/20/17	OP1257	E2M4116
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.020	0.0089	mg/l	
	3&4-Methylphenol	ND	D024	200	0.020	0.0088	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.10	0.014	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.013	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0092	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.020	0.0017	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.020	0.0055	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.020	0.0033	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.010	0.0049	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0039	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.020	0.0064	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.020	0.0039	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	38%		14-88%
4165-62-2	Phenol-d5	26%		10-110%
118-79-6	2,4,6-Tribromophenol	85%		39-149%
4165-60-0	Nitrobenzene-d5	81%		32-128%
321-60-8	2-Fluorobiphenyl	85%		35-119%
1718-51-0	Terphenyl-d14	96%		10-126%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-01		
Lab Sample ID:	JC39017-1A	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8151 SW846 8151/3510C	**Percent Solids:**	87.7
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G107148.D	1	03/22/17	RK	03/20/17	OP1259	G3G3741
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Herbicide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND	D016	10	0.0050	0.0039	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.0015	0.00047	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	108%		50-142%
19719-28-9	2,4-DCAA	64%		50-142%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-01		
Lab Sample ID:	JC39017-1A	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	87.7
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	8G3929.D	1	03/21/17	KD	03/20/17	OP1261	G8G116
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Pesticide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	D013	0.40	0.00010	0.000028	mg/l	
12789-03-6	Chlordane	ND	D020	0.030	0.0050	0.0011	mg/l	
72-20-8	Endrin	ND	D012	0.020	0.00010	0.000050	mg/l	
76-44-8	Heptachlor	ND	D031	0.0080	0.00010	0.000038	mg/l	
1024-57-3	Heptachlor epoxide	ND	D031	0.0080	0.00010	0.000065	mg/l	
72-43-5	Methoxychlor	ND	D014	10	0.00020	0.000057	mg/l	
8001-35-2	Toxaphene	ND	D015	0.50	0.0025	0.0018	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	50%		30-137%
877-09-8	Tetrachloro-m-xylene	51%		30-137%
2051-24-3	Decachlorobiphenyl	97%		10-137%
2051-24-3	Decachlorobiphenyl	95%		10-137%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-01		
Lab Sample ID:	JC39017-1A	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	87.7
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 0.50	D004	5.0	0.50	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Barium	< 1.0	D005	100	1.0	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 0.025	D006	1.0	0.025	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 0.050	D007	5.0	0.050	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Lead	< 0.50	D008	5.0	0.50	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	03/20/17	03/20/17	JPM	SW846 7470A [1]	SW846 7470A [4]
Selenium	< 0.50	D010	1.0	0.50	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Silver	< 0.050	D011	5.0	0.050	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA41592
(2) Instrument QC Batch: MA41600
(3) Prep QC Batch: MP99320
(4) Prep QC Batch: MP99334

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID:	JOHN-SB-01		
Lab Sample ID:	JC39017-1A	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	87.7
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Corrosivity as pH	7.95 NC		su	1	03/18/17 21:10	AT	SW846 9045D
Cyanide Reactivity	< 11	11	mg/kg	1	03/18/17 11:57	YZ	SW846 CHAP7/9012 B
Ignitability (Flashpoint)	> 200		Deg. F	1	03/18/17 22:10	AT	SW846 1010A/ASTM D93
Sulfide Reactivity	< 110	110	mg/kg	1	03/19/17 22:00	CB	SW846 CHAP7/9034

RL = Reporting Limit

Report of Analysis

Client Sample ID:	JOHN-SB-02		
Lab Sample ID:	JC39017-2	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8260C	**Percent Solids:**	93.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V167314.D	1	03/18/17	SY	n/a	n/a	VV7036
Run #2							

	Initial Weight
Run #1	4.5 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0312	0.012	0.0059	mg/kg	
71-43-2	Benzene	0.00064	0.00059	0.00014	mg/kg	
74-97-5	Bromochloromethane	ND	0.0059	0.00038	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0024	0.00018	mg/kg	
75-25-2	Bromoform	ND	0.0059	0.00032	mg/kg	
74-83-9	Bromomethane	ND	0.0059	0.00058	mg/kg	
78-93-3	2-Butanone (MEK)	0.0040	0.012	0.0021	mg/kg	J
75-15-0	Carbon disulfide	0.0010	0.0024	0.00020	mg/kg	J
56-23-5	Carbon tetrachloride	ND	0.0024	0.00020	mg/kg	
108-90-7	Chlorobenzene	ND	0.0024	0.00019	mg/kg	
75-00-3	Chloroethane	ND	0.0059	0.00051	mg/kg	
67-66-3	Chloroform	ND	0.0024	0.00028	mg/kg	
74-87-3	Chloromethane	ND	0.0059	0.00025	mg/kg	
110-82-7	Cyclohexane	ND	0.0024	0.00065	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0024	0.00057	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0024	0.00018	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.0012	0.00029	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0012	0.00020	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0012	0.00016	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0012	0.00018	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0059	0.00065	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0012	0.00022	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0012	0.00020	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0012	0.00018	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0012	0.00052	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0012	0.00019	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0024	0.00037	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0024	0.00023	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0024	0.00026	mg/kg	
100-41-4	Ethylbenzene	0.0029	0.0012	0.00018	mg/kg	
76-13-1	Freon 113	ND	0.0059	0.00057	mg/kg	
591-78-6	2-Hexanone	ND	0.0059	0.0017	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-02		
Lab Sample ID:	JC39017-2	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8260C	**Percent Solids:**	93.6
Project:	LIRR Expansion, Long Island, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	0.0024	0.00018	mg/kg	
79-20-9	Methyl Acetate	ND	0.0059	0.0024	mg/kg	
108-87-2	Methylcyclohexane	ND	0.0024	0.00060	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0012	0.00031	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0059	0.0010	mg/kg	
75-09-2	Methylene chloride	0.0016	0.0059	0.0012	mg/kg	J
100-42-5	Styrene	ND	0.0024	0.00017	mg/kg	
75-65-0	Tert Butyl Alcohol	ND	0.030	0.0036	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0024	0.00028	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0024	0.00033	mg/kg	
108-88-3	Toluene	0.00025	0.0012	0.00015	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0059	0.00059	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0059	0.00059	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0024	0.00020	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0024	0.00038	mg/kg	
79-01-6	Trichloroethene	ND	0.0012	0.00023	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0059	0.00075	mg/kg	
75-01-4	Vinyl chloride	ND	0.0024	0.00024	mg/kg	
	m,p-Xylene	0.0145	0.0012	0.00026	mg/kg	
95-47-6	o-Xylene	0.0067	0.0012	0.00024	mg/kg	
1330-20-7	Xylene (total)	0.0212	0.0012	0.00024	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	115%		70-122%
17060-07-0	1,2-Dichloroethane-D4	108%		68-124%
2037-26-5	Toluene-D8	94%		77-125%
460-00-4	4-Bromofluorobenzene	95%		72-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-02		
Lab Sample ID:	JC39017-2	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	93.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5P36640.D	1	03/19/17	SB	03/18/17	OP1202	E5P1831
Run #2							

	Initial Weight	Final Volume
Run #1	30.4 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	0.070	0.017	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.18	0.022	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.18	0.030	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.18	0.063	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	0.18	0.13	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.18	0.038	mg/kg	
95-48-7	2-Methylphenol	ND	0.070	0.022	mg/kg	
	3&4-Methylphenol	ND	0.070	0.029	mg/kg	
88-75-5	2-Nitrophenol	ND	0.18	0.023	mg/kg	
100-02-7	4-Nitrophenol	ND	0.35	0.094	mg/kg	
87-86-5	Pentachlorophenol	ND	0.14	0.033	mg/kg	
108-95-2	Phenol	ND	0.070	0.018	mg/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.18	0.023	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.18	0.026	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.18	0.021	mg/kg	
83-32-9	Acenaphthene	0.0156	0.035	0.012	mg/kg	J
208-96-8	Acenaphthylene	0.0352	0.035	0.018	mg/kg	
98-86-2	Acetophenone	ND	0.18	0.0076	mg/kg	
120-12-7	Anthracene	0.0775	0.035	0.022	mg/kg	
1912-24-9	Atrazine	ND	0.070	0.015	mg/kg	
56-55-3	Benzo(a)anthracene	0.281	0.035	0.0099	mg/kg	
50-32-8	Benzo(a)pyrene	0.257	0.035	0.016	mg/kg	
205-99-2	Benzo(b)fluoranthene	0.313	0.035	0.016	mg/kg	
191-24-2	Benzo(g,h,i)perylene	0.188	0.035	0.018	mg/kg	
207-08-9	Benzo(k)fluoranthene	0.112	0.035	0.016	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.070	0.014	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.070	0.0086	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.070	0.0048	mg/kg	
100-52-7	Benzaldehyde	ND	0.18	0.0087	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.070	0.0084	mg/kg	
106-47-8	4-Chloroaniline	ND	0.18	0.013	mg/kg	
86-74-8	Carbazole	0.0217	0.070	0.0051	mg/kg	J

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-02		
Lab Sample ID:	JC39017-2	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	93.6
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	0.070	0.014	mg/kg	
218-01-9	Chrysene	0.255	0.035	0.011	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.070	0.0075	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.070	0.015	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.070	0.013	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.070	0.011	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.035	0.011	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.035	0.018	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.070	0.029	mg/kg	
123-91-1	1,4-Dioxane	ND	0.035	0.023	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	0.0604	0.035	0.016	mg/kg	
132-64-9	Dibenzofuran	ND	0.070	0.014	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.070	0.0057	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.070	0.0088	mg/kg	
84-66-2	Diethyl phthalate	ND	0.070	0.0075	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.070	0.0063	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.070	0.0082	mg/kg	
206-44-0	Fluoranthene	0.454	0.035	0.016	mg/kg	
86-73-7	Fluorene	0.0194	0.035	0.016	mg/kg	J
118-74-1	Hexachlorobenzene	ND	0.070	0.0089	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.035	0.014	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.35	0.014	mg/kg	
67-72-1	Hexachloroethane	ND	0.18	0.017	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	0.208	0.035	0.016	mg/kg	
78-59-1	Isophorone	ND	0.070	0.0075	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.070	0.0079	mg/kg	
88-74-4	2-Nitroaniline	ND	0.18	0.0083	mg/kg	
99-09-2	3-Nitroaniline	ND	0.18	0.0088	mg/kg	
100-01-6	4-Nitroaniline	ND	0.18	0.0091	mg/kg	
91-20-3	Naphthalene	ND	0.035	0.0099	mg/kg	
98-95-3	Nitrobenzene	ND	0.070	0.014	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.070	0.010	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.18	0.013	mg/kg	
85-01-8	Phenanthrene	0.205	0.035	0.012	mg/kg	
129-00-0	Pyrene	0.455	0.035	0.011	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.18	0.0089	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	76%		23-115%

ND = Not detected MDL = Method Detection Limit
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E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-02		
Lab Sample ID:	JC39017-2	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	93.6
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	74%		27-114%
118-79-6	2,4,6-Tribromophenol	78%		19-152%
4165-60-0	Nitrobenzene-d5	81%		26-134%
321-60-8	2-Fluorobiphenyl	85%		39-124%
1718-51-0	Terphenyl-d14	84%		36-134%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-02		
Lab Sample ID:	JC39017-2	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8151 SW846 8151/3550C	**Percent Solids:**	93.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OA124605.D	1	03/23/17	RK	03/21/17	OP1206	GOA4269
Run #2	OA124728.D	1	03/26/17	RK	03/25/17	OP1390	GOA4272

	Initial Weight	Final Volume
Run #1	15.4 g	5.0 ml
Run #2	15.6 g	5.0 ml

Herbicide List

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	0.017	0.0078	mg/kg	
93-72-1	2,4,5-TP (Silvex)	ND	0.0035	0.0013	mg/kg	
93-76-5	2,4,5-T	ND	0.0035	0.0013	mg/kg	
75-99-0	Dalapon	ND	0.0035	0.0023	mg/kg	
1918-00-9	Dicamba	ND	0.0035	0.0018	mg/kg	
120-36-5	Dichloroprop	ND	0.017	0.0049	mg/kg	
88-85-7	Dinoseb	ND [a]	0.017	0.012	mg/kg	
94-74-6	MCPA	ND	1.7	0.40	mg/kg	
93-65-2	MCPP	ND	1.7	0.38	mg/kg	
87-86-5	Pentachlorophenol	ND	0.0017	0.0015	mg/kg	
94-82-6	2,4-DB	ND	0.017	0.0056	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	95%	125%	10-159%
19719-28-9	2,4-DCAA	69%	103%	10-159%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-02		
Lab Sample ID:	JC39017-2	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8081B SW846 3546	**Percent Solids:**	93.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G133173.D	1	03/20/17	KD	03/18/17	OP1208	G1G4257
Run #2							

	Initial Weight	Final Volume
Run #1	16.6 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.00064	0.00031	mg/kg	
319-84-6	alpha-BHC	ND	0.00064	0.00034	mg/kg	
319-85-7	beta-BHC	ND	0.00064	0.00040	mg/kg	
319-86-8	delta-BHC	ND	0.00064	0.00029	mg/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.00064	0.00028	mg/kg	
5103-71-9	alpha-Chlordane	ND	0.00064	0.00031	mg/kg	
5103-74-2	gamma-Chlordane	0.00030	0.00064	0.00028	mg/kg	J
60-57-1	Dieldrin	ND	0.00064	0.00032	mg/kg	
72-54-8	4,4'-DDD	ND	0.00064	0.00041	mg/kg	
72-55-9	4,4'-DDE	0.00046	0.00064	0.00034	mg/kg	J
50-29-3	4,4'-DDT	0.0044	0.00064	0.00038	mg/kg	
72-20-8	Endrin	ND	0.00064	0.00030	mg/kg	
1031-07-8	Endosulfan sulfate	ND	0.00064	0.00026	mg/kg	
7421-93-4	Endrin aldehyde	ND	0.00064	0.00038	mg/kg	
959-98-8	Endosulfan-I	ND	0.00064	0.00034	mg/kg	
33213-65-9	Endosulfan-II	ND	0.00064	0.00034	mg/kg	
76-44-8	Heptachlor	ND	0.00064	0.00032	mg/kg	
1024-57-3	Heptachlor epoxide	ND	0.00064	0.00035	mg/kg	
72-43-5	Methoxychlor	ND	0.0013	0.00032	mg/kg	
53494-70-5	Endrin ketone	ND	0.00064	0.00050	mg/kg	
8001-35-2	Toxaphene	ND	0.016	0.0067	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	73%		25-135%
877-09-8	Tetrachloro-m-xylene	74%		25-135%
2051-24-3	Decachlorobiphenyl	57%		10-156%
2051-24-3	Decachlorobiphenyl	78%		10-156%

ND = Not detected MDL = Method Detection Limit
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J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-02		
Lab Sample ID:	JC39017-2	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8082A SW846 3546	**Percent Solids:**	93.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5G67725.D	1	03/21/17	HB	03/18/17	OP1207	G5G1587
Run #2							

	Initial Weight	Final Volume
Run #1	16.6 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.032	0.016	mg/kg	
11104-28-2	Aroclor 1221	ND	0.032	0.016	mg/kg	
11141-16-5	Aroclor 1232	ND	0.032	0.013	mg/kg	
53469-21-9	Aroclor 1242	ND	0.032	0.011	mg/kg	
12672-29-6	Aroclor 1248	ND	0.032	0.020	mg/kg	
11097-69-1	Aroclor 1254	ND	0.032	0.016	mg/kg	
11096-82-5	Aroclor 1260	ND	0.032	0.014	mg/kg	
11100-14-4	Aroclor 1268	ND	0.032	0.011	mg/kg	
37324-23-5	Aroclor 1262	ND	0.032	0.022	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	75%		24-152%
877-09-8	Tetrachloro-m-xylene	86%		24-152%
2051-24-3	Decachlorobiphenyl	78%		10-166%
2051-24-3	Decachlorobiphenyl	102%		10-166%

ND = Not detected MDL = Method Detection Limit
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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-02		
Lab Sample ID:	JC39017-2	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	93.6
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	5520	53	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Antimony	< 2.1	2.1	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Arsenic	3.7	2.1	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Barium	29.2	21	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Beryllium	0.22	0.21	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Cadmium	< 0.53	0.53	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Calcium	19500	530	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Chromium	19.3	1.1	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Cobalt	9.2	5.3	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Copper	21.4	2.6	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Iron	9580	53	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Lead	54.2	2.1	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Magnesium	5970	530	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Manganese	137	1.6	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Mercury	< 0.034	0.034	mg/kg	1	03/17/17	03/18/17	JA	SW846 7471B [2]	SW846 7471B [4]
Nickel	26.1	4.2	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Selenium	< 2.1	2.1	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Silver	1.3	0.53	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Sodium	1500	1100	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Vanadium	25.5	5.3	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Zinc	28.5	5.3	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA41584
(2) Instrument QC Batch: MA41588
(3) Prep QC Batch: MP99298
(4) Prep QC Batch: MP99318

RL = Reporting Limit

Report of Analysis

Client Sample ID:	JOHN-SB-02		
Lab Sample ID:	JC39017-2	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	93.6
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	< 0.27	0.27	mg/kg	1	03/21/17 11:26	BM	SW846 9012B/LACHAT
Solids, Percent	93.6		%	1	03/17/17 09:50	TZW	SM2540 G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	JOHN-SB-02		
Lab Sample ID:	JC39017-2A	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8260C SW846 1311	**Percent Solids:**	93.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B149253.D	5	03/21/17	EH	03/17/17	GP3959	V2B6624
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.0025	0.00070	mg/l	
78-93-3	2-Butanone (MEK)	ND	D035	200	0.10	0.0095	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.0050	0.0027	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.0050	0.00087	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.0050	0.0011	mg/l	
106-46-7	1,4-Dichlorobenzene [a]	ND	D027	7.5	0.0050	0.0011	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.0050	0.0020	mg/l	
75-35-4	1,1-Dichloroethene	ND	D029	0.70	0.0050	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	D039	0.70	0.0050	0.0012	mg/l	
79-01-6	Trichloroethene	ND	D040	0.50	0.0050	0.0013	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.0050	0.0016	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	112%		76-120%
17060-07-0	1,2-Dichloroethane-D4	101%		64-135%
2037-26-5	Toluene-D8	97%		76-117%
460-00-4	4-Bromofluorobenzene	94%		72-122%

(a) This compound in BS is outside in house QC limits bias high.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-02		
Lab Sample ID:	JC39017-2A	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	93.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2M92699.D	1	03/21/17	SB	03/20/17	OP1257	E2M4116
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.020	0.0089	mg/l	
	3&4-Methylphenol	ND	D024	200	0.020	0.0088	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.10	0.014	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.013	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0092	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.020	0.0017	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.020	0.0055	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.020	0.0033	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.010	0.0049	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0039	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.020	0.0064	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.020	0.0039	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	40%		14-88%
4165-62-2	Phenol-d5	28%		10-110%
118-79-6	2,4,6-Tribromophenol	87%		39-149%
4165-60-0	Nitrobenzene-d5	84%		32-128%
321-60-8	2-Fluorobiphenyl	89%		35-119%
1718-51-0	Terphenyl-d14	97%		10-126%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-02		
Lab Sample ID:	JC39017-2A	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8151 SW846 8151/3510C	**Percent Solids:**	93.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G107149.D	1	03/22/17	RK	03/20/17	OP1259	G3G3741
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Herbicide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND	D016	10	0.0050	0.0039	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.0015	0.00047	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	126%		50-142%
19719-28-9	2,4-DCAA	82%		50-142%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-02		
Lab Sample ID:	JC39017-2A	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	93.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	8G3930.D	1	03/21/17	KD	03/20/17	OP1261	G8G116
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Pesticide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	D013	0.40	0.00010	0.000028	mg/l	
12789-03-6	Chlordane	ND	D020	0.030	0.0050	0.0011	mg/l	
72-20-8	Endrin	ND	D012	0.020	0.00010	0.000050	mg/l	
76-44-8	Heptachlor	ND	D031	0.0080	0.00010	0.000038	mg/l	
1024-57-3	Heptachlor epoxide	ND	D031	0.0080	0.00010	0.000065	mg/l	
72-43-5	Methoxychlor	ND	D014	10	0.00020	0.000057	mg/l	
8001-35-2	Toxaphene	ND	D015	0.50	0.0025	0.0018	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	51%		30-137%
877-09-8	Tetrachloro-m-xylene	51%		30-137%
2051-24-3	Decachlorobiphenyl	104%		10-137%
2051-24-3	Decachlorobiphenyl	103%		10-137%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-02		
Lab Sample ID:	JC39017-2A	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	93.6
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 0.50	D004	5.0	0.50	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Barium	< 1.0	D005	100	1.0	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 0.025	D006	1.0	0.025	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 0.050	D007	5.0	0.050	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Lead	< 0.50	D008	5.0	0.50	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	03/20/17	03/20/17	JPM	SW846 7470A [1]	SW846 7470A [4]
Selenium	< 0.50	D010	1.0	0.50	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Silver	< 0.050	D011	5.0	0.050	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA41592
(2) Instrument QC Batch: MA41600
(3) Prep QC Batch: MP99320
(4) Prep QC Batch: MP99334

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID:	JOHN-SB-02		
Lab Sample ID:	JC39017-2A	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	93.6
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Corrosivity as pH	8.43 NC		su	1	03/18/17 21:10	AT	SW846 9045D
Cyanide Reactivity	< 10	10	mg/kg	1	03/18/17 11:59	YZ	SW846 CHAP7/9012 B
Ignitability (Flashpoint)	> 200		Deg. F	1	03/18/17 22:10	AT	SW846 1010A/ASTM D93
Sulfide Reactivity	< 100	100	mg/kg	1	03/19/17 22:00	CB	SW846 CHAP7/9034

RL = Reporting Limit

Report of Analysis

Client Sample ID:	JOHN-SB-03		
Lab Sample ID:	JC39017-3	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8260C	**Percent Solids:**	84.9
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V167280.D	1	03/17/17	SY	n/a	n/a	VV7034
Run #2							

	Initial Weight
Run #1	6.1 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0609	0.0097	0.0048	mg/kg	
71-43-2	Benzene	0.00026	0.00048	0.00012	mg/kg	J
74-97-5	Bromochloromethane	ND	0.0048	0.00031	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0019	0.00015	mg/kg	
75-25-2	Bromoform	ND	0.0048	0.00026	mg/kg	
74-83-9	Bromomethane	ND	0.0048	0.00047	mg/kg	
78-93-3	2-Butanone (MEK)	0.0112	0.0097	0.0017	mg/kg	
75-15-0	Carbon disulfide	0.00058	0.0019	0.00016	mg/kg	J
56-23-5	Carbon tetrachloride	ND	0.0019	0.00016	mg/kg	
108-90-7	Chlorobenzene	ND	0.0019	0.00016	mg/kg	
75-00-3	Chloroethane	ND	0.0048	0.00041	mg/kg	
67-66-3	Chloroform	ND	0.0019	0.00023	mg/kg	
74-87-3	Chloromethane	ND	0.0048	0.00020	mg/kg	
110-82-7	Cyclohexane	ND	0.0019	0.00053	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0019	0.00047	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0019	0.00014	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.00097	0.00023	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.00097	0.00017	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.00097	0.00013	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.00097	0.00015	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0048	0.00053	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.00097	0.00018	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.00097	0.00017	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.00097	0.00015	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.00097	0.00042	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.00097	0.00015	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0019	0.00030	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0019	0.00019	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0019	0.00021	mg/kg	
100-41-4	Ethylbenzene	0.0059	0.00097	0.00014	mg/kg	
76-13-1	Freon 113	ND	0.0048	0.00047	mg/kg	
591-78-6	2-Hexanone	ND	0.0048	0.0013	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-03		
Lab Sample ID:	JC39017-3	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8260C	**Percent Solids:**	84.9
Project:	LIRR Expansion, Long Island, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	0.0019	0.00015	mg/kg	
79-20-9	Methyl Acetate	ND	0.0048	0.0020	mg/kg	
108-87-2	Methylcyclohexane	ND	0.0019	0.00049	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.00097	0.00026	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0048	0.00082	mg/kg	
75-09-2	Methylene chloride	0.0014	0.0048	0.00097	mg/kg	J
100-42-5	Styrene	ND	0.0019	0.00014	mg/kg	
75-65-0	Tert Butyl Alcohol	ND	0.024	0.0029	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0019	0.00023	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0019	0.00027	mg/kg	
108-88-3	Toluene	0.00025	0.00097	0.00012	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0048	0.00048	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0048	0.00048	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0019	0.00016	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0019	0.00031	mg/kg	
79-01-6	Trichloroethene	ND	0.00097	0.00018	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0048	0.00061	mg/kg	
75-01-4	Vinyl chloride	ND	0.0019	0.00020	mg/kg	
	m,p-Xylene	0.0272	0.00097	0.00021	mg/kg	
95-47-6	o-Xylene	0.0098	0.00097	0.00020	mg/kg	
1330-20-7	Xylene (total)	0.0370	0.00097	0.00020	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	116%		70-122%
17060-07-0	1,2-Dichloroethane-D4	106%		68-124%
2037-26-5	Toluene-D8	94%		77-125%
460-00-4	4-Bromofluorobenzene	96%		72-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-03		
Lab Sample ID:	JC39017-3	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	84.9
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5P36641.D	1	03/19/17	SB	03/18/17	OP1202	E5P1831
Run #2							

	Initial Weight	Final Volume
Run #1	31.2 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	0.076	0.019	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.19	0.023	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.19	0.032	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.19	0.067	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	0.19	0.14	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.19	0.040	mg/kg	
95-48-7	2-Methylphenol	ND	0.076	0.024	mg/kg	
	3&4-Methylphenol	ND	0.076	0.031	mg/kg	
88-75-5	2-Nitrophenol	ND	0.19	0.025	mg/kg	
100-02-7	4-Nitrophenol	ND	0.38	0.10	mg/kg	
87-86-5	Pentachlorophenol	ND	0.15	0.035	mg/kg	
108-95-2	Phenol	ND	0.076	0.020	mg/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.19	0.025	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.19	0.028	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.19	0.023	mg/kg	
83-32-9	Acenaphthene	ND	0.038	0.013	mg/kg	
208-96-8	Acenaphthylene	ND	0.038	0.019	mg/kg	
98-86-2	Acetophenone	ND	0.19	0.0081	mg/kg	
120-12-7	Anthracene	0.0592	0.038	0.023	mg/kg	
1912-24-9	Atrazine	ND	0.076	0.016	mg/kg	
56-55-3	Benzo(a)anthracene	0.192	0.038	0.011	mg/kg	
50-32-8	Benzo(a)pyrene	0.181	0.038	0.017	mg/kg	
205-99-2	Benzo(b)fluoranthene	0.208	0.038	0.017	mg/kg	
191-24-2	Benzo(g,h,i)perylene	0.148	0.038	0.019	mg/kg	
207-08-9	Benzo(k)fluoranthene	0.0798	0.038	0.018	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.076	0.015	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.076	0.0092	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.076	0.0052	mg/kg	
100-52-7	Benzaldehyde	ND	0.19	0.0094	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.076	0.0090	mg/kg	
106-47-8	4-Chloroaniline	ND	0.19	0.014	mg/kg	
86-74-8	Carbazole	ND	0.076	0.0055	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-03		
Lab Sample ID:	JC39017-3	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	84.9
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	0.076	0.015	mg/kg	
218-01-9	Chrysene	0.185	0.038	0.012	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.076	0.0081	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.076	0.016	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.076	0.014	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.076	0.012	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.038	0.012	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.038	0.019	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.076	0.031	mg/kg	
123-91-1	1,4-Dioxane	ND	0.038	0.025	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	0.0434	0.038	0.017	mg/kg	
132-64-9	Dibenzofuran	ND	0.076	0.015	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.076	0.0062	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.076	0.0094	mg/kg	
84-66-2	Diethyl phthalate	ND	0.076	0.0080	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.076	0.0067	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.076	0.0088	mg/kg	
206-44-0	Fluoranthene	0.299	0.038	0.017	mg/kg	
86-73-7	Fluorene	0.0172	0.038	0.017	mg/kg	J
118-74-1	Hexachlorobenzene	ND	0.076	0.0096	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.038	0.015	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.38	0.015	mg/kg	
67-72-1	Hexachloroethane	ND	0.19	0.019	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	0.158	0.038	0.018	mg/kg	
78-59-1	Isophorone	ND	0.076	0.0081	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.076	0.0085	mg/kg	
88-74-4	2-Nitroaniline	ND	0.19	0.0089	mg/kg	
99-09-2	3-Nitroaniline	ND	0.19	0.0094	mg/kg	
100-01-6	4-Nitroaniline	ND	0.19	0.0098	mg/kg	
91-20-3	Naphthalene	ND	0.038	0.011	mg/kg	
98-95-3	Nitrobenzene	ND	0.076	0.015	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.076	0.011	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.19	0.014	mg/kg	
85-01-8	Phenanthrene	0.194	0.038	0.013	mg/kg	
129-00-0	Pyrene	0.296	0.038	0.012	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.19	0.0096	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	78%		23-115%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-03		
Lab Sample ID:	JC39017-3	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	84.9
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	76%		27-114%
118-79-6	2,4,6-Tribromophenol	80%		19-152%
4165-60-0	Nitrobenzene-d5	89%		26-134%
321-60-8	2-Fluorobiphenyl	89%		39-124%
1718-51-0	Terphenyl-d14	87%		36-134%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-03		
Lab Sample ID:	JC39017-3	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8151 SW846 8151/3550C	**Percent Solids:**	84.9
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OA124610.D	1	03/23/17	RK	03/21/17	OP1206	GOA4269
Run #2	OA124729.D	1	03/26/17	RK	03/25/17	OP1390	GOA4272

	Initial Weight	Final Volume
Run #1	15.5 g	5.0 ml
Run #2	15.7 g	5.0 ml

Herbicide List

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	0.019	0.0085	mg/kg	
93-72-1	2,4,5-TP (Silvex)	ND	0.0038	0.0014	mg/kg	
93-76-5	2,4,5-T	ND	0.0038	0.0015	mg/kg	
75-99-0	Dalapon	ND	0.0038	0.0026	mg/kg	
1918-00-9	Dicamba	ND	0.0038	0.0019	mg/kg	
120-36-5	Dichloroprop	ND	0.019	0.0054	mg/kg	
88-85-7	Dinoseb	ND [a]	0.019	0.013	mg/kg	
94-74-6	MCPA	ND	1.9	0.44	mg/kg	
93-65-2	MCPP	ND	1.9	0.41	mg/kg	
87-86-5	Pentachlorophenol	ND	0.0019	0.0017	mg/kg	
94-82-6	2,4-DB	ND	0.019	0.0062	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	108%	94%	10-159%
19719-28-9	2,4-DCAA	79%	76%	10-159%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-03		
Lab Sample ID:	JC39017-3	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8081B SW846 3546	**Percent Solids:**	84.9
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G133174.D	1	03/20/17	KD	03/18/17	OP1208	G1G4257
Run #2							

	Initial Weight	Final Volume
Run #1	15.1 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.00078	0.00037	mg/kg	
319-84-6	alpha-BHC	ND	0.00078	0.00042	mg/kg	
319-85-7	beta-BHC	ND	0.00078	0.00049	mg/kg	
319-86-8	delta-BHC	ND	0.00078	0.00035	mg/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.00078	0.00034	mg/kg	
5103-71-9	alpha-Chlordane	ND	0.00078	0.00037	mg/kg	
5103-74-2	gamma-Chlordane	ND	0.00078	0.00034	mg/kg	
60-57-1	Dieldrin	ND	0.00078	0.00039	mg/kg	
72-54-8	4,4'-DDD	ND	0.00078	0.00050	mg/kg	
72-55-9	4,4'-DDE	ND	0.00078	0.00041	mg/kg	
50-29-3	4,4'-DDT	ND	0.00078	0.00046	mg/kg	
72-20-8	Endrin	ND	0.00078	0.00037	mg/kg	
1031-07-8	Endosulfan sulfate	ND	0.00078	0.00031	mg/kg	
7421-93-4	Endrin aldehyde	ND	0.00078	0.00046	mg/kg	
959-98-8	Endosulfan-I	ND	0.00078	0.00041	mg/kg	
33213-65-9	Endosulfan-II	ND	0.00078	0.00041	mg/kg	
76-44-8	Heptachlor	ND	0.00078	0.00038	mg/kg	
1024-57-3	Heptachlor epoxide	ND	0.00078	0.00042	mg/kg	
72-43-5	Methoxychlor	ND	0.0016	0.00039	mg/kg	
53494-70-5	Endrin ketone	ND	0.00078	0.00060	mg/kg	
8001-35-2	Toxaphene	ND	0.020	0.0081	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	57%		25-135%
877-09-8	Tetrachloro-m-xylene	58%		25-135%
2051-24-3	Decachlorobiphenyl	45%		10-156%
2051-24-3	Decachlorobiphenyl	53%		10-156%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-03		
Lab Sample ID:	JC39017-3	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8082A SW846 3546	**Percent Solids:**	84.9
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5G67726.D	1	03/21/17	HB	03/18/17	OP1207	G5G1587
Run #2							

	Initial Weight	Final Volume
Run #1	15.1 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.039	0.019	mg/kg	
11104-28-2	Aroclor 1221	ND	0.039	0.019	mg/kg	
11141-16-5	Aroclor 1232	ND	0.039	0.015	mg/kg	
53469-21-9	Aroclor 1242	ND	0.039	0.014	mg/kg	
12672-29-6	Aroclor 1248	ND	0.039	0.025	mg/kg	
11097-69-1	Aroclor 1254	ND	0.039	0.020	mg/kg	
11096-82-5	Aroclor 1260	ND	0.039	0.017	mg/kg	
11100-14-4	Aroclor 1268	ND	0.039	0.014	mg/kg	
37324-23-5	Aroclor 1262	ND	0.039	0.026	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	66%		24-152%
877-09-8	Tetrachloro-m-xylene	68%		24-152%
2051-24-3	Decachlorobiphenyl	65%		10-166%
2051-24-3	Decachlorobiphenyl	74%		10-166%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-03		
Lab Sample ID:	JC39017-3	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	84.9
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	13700	57	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Antimony	< 2.3	2.3	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Arsenic	3.4	2.3	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Barium	31.1	23	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Beryllium	0.32	0.23	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Cadmium	< 0.57	0.57	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Calcium	6100	570	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Chromium	16.0	1.1	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Cobalt	5.7	5.7	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Copper	8.3	2.9	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Iron	10800	57	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Lead	8.9	2.3	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Magnesium	2510	570	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Manganese	187	1.7	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Mercury	< 0.037	0.037	mg/kg	1	03/17/17	03/18/17	JA	SW846 7471B [2]	SW846 7471B [4]
Nickel	12.2	4.6	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Selenium	< 2.3	2.3	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Silver	< 0.57	0.57	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Vanadium	26.7	5.7	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Zinc	25.3	5.7	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA41584
(2) Instrument QC Batch: MA41588
(3) Prep QC Batch: MP99298
(4) Prep QC Batch: MP99318

RL = Reporting Limit

Report of Analysis

Client Sample ID:	JOHN-SB-03		
Lab Sample ID:	JC39017-3	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	84.9
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	< 0.24	0.24	mg/kg	1	03/21/17 11:30	BM	SW846 9012B/LACHAT
Solids, Percent	84.9		%	1	03/17/17 09:50	TZW	SM2540 G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	JOHN-SB-03		
Lab Sample ID:	JC39017-3A	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8260C SW846 1311	**Percent Solids:**	84.9
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B149254.D	5	03/21/17	EH	03/17/17	GP3959	V2B6624
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.0025	0.00070	mg/l	
78-93-3	2-Butanone (MEK)	ND	D035	200	0.10	0.0095	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.0050	0.0027	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.0050	0.00087	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.0050	0.0011	mg/l	
106-46-7	1,4-Dichlorobenzene [a]	ND	D027	7.5	0.0050	0.0011	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.0050	0.0020	mg/l	
75-35-4	1,1-Dichloroethene	ND	D029	0.70	0.0050	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	D039	0.70	0.0050	0.0012	mg/l	
79-01-6	Trichloroethene	ND	D040	0.50	0.0050	0.0013	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.0050	0.0016	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	112%		76-120%
17060-07-0	1,2-Dichloroethane-D4	101%		64-135%
2037-26-5	Toluene-D8	99%		76-117%
460-00-4	4-Bromofluorobenzene	95%		72-122%

(a) This compound in BS is outside in house QC limits bias high.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-03		
Lab Sample ID:	JC39017-3A	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	84.9
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2M92700.D	1	03/21/17	SB	03/20/17	OP1257	E2M4116
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.020	0.0089	mg/l	
	3&4-Methylphenol	ND	D024	200	0.020	0.0088	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.10	0.014	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.013	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0092	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.020	0.0017	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.020	0.0055	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.020	0.0033	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.010	0.0049	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0039	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.020	0.0064	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.020	0.0039	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	36%		14-88%
4165-62-2	Phenol-d5	23%		10-110%
118-79-6	2,4,6-Tribromophenol	78%		39-149%
4165-60-0	Nitrobenzene-d5	72%		32-128%
321-60-8	2-Fluorobiphenyl	75%		35-119%
1718-51-0	Terphenyl-d14	90%		10-126%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-03		
Lab Sample ID:	JC39017-3A	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8151 SW846 8151/3510C	**Percent Solids:**	84.9
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G107150.D	1	03/22/17	RK	03/20/17	OP1259	G3G3741
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Herbicide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND	D016	10	0.0050	0.0039	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.0015	0.00047	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	132%		50-142%
19719-28-9	2,4-DCAA	79%		50-142%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-03		
Lab Sample ID:	JC39017-3A	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	84.9
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	8G3933.D	1	03/21/17	KD	03/20/17	OP1261	G8G116
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Pesticide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	D013	0.40	0.00010	0.000028	mg/l	
12789-03-6	Chlordane	ND	D020	0.030	0.0050	0.0011	mg/l	
72-20-8	Endrin	ND	D012	0.020	0.00010	0.000050	mg/l	
76-44-8	Heptachlor	ND	D031	0.0080	0.00010	0.000038	mg/l	
1024-57-3	Heptachlor epoxide	ND	D031	0.0080	0.00010	0.000065	mg/l	
72-43-5	Methoxychlor	ND	D014	10	0.00020	0.000057	mg/l	
8001-35-2	Toxaphene	ND	D015	0.50	0.0025	0.0018	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	55%		30-137%
877-09-8	Tetrachloro-m-xylene	56%		30-137%
2051-24-3	Decachlorobiphenyl	117%		10-137%
2051-24-3	Decachlorobiphenyl	116%		10-137%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-03		
Lab Sample ID:	JC39017-3A	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	84.9
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 0.50	D004	5.0	0.50	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Barium	< 1.0	D005	100	1.0	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 0.025	D006	1.0	0.025	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 0.050	D007	5.0	0.050	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Lead	< 0.50	D008	5.0	0.50	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	03/20/17	03/20/17	JPM	SW846 7470A [1]	SW846 7470A [4]
Selenium	< 0.50	D010	1.0	0.50	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Silver	< 0.050	D011	5.0	0.050	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA41592
(2) Instrument QC Batch: MA41600
(3) Prep QC Batch: MP99320
(4) Prep QC Batch: MP99334

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID:	JOHN-SB-03		
Lab Sample ID:	JC39017-3A	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	84.9
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Corrosivity as pH	8.22 NC		su	1	03/18/17 21:10	AT	SW846 9045D
Cyanide Reactivity	< 12	12	mg/kg	1	03/18/17 12:00	YZ	SW846 CHAP7/9012 B
Ignitability (Flashpoint)	> 200		Deg. F	1	03/18/17 22:10	AT	SW846 1010A/ASTM D93
Sulfide Reactivity	< 120	120	mg/kg	1	03/19/17 22:00	CB	SW846 CHAP7/9034

RL = Reporting Limit

Report of Analysis

Client Sample ID:	JOHN-SB-04		
Lab Sample ID:	JC39017-4	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8260C	**Percent Solids:**	87.8
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V167313.D	1	03/18/17	SY	n/a	n/a	VV7036
Run #2							

	Initial Weight
Run #1	6.7 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0119	0.0085	0.0042	mg/kg	
71-43-2	Benzene	ND	0.00042	0.00010	mg/kg	
74-97-5	Bromochloromethane	ND	0.0042	0.00027	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0017	0.00013	mg/kg	
75-25-2	Bromoform	ND	0.0042	0.00023	mg/kg	
74-83-9	Bromomethane	ND	0.0042	0.00041	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.0085	0.0015	mg/kg	
75-15-0	Carbon disulfide	ND	0.0017	0.00014	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0017	0.00014	mg/kg	
108-90-7	Chlorobenzene	ND	0.0017	0.00014	mg/kg	
75-00-3	Chloroethane	ND	0.0042	0.00036	mg/kg	
67-66-3	Chloroform	ND	0.0017	0.00020	mg/kg	
74-87-3	Chloromethane	ND	0.0042	0.00018	mg/kg	
110-82-7	Cyclohexane	ND	0.0017	0.00046	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0017	0.00041	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0017	0.00013	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.00085	0.00021	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.00085	0.00015	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.00085	0.00012	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.00085	0.00013	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0042	0.00046	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.00085	0.00016	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.00085	0.00015	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.00085	0.00013	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.00085	0.00037	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.00085	0.00013	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0017	0.00026	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0017	0.00017	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0017	0.00019	mg/kg	
100-41-4	Ethylbenzene	0.0014	0.00085	0.00013	mg/kg	
76-13-1	Freon 113	ND	0.0042	0.00041	mg/kg	
591-78-6	2-Hexanone	ND	0.0042	0.0012	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-04		
Lab Sample ID:	JC39017-4	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8260C	**Percent Solids:**	87.8
Project:	LIRR Expansion, Long Island, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	0.0017	0.00013	mg/kg	
79-20-9	Methyl Acetate	ND	0.0042	0.0017	mg/kg	
108-87-2	Methylcyclohexane	ND	0.0017	0.00043	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.00085	0.00023	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0042	0.00072	mg/kg	
75-09-2	Methylene chloride	ND	0.0042	0.00085	mg/kg	
100-42-5	Styrene	ND	0.0017	0.00012	mg/kg	
75-65-0	Tert Butyl Alcohol	ND	0.021	0.0026	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0017	0.00020	mg/kg	
127-18-4	Tetrachloroethene	0.00034	0.0017	0.00024	mg/kg	J
108-88-3	Toluene	ND	0.00085	0.00011	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0042	0.00042	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0042	0.00042	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0017	0.00014	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0017	0.00027	mg/kg	
79-01-6	Trichloroethene	ND	0.00085	0.00016	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0042	0.00053	mg/kg	
75-01-4	Vinyl chloride	ND	0.0017	0.00017	mg/kg	
	m,p-Xylene	0.0059	0.00085	0.00019	mg/kg	
95-47-6	o-Xylene	0.0020	0.00085	0.00017	mg/kg	
1330-20-7	Xylene (total)	0.0079	0.00085	0.00017	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	115%		70-122%
17060-07-0	1,2-Dichloroethane-D4	105%		68-124%
2037-26-5	Toluene-D8	96%		77-125%
460-00-4	4-Bromofluorobenzene	94%		72-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-04		
Lab Sample ID:	JC39017-4	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	87.8
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5P36642.D	1	03/19/17	SB	03/18/17	OP1202	E5P1831
Run #2							

	Initial Weight	Final Volume
Run #1	31.4 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	0.073	0.018	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.18	0.022	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.18	0.031	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.18	0.065	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	0.18	0.14	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.18	0.039	mg/kg	
95-48-7	2-Methylphenol	ND	0.073	0.023	mg/kg	
	3&4-Methylphenol	ND	0.073	0.030	mg/kg	
88-75-5	2-Nitrophenol	ND	0.18	0.024	mg/kg	
100-02-7	4-Nitrophenol	ND	0.36	0.097	mg/kg	
87-86-5	Pentachlorophenol	ND	0.15	0.034	mg/kg	
108-95-2	Phenol	ND	0.073	0.019	mg/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.18	0.024	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.18	0.027	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.18	0.022	mg/kg	
83-32-9	Acenaphthene	ND	0.036	0.013	mg/kg	
208-96-8	Acenaphthylene	ND	0.036	0.018	mg/kg	
98-86-2	Acetophenone	ND	0.18	0.0078	mg/kg	
120-12-7	Anthracene	ND	0.036	0.022	mg/kg	
1912-24-9	Atrazine	ND	0.073	0.016	mg/kg	
56-55-3	Benzo(a)anthracene	0.0299	0.036	0.010	mg/kg	J
50-32-8	Benzo(a)pyrene	0.0347	0.036	0.017	mg/kg	J
205-99-2	Benzo(b)fluoranthene	0.0434	0.036	0.016	mg/kg	
191-24-2	Benzo(g,h,i)perylene	0.0399	0.036	0.018	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.036	0.017	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.073	0.014	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.073	0.0089	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.073	0.0050	mg/kg	
100-52-7	Benzaldehyde	ND	0.18	0.0090	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.073	0.0086	mg/kg	
106-47-8	4-Chloroaniline	ND	0.18	0.013	mg/kg	
86-74-8	Carbazole	ND	0.073	0.0053	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-04		
Lab Sample ID:	JC39017-4	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	87.8
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	0.073	0.014	mg/kg	
218-01-9	Chrysene	0.0426	0.036	0.011	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.073	0.0078	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.073	0.016	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.073	0.013	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.073	0.012	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.036	0.011	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.036	0.018	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.073	0.030	mg/kg	
123-91-1	1,4-Dioxane	ND	0.036	0.024	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.036	0.016	mg/kg	
132-64-9	Dibenzofuran	ND	0.073	0.015	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.073	0.0059	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.073	0.0090	mg/kg	
84-66-2	Diethyl phthalate	ND	0.073	0.0077	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.073	0.0065	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.073	0.0085	mg/kg	
206-44-0	Fluoranthene	0.0344	0.036	0.016	mg/kg	J
86-73-7	Fluorene	ND	0.036	0.017	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.073	0.0092	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.036	0.015	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.36	0.014	mg/kg	
67-72-1	Hexachloroethane	ND	0.18	0.018	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	0.0376	0.036	0.017	mg/kg	
78-59-1	Isophorone	ND	0.073	0.0078	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.073	0.0082	mg/kg	
88-74-4	2-Nitroaniline	ND	0.18	0.0086	mg/kg	
99-09-2	3-Nitroaniline	ND	0.18	0.0091	mg/kg	
100-01-6	4-Nitroaniline	ND	0.18	0.0094	mg/kg	
91-20-3	Naphthalene	ND	0.036	0.010	mg/kg	
98-95-3	Nitrobenzene	ND	0.073	0.014	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.073	0.010	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.18	0.013	mg/kg	
85-01-8	Phenanthrene	0.0166	0.036	0.012	mg/kg	J
129-00-0	Pyrene	0.0424	0.036	0.012	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.18	0.0092	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	76%		23-115%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-04		
Lab Sample ID:	JC39017-4	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	87.8
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	73%		27-114%
118-79-6	2,4,6-Tribromophenol	76%		19-152%
4165-60-0	Nitrobenzene-d5	84%		26-134%
321-60-8	2-Fluorobiphenyl	86%		39-124%
1718-51-0	Terphenyl-d14	84%		36-134%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-04		
Lab Sample ID:	JC39017-4	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8151 SW846 8151/3550C	**Percent Solids:**	87.8
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OA124611.D	1	03/23/17	RK	03/21/17	OP1206	GOA4269
Run #2	OA124732.D	1	03/26/17	RK	03/25/17	OP1390	GOA4272

	Initial Weight	Final Volume
Run #1	15.5 g	5.0 ml
Run #2	15.7 g	5.0 ml

Herbicide List

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	0.018	0.0082	mg/kg	
93-72-1	2,4,5-TP (Silvex)	ND	0.0037	0.0013	mg/kg	
93-76-5	2,4,5-T	ND	0.0037	0.0014	mg/kg	
75-99-0	Dalapon	ND	0.0037	0.0025	mg/kg	
1918-00-9	Dicamba	ND	0.0037	0.0019	mg/kg	
120-36-5	Dichloroprop	ND	0.018	0.0052	mg/kg	
88-85-7	Dinoseb	ND [a]	0.018	0.012	mg/kg	
94-74-6	MCPA	ND	1.8	0.42	mg/kg	
93-65-2	MCPP	ND	1.8	0.40	mg/kg	
87-86-5	Pentachlorophenol	ND	0.0018	0.0016	mg/kg	
94-82-6	2,4-DB	ND	0.018	0.0060	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	92%	119%	10-159%
19719-28-9	2,4-DCAA	68%	142%	10-159%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-04		
Lab Sample ID:	JC39017-4	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8081B SW846 3546	**Percent Solids:**	87.8
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G133175.D	1	03/20/17	KD	03/18/17	OP1208	G1G4257
Run #2							

	Initial Weight	Final Volume
Run #1	16.1 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.00071	0.00034	mg/kg	
319-84-6	alpha-BHC	ND	0.00071	0.00038	mg/kg	
319-85-7	beta-BHC	ND	0.00071	0.00044	mg/kg	
319-86-8	delta-BHC	ND	0.00071	0.00032	mg/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.00071	0.00031	mg/kg	
5103-71-9	alpha-Chlordane [a]	0.00072	0.00071	0.00034	mg/kg	
5103-74-2	gamma-Chlordane	0.00060	0.00071	0.00031	mg/kg	J
60-57-1	Dieldrin	ND	0.00071	0.00035	mg/kg	
72-54-8	4,4'-DDD	ND	0.00071	0.00045	mg/kg	
72-55-9	4,4'-DDE	ND	0.00071	0.00037	mg/kg	
50-29-3	4,4'-DDT	ND	0.00071	0.00042	mg/kg	
72-20-8	Endrin	ND	0.00071	0.00033	mg/kg	
1031-07-8	Endosulfan sulfate	ND	0.00071	0.00028	mg/kg	
7421-93-4	Endrin aldehyde	ND	0.00071	0.00042	mg/kg	
959-98-8	Endosulfan-I	ND	0.00071	0.00037	mg/kg	
33213-65-9	Endosulfan-II	ND	0.00071	0.00037	mg/kg	
76-44-8	Heptachlor	ND	0.00071	0.00035	mg/kg	
1024-57-3	Heptachlor epoxide	ND	0.00071	0.00038	mg/kg	
72-43-5	Methoxychlor	ND	0.0014	0.00035	mg/kg	
53494-70-5	Endrin ketone	ND	0.00071	0.00055	mg/kg	
8001-35-2	Toxaphene	ND	0.018	0.0074	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	78%		25-135%
877-09-8	Tetrachloro-m-xylene	80%		25-135%
2051-24-3	Decachlorobiphenyl	58%		10-156%
2051-24-3	Decachlorobiphenyl	65%		10-156%

(a) More than 40 % RPD for detected concentrations between the two GC columns.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-04		
Lab Sample ID:	JC39017-4	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8082A SW846 3546	**Percent Solids:**	87.8
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5G67727.D	1	03/21/17	HB	03/18/17	OP1207	G5G1587
Run #2							

	Initial Weight	Final Volume
Run #1	16.1 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.035	0.017	mg/kg	
11104-28-2	Aroclor 1221	ND	0.035	0.017	mg/kg	
11141-16-5	Aroclor 1232	ND	0.035	0.014	mg/kg	
53469-21-9	Aroclor 1242	ND	0.035	0.013	mg/kg	
12672-29-6	Aroclor 1248	ND	0.035	0.022	mg/kg	
11097-69-1	Aroclor 1254	ND	0.035	0.018	mg/kg	
11096-82-5	Aroclor 1260	ND	0.035	0.015	mg/kg	
11100-14-4	Aroclor 1268	ND	0.035	0.013	mg/kg	
37324-23-5	Aroclor 1262	ND	0.035	0.024	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	99%		24-152%
877-09-8	Tetrachloro-m-xylene	103%		24-152%
2051-24-3	Decachlorobiphenyl	89%		10-166%
2051-24-3	Decachlorobiphenyl	96%		10-166%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-04		
Lab Sample ID:	JC39017-4	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	87.8
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	8920	55	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Antimony	< 2.2	2.2	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Arsenic	4.2	2.2	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Barium	29.9	22	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Beryllium	0.25	0.22	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Cadmium	< 0.55	0.55	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Calcium	6600	550	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Chromium	12.2	1.1	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Cobalt	5.5	5.5	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Copper	27.8	2.8	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Iron	13400	55	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Lead	18.9	2.2	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Magnesium	2370	550	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Manganese	179	1.7	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Mercury	< 0.036	0.036	mg/kg	1	03/17/17	03/18/17	JA	SW846 7471B [2]	SW846 7471B [4]
Nickel	13.5	4.4	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Selenium	< 2.2	2.2	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Silver	1.2	0.55	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Sodium	4160	1100	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Vanadium	27.5	5.5	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]
Zinc	34.1	5.5	mg/kg	1	03/17/17	03/17/17	ND	SW846 6010C [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA41584
(2) Instrument QC Batch: MA41588
(3) Prep QC Batch: MP99298
(4) Prep QC Batch: MP99318

RL = Reporting Limit

Report of Analysis

Client Sample ID:	JOHN-SB-04		
Lab Sample ID:	JC39017-4	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	87.8
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	< 0.25	0.25	mg/kg	1	03/21/17 11:31	BM	SW846 9012B/LACHAT
Solids, Percent	87.8		%	1	03/17/17 09:50	TZW	SM2540 G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	JOHN-SB-04		
Lab Sample ID:	JC39017-4A	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8260C SW846 1311	**Percent Solids:**	87.8
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B149255.D	5	03/21/17	EH	03/17/17	GP3959	V2B6624
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.0025	0.00070	mg/l	
78-93-3	2-Butanone (MEK)	ND	D035	200	0.10	0.0095	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.0050	0.0027	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.0050	0.00087	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.0050	0.0011	mg/l	
106-46-7	1,4-Dichlorobenzene [a]	ND	D027	7.5	0.0050	0.0011	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.0050	0.0020	mg/l	
75-35-4	1,1-Dichloroethene	ND	D029	0.70	0.0050	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	D039	0.70	0.0050	0.0012	mg/l	
79-01-6	Trichloroethene	ND	D040	0.50	0.0050	0.0013	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.0050	0.0016	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	114%		76-120%
17060-07-0	1,2-Dichloroethane-D4	101%		64-135%
2037-26-5	Toluene-D8	98%		76-117%
460-00-4	4-Bromofluorobenzene	94%		72-122%

(a) This compound in BS is outside in house QC limits bias high.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-04		
Lab Sample ID:	JC39017-4A	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	87.8
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2M92701.D	1	03/21/17	SB	03/20/17	OP1257	E2M4116
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.020	0.0089	mg/l	
	3&4-Methylphenol	ND	D024	200	0.020	0.0088	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.10	0.014	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.013	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0092	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.020	0.0017	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.020	0.0055	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.020	0.0033	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.010	0.0049	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0039	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.020	0.0064	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.020	0.0039	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	42%		14-88%
4165-62-2	Phenol-d5	23%		10-110%
118-79-6	2,4,6-Tribromophenol	87%		39-149%
4165-60-0	Nitrobenzene-d5	81%		32-128%
321-60-8	2-Fluorobiphenyl	84%		35-119%
1718-51-0	Terphenyl-d14	96%		10-126%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-04		
Lab Sample ID:	JC39017-4A	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8151 SW846 8151/3510C	**Percent Solids:**	87.8
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G107151.D	1	03/22/17	RK	03/20/17	OP1259	G3G3741
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Herbicide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND	D016	10	0.0050	0.0039	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.0015	0.00047	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	111%		50-142%
19719-28-9	2,4-DCAA	75%		50-142%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-04		
Lab Sample ID:	JC39017-4A	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	87.8
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	8G3934.D	1	03/21/17	KD	03/20/17	OP1261	G8G116
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Pesticide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	D013	0.40	0.00010	0.000028	mg/l	
12789-03-6	Chlordane	ND	D020	0.030	0.0050	0.0011	mg/l	
72-20-8	Endrin	ND	D012	0.020	0.00010	0.000050	mg/l	
76-44-8	Heptachlor	ND	D031	0.0080	0.00010	0.000038	mg/l	
1024-57-3	Heptachlor epoxide	ND	D031	0.0080	0.00010	0.000065	mg/l	
72-43-5	Methoxychlor	ND	D014	10	0.00020	0.000057	mg/l	
8001-35-2	Toxaphene	ND	D015	0.50	0.0025	0.0018	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	48%		30-137%
877-09-8	Tetrachloro-m-xylene	47%		30-137%
2051-24-3	Decachlorobiphenyl	86%		10-137%
2051-24-3	Decachlorobiphenyl	83%		10-137%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	JOHN-SB-04		
Lab Sample ID:	JC39017-4A	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	87.8
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 0.50	D004	5.0	0.50	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Barium	< 1.0	D005	100	1.0	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 0.025	D006	1.0	0.025	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 0.050	D007	5.0	0.050	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Lead	< 0.50	D008	5.0	0.50	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	03/20/17	03/20/17	JPM	SW846 7470A [1]	SW846 7470A [4]
Selenium	< 0.50	D010	1.0	0.50	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Silver	< 0.050	D011	5.0	0.050	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA41592
(2) Instrument QC Batch: MA41600
(3) Prep QC Batch: MP99320
(4) Prep QC Batch: MP99334

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID:	JOHN-SB-04		
Lab Sample ID:	JC39017-4A	**Date Sampled:**	03/15/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	87.8
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Corrosivity as pH	8.03 NC		su	1	03/18/17 21:10	AT	SW846 9045D
Cyanide Reactivity	< 11	11	mg/kg	1	03/18/17 12:01	YZ	SW846 CHAP7/9012 B
Ignitability (Flashpoint)	> 200		Deg. F	1	03/18/17 22:10	AT	SW846 1010A/ASTM D93
Sulfide Reactivity	< 110	110	mg/kg	1	03/19/17 22:00	CB	SW846 CHAP7/9034

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

Parameter Certification Exceptions

Job Number: JC39017
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY

The following parameters included in this report are exceptions to NELAC certification.
The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Cyanide Reactivity		**SW846 CHAP7/9012 B**	SO	Accutest is not certified for this parameter.[a]
Sulfide Reactivity		**SW846 CHAP7/9034**	SO	Accutest is not certified for this parameter.[a]

(a) Reactivity analyzed following SW846 Chapter 7 is no longer recognized by regulatory agencies. Use of results should be verified through the program to which the data is being submitted.

Certification exceptions shown are based on the New Jersey DEP certifications. Applicability in other states may vary. Please contact your laboratory representative if additional information is required for a specific regulatory program.

SGS ACCUTEST SCL

CHAIN OF CUSTODY

SGS Accutest - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

PAGE 1 OF 1

FED-EX Tracking #: | Bottle Order Control #:
SGS Accutest Quote #: | SGS Accutest Job #: JC39017

Client / Reporting Information

Company Name: Matrix NewWorld
Street Address: 150th W 30th st.
City: NY State: NY Zip: 10001
Project Contact: Brian Crespi Email: BCrespi@matrixnewworld.com
Phone #: 212-324-4251 973-240-1973 Fax #:
Sampler(s) Name(s): Lindsey Melidarch Phone #: 201-881-1955

Project Information

Project Name: Long Island Rail Road (LIRR)
Street: John St.
City: Hicksville State: NY
Project #: 16-144
Client Purchase Order #:
Project Manager: Brian Crespi

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

SGS Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	NI Water	MEOH	ENCORE	FULLTCLP	RCRA	FULLTAL/TCL	Herbicides/Restricted	PCB	LAB USE ONLY
1	JOHN-SB-01		3/15/17	0815	LM	SO	6					3	2	1		X	X	X	X	X	C59
2	JOHN-SB-02		3/15/17	0855	LM	SO	6					3	2	1		X	X	X	X	X	4G4
3	JOHN-SB-03		3/15/17	1020	LM	SO	6					3	2	1		X	X	X	X	X	1MF3
4	JOHN-SB-04		3/15/17	1100	LM	SO	6					3	2	1		X	X	X	X	X	4088

D.I. slurry voc vials frozen storage
Date: 3/16/17 Time: 1500 Initials: [illegible]

Turnaround Time (Business days)

- ☐ Std. 10 Business Days
- ☐ 5 Day RUSH
- ☑ 3 Day RUSH
- ☐ 2 Day RUSH
- ☐ 1 Day RUSH
- ☐ other_____

Emergency & Rush T/A data available VIA Lablink

Approved by (SGS Accutest PM): / Date:

INITIAL ASESSMENT 3/16/17
LABEL VERIFICATION [illegible]

Data Deliverable Information

- ☐ Commercial "a" (Level 1)
- ☐ Commercial "b" *Level 2)
- ☐ FULLT1 (Level 3+4)
- ☐ NJ Reduced
- ☐ Commercial "C"
- ☐ *NJ Data of Known Quality Protocol Reporting*
- ☑ NYASP Category A
- ☐ NYASP Category B
- ☐ State Forms
- ☐ EDD Format _____
- ☐ Other _____

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

CS#620/618
Samples on ice

Sample inventory is verified upon receipt in the Laboratory

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date/Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [illegible]	3/16/17 1400	1 [illegible]	2 [illegible]	3/16/17 1515	2 [illegible]
Relinquished by Sampler: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by Sampler: 5	Date Time:	Received By: 5	Custody Seal # ☐ Intact ☐ Not intact	Preserved where applicable ☐	On Ice ☑ Cooler Temp. 3.4°C, 3.9°C TG

SM088-01C Rev. Date: 9/13/16

JC39017: Chain of Custody
Page 1 of 3

SGS ACCUTEST

Soil VOC Vial Tracking Log

JOB NUMBER: JC39017

SAMPLE #	MeOH	MeOH	DIH2O / NaHSO4	DIH2O / NaHSO4
1	1008		301	302
2	1010		306	305
3	1007		300	299
4	1005		295	296

All strike outs must be initialed & dated. A reason code must be applied if not a transcription error.

Form: SM087-01

Rev Date: 6/1/16

SGS Accutest Sample Receipt Summary

Job Number: JC39017 **Client:** _____ **Project:** _____

Date / Time Received: 3/16/2017 3:55:00 PM **Delivery Method:** _____ **Airbill #'s:** _____

Cooler Temps (Raw Measured) °C: Cooler 1: (3.4); Cooler 2: (3.9);

Cooler Temps (Corrected) °C: Cooler 1: (4.8); Cooler 2: (5.3);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	2		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

SM089-02
Rev. Date 12/1/16

JC39017: Chain of Custody
Page 3 of 3

Internal Sample Tracking Chronicle

Matrix New World Engineering, Inc.

Job No: JC39017

LIRR Expansion, Long Island, NY
Project No: 16-144, John Street Parking Lot, John Street, Hicksville

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC39017-1 Collected: 15-MAR-17 08:15 By: LM Received: 16-MAR-17 By: AS JOHN-SB-01						
JC39017-1	SM2540 G-97	17-MAR-17 09:50	TZW			SOL104
JC39017-1	SW846 6010C	17-MAR-17 17:45	ND	17-MAR-17	RM	AG,AL,AS,BA,BE,CA,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN
JC39017-1	SW846 8260C	17-MAR-17 18:34	SY			V8260TCL20
JC39017-1	SW846 7471B	18-MAR-17 09:19	JA	17-MAR-17	JA	HG
JC39017-1	SW846 8270D	19-MAR-17 20:50	SB	18-MAR-17	LL	AB8270TCL20
JC39017-1	SW846 8081B	20-MAR-17 22:44	KD	18-MAR-17	AC	P8081PESTTCL
JC39017-1	SW846 8082A	21-MAR-17 08:02	HB	18-MAR-17	AC	P8082PCB11AO
JC39017-1	SW846 9012B/LACHAT	21-MAR-17 11:24	BM	20-MAR-17	MP	CN
JC39017-1	SW846 8151	23-MAR-17 00:15	RK	21-MAR-17	AQ	H8151FL
JC39017-1	SW846 8151	26-MAR-17 07:41	RK	25-MAR-17	DH	H8151FL
JC39017-2 Collected: 15-MAR-17 08:55 By: LM Received: 16-MAR-17 By: AS JOHN-SB-02						
JC39017-2	SM2540 G-97	17-MAR-17 09:50	TZW			SOL104
JC39017-2	SW846 6010C	17-MAR-17 18:02	ND	17-MAR-17	RM	AG,AL,AS,BA,BE,CA,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN
JC39017-2	SW846 7471B	18-MAR-17 09:21	JA	17-MAR-17	JA	HG
JC39017-2	SW846 8260C	18-MAR-17 16:43	SY			V8260TCL20
JC39017-2	SW846 8270D	19-MAR-17 21:13	SB	18-MAR-17	LL	AB8270TCL20
JC39017-2	SW846 8081B	20-MAR-17 23:01	KD	18-MAR-17	AC	P8081PESTTCL
JC39017-2	SW846 8082A	21-MAR-17 10:46	HB	18-MAR-17	AC	P8082PCB11AO
JC39017-2	SW846 9012B/LACHAT	21-MAR-17 11:26	BM	20-MAR-17	MP	CN
JC39017-2	SW846 8151	23-MAR-17 00:43	RK	21-MAR-17	AQ	H8151FL
JC39017-2	SW846 8151	26-MAR-17 08:09	RK	25-MAR-17	DH	H8151FL
JC39017-3 Collected: 15-MAR-17 10:20 By: LM Received: 16-MAR-17 By: AS JOHN-SB-03						
JC39017-3	SM2540 G-97	17-MAR-17 09:50	TZW			SOL104
JC39017-3	SW846 6010C	17-MAR-17 18:06	ND	17-MAR-17	RM	AG,AL,AS,BA,BE,CA,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN
JC39017-3	SW846 8260C	17-MAR-17 19:02	SY			V8260TCL20

Internal Sample Tracking Chronicle

Matrix New World Engineering, Inc.

Job No: JC39017

LIRR Expansion, Long Island, NY
Project No: 16-144, John Street Parking Lot, John Street, Hicksville

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC39017-3	SW846 7471B	18-MAR-17 09:25	JA	17-MAR-17	JA	HG
JC39017-3	SW846 8270D	19-MAR-17 21:36	SB	18-MAR-17	LL	AB8270TCL20
JC39017-3	SW846 8081B	20-MAR-17 23:17	KD	18-MAR-17	AC	P8081PESTTCL
JC39017-3	SW846 8082A	21-MAR-17 11:04	HB	18-MAR-17	AC	P8082PCB11AO
JC39017-3	SW846 9012B/LACHAT	21-MAR-17 11:30	BM	20-MAR-17	MP	CN
JC39017-3	SW846 8151	23-MAR-17 03:05	RK	21-MAR-17	AQ	H8151FL
JC39017-3	SW846 8151	26-MAR-17 08:37	RK	25-MAR-17	DH	H8151FL
JC39017-4	Collected: 15-MAR-17 11:00 By: LM		Received: 16-MAR-17 By: AS			
JOHN-SB-04						
JC39017-4	SM2540 G-97	17-MAR-17 09:50	TZW			SOL104
JC39017-4	SW846 6010C	17-MAR-17 18:09	ND	17-MAR-17	RM	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC39017-4	SW846 7471B	18-MAR-17 09:27	JA	17-MAR-17	JA	HG
JC39017-4	SW846 8260C	18-MAR-17 16:14	SY			V8260TCL20
JC39017-4	SW846 8270D	19-MAR-17 22:00	SB	18-MAR-17	LL	AB8270TCL20
JC39017-4	SW846 8081B	20-MAR-17 23:34	KD	18-MAR-17	AC	P8081PESTTCL
JC39017-4	SW846 8082A	21-MAR-17 11:23	HB	18-MAR-17	AC	P8082PCB11AO
JC39017-4	SW846 9012B/LACHAT	21-MAR-17 11:31	BM	20-MAR-17	MP	CN
JC39017-4	SW846 8151	23-MAR-17 03:34	RK	21-MAR-17	AQ	H8151FL
JC39017-4	SW846 8151	26-MAR-17 10:02	RK	25-MAR-17	DH	H8151FL
JC39017-1A	Collected: 15-MAR-17 08:15 By: LM		Received: 16-MAR-17 By: AS			
JOHN-SB-01						
JC39017-1A	SW846 CHAP7/9012 B	18-MAR-17 11:57	YZ	18-MAR-17	CB	CREAC
JC39017-1A	SW846 9045D	18-MAR-17 21:10	AT			CORR
JC39017-1A	SW846 1010A/ASTM D93	18-MAR-17 22:10	AT			IGN
JC39017-1A	SW846 CHAP7/9034	19-MAR-17 22:00	CB	18-MAR-17	CB	SREAC
JC39017-1A	SW846 7470A	20-MAR-17 13:33	JPM	20-MAR-17	JPM	EHG
JC39017-1A	SW846 6010C	20-MAR-17 15:14	AB	18-MAR-17	JA	EAG,EAS,EBA,ECD,ECR,EPB,ESE
JC39017-1A	SW846 8270D	21-MAR-17 06:10	SB	20-MAR-17	MS	AB8270TCLP
JC39017-1A	SW846 8081B	21-MAR-17 11:51	KD	20-MAR-17	AF	P8081TCLP
JC39017-1A	SW846 8260C	21-MAR-17 12:42	EH	17-MAR-17	MS	V8260TCLP
JC39017-1A	SW846 8151	22-MAR-17 03:38	RK	20-MAR-17	RF	H8151TCLP

Internal Sample Tracking Chronicle

Matrix New World Engineering, Inc.

Job No: JC39017

LIRR Expansion, Long Island, NY
Project No: 16-144, John Street Parking Lot, John Street, Hicksville

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC39017-2A	Collected: 15-MAR-17 08:55 By: LM		Received: 16-MAR-17 By: AS			
JOHN-SB-02						
JC39017-2A	SW846 CHAP7/9012 B	18-MAR-17 11:59	YZ	18-MAR-17	CB	CREAC
JC39017-2A	SW846 9045D	18-MAR-17 21:10	AT			CORR
JC39017-2A	SW846 1010A/ASTM D93	18-MAR-17 22:10	AT			IGN
JC39017-2A	SW846 CHAP7/9034	19-MAR-17 22:00	CB	18-MAR-17	CB	SREAC
JC39017-2A	SW846 7470A	20-MAR-17 13:35	JPM	20-MAR-17	JPM	EHG
JC39017-2A	SW846 6010C	20-MAR-17 15:35	AB	18-MAR-17	JA	EAG,EAS,EBA,ECD,ECR,EPB,ESE
JC39017-2A	SW846 8270D	21-MAR-17 06:35	SB	20-MAR-17	MS	AB8270TCLP
JC39017-2A	SW846 8081B	21-MAR-17 12:06	KD	20-MAR-17	AF	P8081TCLP
JC39017-2A	SW846 8260C	21-MAR-17 13:13	EH	17-MAR-17	MS	V8260TCLP
JC39017-2A	SW846 8151	22-MAR-17 04:07	RK	20-MAR-17	RF	H8151TCLP
JC39017-3A	Collected: 15-MAR-17 10:20 By: LM		Received: 16-MAR-17 By: AS			
JOHN-SB-03						
JC39017-3A	SW846 CHAP7/9012 B	18-MAR-17 12:00	YZ	18-MAR-17	CB	CREAC
JC39017-3A	SW846 9045D	18-MAR-17 21:10	AT			CORR
JC39017-3A	SW846 1010A/ASTM D93	18-MAR-17 22:10	AT			IGN
JC39017-3A	SW846 CHAP7/9034	19-MAR-17 22:00	CB	18-MAR-17	CB	SREAC
JC39017-3A	SW846 7470A	20-MAR-17 13:36	JPM	20-MAR-17	JPM	EHG
JC39017-3A	SW846 6010C	20-MAR-17 15:38	AB	18-MAR-17	JA	EAG,EAS,EBA,ECD,ECR,EPB,ESE
JC39017-3A	SW846 8270D	21-MAR-17 07:00	SB	20-MAR-17	MS	AB8270TCLP
JC39017-3A	SW846 8081B	21-MAR-17 12:51	KD	20-MAR-17	AF	P8081TCLP
JC39017-3A	SW846 8260C	21-MAR-17 13:44	EH	17-MAR-17	MS	V8260TCLP
JC39017-3A	SW846 8151	22-MAR-17 04:35	RK	20-MAR-17	RF	H8151TCLP
JC39017-4A	Collected: 15-MAR-17 11:00 By: LM		Received: 16-MAR-17 By: AS			
JOHN-SB-04						
JC39017-4A	SW846 CHAP7/9012 B	18-MAR-17 12:01	YZ	18-MAR-17	CB	CREAC
JC39017-4A	SW846 9045D	18-MAR-17 21:10	AT			CORR
JC39017-4A	SW846 1010A/ASTM D93	18-MAR-17 22:10	AT			IGN
JC39017-4A	SW846 CHAP7/9034	19-MAR-17 22:00	CB	18-MAR-17	CB	SREAC
JC39017-4A	SW846 7470A	20-MAR-17 13:37	JPM	20-MAR-17	JPM	EHG
JC39017-4A	SW846 6010C	20-MAR-17 15:41	AB	18-MAR-17	JA	EAG,EAS,EBA,ECD,ECR,EPB,ESE
JC39017-4A	SW846 8270D	21-MAR-17 07:26	SB	20-MAR-17	MS	AB8270TCLP
JC39017-4A	SW846 8081B	21-MAR-17 13:06	KD	20-MAR-17	AF	P8081TCLP

Internal Sample Tracking Chronicle

Matrix New World Engineering, Inc.

Job No: JC39017

LIRR Expansion, Long Island, NY
Project No: 16-144, John Street Parking Lot, John Street, Hicksville

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC39017-4A	SW846 8260C	21-MAR-17 14:15	EH	17-MAR-17	MS	V8260TCLP
JC39017-4A	SW846 8151	22-MAR-17 05:03	RK	20-MAR-17	RF	H8151TCLP

SGS Accutest Internal Chain of Custody

Job Number: JC39017
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/16/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC39017-1.1	Secured Storage	Todd Shoemaker	03/17/17 10:00	Retrieve from Storage
JC39017-1.1	Todd Shoemaker	Secured Staging Area	03/17/17 10:00	Return to Storage
JC39017-1.1	Secured Staging Area	Mark Setaro	03/17/17 10:06	Retrieve from Storage
JC39017-1.1	Mark Setaro	Secured Storage	03/17/17 13:38	Return to Storage
JC39017-1.1	Secured Storage	Arielle Cocozza	03/18/17 06:25	Retrieve from Storage
JC39017-1.1	Secured Storage	Sahara Feliciano	03/18/17 15:47	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JC39017-1.1	Sahara Feliciano	Secured Staging Area	03/18/17 15:47	Return to Storage
JC39017-1.1	Secured Staging Area	Amir Takla	03/18/17 18:31	Retrieve from Storage
JC39017-1.1	Amir Takla	Secured Storage	03/18/17 18:32	Return to Storage
JC39017-1.1	Secured Storage	Sahara Feliciano	03/19/17 15:08	Retrieve from Storage
JC39017-1.1	Sahara Feliciano	Secured Staging Area	03/19/17 15:08	Return to Storage
JC39017-1.1	Secured Staging Area	Miti Patel	03/20/17 09:23	Retrieve from Storage
JC39017-1.1	Miti Patel	Secured Storage	03/20/17 13:16	Return to Storage
JC39017-1.1	Secured Storage	Edwin Gonzalez	03/23/17 12:29	Retrieve from Storage
JC39017-1.1	Edwin Gonzalez	Secured Staging Area	03/23/17 12:29	Return to Storage
JC39017-1.1	Secured Staging Area	Lindsey Lee	03/23/17 15:08	Retrieve from Storage
JC39017-1.1	Lindsey Lee	Secured Storage	03/23/17 23:34	Return to Storage
JC39017-1.1	Secured Storage	Albert Quayson	03/24/17 14:59	Retrieve from Storage
JC39017-1.1	Albert Quayson	Secured Storage	03/24/17 18:18	Return to Storage
JC39017-1.1	Secured Storage	Lindsey Lee	03/25/17 06:13	Retrieve from Storage
JC39017-1.1	Lindsey Lee	Secured Storage	03/25/17 16:13	Return to Storage
JC39017-1.1.1	Mark Setaro	TCLP	03/17/17 10:06	Leachate from JC39017-1.1
JC39017-1.1.1	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39017-1.1
JC39017-1.1.1	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39017-1.1.1	Secured Storage	Jessica Adametz	03/18/17 11:11	Retrieve from Storage
JC39017-1.1.1	Jessica Adametz	Secured Storage	03/18/17 11:12	Return to Storage
JC39017-1.1.2	Arielle Cocozza	Organics Prep	03/18/17 06:26	Extract from JC39017-1.1
JC39017-1.1.2	Organics Prep	Arielle Cocozza	03/18/17 16:25	Extract from JC39017-1.1
JC39017-1.1.2	Arielle Cocozza	Extract Storage	03/18/17 16:25	Return to Storage
JC39017-1.1.2	Extract Storage	Humarah Bano	03/20/17 17:01	Retrieve from Storage
JC39017-1.1.2	Humarah Bano	GC5G	03/20/17 17:01	Load on Instrument
JC39017-1.1.2	GC5G	Humarah Bano	03/22/17 10:28	Unload from Instrument
JC39017-1.1.2	Humarah Bano	Extract Freezer	03/22/17 10:28	Return to Storage
JC39017-1.1.3	Arielle Cocozza	Organics Prep	03/18/17 06:26	Extract from JC39017-1.1
JC39017-1.1.3	Organics Prep	Arielle Cocozza	03/18/17 16:25	Extract from JC39017-1.1
JC39017-1.1.3	Arielle Cocozza	Extract Storage	03/18/17 16:25	Return to Storage
JC39017-1.1.3	Extract Storage	Christine Phillips	03/20/17 16:34	Retrieve from Storage
JC39017-1.1.3	Christine Phillips	GC1G	03/20/17 16:34	Load on Instrument
JC39017-1.1.4	Arielle Cocozza	Organics Prep	03/18/17 06:37	Extract from JC39017-1.1

SGS Accutest Internal Chain of Custody

Job Number: JC39017
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/16/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC39017-1.1.4	Organics Prep	Lindsey Lee	03/18/17 17:02	Extract from JC39017-1.1
JC39017-1.1.4	Lindsey Lee	Extract Storage	03/18/17 17:02	Return to Storage
JC39017-1.1.4	Extract Storage	Sean Block	03/19/17 13:11	Retrieve from Storage
JC39017-1.1.4	Sean Block	GCMS5P	03/19/17 13:11	Load on Instrument
JC39017-1.1.4	GCMS5P	Ashley Noble	03/21/17 13:08	Unload from Instrument
JC39017-1.1.4	Ashley Noble	Extract Freezer	03/21/17 13:08	Return to Storage
JC39017-1.1.5	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39017-1.1
JC39017-1.1.5	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39017-1.1.5	Secured Storage	Nicholas Goydish	03/20/17 08:04	Retrieve from Storage
JC39017-1.1.5	Nicholas Goydish	Jonathan Stanley	03/20/17 14:59	Custody Transfer
JC39017-1.1.5	Jonathan Stanley	Ryan Fantasia	03/20/17 15:16	Custody Transfer
JC39017-1.1.5	Ryan Fantasia	Secured Storage	03/20/17 23:02	Return to Storage
JC39017-1.1.6	Jessica Adametz	Metals Digestion	03/18/17 11:12	Digestate from JC39017-1.1.1
JC39017-1.1.6	Metals Digestion	Jessica Adametz	03/18/17 11:12	Digestate from JC39017-1.1.1
JC39017-1.1.6	Jessica Adametz	Metals Digestate Storage	03/18/17 11:12	Return to Storage
JC39017-1.1.7	Nicholas Goydish	Organics Prep	03/20/17 08:11	Extract from JC39017-1.1.5
JC39017-1.1.7	Organics Prep	Ryan Fantasia	03/20/17 23:34	Extract from JC39017-1.1.5
JC39017-1.1.7	Ryan Fantasia	Extract Storage	03/20/17 23:34	Return to Storage
JC39017-1.1.7	Extract Storage	Rebecca Krug	03/21/17 16:43	Retrieve from Storage
JC39017-1.1.7	Rebecca Krug	GC3G	03/21/17 16:43	Load on Instrument
JC39017-1.1.7	GC3G	Rebecca Krug	03/23/17 16:15	Unload from Instrument
JC39017-1.1.7	Rebecca Krug	Extract Freezer	03/23/17 16:15	Return to Storage
JC39017-1.1.8	Nicholas Goydish	Organics Prep	03/20/17 08:12	Extract from JC39017-1.1.5
JC39017-1.1.8	Organics Prep	Nicholas Goydish	03/20/17 16:46	Extract from JC39017-1.1.5
JC39017-1.1.8	Nicholas Goydish	Extract Storage	03/20/17 16:46	Return to Storage
JC39017-1.1.8	Extract Storage	Sean Block	03/20/17 23:22	Retrieve from Storage
JC39017-1.1.8	Sean Block	GCMS2M	03/20/17 23:22	Load on Instrument
JC39017-1.1.8	GCMS2M	Ashley Noble	03/21/17 09:42	Unload from Instrument
JC39017-1.1.8	Ashley Noble	Extract Freezer	03/21/17 09:42	Return to Storage
JC39017-1.1.9	Nicholas Goydish	Organics Prep	03/20/17 08:13	Extract from JC39017-1.1.5
JC39017-1.1.9	Organics Prep	Amanda Furka	03/20/17 23:01	Extract from JC39017-1.1.5
JC39017-1.1.9	Amanda Furka	Extract Storage	03/20/17 23:01	Return to Storage
JC39017-1.1.9	Extract Storage	Christine Phillips	03/21/17 10:01	Retrieve from Storage
JC39017-1.1.9	Christine Phillips	GC8G	03/21/17 10:01	Load on Instrument
JC39017-1.1.10	Lindsey Lee	Organics Prep	03/23/17 15:23	Extract from JC39017-1.1
JC39017-1.1.10	Organics Prep	Sora Lynn Mathurin	03/24/17 12:14	Extract from JC39017-1.1
JC39017-1.1.10	Sora Lynn Mathurin	Extract Storage	03/24/17 12:14	Return to Storage

SGS Accutest Internal Chain of Custody

Job Number: JC39017
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/16/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC39017-1.1.11	Albert Quayson	Organics Prep	03/24/17 14:59	Extract from JC39017-1.1
JC39017-1.1.11	Organics Prep	Ryan Fantasia	03/24/17 23:51	Extract from JC39017-1.1
JC39017-1.1.11	Ryan Fantasia	Extract Storage	03/24/17 23:51	Return to Storage
JC39017-1.1.12	Albert Quayson	Organics Prep	03/24/17 14:59	Extract from JC39017-1.1
JC39017-1.1.12	Organics Prep	Ryan Fantasia	03/24/17 23:51	Extract from JC39017-1.1
JC39017-1.1.12	Ryan Fantasia	Extract Storage	03/24/17 23:51	Return to Storage
JC39017-1.1.13	Lindsey Lee	Organics Prep	03/25/17 06:55	Extract from JC39017-1.1
JC39017-1.1.13	Organics Prep	Albert Quayson	03/25/17 18:27	Extract from JC39017-1.1
JC39017-1.1.13	Albert Quayson	Extract Storage	03/25/17 18:27	Return to Storage
JC39017-1.1.13	Extract Storage	Rebecca Krug	03/26/17 06:29	Retrieve from Storage
JC39017-1.1.13	Rebecca Krug	GCOA	03/26/17 06:30	Load on Instrument
JC39017-1.2	Secured Storage	Todd Shoemaker	03/17/17 08:21	Retrieve from Storage
JC39017-1.2	Todd Shoemaker	Secured Staging Area	03/17/17 08:21	Return to Storage
JC39017-1.2	Secured Staging Area	Radhika Mistry	03/17/17 08:56	Retrieve from Storage
JC39017-1.2	Radhika Mistry	Secured Storage	03/17/17 08:59	Return to Storage
JC39017-1.2	Secured Storage	Luis Villanueva	03/17/17 09:28	Retrieve from Storage
JC39017-1.2	Luis Villanueva	Secured Storage	03/17/17 10:54	Return to Storage
JC39017-1.2	Secured Storage	Sahara Feliciano	03/17/17 12:15	Retrieve from Storage
JC39017-1.2	Sahara Feliciano	Secured Staging Area	03/17/17 12:15	Return to Storage
JC39017-1.2	Secured Staging Area	Jessica Adametz	03/17/17 14:39	Retrieve from Storage
JC39017-1.2	Jessica Adametz	Secured Storage	03/17/17 14:42	Return to Storage
JC39017-1.2	Secured Storage	Edwin Gonzalez	03/17/17 17:23	Retrieve from Storage
JC39017-1.2	Edwin Gonzalez	Secured Staging Area	03/17/17 17:23	Return to Storage
JC39017-1.2	Secured Staging Area	Hans Seignon	03/17/17 17:30	Retrieve from Storage
JC39017-1.2	Hans Seignon	Chris Brunson	03/17/17 20:55	Custody Transfer
JC39017-1.2	Secured Storage	Sahara Feliciano	03/19/17 11:54	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JC39017-1.2	Sahara Feliciano	Secured Staging Area	03/19/17 11:55	Return to Storage
JC39017-1.2	Secured Staging Area	Steven Zarchy	03/20/17 06:59	Retrieve from Storage
JC39017-1.2	Steven Zarchy	Stephen Seuling	03/20/17 07:58	Custody Transfer
JC39017-1.2	Stephen Seuling	Secured Storage	03/20/17 11:39	Return to Storage
JC39017-1.2.1	Radhika Mistry	Metals Digestion	03/17/17 08:57	Digestate from JC39017-1.2
JC39017-1.2.1	Metals Digestion	Radhika Mistry	03/17/17 08:58	Digestate from JC39017-1.2
JC39017-1.2.1	Radhika Mistry	Metals Digestate Storage	03/17/17 08:58	Return to Storage
JC39017-1.2.1	Metals Digestate Storage	Nancy Duan	03/17/17 15:39	Retrieve from Storage
JC39017-1.2.1	Nancy Duan	Metals Digestate Storage	03/17/17 15:40	Return to Storage
JC39017-1.2.2	Steven Zarchy	Organics Prep	03/20/17 07:17	Extract from JC39017-1.2
JC39017-1.2.2	Organics Prep	Albert Quayson	03/21/17 12:03	Extract from JC39017-1.2
JC39017-1.2.2	Albert Quayson	Extract Storage	03/21/17 12:03	Return to Storage

SGS Accutest Internal Chain of Custody

Job Number: JC39017
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/16/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC39017-1.2.2	Extract Storage	Rebecca Krug	03/22/17 17:05	Retrieve from Storage
JC39017-1.2.2	Rebecca Krug	GCOA	03/22/17 17:05	Load on Instrument
JC39017-1.2.2	GCOA	Rebecca Krug	03/23/17 16:47	Unload from Instrument
JC39017-1.2.2	Rebecca Krug	Extract Freezer	03/23/17 16:47	Return to Storage
JC39017-1.3	Secured Storage	Todd Shoemaker	03/17/17 10:00	Retrieve from Storage
JC39017-1.3	Todd Shoemaker	Secured Staging Area	03/17/17 10:00	Return to Storage
JC39017-1.3	Secured Staging Area	Mark Setaro	03/17/17 10:06	Retrieve from Storage
JC39017-1.3	Mark Setaro	Secured Storage	03/17/17 13:38	Return to Storage
JC39017-1.3.1	Mark Setaro	TCLP	03/17/17 10:06	Leachate from JC39017-1.3
JC39017-1.3.1	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39017-1.3
JC39017-1.3.1	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39017-1.3.1	Secured Storage	Eddie Huang	03/20/17 15:48	Retrieve from Storage
JC39017-1.3.1	Eddie Huang	GCMS2B	03/20/17 15:48	Load on Instrument
JC39017-1.3.1	GCMS2B	Eddie Huang	03/21/17 08:55	Unload from Instrument
JC39017-1.3.1	Eddie Huang	Secured Storage	03/21/17 08:55	Return to Storage
JC39017-1.3.1	Secured Storage	Eddie Huang	03/21/17 14:47	Retrieve from Storage
JC39017-1.3.1	Eddie Huang	GCMS2B	03/21/17 14:47	Load on Instrument
JC39017-1.3.1	GCMS2B	Eddie Huang	03/22/17 10:08	Unload from Instrument
JC39017-1.3.1	Eddie Huang	Secured Storage	03/22/17 10:08	Return to Storage
JC39017-1.3.2	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39017-1.3
JC39017-1.3.2	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39017-2.1	Secured Storage	Todd Shoemaker	03/17/17 10:00	Retrieve from Storage
JC39017-2.1	Todd Shoemaker	Secured Staging Area	03/17/17 10:00	Return to Storage
JC39017-2.1	Secured Staging Area	Mark Setaro	03/17/17 10:06	Retrieve from Storage
JC39017-2.1	Mark Setaro	Secured Storage	03/17/17 13:38	Return to Storage
JC39017-2.1	Secured Storage	Arielle Cocozza	03/18/17 06:25	Retrieve from Storage
JC39017-2.1	Secured Storage	Sahara Feliciano	03/18/17 15:47	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JC39017-2.1	Sahara Feliciano	Secured Staging Area	03/18/17 15:47	Return to Storage
JC39017-2.1	Secured Staging Area	Amir Takla	03/18/17 18:31	Retrieve from Storage
JC39017-2.1	Amir Takla	Secured Storage	03/18/17 18:32	Return to Storage
JC39017-2.1	Secured Storage	Sahara Feliciano	03/19/17 15:08	Retrieve from Storage
JC39017-2.1	Sahara Feliciano	Secured Staging Area	03/19/17 15:08	Return to Storage
JC39017-2.1	Secured Staging Area	Miti Patel	03/20/17 09:23	Retrieve from Storage
JC39017-2.1	Miti Patel	Secured Storage	03/20/17 13:16	Return to Storage
JC39017-2.1	Secured Storage	Edwin Gonzalez	03/23/17 12:29	Retrieve from Storage
JC39017-2.1	Edwin Gonzalez	Secured Staging Area	03/23/17 12:29	Return to Storage
JC39017-2.1	Secured Staging Area	Lindsey Lee	03/23/17 15:08	Retrieve from Storage
JC39017-2.1	Lindsey Lee	Secured Storage	03/23/17 23:34	Return to Storage
JC39017-2.1	Secured Storage	Albert Quayson	03/24/17 14:59	Retrieve from Storage

SGS Accutest Internal Chain of Custody

Job Number: JC39017
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/16/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC39017-2.1	Albert Quayson	Secured Storage	03/24/17 18:18	Return to Storage
JC39017-2.1	Secured Storage	Lindsey Lee	03/25/17 06:13	Retrieve from Storage
JC39017-2.1	Lindsey Lee	Secured Storage	03/25/17 16:13	Return to Storage
JC39017-2.1.1	Mark Setaro	TCLP	03/17/17 10:06	Leachate from JC39017-2.1
JC39017-2.1.1	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39017-2.1
JC39017-2.1.1	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39017-2.1.1	Secured Storage	Jessica Adametz	03/18/17 11:11	Retrieve from Storage
JC39017-2.1.1	Jessica Adametz	Secured Storage	03/18/17 11:12	Return to Storage
JC39017-2.1.2	Arielle Cocozza	Organics Prep	03/18/17 06:26	Extract from JC39017-2.1
JC39017-2.1.2	Organics Prep	Arielle Cocozza	03/18/17 16:25	Extract from JC39017-2.1
JC39017-2.1.2	Arielle Cocozza	Extract Storage	03/18/17 16:25	Return to Storage
JC39017-2.1.2	Extract Storage	Humarah Bano	03/20/17 17:01	Retrieve from Storage
JC39017-2.1.2	Humarah Bano	GC5G	03/20/17 17:01	Load on Instrument
JC39017-2.1.2	GC5G	Humarah Bano	03/22/17 10:28	Unload from Instrument
JC39017-2.1.2	Humarah Bano	Extract Freezer	03/22/17 10:28	Return to Storage
JC39017-2.1.3	Arielle Cocozza	Organics Prep	03/18/17 06:26	Extract from JC39017-2.1
JC39017-2.1.3	Organics Prep	Arielle Cocozza	03/18/17 16:25	Extract from JC39017-2.1
JC39017-2.1.3	Arielle Cocozza	Extract Storage	03/18/17 16:25	Return to Storage
JC39017-2.1.3	Extract Storage	Christine Phillips	03/20/17 16:34	Retrieve from Storage
JC39017-2.1.3	Christine Phillips	GC1G	03/20/17 16:34	Load on Instrument
JC39017-2.1.4	Arielle Cocozza	Organics Prep	03/18/17 06:37	Extract from JC39017-2.1
JC39017-2.1.4	Organics Prep	Lindsey Lee	03/18/17 17:02	Extract from JC39017-2.1
JC39017-2.1.4	Lindsey Lee	Extract Storage	03/18/17 17:02	Return to Storage
JC39017-2.1.4	Extract Storage	Sean Block	03/19/17 13:11	Retrieve from Storage
JC39017-2.1.4	Sean Block	GCMS5P	03/19/17 13:11	Load on Instrument
JC39017-2.1.4	GCMS5P	Ashley Noble	03/21/17 13:08	Unload from Instrument
JC39017-2.1.4	Ashley Noble	Extract Freezer	03/21/17 13:08	Return to Storage
JC39017-2.1.5	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39017-2.1
JC39017-2.1.5	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39017-2.1.5	Secured Storage	Nicholas Goydish	03/20/17 08:04	Retrieve from Storage
JC39017-2.1.5	Nicholas Goydish	Jonathan Stanley	03/20/17 14:59	Custody Transfer
JC39017-2.1.5	Jonathan Stanley	Ryan Fantasia	03/20/17 15:16	Custody Transfer
JC39017-2.1.5	Ryan Fantasia	Secured Storage	03/20/17 23:02	Return to Storage
JC39017-2.1.6	Jessica Adametz	Metals Digestion	03/18/17 11:12	Digestate from JC39017-2.1.1
JC39017-2.1.6	Metals Digestion	Jessica Adametz	03/18/17 11:12	Digestate from JC39017-2.1.1
JC39017-2.1.6	Jessica Adametz	Metals Digestate Storage	03/18/17 11:12	Return to Storage
JC39017-2.1.7	Nicholas Goydish	Organics Prep	03/20/17 08:11	Extract from JC39017-2.1.5

SGS Accutest Internal Chain of Custody

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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC39017-2.1.7	Organics Prep	Ryan Fantasia	03/20/17 23:34	Extract from JC39017-2.1.5
JC39017-2.1.7	Ryan Fantasia	Extract Storage	03/20/17 23:34	Return to Storage
JC39017-2.1.7	Extract Storage	Rebecca Krug	03/21/17 16:43	Retrieve from Storage
JC39017-2.1.7	Rebecca Krug	GC3G	03/21/17 16:43	Load on Instrument
JC39017-2.1.7	GC3G	Rebecca Krug	03/23/17 16:15	Unload from Instrument
JC39017-2.1.7	Rebecca Krug	Extract Freezer	03/23/17 16:15	Return to Storage
JC39017-2.1.8	Nicholas Goydish	Organics Prep	03/20/17 08:12	Extract from JC39017-2.1.5
JC39017-2.1.8	Organics Prep	Nicholas Goydish	03/20/17 16:46	Extract from JC39017-2.1.5
JC39017-2.1.8	Nicholas Goydish	Extract Storage	03/20/17 16:46	Return to Storage
JC39017-2.1.8	Extract Storage	Sean Block	03/20/17 23:22	Retrieve from Storage
JC39017-2.1.8	Sean Block	GCMS2M	03/20/17 23:22	Load on Instrument
JC39017-2.1.8	GCMS2M	Ashley Noble	03/21/17 09:42	Unload from Instrument
JC39017-2.1.8	Ashley Noble	Extract Freezer	03/21/17 09:42	Return to Storage
JC39017-2.1.9	Nicholas Goydish	Organics Prep	03/20/17 08:13	Extract from JC39017-2.1.5
JC39017-2.1.9	Organics Prep	Amanda Furka	03/20/17 23:01	Extract from JC39017-2.1.5
JC39017-2.1.9	Amanda Furka	Extract Storage	03/20/17 23:01	Return to Storage
JC39017-2.1.9	Extract Storage	Christine Phillips	03/21/17 10:01	Retrieve from Storage
JC39017-2.1.9	Christine Phillips	GC8G	03/21/17 10:01	Load on Instrument
JC39017-2.1.10	Lindsey Lee	Organics Prep	03/23/17 15:23	Extract from JC39017-2.1
JC39017-2.1.10	Organics Prep	Sora Lynn Mathurin	03/24/17 12:14	Extract from JC39017-2.1
JC39017-2.1.10	Sora Lynn Mathurin	Extract Storage	03/24/17 12:14	Return to Storage
JC39017-2.1.10	Extract Storage	Rebecca Krug	03/24/17 12:23	Retrieve from Storage
JC39017-2.1.10	Rebecca Krug	GCOA	03/24/17 12:23	Load on Instrument
JC39017-2.1.11	Albert Quayson	Organics Prep	03/24/17 14:59	Extract from JC39017-2.1
JC39017-2.1.11	Organics Prep	Ryan Fantasia	03/24/17 23:51	Extract from JC39017-2.1
JC39017-2.1.11	Ryan Fantasia	Extract Storage	03/24/17 23:51	Return to Storage
JC39017-2.1.12	Albert Quayson	Organics Prep	03/24/17 14:59	Extract from JC39017-2.1
JC39017-2.1.12	Organics Prep	Ryan Fantasia	03/24/17 23:51	Extract from JC39017-2.1
JC39017-2.1.12	Ryan Fantasia	Extract Storage	03/24/17 23:51	Return to Storage
JC39017-2.1.13	Lindsey Lee	Organics Prep	03/25/17 06:55	Extract from JC39017-2.1
JC39017-2.1.13	Organics Prep	Albert Quayson	03/25/17 18:27	Extract from JC39017-2.1
JC39017-2.1.13	Albert Quayson	Extract Storage	03/25/17 18:27	Return to Storage
JC39017-2.1.13	Extract Storage	Rebecca Krug	03/26/17 06:29	Retrieve from Storage
JC39017-2.1.13	Rebecca Krug	GCOA	03/26/17 06:30	Load on Instrument
JC39017-2.2	Secured Storage	Todd Shoemaker	03/17/17 08:21	Retrieve from Storage
JC39017-2.2	Todd Shoemaker	Secured Staging Area	03/17/17 08:21	Return to Storage
JC39017-2.2	Secured Staging Area	Radhika Mistry	03/17/17 08:56	Retrieve from Storage

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Job Number: JC39017
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Project: LIRR Expansion, Long Island, NY
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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC39017-2.2	Radhika Mistry	Secured Storage	03/17/17 08:59	Return to Storage
JC39017-2.2	Secured Storage	Luis Villanueva	03/17/17 09:28	Retrieve from Storage
JC39017-2.2	Luis Villanueva	Secured Storage	03/17/17 10:54	Return to Storage
JC39017-2.2	Secured Storage	Sahara Feliciano	03/17/17 12:15	Retrieve from Storage
JC39017-2.2	Sahara Feliciano	Secured Staging Area	03/17/17 12:15	Return to Storage
JC39017-2.2	Secured Staging Area	Jessica Adametz	03/17/17 14:39	Retrieve from Storage
JC39017-2.2	Jessica Adametz	Secured Storage	03/17/17 14:42	Return to Storage
JC39017-2.2	Secured Storage	Edwin Gonzalez	03/17/17 17:23	Retrieve from Storage
JC39017-2.2	Edwin Gonzalez	Secured Staging Area	03/17/17 17:23	Return to Storage
JC39017-2.2	Secured Staging Area	Hans Seignon	03/17/17 17:30	Retrieve from Storage
JC39017-2.2	Hans Seignon	Chris Brunson	03/17/17 20:55	Custody Transfer
JC39017-2.2	Secured Storage	Sahara Feliciano	03/19/17 11:54	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JC39017-2.2	Sahara Feliciano	Secured Staging Area	03/19/17 11:55	Return to Storage
JC39017-2.2	Secured Staging Area	Steven Zarchy	03/20/17 06:59	Retrieve from Storage
JC39017-2.2	Steven Zarchy	Stephen Seuling	03/20/17 07:58	Custody Transfer
JC39017-2.2	Stephen Seuling	Secured Storage	03/20/17 11:39	Return to Storage
JC39017-2.2.1	Radhika Mistry	Metals Digestion	03/17/17 08:57	Digestate from JC39017-2.2
JC39017-2.2.1	Metals Digestion	Radhika Mistry	03/17/17 08:58	Digestate from JC39017-2.2
JC39017-2.2.1	Radhika Mistry	Metals Digestate Storage	03/17/17 08:58	Return to Storage
JC39017-2.2.1	Metals Digestate Storage	Nancy Duan	03/17/17 15:39	Retrieve from Storage
JC39017-2.2.1	Nancy Duan	Metals Digestate Storage	03/17/17 15:40	Return to Storage
JC39017-2.2.2	Steven Zarchy	Organics Prep	03/20/17 07:17	Extract from JC39017-2.2
JC39017-2.2.2	Organics Prep	Albert Quayson	03/21/17 12:03	Extract from JC39017-2.2
JC39017-2.2.2	Albert Quayson	Extract Storage	03/21/17 12:03	Return to Storage
JC39017-2.2.2	Extract Storage	Rebecca Krug	03/22/17 17:05	Retrieve from Storage
JC39017-2.2.2	Rebecca Krug	GCOA	03/22/17 17:05	Load on Instrument
JC39017-2.2.2	GCOA	Rebecca Krug	03/23/17 16:47	Unload from Instrument
JC39017-2.2.2	Rebecca Krug	Extract Freezer	03/23/17 16:47	Return to Storage
JC39017-2.3	Secured Storage	Todd Shoemaker	03/17/17 10:00	Retrieve from Storage
JC39017-2.3	Todd Shoemaker	Secured Staging Area	03/17/17 10:00	Return to Storage
JC39017-2.3	Secured Staging Area	Mark Setaro	03/17/17 10:06	Retrieve from Storage
JC39017-2.3	Mark Setaro	Secured Storage	03/17/17 13:38	Return to Storage
JC39017-2.3.1	Mark Setaro	TCLP	03/17/17 10:06	Leachate from JC39017-2.3
JC39017-2.3.1	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39017-2.3
JC39017-2.3.1	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39017-2.3.2	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39017-2.3
JC39017-2.3.2	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39017-2.3.2	Secured Storage	Eddie Huang	03/20/17 15:48	Retrieve from Storage

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Job Number: JC39017
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC39017-2.3.2	Eddie Huang	GCMS2B	03/20/17 15:48	Load on Instrument
JC39017-2.3.2	GCMS2B	Eddie Huang	03/21/17 08:55	Unload from Instrument
JC39017-2.3.2	Eddie Huang	Secured Storage	03/21/17 08:55	Return to Storage
JC39017-2.3.2	Secured Storage	Eddie Huang	03/21/17 14:47	Retrieve from Storage
JC39017-2.3.2	Eddie Huang	GCMS2B	03/21/17 14:47	Load on Instrument
JC39017-2.3.2	GCMS2B	Eddie Huang	03/22/17 10:08	Unload from Instrument
JC39017-2.3.2	Eddie Huang	Secured Storage	03/22/17 10:08	Return to Storage
JC39017-3.1	Secured Storage	Todd Shoemaker	03/17/17 10:00	Retrieve from Storage
JC39017-3.1	Todd Shoemaker	Secured Staging Area	03/17/17 10:00	Return to Storage
JC39017-3.1	Secured Staging Area	Mark Setaro	03/17/17 10:06	Retrieve from Storage
JC39017-3.1	Mark Setaro	Secured Storage	03/17/17 13:38	Return to Storage
JC39017-3.1	Secured Storage	Arielle Cocozza	03/18/17 06:25	Retrieve from Storage
JC39017-3.1	Secured Storage	Sahara Feliciano	03/18/17 15:47	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JC39017-3.1	Sahara Feliciano	Secured Staging Area	03/18/17 15:47	Return to Storage
JC39017-3.1	Secured Staging Area	Amir Takla	03/18/17 18:31	Retrieve from Storage
JC39017-3.1	Amir Takla	Secured Storage	03/18/17 18:32	Return to Storage
JC39017-3.1	Secured Storage	Sahara Feliciano	03/19/17 15:08	Retrieve from Storage
JC39017-3.1	Sahara Feliciano	Secured Staging Area	03/19/17 15:08	Return to Storage
JC39017-3.1	Secured Staging Area	Miti Patel	03/20/17 09:23	Retrieve from Storage
JC39017-3.1	Miti Patel	Secured Storage	03/20/17 13:16	Return to Storage
JC39017-3.1	Secured Storage	Edwin Gonzalez	03/23/17 12:29	Retrieve from Storage
JC39017-3.1	Edwin Gonzalez	Secured Staging Area	03/23/17 12:29	Return to Storage
JC39017-3.1	Secured Staging Area	Lindsey Lee	03/23/17 15:08	Retrieve from Storage
JC39017-3.1	Lindsey Lee	Secured Storage	03/23/17 23:34	Return to Storage
JC39017-3.1	Secured Storage	Albert Quayson	03/24/17 14:59	Retrieve from Storage
JC39017-3.1	Albert Quayson	Secured Storage	03/24/17 18:18	Return to Storage
JC39017-3.1	Secured Storage	Lindsey Lee	03/25/17 06:13	Retrieve from Storage
JC39017-3.1	Lindsey Lee	Secured Storage	03/25/17 16:13	Return to Storage
JC39017-3.1.1	Mark Setaro	TCLP	03/17/17 10:06	Leachate from JC39017-3.1
JC39017-3.1.1	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39017-3.1
JC39017-3.1.1	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39017-3.1.1	Secured Storage	Jessica Adametz	03/18/17 11:11	Retrieve from Storage
JC39017-3.1.1	Jessica Adametz	Secured Storage	03/18/17 11:12	Return to Storage
JC39017-3.1.2	Arielle Cocozza	Organics Prep	03/18/17 06:26	Extract from JC39017-3.1
JC39017-3.1.2	Organics Prep	Arielle Cocozza	03/18/17 16:25	Extract from JC39017-3.1
JC39017-3.1.2	Arielle Cocozza	Extract Storage	03/18/17 16:25	Return to Storage
JC39017-3.1.2	Extract Storage	Humarah Bano	03/20/17 17:01	Retrieve from Storage
JC39017-3.1.2	Humarah Bano	GC5G	03/20/17 17:01	Load on Instrument
JC39017-3.1.2	GC5G	Humarah Bano	03/22/17 10:28	Unload from Instrument
JC39017-3.1.2	Humarah Bano	Extract Freezer	03/22/17 10:28	Return to Storage

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Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC39017-3.1.3	Arielle Cocozza	Organics Prep	03/18/17 06:26	Extract from JC39017-3.1
JC39017-3.1.3	Organics Prep	Arielle Cocozza	03/18/17 16:25	Extract from JC39017-3.1
JC39017-3.1.3	Arielle Cocozza	Extract Storage	03/18/17 16:25	Return to Storage
JC39017-3.1.3	Extract Storage	Christine Phillips	03/20/17 16:34	Retrieve from Storage
JC39017-3.1.3	Christine Phillips	GC1G	03/20/17 16:34	Load on Instrument
JC39017-3.1.4	Arielle Cocozza	Organics Prep	03/18/17 06:37	Extract from JC39017-3.1
JC39017-3.1.4	Organics Prep	Lindsey Lee	03/18/17 17:02	Extract from JC39017-3.1
JC39017-3.1.4	Lindsey Lee	Extract Storage	03/18/17 17:02	Return to Storage
JC39017-3.1.4	Extract Storage	Sean Block	03/19/17 13:11	Retrieve from Storage
JC39017-3.1.4	Sean Block	GCMS5P	03/19/17 13:11	Load on Instrument
JC39017-3.1.4	GCMS5P	Ashley Noble	03/21/17 13:08	Unload from Instrument
JC39017-3.1.4	Ashley Noble	Extract Freezer	03/21/17 13:08	Return to Storage
JC39017-3.1.5	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39017-3.1
JC39017-3.1.5	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39017-3.1.5	Secured Storage	Nicholas Goydish	03/20/17 08:04	Retrieve from Storage
JC39017-3.1.5	Nicholas Goydish	Jonathan Stanley	03/20/17 14:59	Custody Transfer
JC39017-3.1.5	Jonathan Stanley	Ryan Fantasia	03/20/17 15:16	Custody Transfer
JC39017-3.1.5	Ryan Fantasia	Secured Storage	03/20/17 23:02	Return to Storage
JC39017-3.1.6	Jessica Adametz	Metals Digestion	03/18/17 11:12	Digestate from JC39017-3.1.1
JC39017-3.1.6	Metals Digestion	Jessica Adametz	03/18/17 11:12	Digestate from JC39017-3.1.1
JC39017-3.1.6	Jessica Adametz	Metals Digestate Storage	03/18/17 11:12	Return to Storage
JC39017-3.1.7	Nicholas Goydish	Organics Prep	03/20/17 08:11	Extract from JC39017-3.1.5
JC39017-3.1.7	Organics Prep	Ryan Fantasia	03/20/17 23:34	Extract from JC39017-3.1.5
JC39017-3.1.7	Ryan Fantasia	Extract Storage	03/20/17 23:34	Return to Storage
JC39017-3.1.7	Extract Storage	Rebecca Krug	03/21/17 16:43	Retrieve from Storage
JC39017-3.1.7	Rebecca Krug	GC3G	03/21/17 16:43	Load on Instrument
JC39017-3.1.7	GC3G	Rebecca Krug	03/23/17 16:15	Unload from Instrument
JC39017-3.1.7	Rebecca Krug	Extract Freezer	03/23/17 16:15	Return to Storage
JC39017-3.1.8	Nicholas Goydish	Organics Prep	03/20/17 08:12	Extract from JC39017-3.1.5
JC39017-3.1.8	Organics Prep	Nicholas Goydish	03/20/17 16:46	Extract from JC39017-3.1.5
JC39017-3.1.8	Nicholas Goydish	Extract Storage	03/20/17 16:46	Return to Storage
JC39017-3.1.8	Extract Storage	Sean Block	03/20/17 23:22	Retrieve from Storage
JC39017-3.1.8	Sean Block	GCMS2M	03/20/17 23:22	Load on Instrument
JC39017-3.1.8	GCMS2M	Ashley Noble	03/21/17 09:42	Unload from Instrument
JC39017-3.1.8	Ashley Noble	Extract Freezer	03/21/17 09:42	Return to Storage
JC39017-3.1.9	Nicholas Goydish	Organics Prep	03/20/17 08:13	Extract from JC39017-3.1.5
JC39017-3.1.9	Organics Prep	Amanda Furka	03/20/17 23:01	Extract from JC39017-3.1.5

SGS Accutest Internal Chain of Custody

Job Number: JC39017
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC39017-3.1.9	Amanda Furka	Extract Storage	03/20/17 23:01	Return to Storage
JC39017-3.1.9	Extract Storage	Christine Phillips	03/21/17 10:01	Retrieve from Storage
JC39017-3.1.9	Christine Phillips	GC8G	03/21/17 10:01	Load on Instrument
JC39017-3.1.10	Lindsey Lee	Organics Prep	03/23/17 15:23	Extract from JC39017-3.1
JC39017-3.1.10	Organics Prep	Sora Lynn Mathurin	03/24/17 12:14	Extract from JC39017-3.1
JC39017-3.1.10	Sora Lynn Mathurin	Extract Storage	03/24/17 12:14	Return to Storage
JC39017-3.1.11	Albert Quayson	Organics Prep	03/24/17 14:59	Extract from JC39017-3.1
JC39017-3.1.11	Organics Prep	Ryan Fantasia	03/24/17 23:51	Extract from JC39017-3.1
JC39017-3.1.11	Ryan Fantasia	Extract Storage	03/24/17 23:51	Return to Storage
JC39017-3.1.12	Albert Quayson	Organics Prep	03/24/17 14:59	Extract from JC39017-3.1
JC39017-3.1.12	Organics Prep	Ryan Fantasia	03/24/17 23:51	Extract from JC39017-3.1
JC39017-3.1.12	Ryan Fantasia	Extract Storage	03/24/17 23:51	Return to Storage
JC39017-3.1.13	Lindsey Lee	Organics Prep	03/25/17 06:55	Extract from JC39017-3.1
JC39017-3.1.13	Organics Prep	Albert Quayson	03/25/17 18:27	Extract from JC39017-3.1
JC39017-3.1.13	Albert Quayson	Extract Storage	03/25/17 18:27	Return to Storage
JC39017-3.1.13	Extract Storage	Rebecca Krug	03/26/17 06:29	Retrieve from Storage
JC39017-3.1.13	Rebecca Krug	GCOA	03/26/17 06:30	Load on Instrument
JC39017-3.2	Secured Storage	Todd Shoemaker	03/17/17 08:21	Retrieve from Storage
JC39017-3.2	Todd Shoemaker	Secured Staging Area	03/17/17 08:21	Return to Storage
JC39017-3.2	Secured Staging Area	Radhika Mistry	03/17/17 08:56	Retrieve from Storage
JC39017-3.2	Radhika Mistry	Secured Storage	03/17/17 08:59	Return to Storage
JC39017-3.2	Secured Storage	Luis Villanueva	03/17/17 09:28	Retrieve from Storage
JC39017-3.2	Luis Villanueva	Secured Storage	03/17/17 10:54	Return to Storage
JC39017-3.2	Secured Storage	Sahara Feliciano	03/17/17 12:15	Retrieve from Storage
JC39017-3.2	Sahara Feliciano	Secured Staging Area	03/17/17 12:15	Return to Storage
JC39017-3.2	Secured Staging Area	Jessica Adametz	03/17/17 14:39	Retrieve from Storage
JC39017-3.2	Jessica Adametz	Secured Storage	03/17/17 14:42	Return to Storage
JC39017-3.2	Secured Storage	Edwin Gonzalez	03/17/17 17:23	Retrieve from Storage
JC39017-3.2	Edwin Gonzalez	Secured Staging Area	03/17/17 17:23	Return to Storage
JC39017-3.2	Secured Staging Area	Hans Seignon	03/17/17 17:30	Retrieve from Storage
JC39017-3.2	Hans Seignon	Chris Brunson	03/17/17 20:55	Custody Transfer
JC39017-3.2	Secured Storage	Sahara Feliciano	03/19/17 11:54	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JC39017-3.2	Sahara Feliciano	Secured Staging Area	03/19/17 11:55	Return to Storage
JC39017-3.2	Secured Staging Area	Steven Zarchy	03/20/17 06:59	Retrieve from Storage
JC39017-3.2	Steven Zarchy	Stephen Seuling	03/20/17 07:58	Custody Transfer
JC39017-3.2	Stephen Seuling	Secured Storage	03/20/17 11:39	Return to Storage
JC39017-3.2.1	Radhika Mistry	Metals Digestion	03/17/17 08:57	Digestate from JC39017-3.2

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Project: LIRR Expansion, Long Island, NY
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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC39017-3.2.1	Metals Digestion	Radhika Mistry	03/17/17 08:58	Digestate from JC39017-3.2
JC39017-3.2.1	Radhika Mistry	Metals Digestate Storage	03/17/17 08:58	Return to Storage
JC39017-3.2.1	Metals Digestate Storage	Nancy Duan	03/17/17 15:39	Retrieve from Storage
JC39017-3.2.1	Nancy Duan	Metals Digestate Storage	03/17/17 15:40	Return to Storage
JC39017-3.2.2	Steven Zarchy	Organics Prep	03/20/17 07:17	Extract from JC39017-3.2
JC39017-3.2.2	Organics Prep	Albert Quayson	03/21/17 12:03	Extract from JC39017-3.2
JC39017-3.2.2	Albert Quayson	Extract Storage	03/21/17 12:03	Return to Storage
JC39017-3.2.2	Extract Storage	Rebecca Krug	03/22/17 17:05	Retrieve from Storage
JC39017-3.2.2	Rebecca Krug	GCOA	03/22/17 17:05	Load on Instrument
JC39017-3.2.2	GCOA	Rebecca Krug	03/23/17 16:47	Unload from Instrument
JC39017-3.2.2	Rebecca Krug	Extract Freezer	03/23/17 16:47	Return to Storage
JC39017-3.3	Secured Storage	Todd Shoemaker	03/17/17 10:00	Retrieve from Storage
JC39017-3.3	Todd Shoemaker	Secured Staging Area	03/17/17 10:00	Return to Storage
JC39017-3.3	Secured Staging Area	Mark Setaro	03/17/17 10:06	Retrieve from Storage
JC39017-3.3	Mark Setaro	Secured Storage	03/17/17 13:38	Return to Storage
JC39017-3.3.1	Mark Setaro	TCLP	03/17/17 10:06	Leachate from JC39017-3.3
JC39017-3.3.1	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39017-3.3
JC39017-3.3.1	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39017-3.3.2	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39017-3.3
JC39017-3.3.2	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39017-3.3.2	Secured Storage	Eddie Huang	03/20/17 15:48	Retrieve from Storage
JC39017-3.3.2	Eddie Huang	GCMS2B	03/20/17 15:48	Load on Instrument
JC39017-3.3.2	GCMS2B	Eddie Huang	03/21/17 08:55	Unload from Instrument
JC39017-3.3.2	Eddie Huang	Secured Storage	03/21/17 08:55	Return to Storage
JC39017-3.3.2	Secured Storage	Eddie Huang	03/21/17 14:47	Retrieve from Storage
JC39017-3.3.2	Eddie Huang	GCMS2B	03/21/17 14:47	Load on Instrument
JC39017-3.3.2	GCMS2B	Eddie Huang	03/22/17 10:08	Unload from Instrument
JC39017-3.3.2	Eddie Huang	Secured Storage	03/22/17 10:08	Return to Storage
JC39017-3.6	Secured Storage	Sushila Yadav	03/17/17 16:26	Retrieve from Storage
JC39017-3.6	Sushila Yadav	GCMSV	03/17/17 16:26	Load on Instrument
JC39017-3.6	GCMSV	Sushila Yadav	03/18/17 11:17	Unload from Instrument
JC39017-3.6	Sushila Yadav		03/18/17 11:19	Depleted
JC39017-4.1	Secured Storage	Todd Shoemaker	03/17/17 10:00	Retrieve from Storage
JC39017-4.1	Todd Shoemaker	Secured Staging Area	03/17/17 10:00	Return to Storage
JC39017-4.1	Secured Staging Area	Mark Setaro	03/17/17 10:06	Retrieve from Storage
JC39017-4.1	Mark Setaro	Secured Storage	03/17/17 13:38	Return to Storage
JC39017-4.1	Secured Storage	Arielle Cocozza	03/18/17 06:25	Retrieve from Storage
JC39017-4.1	Secured Storage	Sahara Feliciano	03/18/17 15:47	Retrieve from Storage

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Job Number: JC39017
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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
Bottle was returned to secure storage, but inadvertently not scanned.				
JC39017-4.1	Sahara Feliciano	Secured Staging Area	03/18/17 15:47	Return to Storage
JC39017-4.1	Secured Staging Area	Amir Takla	03/18/17 18:31	Retrieve from Storage
JC39017-4.1	Amir Takla	Secured Storage	03/18/17 18:32	Return to Storage
JC39017-4.1	Secured Storage	Sahara Feliciano	03/19/17 15:08	Retrieve from Storage
JC39017-4.1	Sahara Feliciano	Secured Staging Area	03/19/17 15:08	Return to Storage
JC39017-4.1	Secured Staging Area	Miti Patel	03/20/17 09:23	Retrieve from Storage
JC39017-4.1	Miti Patel	Secured Storage	03/20/17 13:16	Return to Storage
JC39017-4.1	Secured Storage	Edwin Gonzalez	03/23/17 12:29	Retrieve from Storage
JC39017-4.1	Edwin Gonzalez	Secured Staging Area	03/23/17 12:29	Return to Storage
JC39017-4.1	Secured Staging Area	Lindsey Lee	03/23/17 15:08	Retrieve from Storage
JC39017-4.1	Lindsey Lee	Secured Storage	03/23/17 23:34	Return to Storage
JC39017-4.1	Secured Storage	Albert Quayson	03/24/17 14:59	Retrieve from Storage
JC39017-4.1	Albert Quayson	Secured Storage	03/24/17 18:18	Return to Storage
JC39017-4.1	Secured Storage	Lindsey Lee	03/25/17 06:13	Retrieve from Storage
JC39017-4.1	Lindsey Lee	Secured Storage	03/25/17 16:13	Return to Storage
JC39017-4.1.1	Mark Setaro	TCLP	03/17/17 10:06	Leachate from JC39017-4.1
JC39017-4.1.1	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39017-4.1
JC39017-4.1.1	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39017-4.1.1	Secured Storage	Jessica Adametz	03/18/17 11:11	Retrieve from Storage
JC39017-4.1.1	Jessica Adametz	Secured Storage	03/18/17 11:12	Return to Storage
JC39017-4.1.2	Arielle Cocozza	Organics Prep	03/18/17 06:26	Extract from JC39017-4.1
JC39017-4.1.2	Organics Prep	Arielle Cocozza	03/18/17 16:25	Extract from JC39017-4.1
JC39017-4.1.2	Arielle Cocozza	Extract Storage	03/18/17 16:25	Return to Storage
JC39017-4.1.2	Extract Storage	Humarah Bano	03/20/17 17:01	Retrieve from Storage
JC39017-4.1.2	Humarah Bano	GC5G	03/20/17 17:01	Load on Instrument
JC39017-4.1.2	GC5G	Humarah Bano	03/22/17 10:28	Unload from Instrument
JC39017-4.1.2	Humarah Bano	Extract Freezer	03/22/17 10:28	Return to Storage
JC39017-4.1.3	Arielle Cocozza	Organics Prep	03/18/17 06:26	Extract from JC39017-4.1
JC39017-4.1.3	Organics Prep	Arielle Cocozza	03/18/17 16:25	Extract from JC39017-4.1
JC39017-4.1.3	Arielle Cocozza	Extract Storage	03/18/17 16:25	Return to Storage
JC39017-4.1.3	Extract Storage	Christine Phillips	03/20/17 16:34	Retrieve from Storage
JC39017-4.1.3	Christine Phillips	GC1G	03/20/17 16:34	Load on Instrument
JC39017-4.1.4	Arielle Cocozza	Organics Prep	03/18/17 06:37	Extract from JC39017-4.1
JC39017-4.1.4	Organics Prep	Lindsey Lee	03/18/17 17:02	Extract from JC39017-4.1
JC39017-4.1.4	Lindsey Lee	Extract Storage	03/18/17 17:02	Return to Storage
JC39017-4.1.4	Extract Storage	Sean Block	03/19/17 13:11	Retrieve from Storage
JC39017-4.1.4	Sean Block	GCMS5P	03/19/17 13:11	Load on Instrument
JC39017-4.1.4	GCMS5P	Ashley Noble	03/21/17 13:08	Unload from Instrument
JC39017-4.1.4	Ashley Noble	Extract Freezer	03/21/17 13:08	Return to Storage

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Job Number: JC39017
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC39017-4.1.5	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39017-4.1
JC39017-4.1.5	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39017-4.1.5	Secured Storage	Nicholas Goydish	03/20/17 08:04	Retrieve from Storage
JC39017-4.1.5	Nicholas Goydish	Jonathan Stanley	03/20/17 14:59	Custody Transfer
JC39017-4.1.5	Jonathan Stanley	Ryan Fantasia	03/20/17 15:16	Custody Transfer
JC39017-4.1.5	Ryan Fantasia	Secured Storage	03/20/17 23:02	Return to Storage
JC39017-4.1.6	Jessica Adametz	Metals Digestion	03/18/17 11:12	Digestate from JC39017-4.1.1
JC39017-4.1.6	Metals Digestion	Jessica Adametz	03/18/17 11:12	Digestate from JC39017-4.1.1
JC39017-4.1.6	Jessica Adametz	Metals Digestate Storage	03/18/17 11:12	Return to Storage
JC39017-4.1.7	Nicholas Goydish	Organics Prep	03/20/17 08:11	Extract from JC39017-4.1.5
JC39017-4.1.7	Organics Prep	Ryan Fantasia	03/20/17 23:34	Extract from JC39017-4.1.5
JC39017-4.1.7	Ryan Fantasia	Extract Storage	03/20/17 23:34	Return to Storage
JC39017-4.1.7	Extract Storage	Rebecca Krug	03/21/17 16:43	Retrieve from Storage
JC39017-4.1.7	Rebecca Krug	GC3G	03/21/17 16:43	Load on Instrument
JC39017-4.1.7	GC3G	Rebecca Krug	03/23/17 16:15	Unload from Instrument
JC39017-4.1.7	Rebecca Krug	Extract Freezer	03/23/17 16:15	Return to Storage
JC39017-4.1.8	Nicholas Goydish	Organics Prep	03/20/17 08:12	Extract from JC39017-4.1.5
JC39017-4.1.8	Organics Prep	Nicholas Goydish	03/20/17 16:46	Extract from JC39017-4.1.5
JC39017-4.1.8	Nicholas Goydish	Extract Storage	03/20/17 16:46	Return to Storage
JC39017-4.1.8	Extract Storage	Sean Block	03/20/17 23:22	Retrieve from Storage
JC39017-4.1.8	Sean Block	GCMS2M	03/20/17 23:22	Load on Instrument
JC39017-4.1.8	GCMS2M	Ashley Noble	03/21/17 09:42	Unload from Instrument
JC39017-4.1.8	Ashley Noble	Extract Freezer	03/21/17 09:42	Return to Storage
JC39017-4.1.9	Nicholas Goydish	Organics Prep	03/20/17 08:13	Extract from JC39017-4.1.5
JC39017-4.1.9	Organics Prep	Amanda Furka	03/20/17 23:01	Extract from JC39017-4.1.5
JC39017-4.1.9	Amanda Furka	Extract Storage	03/20/17 23:01	Return to Storage
JC39017-4.1.9	Extract Storage	Christine Phillips	03/21/17 10:01	Retrieve from Storage
JC39017-4.1.9	Christine Phillips	GC8G	03/21/17 10:01	Load on Instrument
JC39017-4.1.10	Lindsey Lee	Organics Prep	03/23/17 15:23	Extract from JC39017-4.1
JC39017-4.1.10	Organics Prep	Sora Lynn Mathurin	03/24/17 12:14	Extract from JC39017-4.1
JC39017-4.1.10	Sora Lynn Mathurin	Extract Storage	03/24/17 12:14	Return to Storage
JC39017-4.1.11	Albert Quayson	Organics Prep	03/24/17 14:59	Extract from JC39017-4.1
JC39017-4.1.11	Organics Prep	Ryan Fantasia	03/24/17 23:51	Extract from JC39017-4.1
JC39017-4.1.11	Ryan Fantasia	Extract Storage	03/24/17 23:51	Return to Storage
JC39017-4.1.12	Albert Quayson	Organics Prep	03/24/17 14:59	Extract from JC39017-4.1
JC39017-4.1.12	Organics Prep	Ryan Fantasia	03/24/17 23:51	Extract from JC39017-4.1

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Account: MTXFPNJ Matrix New World Engineering, Inc.
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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC39017-4.1.12	Ryan Fantasia	Extract Storage	03/24/17 23:51	Return to Storage
JC39017-4.1.13	Lindsey Lee	Organics Prep	03/25/17 06:55	Extract from JC39017-4.1
JC39017-4.1.13	Organics Prep	Albert Quayson	03/25/17 18:27	Extract from JC39017-4.1
JC39017-4.1.13	Albert Quayson	Extract Storage	03/25/17 18:27	Return to Storage
JC39017-4.1.13	Extract Storage	Rebecca Krug	03/26/17 06:29	Retrieve from Storage
JC39017-4.1.13	Rebecca Krug	GCOA	03/26/17 06:30	Load on Instrument
JC39017-4.2	Secured Storage	Todd Shoemaker	03/17/17 08:21	Retrieve from Storage
JC39017-4.2	Todd Shoemaker	Secured Staging Area	03/17/17 08:21	Return to Storage
JC39017-4.2	Secured Staging Area	Radhika Mistry	03/17/17 08:56	Retrieve from Storage
JC39017-4.2	Radhika Mistry	Secured Storage	03/17/17 08:59	Return to Storage
JC39017-4.2	Secured Storage	Luis Villanueva	03/17/17 09:28	Retrieve from Storage
JC39017-4.2	Luis Villanueva	Secured Storage	03/17/17 10:54	Return to Storage
JC39017-4.2	Secured Storage	Sahara Feliciano	03/17/17 12:15	Retrieve from Storage
JC39017-4.2	Sahara Feliciano	Secured Staging Area	03/17/17 12:15	Return to Storage
JC39017-4.2	Secured Staging Area	Jessica Adametz	03/17/17 14:39	Retrieve from Storage
JC39017-4.2	Jessica Adametz	Secured Storage	03/17/17 14:42	Return to Storage
JC39017-4.2	Secured Storage	Edwin Gonzalez	03/17/17 17:23	Retrieve from Storage
JC39017-4.2	Edwin Gonzalez	Secured Staging Area	03/17/17 17:23	Return to Storage
JC39017-4.2	Secured Staging Area	Hans Seignon	03/17/17 17:30	Retrieve from Storage
JC39017-4.2	Hans Seignon	Chris Brunson	03/17/17 20:55	Custody Transfer
JC39017-4.2	Secured Storage	Sahara Feliciano	03/19/17 11:54	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JC39017-4.2	Sahara Feliciano	Secured Staging Area	03/19/17 11:55	Return to Storage
JC39017-4.2	Secured Staging Area	Steven Zarchy	03/20/17 06:59	Retrieve from Storage
JC39017-4.2	Steven Zarchy	Stephen Seuling	03/20/17 07:58	Custody Transfer
JC39017-4.2	Stephen Seuling	Secured Storage	03/20/17 11:39	Return to Storage
JC39017-4.2.1	Radhika Mistry	Metals Digestion	03/17/17 08:57	Digestate from JC39017-4.2
JC39017-4.2.1	Metals Digestion	Radhika Mistry	03/17/17 08:58	Digestate from JC39017-4.2
JC39017-4.2.1	Radhika Mistry	Metals Digestate Storage	03/17/17 08:58	Return to Storage
JC39017-4.2.1	Metals Digestate Storage	Nancy Duan	03/17/17 15:39	Retrieve from Storage
JC39017-4.2.1	Nancy Duan	Metals Digestate Storage	03/17/17 15:40	Return to Storage
JC39017-4.2.2	Steven Zarchy	Organics Prep	03/20/17 07:17	Extract from JC39017-4.2
JC39017-4.2.2	Organics Prep	Albert Quayson	03/21/17 12:03	Extract from JC39017-4.2
JC39017-4.2.2	Albert Quayson	Extract Storage	03/21/17 12:03	Return to Storage
JC39017-4.2.2	Extract Storage	Rebecca Krug	03/22/17 17:05	Retrieve from Storage
JC39017-4.2.2	Rebecca Krug	GCOA	03/22/17 17:05	Load on Instrument
JC39017-4.2.2	GCOA	Rebecca Krug	03/23/17 16:47	Unload from Instrument
JC39017-4.2.2	Rebecca Krug	Extract Freezer	03/23/17 16:47	Return to Storage
JC39017-4.3	Secured Storage	Todd Shoemaker	03/17/17 10:00	Retrieve from Storage

SGS Accutest Internal Chain of Custody

Job Number: JC39017
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/16/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC39017-4.3	Todd Shoemaker	Secured Staging Area	03/17/17 10:00	Return to Storage
JC39017-4.3	Secured Staging Area	Mark Setaro	03/17/17 10:06	Retrieve from Storage
JC39017-4.3	Mark Setaro	Secured Storage	03/17/17 13:38	Return to Storage
JC39017-4.3.1	Mark Setaro	TCLP	03/17/17 10:06	Leachate from JC39017-4.3
JC39017-4.3.1	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39017-4.3
JC39017-4.3.1	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39017-4.3.2	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39017-4.3
JC39017-4.3.2	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39017-4.3.2	Secured Storage	Eddie Huang	03/20/17 15:48	Retrieve from Storage
JC39017-4.3.2	Eddie Huang	GCMS2B	03/20/17 15:48	Load on Instrument
JC39017-4.3.2	GCMS2B	Eddie Huang	03/21/17 08:55	Unload from Instrument
JC39017-4.3.2	Eddie Huang	Secured Storage	03/21/17 08:55	Return to Storage
JC39017-4.3.2	Secured Storage	Eddie Huang	03/21/17 14:47	Retrieve from Storage
JC39017-4.3.2	Eddie Huang	GCMS2B	03/21/17 14:47	Load on Instrument
JC39017-4.3.2	GCMS2B	Eddie Huang	03/22/17 10:08	Unload from Instrument
JC39017-4.3.2	Eddie Huang	Secured Storage	03/22/17 10:08	Return to Storage

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Automated Report

Technical Report for

Matrix New World Engineering, Inc.

LIRR Expansion, Long Island, NY

16-144, Railroad Ave. Parking Lot, Railroad Ave., Westbury

SGS Accutest Job Number: JC39018

Sampling Date: 03/16/17

Report to:

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Total number of pages in report: 97

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Nancy Cole
Laboratory Director

Client Service contact: Tammy McCloskey 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (L-A-B L2248)

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SGS Accutest

Sample Summary

Matrix New World Engineering, Inc.

Job No: JC39018

LIRR Expansion, Long Island, NY
Project No: 16-144, Railroad Ave. Parking Lot, Railroad Ave., Westbury

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC39018-1	03/16/17	08:30	LM	03/16/17	SO	Soil	RAIL-SB-01
JC39018-1A	03/16/17	08:30	LM	03/16/17	SO	Soil	RAIL-SB-01
JC39018-2	03/16/17	09:40	LM	03/16/17	SO	Soil	RAIL-SB-02
JC39018-2A	03/16/17	09:40	LM	03/16/17	SO	Soil	RAIL-SB-02
JC39018-3	03/16/17	11:10	LM	03/16/17	SO	Soil	RAIL-SB-03
JC39018-3A	03/16/17	11:10	LM	03/16/17	SO	Soil	RAIL-SB-03
JC39018-4	03/16/17	12:30	LM	03/16/17	SO	Soil	RAIL-SB-04
JC39018-4A	03/16/17	12:30	LM	03/16/17	SO	Soil	RAIL-SB-04

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Summary of Hits

Job Number: JC39018
Account: Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Collected: 03/16/17

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC39018-1	**RAIL-SB-01**					
Acetone		0.0568	0.012	0.0059	mg/kg	SW846 8260C
Benzene		0.00036 J	0.00059	0.00014	mg/kg	SW846 8260C
2-Butanone (MEK)		0.0059 J	0.012	0.0021	mg/kg	SW846 8260C
Carbon disulfide		0.00034 J	0.0024	0.00020	mg/kg	SW846 8260C
Ethylbenzene		0.0227	0.0012	0.00018	mg/kg	SW846 8260C
Isopropylbenzene		0.00050 J	0.0024	0.00018	mg/kg	SW846 8260C
Methyl Acetate		0.0264	0.0059	0.0024	mg/kg	SW846 8260C
Methylcyclohexane		0.0018 J	0.0024	0.00059	mg/kg	SW846 8260C
Toluene		0.0012	0.0012	0.00015	mg/kg	SW846 8260C
m,p-Xylene		0.0939	0.0012	0.00026	mg/kg	SW846 8260C
o-Xylene		0.0379	0.0012	0.00024	mg/kg	SW846 8260C
Xylene (total)		0.132	0.0012	0.00024	mg/kg	SW846 8260C
Benzo(a)anthracene		0.0258 J	0.035	0.0098	mg/kg	SW846 8270D
Benzo(a)pyrene		0.0269 J	0.035	0.016	mg/kg	SW846 8270D
Benzo(b)fluoranthene		0.0399	0.035	0.015	mg/kg	SW846 8270D
Benzo(g,h,i)perylene		0.0299 J	0.035	0.017	mg/kg	SW846 8270D
Chrysene		0.0395	0.035	0.011	mg/kg	SW846 8270D
Fluoranthene		0.0417	0.035	0.016	mg/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		0.0295 J	0.035	0.016	mg/kg	SW846 8270D
Phenanthrene		0.0191 J	0.035	0.012	mg/kg	SW846 8270D
Pyrene		0.0450	0.035	0.011	mg/kg	SW846 8270D
alpha-Chlordane [a]		0.00079	0.00066	0.00031	mg/kg	SW846 8081B
gamma-Chlordane		0.00066	0.00066	0.00029	mg/kg	SW846 8081B
Aluminum		2810	56		mg/kg	SW846 6010C
Arsenic		2.3	2.2		mg/kg	SW846 6010C
Calcium		4320	560		mg/kg	SW846 6010C
Chromium		17.9	1.1		mg/kg	SW846 6010C
Copper		6.8	2.8		mg/kg	SW846 6010C
Iron		7610	56		mg/kg	SW846 6010C
Lead		3.9	2.2		mg/kg	SW846 6010C
Magnesium		791	560		mg/kg	SW846 6010C
Manganese		107	1.7		mg/kg	SW846 6010C
Nickel		16.6	4.5		mg/kg	SW846 6010C
Vanadium		8.7	5.6		mg/kg	SW846 6010C
Zinc		13.5	5.6		mg/kg	SW846 6010C
JC39018-1A	**RAIL-SB-01**					
Corrosivity as pH		9.46 NC			su	SW846 9045D
Ignitability (Flashpoint)		> 200			Deg. F	SW846 1010A/ASTM D93
Chromium		0.058	0.050		mg/l	SW846 6010C

Summary of Hits

Job Number: JC39018
Account: Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Collected: 03/16/17

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC39018-2	**RAIL-SB-02**					
Acetone		0.0352	0.010	0.0051	mg/kg	SW846 8260C
Benzene		0.00056	0.00051	0.00012	mg/kg	SW846 8260C
2-Butanone (MEK)		0.0067 J	0.010	0.0018	mg/kg	SW846 8260C
Carbon disulfide		0.00031 J	0.0020	0.00017	mg/kg	SW846 8260C
Ethylbenzene		0.0015	0.0010	0.00015	mg/kg	SW846 8260C
Toluene		0.00063 J	0.0010	0.00013	mg/kg	SW846 8260C
m,p-Xylene		0.0063	0.0010	0.00022	mg/kg	SW846 8260C
o-Xylene		0.0033	0.0010	0.00021	mg/kg	SW846 8260C
Xylene (total)		0.0096	0.0010	0.00021	mg/kg	SW846 8260C
Benzo(a)anthracene		0.0358	0.035	0.0098	mg/kg	SW846 8270D
Benzo(a)pyrene		0.0440	0.035	0.016	mg/kg	SW846 8270D
Benzo(b)fluoranthene		0.0597	0.035	0.015	mg/kg	SW846 8270D
Benzo(g,h,i)perylene		0.0513	0.035	0.017	mg/kg	SW846 8270D
Benzo(k)fluoranthene		0.0184 J	0.035	0.016	mg/kg	SW846 8270D
Chrysene		0.0540	0.035	0.011	mg/kg	SW846 8270D
bis(2-Ethylhexyl)phthalate		0.0806	0.069	0.0081	mg/kg	SW846 8270D
Fluoranthene		0.0584	0.035	0.015	mg/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		0.0431	0.035	0.016	mg/kg	SW846 8270D
Phenanthrene		0.0288 J	0.035	0.012	mg/kg	SW846 8270D
Pyrene		0.0616	0.035	0.011	mg/kg	SW846 8270D
Aluminum		2700	54		mg/kg	SW846 6010C
Calcium		4070	540		mg/kg	SW846 6010C
Chromium		8.7	1.1		mg/kg	SW846 6010C
Copper		4.9	2.7		mg/kg	SW846 6010C
Iron		4620	54		mg/kg	SW846 6010C
Lead		3.8	2.1		mg/kg	SW846 6010C
Magnesium		2080	540		mg/kg	SW846 6010C
Manganese		86.5	1.6		mg/kg	SW846 6010C
Nickel		7.2	4.3		mg/kg	SW846 6010C
Vanadium		7.9	5.4		mg/kg	SW846 6010C
Zinc		9.3	5.4		mg/kg	SW846 6010C
JC39018-2A	**RAIL-SB-02**					
Corrosivity as pH		8.13 NC			su	SW846 9045D
Ignitability (Flashpoint)		> 200			Deg. F	SW846 1010A/ASTM D93
JC39018-3	**RAIL-SB-03**					
Acetone		0.0248	0.0083	0.0042	mg/kg	SW846 8260C
Benzene		0.00032 J	0.00042	0.00010	mg/kg	SW846 8260C
2-Butanone (MEK)		0.0039 J	0.0083	0.0015	mg/kg	SW846 8260C
Carbon disulfide		0.0015 J	0.0017	0.00014	mg/kg	SW846 8260C

Summary of Hits

Job Number: JC39018
Account: Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Collected: 03/16/17

Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
Ethylbenzene	0.00094	0.00083	0.00012	mg/kg	SW846 8260C
Toluene	0.00021 J	0.00083	0.00010	mg/kg	SW846 8260C
m,p-Xylene	0.0036	0.00083	0.00018	mg/kg	SW846 8260C
o-Xylene	0.0021	0.00083	0.00017	mg/kg	SW846 8260C
Xylene (total)	0.0057	0.00083	0.00017	mg/kg	SW846 8260C
Benzo(a)anthracene	0.0320 J	0.034	0.0096	mg/kg	SW846 8270D
Benzo(a)pyrene	0.0350	0.034	0.015	mg/kg	SW846 8270D
Benzo(b)fluoranthene	0.0485	0.034	0.015	mg/kg	SW846 8270D
Benzo(g,h,i)perylene	0.0398	0.034	0.017	mg/kg	SW846 8270D
Chrysene	0.0422	0.034	0.011	mg/kg	SW846 8270D
Fluoranthene	0.0497	0.034	0.015	mg/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene	0.0335 J	0.034	0.016	mg/kg	SW846 8270D
Phenanthrene	0.0280 J	0.034	0.011	mg/kg	SW846 8270D
Pyrene	0.0555	0.034	0.011	mg/kg	SW846 8270D
Aluminum	2400	54		mg/kg	SW846 6010C
Calcium	4060	540		mg/kg	SW846 6010C
Chromium	8.9	1.1		mg/kg	SW846 6010C
Copper	5.4	2.7		mg/kg	SW846 6010C
Iron	4150	54		mg/kg	SW846 6010C
Lead	4.8	2.1		mg/kg	SW846 6010C
Magnesium	1590	540		mg/kg	SW846 6010C
Manganese	84.8	1.6		mg/kg	SW846 6010C
Nickel	7.8	4.3		mg/kg	SW846 6010C
Vanadium	6.0	5.4		mg/kg	SW846 6010C
Zinc	7.5	5.4		mg/kg	SW846 6010C
JC39018-3A RAIL-SB-03					
Corrosivity as pH	8.06 NC			su	SW846 9045D
Ignitability (Flashpoint)	> 200			Deg. F	SW846 1010A/ASTM D93
JC39018-4 RAIL-SB-04					
Acetone	0.0048 J	0.0096	0.0048	mg/kg	SW846 8260C
Carbon disulfide	0.00024 J	0.0019	0.00016	mg/kg	SW846 8260C
Tetrachloroethene	0.00040 J	0.0019	0.00027	mg/kg	SW846 8260C
Benzo(a)anthracene	0.0196 J	0.033	0.0092	mg/kg	SW846 8270D
Benzo(a)pyrene	0.0239 J	0.033	0.015	mg/kg	SW846 8270D
Benzo(b)fluoranthene	0.0301 J	0.033	0.014	mg/kg	SW846 8270D
Benzo(g,h,i)perylene	0.0231 J	0.033	0.016	mg/kg	SW846 8270D
Chrysene	0.0228 J	0.033	0.010	mg/kg	SW846 8270D
Fluoranthene	0.0354	0.033	0.015	mg/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene	0.0242 J	0.033	0.015	mg/kg	SW846 8270D
Phenanthrene	0.0141 J	0.033	0.011	mg/kg	SW846 8270D
Pyrene	0.0335	0.033	0.010	mg/kg	SW846 8270D

Summary of Hits

Job Number: JC39018
Account: Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Collected: 03/16/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Aluminum		2160	51		mg/kg	SW846 6010C
Calcium		1880	510		mg/kg	SW846 6010C
Chromium		8.6	1.0		mg/kg	SW846 6010C
Copper		3.5	2.5		mg/kg	SW846 6010C
Iron		4200	51		mg/kg	SW846 6010C
Lead		3.1	2.0		mg/kg	SW846 6010C
Magnesium		846	510		mg/kg	SW846 6010C
Manganese		79.1	1.5		mg/kg	SW846 6010C
Nickel		6.3	4.1		mg/kg	SW846 6010C
Vanadium		5.3	5.1		mg/kg	SW846 6010C
Zinc		6.3	5.1		mg/kg	SW846 6010C
JC39018-4A	**RAIL-SB-04**					
Corrosivity as pH		8.51 NC			su	SW846 9045D
Ignitability (Flashpoint)		> 200			Deg. F	SW846 1010A/ASTM D93

(a) More than 40 % RPD for detected concentrations between the two GC columns.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	RAIL-SB-01		
Lab Sample ID:	JC39018-1	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8260C	**Percent Solids:**	92.5
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C217053.D	1	03/18/17	SY	n/a	n/a	VC7994
Run #2							

	Initial Weight
Run #1	4.6 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0568	0.012	0.0059	mg/kg	
71-43-2	Benzene	0.00036	0.00059	0.00014	mg/kg	J
74-97-5	Bromochloromethane	ND	0.0059	0.00037	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0024	0.00018	mg/kg	
75-25-2	Bromoform	ND	0.0059	0.00031	mg/kg	
74-83-9	Bromomethane	ND	0.0059	0.00057	mg/kg	
78-93-3	2-Butanone (MEK)	0.0059	0.012	0.0021	mg/kg	J
75-15-0	Carbon disulfide	0.00034	0.0024	0.00020	mg/kg	J
56-23-5	Carbon tetrachloride	ND	0.0024	0.00020	mg/kg	
108-90-7	Chlorobenzene	ND	0.0024	0.00019	mg/kg	
75-00-3	Chloroethane	ND	0.0059	0.00050	mg/kg	
67-66-3	Chloroform	ND	0.0024	0.00028	mg/kg	
74-87-3	Chloromethane	ND	0.0059	0.00025	mg/kg	
110-82-7	Cyclohexane	ND	0.0024	0.00064	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0024	0.00057	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0024	0.00018	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.0012	0.00028	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0012	0.00020	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0012	0.00016	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0012	0.00018	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0059	0.00064	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0012	0.00022	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0012	0.00020	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0012	0.00018	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0012	0.00051	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0012	0.00019	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0024	0.00036	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0024	0.00023	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0024	0.00026	mg/kg	
100-41-4	Ethylbenzene	0.0227	0.0012	0.00018	mg/kg	
76-13-1	Freon 113	ND	0.0059	0.00057	mg/kg	
591-78-6	2-Hexanone	ND	0.0059	0.0016	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-01		
Lab Sample ID:	JC39018-1	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8260C	**Percent Solids:**	92.5
Project:	LIRR Expansion, Long Island, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	0.00050	0.0024	0.00018	mg/kg	J
79-20-9	Methyl Acetate	0.0264	0.0059	0.0024	mg/kg	
108-87-2	Methylcyclohexane	0.0018	0.0024	0.00059	mg/kg	J
1634-04-4	Methyl Tert Butyl Ether	ND	0.0012	0.00031	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0059	0.0010	mg/kg	
75-09-2	Methylene chloride	ND	0.0059	0.0012	mg/kg	
100-42-5	Styrene	ND	0.0024	0.00017	mg/kg	
75-65-0	Tert Butyl Alcohol	ND	0.029	0.0036	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0024	0.00028	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0024	0.00033	mg/kg	
108-88-3	Toluene	0.0012	0.0012	0.00015	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0059	0.00059	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0059	0.00059	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0024	0.00020	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0024	0.00038	mg/kg	
79-01-6	Trichloroethene	ND	0.0012	0.00022	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0059	0.00074	mg/kg	
75-01-4	Vinyl chloride	ND	0.0024	0.00024	mg/kg	
	m,p-Xylene	0.0939	0.0012	0.00026	mg/kg	
95-47-6	o-Xylene	0.0379	0.0012	0.00024	mg/kg	
1330-20-7	Xylene (total)	0.132	0.0012	0.00024	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		70-122%
17060-07-0	1,2-Dichloroethane-D4	86%		68-124%
2037-26-5	Toluene-D8	99%		77-125%
460-00-4	4-Bromofluorobenzene	104%		72-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-01		
Lab Sample ID:	JC39018-1	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	92.5
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5P36635.D	1	03/19/17	SB	03/18/17	OP1202	E5P1831
Run #2							

	Initial Weight	Final Volume
Run #1	31.1 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	0.070	0.017	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.17	0.021	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.17	0.030	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.17	0.062	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	0.17	0.13	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.17	0.037	mg/kg	
95-48-7	2-Methylphenol	ND	0.070	0.022	mg/kg	
	3&4-Methylphenol	ND	0.070	0.029	mg/kg	
88-75-5	2-Nitrophenol	ND	0.17	0.023	mg/kg	
100-02-7	4-Nitrophenol	ND	0.35	0.093	mg/kg	
87-86-5	Pentachlorophenol	ND	0.14	0.033	mg/kg	
108-95-2	Phenol	ND	0.070	0.018	mg/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.17	0.023	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.17	0.026	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.17	0.021	mg/kg	
83-32-9	Acenaphthene	ND	0.035	0.012	mg/kg	
208-96-8	Acenaphthylene	ND	0.035	0.018	mg/kg	
98-86-2	Acetophenone	ND	0.17	0.0075	mg/kg	
120-12-7	Anthracene	ND	0.035	0.021	mg/kg	
1912-24-9	Atrazine	ND	0.070	0.015	mg/kg	
56-55-3	Benzo(a)anthracene	0.0258	0.035	0.0098	mg/kg	J
50-32-8	Benzo(a)pyrene	0.0269	0.035	0.016	mg/kg	J
205-99-2	Benzo(b)fluoranthene	0.0399	0.035	0.015	mg/kg	
191-24-2	Benzo(g,h,i)perylene	0.0299	0.035	0.017	mg/kg	J
207-08-9	Benzo(k)fluoranthene	ND	0.035	0.016	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.070	0.013	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.070	0.0085	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.070	0.0048	mg/kg	
100-52-7	Benzaldehyde	ND	0.17	0.0086	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.070	0.0083	mg/kg	
106-47-8	4-Chloroaniline	ND	0.17	0.013	mg/kg	
86-74-8	Carbazole	ND	0.070	0.0050	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-01		
Lab Sample ID:	JC39018-1	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	92.5
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	0.070	0.014	mg/kg	
218-01-9	Chrysene	0.0395	0.035	0.011	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.070	0.0074	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.070	0.015	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.070	0.012	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.070	0.011	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.035	0.011	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.035	0.017	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.070	0.029	mg/kg	
123-91-1	1,4-Dioxane	ND	0.035	0.023	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.035	0.015	mg/kg	
132-64-9	Dibenzofuran	ND	0.070	0.014	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.070	0.0057	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.070	0.0087	mg/kg	
84-66-2	Diethyl phthalate	ND	0.070	0.0074	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.070	0.0062	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.070	0.0081	mg/kg	
206-44-0	Fluoranthene	0.0417	0.035	0.016	mg/kg	
86-73-7	Fluorene	ND	0.035	0.016	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.070	0.0088	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.035	0.014	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.35	0.014	mg/kg	
67-72-1	Hexachloroethane	ND	0.17	0.017	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	0.0295	0.035	0.016	mg/kg	J
78-59-1	Isophorone	ND	0.070	0.0074	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.070	0.0079	mg/kg	
88-74-4	2-Nitroaniline	ND	0.17	0.0082	mg/kg	
99-09-2	3-Nitroaniline	ND	0.17	0.0087	mg/kg	
100-01-6	4-Nitroaniline	ND	0.17	0.0090	mg/kg	
91-20-3	Naphthalene	ND	0.035	0.0098	mg/kg	
98-95-3	Nitrobenzene	ND	0.070	0.013	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.070	0.010	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.17	0.013	mg/kg	
85-01-8	Phenanthrene	0.0191	0.035	0.012	mg/kg	J
129-00-0	Pyrene	0.0450	0.035	0.011	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.17	0.0088	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	82%		23-115%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-01		
Lab Sample ID:	JC39018-1	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	92.5
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	78%		27-114%
118-79-6	2,4,6-Tribromophenol	80%		19-152%
4165-60-0	Nitrobenzene-d5	93%		26-134%
321-60-8	2-Fluorobiphenyl	89%		39-124%
1718-51-0	Terphenyl-d14	87%		36-134%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-01		
Lab Sample ID:	JC39018-1	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8151 SW846 8151/3550C	**Percent Solids:**	92.5
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OA124612.D	1	03/23/17	RK	03/21/17	OP1206	GOA4269
Run #2	3G107321.D	1	03/26/17	RK	03/25/17	OP1390	G3G3745

	Initial Weight	Final Volume
Run #1	15.8 g	5.0 ml
Run #2	16.0 g	5.0 ml

Herbicide List

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	0.017	0.0077	mg/kg	
93-72-1	2,4,5-TP (Silvex)	ND	0.0034	0.0012	mg/kg	
93-76-5	2,4,5-T	ND	0.0034	0.0013	mg/kg	
75-99-0	Dalapon	ND	0.0034	0.0023	mg/kg	
1918-00-9	Dicamba	ND	0.0034	0.0017	mg/kg	
120-36-5	Dichloroprop	ND	0.017	0.0048	mg/kg	
88-85-7	Dinoseb	ND [a]	0.017	0.011	mg/kg	
94-74-6	MCPA	ND	1.7	0.39	mg/kg	
93-65-2	MCPP	ND	1.7	0.37	mg/kg	
87-86-5	Pentachlorophenol	ND	0.0017	0.0015	mg/kg	
94-82-6	2,4-DB	ND	0.017	0.0055	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	102%	85%	10-159%
19719-28-9	2,4-DCAA	81%	93%	10-159%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-01		
Lab Sample ID:	JC39018-1	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8081B SW846 3546	**Percent Solids:**	92.5
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G133176.D	1	03/20/17	KD	03/18/17	OP1208	G1G4257
Run #2							

	Initial Weight	Final Volume
Run #1	16.5 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.00066	0.00031	mg/kg	
319-84-6	alpha-BHC	ND	0.00066	0.00035	mg/kg	
319-85-7	beta-BHC	ND	0.00066	0.00041	mg/kg	
319-86-8	delta-BHC	ND	0.00066	0.00030	mg/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.00066	0.00029	mg/kg	
5103-71-9	alpha-Chlordane [a]	0.00079	0.00066	0.00031	mg/kg	
5103-74-2	gamma-Chlordane	0.00066	0.00066	0.00029	mg/kg	
60-57-1	Dieldrin	ND	0.00066	0.00033	mg/kg	
72-54-8	4,4'-DDD	ND	0.00066	0.00042	mg/kg	
72-55-9	4,4'-DDE	ND	0.00066	0.00034	mg/kg	
50-29-3	4,4'-DDT	ND	0.00066	0.00039	mg/kg	
72-20-8	Endrin	ND	0.00066	0.00031	mg/kg	
1031-07-8	Endosulfan sulfate	ND	0.00066	0.00026	mg/kg	
7421-93-4	Endrin aldehyde	ND	0.00066	0.00039	mg/kg	
959-98-8	Endosulfan-I	ND	0.00066	0.00034	mg/kg	
33213-65-9	Endosulfan-II	ND	0.00066	0.00034	mg/kg	
76-44-8	Heptachlor	ND	0.00066	0.00032	mg/kg	
1024-57-3	Heptachlor epoxide	ND	0.00066	0.00035	mg/kg	
72-43-5	Methoxychlor	ND	0.0013	0.00033	mg/kg	
53494-70-5	Endrin ketone	ND	0.00066	0.00051	mg/kg	
8001-35-2	Toxaphene	ND	0.016	0.0068	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	71%		25-135%
877-09-8	Tetrachloro-m-xylene	74%		25-135%
2051-24-3	Decachlorobiphenyl	50%		10-156%
2051-24-3	Decachlorobiphenyl	59%		10-156%

(a) More than 40 % RPD for detected concentrations between the two GC columns.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-01		
Lab Sample ID:	JC39018-1	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8082A SW846 3546	**Percent Solids:**	92.5
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5G67674.D	1	03/20/17	SP	03/18/17	OP1207	G5G1586
Run #2							

	Initial Weight	Final Volume
Run #1	16.6 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.033	0.016	mg/kg	
11104-28-2	Aroclor 1221	ND	0.033	0.016	mg/kg	
11141-16-5	Aroclor 1232	ND	0.033	0.013	mg/kg	
53469-21-9	Aroclor 1242	ND	0.033	0.012	mg/kg	
12672-29-6	Aroclor 1248	ND	0.033	0.021	mg/kg	
11097-69-1	Aroclor 1254	ND	0.033	0.016	mg/kg	
11096-82-5	Aroclor 1260	ND	0.033	0.014	mg/kg	
11100-14-4	Aroclor 1268	ND	0.033	0.012	mg/kg	
37324-23-5	Aroclor 1262	ND	0.033	0.022	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	69%		24-152%
877-09-8	Tetrachloro-m-xylene	74%		24-152%
2051-24-3	Decachlorobiphenyl	80%		10-166%
2051-24-3	Decachlorobiphenyl	79%		10-166%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-01		
Lab Sample ID:	JC39018-1	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	92.5
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	2810	56	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 2.2	2.2	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Arsenic	2.3	2.2	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Barium	< 22	22	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Beryllium	< 0.22	0.22	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.56	0.56	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Calcium	4320	560	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Chromium	17.9	1.1	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Cobalt	< 5.6	5.6	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Copper	6.8	2.8	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Iron	7610	56	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Lead	3.9	2.2	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Magnesium	791	560	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Manganese	107	1.7	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Mercury	< 0.032	0.032	mg/kg	1	03/17/17	03/18/17	JA	SW846 7471B [1]	SW846 7471B [4]
Nickel	16.6	4.5	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 2.2	2.2	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Silver	< 0.56	0.56	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Vanadium	8.7	5.6	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Zinc	13.5	5.6	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA41588
(2) Instrument QC Batch: MA41608
(3) Prep QC Batch: MP99308
(4) Prep QC Batch: MP99318

RL = Reporting Limit

Report of Analysis

Client Sample ID:	RAIL-SB-01		
Lab Sample ID:	JC39018-1	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	92.5
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	< 0.24	0.24	mg/kg	1	03/21/17 11:32	BM	SW846 9012B/LACHAT
Solids, Percent	92.5		%	1	03/17/17 09:50	TZW	SM2540 G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	RAIL-SB-01		
Lab Sample ID:	JC39018-1A	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8260C SW846 1311	**Percent Solids:**	92.5
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B149256.D	5	03/21/17	EH	03/17/17	GP3959	V2B6624
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.0025	0.00070	mg/l	
78-93-3	2-Butanone (MEK)	ND	D035	200	0.10	0.0095	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.0050	0.0027	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.0050	0.00087	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.0050	0.0011	mg/l	
106-46-7	1,4-Dichlorobenzene [a]	ND	D027	7.5	0.0050	0.0011	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.0050	0.0020	mg/l	
75-35-4	1,1-Dichloroethene	ND	D029	0.70	0.0050	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	D039	0.70	0.0050	0.0012	mg/l	
79-01-6	Trichloroethene	ND	D040	0.50	0.0050	0.0013	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.0050	0.0016	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	114%		76-120%
17060-07-0	1,2-Dichloroethane-D4	102%		64-135%
2037-26-5	Toluene-D8	98%		76-117%
460-00-4	4-Bromofluorobenzene	95%		72-122%

(a) This compound in BS is outside in house QC limits bias high.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-01		
Lab Sample ID:	JC39018-1A	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	92.5
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2M92702.D	1	03/21/17	SB	03/20/17	OP1257	E2M4116
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.020	0.0089	mg/l	
	3&4-Methylphenol	ND	D024	200	0.020	0.0088	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.10	0.014	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.013	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0092	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.020	0.0017	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.020	0.0055	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.020	0.0033	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.010	0.0049	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0039	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.020	0.0064	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.020	0.0039	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	35%		14-88%
4165-62-2	Phenol-d5	24%		10-110%
118-79-6	2,4,6-Tribromophenol	78%		39-149%
4165-60-0	Nitrobenzene-d5	72%		32-128%
321-60-8	2-Fluorobiphenyl	75%		35-119%
1718-51-0	Terphenyl-d14	91%		10-126%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-01		
Lab Sample ID:	JC39018-1A	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8151 SW846 8151/3510C	**Percent Solids:**	92.5
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G107152.D	1	03/22/17	RK	03/20/17	OP1259	G3G3741
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Herbicide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND	D016	10	0.0050	0.0039	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.0015	0.00047	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	86%		50-142%
19719-28-9	2,4-DCAA	55%		50-142%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-01		
Lab Sample ID:	JC39018-1A	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	92.5
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	8G3935.D	1	03/21/17	KD	03/20/17	OP1261	G8G116
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Pesticide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	D013	0.40	0.00010	0.000028	mg/l	
12789-03-6	Chlordane	ND	D020	0.030	0.0050	0.0011	mg/l	
72-20-8	Endrin	ND	D012	0.020	0.00010	0.000050	mg/l	
76-44-8	Heptachlor	ND	D031	0.0080	0.00010	0.000038	mg/l	
1024-57-3	Heptachlor epoxide	ND	D031	0.0080	0.00010	0.000065	mg/l	
72-43-5	Methoxychlor	ND	D014	10	0.00020	0.000057	mg/l	
8001-35-2	Toxaphene	ND	D015	0.50	0.0025	0.0018	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	74%		30-137%
877-09-8	Tetrachloro-m-xylene	75%		30-137%
2051-24-3	Decachlorobiphenyl	85%		10-137%
2051-24-3	Decachlorobiphenyl	86%		10-137%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-01		
Lab Sample ID:	JC39018-1A	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	92.5
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 0.50	D004	5.0	0.50	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Barium	< 1.0	D005	100	1.0	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 0.025	D006	1.0	0.025	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Chromium	0.058	D007	5.0	0.050	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Lead	< 0.50	D008	5.0	0.50	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	03/20/17	03/20/17	JPM	SW846 7470A [1]	SW846 7470A [4]
Selenium	< 0.50	D010	1.0	0.50	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Silver	< 0.050	D011	5.0	0.050	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA41592
(2) Instrument QC Batch: MA41600
(3) Prep QC Batch: MP99320
(4) Prep QC Batch: MP99334

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID:	RAIL-SB-01		
Lab Sample ID:	JC39018-1A	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	92.5
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Corrosivity as pH	9.46 NC		su	1	03/18/17 21:10	AT	SW846 9045D
Cyanide Reactivity	< 10	10	mg/kg	1	03/18/17 12:03	YZ	SW846 CHAP7/9012 B
Ignitability (Flashpoint)	> 200		Deg. F	1	03/18/17 22:10	AT	SW846 1010A/ASTM D93
Sulfide Reactivity	< 100	100	mg/kg	1	03/19/17 22:00	CB	SW846 CHAP7/9034

RL = Reporting Limit

Report of Analysis

Client Sample ID:	RAIL-SB-02		
Lab Sample ID:	JC39018-2	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8260C	**Percent Solids:**	94.3
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C217059.D	1	03/18/17	SY	n/a	n/a	VC7994
Run #2							

	Initial Weight
Run #1	5.2 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0352	0.010	0.0051	mg/kg	
71-43-2	Benzene	0.00056	0.00051	0.00012	mg/kg	
74-97-5	Bromochloromethane	ND	0.0051	0.00033	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0020	0.00015	mg/kg	
75-25-2	Bromoform	ND	0.0051	0.00027	mg/kg	
74-83-9	Bromomethane	ND	0.0051	0.00049	mg/kg	
78-93-3	2-Butanone (MEK)	0.0067	0.010	0.0018	mg/kg	J
75-15-0	Carbon disulfide	0.00031	0.0020	0.00017	mg/kg	J
56-23-5	Carbon tetrachloride	ND	0.0020	0.00017	mg/kg	
108-90-7	Chlorobenzene	ND	0.0020	0.00017	mg/kg	
75-00-3	Chloroethane	ND	0.0051	0.00044	mg/kg	
67-66-3	Chloroform	ND	0.0020	0.00024	mg/kg	
74-87-3	Chloromethane	ND	0.0051	0.00022	mg/kg	
110-82-7	Cyclohexane	ND	0.0020	0.00056	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0020	0.00049	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0020	0.00015	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.0010	0.00025	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0010	0.00017	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0010	0.00014	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0010	0.00016	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0051	0.00056	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00019	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00017	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00016	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00045	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00016	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0020	0.00032	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0020	0.00020	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0020	0.00023	mg/kg	
100-41-4	Ethylbenzene	0.0015	0.0010	0.00015	mg/kg	
76-13-1	Freon 113	ND	0.0051	0.00049	mg/kg	
591-78-6	2-Hexanone	ND	0.0051	0.0014	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-02		
Lab Sample ID:	JC39018-2	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8260C	**Percent Solids:**	94.3
Project:	LIRR Expansion, Long Island, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	0.0020	0.00016	mg/kg	
79-20-9	Methyl Acetate	ND	0.0051	0.0021	mg/kg	
108-87-2	Methylcyclohexane	ND	0.0020	0.00051	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0010	0.00027	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0051	0.00087	mg/kg	
75-09-2	Methylene chloride	ND	0.0051	0.0010	mg/kg	
100-42-5	Styrene	ND	0.0020	0.00015	mg/kg	
75-65-0	Tert Butyl Alcohol	ND	0.025	0.0031	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0020	0.00024	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0020	0.00029	mg/kg	
108-88-3	Toluene	0.00063	0.0010	0.00013	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0051	0.00051	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0051	0.00051	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0020	0.00017	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0020	0.00033	mg/kg	
79-01-6	Trichloroethene	ND	0.0010	0.00019	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0051	0.00064	mg/kg	
75-01-4	Vinyl chloride	ND	0.0020	0.00021	mg/kg	
	m,p-Xylene	0.0063	0.0010	0.00022	mg/kg	
95-47-6	o-Xylene	0.0033	0.0010	0.00021	mg/kg	
1330-20-7	Xylene (total)	0.0096	0.0010	0.00021	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		70-122%
17060-07-0	1,2-Dichloroethane-D4	91%		68-124%
2037-26-5	Toluene-D8	100%		77-125%
460-00-4	4-Bromofluorobenzene	105%		72-130%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-02		
Lab Sample ID:	JC39018-2	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	94.3
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5P36636.D	1	03/19/17	SB	03/18/17	OP1202	E5P1831
Run #2							

	Initial Weight	Final Volume
Run #1	30.6 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	0.069	0.017	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.17	0.021	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.17	0.030	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.17	0.062	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	0.17	0.13	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.17	0.037	mg/kg	
95-48-7	2-Methylphenol	ND	0.069	0.022	mg/kg	
	3&4-Methylphenol	ND	0.069	0.028	mg/kg	
88-75-5	2-Nitrophenol	ND	0.17	0.023	mg/kg	
100-02-7	4-Nitrophenol	ND	0.35	0.093	mg/kg	
87-86-5	Pentachlorophenol	ND	0.14	0.033	mg/kg	
108-95-2	Phenol	ND	0.069	0.018	mg/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.17	0.023	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.17	0.026	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.17	0.021	mg/kg	
83-32-9	Acenaphthene	ND	0.035	0.012	mg/kg	
208-96-8	Acenaphthylene	ND	0.035	0.018	mg/kg	
98-86-2	Acetophenone	ND	0.17	0.0075	mg/kg	
120-12-7	Anthracene	ND	0.035	0.021	mg/kg	
1912-24-9	Atrazine	ND	0.069	0.015	mg/kg	
56-55-3	Benzo(a)anthracene	0.0358	0.035	0.0098	mg/kg	
50-32-8	Benzo(a)pyrene	0.0440	0.035	0.016	mg/kg	
205-99-2	Benzo(b)fluoranthene	0.0597	0.035	0.015	mg/kg	
191-24-2	Benzo(g,h,i)perylene	0.0513	0.035	0.017	mg/kg	
207-08-9	Benzo(k)fluoranthene	0.0184	0.035	0.016	mg/kg	J
101-55-3	4-Bromophenyl phenyl ether	ND	0.069	0.013	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.069	0.0085	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.069	0.0047	mg/kg	
100-52-7	Benzaldehyde	ND	0.17	0.0086	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.069	0.0082	mg/kg	
106-47-8	4-Chloroaniline	ND	0.17	0.012	mg/kg	
86-74-8	Carbazole	ND	0.069	0.0050	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-02		
Lab Sample ID:	JC39018-2	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	94.3
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	0.069	0.014	mg/kg	
218-01-9	Chrysene	0.0540	0.035	0.011	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.069	0.0074	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.069	0.015	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.069	0.012	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.069	0.011	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.035	0.011	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.035	0.017	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.069	0.029	mg/kg	
123-91-1	1,4-Dioxane	ND	0.035	0.023	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.035	0.015	mg/kg	
132-64-9	Dibenzofuran	ND	0.069	0.014	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.069	0.0056	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.069	0.0086	mg/kg	
84-66-2	Diethyl phthalate	ND	0.069	0.0074	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.069	0.0062	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	0.0806	0.069	0.0081	mg/kg	
206-44-0	Fluoranthene	0.0584	0.035	0.015	mg/kg	
86-73-7	Fluorene	ND	0.035	0.016	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.069	0.0088	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.035	0.014	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.35	0.014	mg/kg	
67-72-1	Hexachloroethane	ND	0.17	0.017	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	0.0431	0.035	0.016	mg/kg	
78-59-1	Isophorone	ND	0.069	0.0074	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.069	0.0078	mg/kg	
88-74-4	2-Nitroaniline	ND	0.17	0.0082	mg/kg	
99-09-2	3-Nitroaniline	ND	0.17	0.0087	mg/kg	
100-01-6	4-Nitroaniline	ND	0.17	0.0090	mg/kg	
91-20-3	Naphthalene	ND	0.035	0.0098	mg/kg	
98-95-3	Nitrobenzene	ND	0.069	0.013	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.069	0.010	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.17	0.013	mg/kg	
85-01-8	Phenanthrene	0.0288	0.035	0.012	mg/kg	J
129-00-0	Pyrene	0.0616	0.035	0.011	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.17	0.0088	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	77%		23-115%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-02		
Lab Sample ID:	JC39018-2	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	94.3
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	73%		27-114%
118-79-6	2,4,6-Tribromophenol	73%		19-152%
4165-60-0	Nitrobenzene-d5	87%		26-134%
321-60-8	2-Fluorobiphenyl	86%		39-124%
1718-51-0	Terphenyl-d14	86%		36-134%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-02		
Lab Sample ID:	JC39018-2	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8151 SW846 8151/3550C	**Percent Solids:**	94.3
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OA124613.D	1	03/23/17	RK	03/21/17	OP1206	GOA4269
Run #2	3G107322.D	1	03/26/17	RK	03/25/17	OP1390	G3G3745

	Initial Weight	Final Volume
Run #1	15.0 g	5.0 ml
Run #2	16.1 g	5.0 ml

Herbicide List

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	0.018	0.0079	mg/kg	
93-72-1	2,4,5-TP (Silvex)	ND	0.0035	0.0013	mg/kg	
93-76-5	2,4,5-T	ND	0.0035	0.0014	mg/kg	
75-99-0	Dalapon	ND	0.0035	0.0024	mg/kg	
1918-00-9	Dicamba	ND	0.0035	0.0018	mg/kg	
120-36-5	Dichloroprop	ND	0.018	0.0050	mg/kg	
88-85-7	Dinoseb	ND [a]	0.016	0.011	mg/kg	
94-74-6	MCPA	ND	1.8	0.41	mg/kg	
93-65-2	MCPP	ND	1.8	0.39	mg/kg	
87-86-5	Pentachlorophenol	ND	0.0018	0.0015	mg/kg	
94-82-6	2,4-DB	ND	0.018	0.0057	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	86%	97%	10-159%
19719-28-9	2,4-DCAA	68%	122%	10-159%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-02		
Lab Sample ID:	JC39018-2	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8081B SW846 3546	**Percent Solids:**	94.3
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G133177.D	1	03/21/17	KD	03/18/17	OP1208	G1G4257
Run #2							

	Initial Weight	Final Volume
Run #1	15.5 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.00068	0.00033	mg/kg	
319-84-6	alpha-BHC	ND	0.00068	0.00037	mg/kg	
319-85-7	beta-BHC	ND	0.00068	0.00043	mg/kg	
319-86-8	delta-BHC	ND	0.00068	0.00031	mg/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.00068	0.00030	mg/kg	
5103-71-9	alpha-Chlordane	ND	0.00068	0.00032	mg/kg	
5103-74-2	gamma-Chlordane	ND	0.00068	0.00030	mg/kg	
60-57-1	Dieldrin	ND	0.00068	0.00034	mg/kg	
72-54-8	4,4'-DDD	ND	0.00068	0.00044	mg/kg	
72-55-9	4,4'-DDE	ND	0.00068	0.00036	mg/kg	
50-29-3	4,4'-DDT	ND	0.00068	0.00041	mg/kg	
72-20-8	Endrin	ND	0.00068	0.00032	mg/kg	
1031-07-8	Endosulfan sulfate	ND	0.00068	0.00027	mg/kg	
7421-93-4	Endrin aldehyde	ND	0.00068	0.00041	mg/kg	
959-98-8	Endosulfan-I	ND	0.00068	0.00036	mg/kg	
33213-65-9	Endosulfan-II	ND	0.00068	0.00036	mg/kg	
76-44-8	Heptachlor	ND	0.00068	0.00034	mg/kg	
1024-57-3	Heptachlor epoxide	ND	0.00068	0.00037	mg/kg	
72-43-5	Methoxychlor	ND	0.0014	0.00034	mg/kg	
53494-70-5	Endrin ketone	ND	0.00068	0.00053	mg/kg	
8001-35-2	Toxaphene	ND	0.017	0.0071	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	70%		25-135%
877-09-8	Tetrachloro-m-xylene	72%		25-135%
2051-24-3	Decachlorobiphenyl	44%		10-156%
2051-24-3	Decachlorobiphenyl	57%		10-156%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-02		
Lab Sample ID:	JC39018-2	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8082A SW846 3546	**Percent Solids:**	94.3
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5G67675.D	1	03/20/17	SP	03/18/17	OP1207	G5G1586
Run #2							

	Initial Weight	Final Volume
Run #1	15.5 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.034	0.017	mg/kg	
11104-28-2	Aroclor 1221	ND	0.034	0.017	mg/kg	
11141-16-5	Aroclor 1232	ND	0.034	0.013	mg/kg	
53469-21-9	Aroclor 1242	ND	0.034	0.012	mg/kg	
12672-29-6	Aroclor 1248	ND	0.034	0.022	mg/kg	
11097-69-1	Aroclor 1254	ND	0.034	0.017	mg/kg	
11096-82-5	Aroclor 1260	ND	0.034	0.015	mg/kg	
11100-14-4	Aroclor 1268	ND	0.034	0.012	mg/kg	
37324-23-5	Aroclor 1262	ND	0.034	0.023	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	69%		24-152%
877-09-8	Tetrachloro-m-xylene	74%		24-152%
2051-24-3	Decachlorobiphenyl	75%		10-166%
2051-24-3	Decachlorobiphenyl	78%		10-166%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-02		
Lab Sample ID:	JC39018-2	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	94.3
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	2700	54	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 2.1	2.1	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Arsenic	< 2.1	2.1	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Barium	< 21	21	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Beryllium	< 0.21	0.21	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.54	0.54	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Calcium	4070	540	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Chromium	8.7	1.1	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Cobalt	< 5.4	5.4	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Copper	4.9	2.7	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Iron	4620	54	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Lead	3.8	2.1	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Magnesium	2080	540	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Manganese	86.5	1.6	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Mercury	< 0.034	0.034	mg/kg	1	03/17/17	03/18/17	JA	SW846 7471B [1]	SW846 7471B [4]
Nickel	7.2	4.3	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 2.1	2.1	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Silver	< 0.54	0.54	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Vanadium	7.9	5.4	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Zinc	9.3	5.4	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA41588
(2) Instrument QC Batch: MA41608
(3) Prep QC Batch: MP99308
(4) Prep QC Batch: MP99318

RL = Reporting Limit

Report of Analysis

Client Sample ID:	RAIL-SB-02		
Lab Sample ID:	JC39018-2	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	94.3
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	< 0.24	0.24	mg/kg	1	03/21/17 11:34	BM	SW846 9012B/LACHAT
Solids, Percent	94.3		%	1	03/17/17 09:50	TZW	SM2540 G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	RAIL-SB-02		
Lab Sample ID:	JC39018-2A	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8260C SW846 1311	**Percent Solids:**	94.3
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B149257.D	5	03/21/17	EH	03/17/17	GP3959	V2B6624
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.0025	0.00070	mg/l	
78-93-3	2-Butanone (MEK)	ND	D035	200	0.10	0.0095	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.0050	0.0027	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.0050	0.00087	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.0050	0.0011	mg/l	
106-46-7	1,4-Dichlorobenzene [a]	ND	D027	7.5	0.0050	0.0011	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.0050	0.0020	mg/l	
75-35-4	1,1-Dichloroethene	ND	D029	0.70	0.0050	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	D039	0.70	0.0050	0.0012	mg/l	
79-01-6	Trichloroethene	ND	D040	0.50	0.0050	0.0013	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.0050	0.0016	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	114%		76-120%
17060-07-0	1,2-Dichloroethane-D4	101%		64-135%
2037-26-5	Toluene-D8	98%		76-117%
460-00-4	4-Bromofluorobenzene	95%		72-122%

(a) This compound in BS is outside in house QC limits bias high.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-02		
Lab Sample ID:	JC39018-2A	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	94.3
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2M92703.D	1	03/21/17	SB	03/20/17	OP1257	E2M4116
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.020	0.0089	mg/l	
	3&4-Methylphenol	ND	D024	200	0.020	0.0088	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.10	0.014	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.013	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0092	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.020	0.0017	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.020	0.0055	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.020	0.0033	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.010	0.0049	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0039	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.020	0.0064	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.020	0.0039	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	43%		14-88%
4165-62-2	Phenol-d5	28%		10-110%
118-79-6	2,4,6-Tribromophenol	84%		39-149%
4165-60-0	Nitrobenzene-d5	84%		32-128%
321-60-8	2-Fluorobiphenyl	88%		35-119%
1718-51-0	Terphenyl-d14	95%		10-126%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-02		
Lab Sample ID:	JC39018-2A	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8151 SW846 8151/3510C	**Percent Solids:**	94.3
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G107155.D	1	03/22/17	RK	03/20/17	OP1259	G3G3741
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Herbicide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND	D016	10	0.0050	0.0039	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.0015	0.00047	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	116%		50-142%
19719-28-9	2,4-DCAA	76%		50-142%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-02		
Lab Sample ID:	JC39018-2A	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	94.3
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	8G3936.D	1	03/21/17	KD	03/20/17	OP1261	G8G116
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Pesticide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	D013	0.40	0.00010	0.000028	mg/l	
12789-03-6	Chlordane	ND	D020	0.030	0.0050	0.0011	mg/l	
72-20-8	Endrin	ND	D012	0.020	0.00010	0.000050	mg/l	
76-44-8	Heptachlor	ND	D031	0.0080	0.00010	0.000038	mg/l	
1024-57-3	Heptachlor epoxide	ND	D031	0.0080	0.00010	0.000065	mg/l	
72-43-5	Methoxychlor	ND	D014	10	0.00020	0.000057	mg/l	
8001-35-2	Toxaphene	ND	D015	0.50	0.0025	0.0018	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	65%		30-137%
877-09-8	Tetrachloro-m-xylene	67%		30-137%
2051-24-3	Decachlorobiphenyl	106%		10-137%
2051-24-3	Decachlorobiphenyl	103%		10-137%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-02		
Lab Sample ID:	JC39018-2A	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	94.3
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 0.50	D004	5.0	0.50	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Barium	< 1.0	D005	100	1.0	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 0.025	D006	1.0	0.025	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 0.050	D007	5.0	0.050	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Lead	< 0.50	D008	5.0	0.50	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	03/20/17	03/20/17	JPM	SW846 7470A [1]	SW846 7470A [4]
Selenium	< 0.50	D010	1.0	0.50	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Silver	< 0.050	D011	5.0	0.050	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA41592
(2) Instrument QC Batch: MA41600
(3) Prep QC Batch: MP99320
(4) Prep QC Batch: MP99334

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID:	RAIL-SB-02		
Lab Sample ID:	JC39018-2A	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	94.3
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Corrosivity as pH	8.13 NC		su	1	03/18/17 21:10	AT	SW846 9045D
Cyanide Reactivity	< 10	10	mg/kg	1	03/18/17 12:07	YZ	SW846 CHAP7/9012 B
Ignitability (Flashpoint)	> 200		Deg. F	1	03/18/17 22:10	AT	SW846 1010A/ASTM D93
Sulfide Reactivity	< 100	100	mg/kg	1	03/19/17 22:00	CB	SW846 CHAP7/9034

RL = Reporting Limit

Report of Analysis

Client Sample ID:	RAIL-SB-03		
Lab Sample ID:	JC39018-3	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8260C	**Percent Solids:**	94.0
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C217052.D	1	03/18/17	SY	n/a	n/a	VC7994
Run #2							

	Initial Weight
Run #1	6.4 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0248	0.0083	0.0042	mg/kg	
71-43-2	Benzene	0.00032	0.00042	0.00010	mg/kg	J
74-97-5	Bromochloromethane	ND	0.0042	0.00027	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0017	0.00013	mg/kg	
75-25-2	Bromoform	ND	0.0042	0.00022	mg/kg	
74-83-9	Bromomethane	ND	0.0042	0.00040	mg/kg	
78-93-3	2-Butanone (MEK)	0.0039	0.0083	0.0015	mg/kg	J
75-15-0	Carbon disulfide	0.0015	0.0017	0.00014	mg/kg	J
56-23-5	Carbon tetrachloride	ND	0.0017	0.00014	mg/kg	
108-90-7	Chlorobenzene	ND	0.0017	0.00013	mg/kg	
75-00-3	Chloroethane	ND	0.0042	0.00036	mg/kg	
67-66-3	Chloroform	ND	0.0017	0.00020	mg/kg	
74-87-3	Chloromethane	ND	0.0042	0.00018	mg/kg	
110-82-7	Cyclohexane	ND	0.0017	0.00045	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0017	0.00040	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0017	0.00012	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.00083	0.00020	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.00083	0.00014	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.00083	0.00011	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.00083	0.00013	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0042	0.00045	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.00083	0.00016	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.00083	0.00014	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.00083	0.00013	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.00083	0.00036	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.00083	0.00013	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0017	0.00026	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0017	0.00016	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0017	0.00018	mg/kg	
100-41-4	Ethylbenzene	0.00094	0.00083	0.00012	mg/kg	
76-13-1	Freon 113	ND	0.0042	0.00040	mg/kg	
591-78-6	2-Hexanone	ND	0.0042	0.0012	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-03		
Lab Sample ID:	JC39018-3	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8260C	**Percent Solids:**	94.0
Project:	LIRR Expansion, Long Island, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	0.0017	0.00013	mg/kg	
79-20-9	Methyl Acetate	ND	0.0042	0.0017	mg/kg	
108-87-2	Methylcyclohexane	ND	0.0017	0.00042	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.00083	0.00022	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0042	0.00071	mg/kg	
75-09-2	Methylene chloride	ND	0.0042	0.00083	mg/kg	
100-42-5	Styrene	ND	0.0017	0.00012	mg/kg	
75-65-0	Tert Butyl Alcohol	ND	0.021	0.0025	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0017	0.00020	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0017	0.00023	mg/kg	
108-88-3	Toluene	0.00021	0.00083	0.00010	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0042	0.00042	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0042	0.00042	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0017	0.00014	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0017	0.00027	mg/kg	
79-01-6	Trichloroethene	ND	0.00083	0.00016	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0042	0.00052	mg/kg	
75-01-4	Vinyl chloride	ND	0.0017	0.00017	mg/kg	
	m,p-Xylene	0.0036	0.00083	0.00018	mg/kg	
95-47-6	o-Xylene	0.0021	0.00083	0.00017	mg/kg	
1330-20-7	Xylene (total)	0.0057	0.00083	0.00017	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		70-122%
17060-07-0	1,2-Dichloroethane-D4	84%		68-124%
2037-26-5	Toluene-D8	99%		77-125%
460-00-4	4-Bromofluorobenzene	108%		72-130%

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E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-03		
Lab Sample ID:	JC39018-3	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	94.0
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5P36637.D	1	03/19/17	SB	03/18/17	OP1202	E5P1831
Run #2							

	Initial Weight	Final Volume
Run #1	31.3 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	0.068	0.017	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.17	0.021	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.17	0.029	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.17	0.060	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	0.17	0.13	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.17	0.036	mg/kg	
95-48-7	2-Methylphenol	ND	0.068	0.022	mg/kg	
	3&4-Methylphenol	ND	0.068	0.028	mg/kg	
88-75-5	2-Nitrophenol	ND	0.17	0.022	mg/kg	
100-02-7	4-Nitrophenol	ND	0.34	0.091	mg/kg	
87-86-5	Pentachlorophenol	ND	0.14	0.032	mg/kg	
108-95-2	Phenol	ND	0.068	0.018	mg/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.17	0.023	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.17	0.025	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.17	0.020	mg/kg	
83-32-9	Acenaphthene	ND	0.034	0.012	mg/kg	
208-96-8	Acenaphthylene	ND	0.034	0.017	mg/kg	
98-86-2	Acetophenone	ND	0.17	0.0073	mg/kg	
120-12-7	Anthracene	ND	0.034	0.021	mg/kg	
1912-24-9	Atrazine	ND	0.068	0.015	mg/kg	
56-55-3	Benzo(a)anthracene	0.0320	0.034	0.0096	mg/kg	J
50-32-8	Benzo(a)pyrene	0.0350	0.034	0.015	mg/kg	
205-99-2	Benzo(b)fluoranthene	0.0485	0.034	0.015	mg/kg	
191-24-2	Benzo(g,h,i)perylene	0.0398	0.034	0.017	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.034	0.016	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.068	0.013	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.068	0.0083	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.068	0.0047	mg/kg	
100-52-7	Benzaldehyde	ND	0.17	0.0084	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.068	0.0081	mg/kg	
106-47-8	4-Chloroaniline	ND	0.17	0.012	mg/kg	
86-74-8	Carbazole	ND	0.068	0.0049	mg/kg	

ND = Not detected MDL = Method Detection Limit
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E = Indicates value exceeds calibration range

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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-03		
Lab Sample ID:	JC39018-3	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	94.0
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	0.068	0.013	mg/kg	
218-01-9	Chrysene	0.0422	0.034	0.011	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.068	0.0073	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.068	0.015	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.068	0.012	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.068	0.011	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.034	0.011	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.034	0.017	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.068	0.028	mg/kg	
123-91-1	1,4-Dioxane	ND	0.034	0.022	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.034	0.015	mg/kg	
132-64-9	Dibenzofuran	ND	0.068	0.014	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.068	0.0055	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.068	0.0085	mg/kg	
84-66-2	Diethyl phthalate	ND	0.068	0.0072	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.068	0.0060	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.068	0.0080	mg/kg	
206-44-0	Fluoranthene	0.0497	0.034	0.015	mg/kg	
86-73-7	Fluorene	ND	0.034	0.016	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.068	0.0086	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.034	0.014	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.34	0.014	mg/kg	
67-72-1	Hexachloroethane	ND	0.17	0.017	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	0.0335	0.034	0.016	mg/kg	J
78-59-1	Isophorone	ND	0.068	0.0073	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.068	0.0077	mg/kg	
88-74-4	2-Nitroaniline	ND	0.17	0.0080	mg/kg	
99-09-2	3-Nitroaniline	ND	0.17	0.0085	mg/kg	
100-01-6	4-Nitroaniline	ND	0.17	0.0088	mg/kg	
91-20-3	Naphthalene	ND	0.034	0.0096	mg/kg	
98-95-3	Nitrobenzene	ND	0.068	0.013	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.068	0.0098	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.17	0.012	mg/kg	
85-01-8	Phenanthrene	0.0280	0.034	0.011	mg/kg	J
129-00-0	Pyrene	0.0555	0.034	0.011	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.17	0.0086	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	73%		23-115%

ND = Not detected MDL = Method Detection Limit
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E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-03		
Lab Sample ID:	JC39018-3	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	94.0
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	73%		27-114%
118-79-6	2,4,6-Tribromophenol	77%		19-152%
4165-60-0	Nitrobenzene-d5	82%		26-134%
321-60-8	2-Fluorobiphenyl	84%		39-124%
1718-51-0	Terphenyl-d14	89%		36-134%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-03		
Lab Sample ID:	JC39018-3	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8151 SW846 8151/3550C	**Percent Solids:**	94.0
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OA124614.D	1	03/23/17	RK	03/21/17	OP1206	GOA4269
Run #2	3G107323.D	1	03/26/17	RK	03/25/17	OP1390	G3G3745

	Initial Weight	Final Volume
Run #1	15.1 g	5.0 ml
Run #2	15.4 g	5.0 ml

Herbicide List

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	0.018	0.0079	mg/kg	
93-72-1	2,4,5-TP (Silvex)	ND	0.0035	0.0013	mg/kg	
93-76-5	2,4,5-T	ND	0.0035	0.0014	mg/kg	
75-99-0	Dalapon	ND	0.0035	0.0024	mg/kg	
1918-00-9	Dicamba	ND	0.0035	0.0018	mg/kg	
120-36-5	Dichloroprop	ND	0.018	0.0050	mg/kg	
88-85-7	Dinoseb	ND [a]	0.017	0.012	mg/kg	
94-74-6	MCPA	ND	1.8	0.41	mg/kg	
93-65-2	MCPP	ND	1.8	0.38	mg/kg	
87-86-5	Pentachlorophenol	ND	0.0018	0.0015	mg/kg	
94-82-6	2,4-DB	ND	0.018	0.0057	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	43%	114%	10-159%
19719-28-9	2,4-DCAA	32%	112%	10-159%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-03		
Lab Sample ID:	JC39018-3	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8081B SW846 3546	**Percent Solids:**	94.0
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G133178.D	1	03/21/17	KD	03/18/17	OP1208	G1G4257
Run #2							

	Initial Weight	Final Volume
Run #1	15.5 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.00069	0.00033	mg/kg	
319-84-6	alpha-BHC	ND	0.00069	0.00037	mg/kg	
319-85-7	beta-BHC	ND	0.00069	0.00043	mg/kg	
319-86-8	delta-BHC	ND	0.00069	0.00031	mg/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.00069	0.00030	mg/kg	
5103-71-9	alpha-Chlordane	ND	0.00069	0.00033	mg/kg	
5103-74-2	gamma-Chlordane	ND	0.00069	0.00030	mg/kg	
60-57-1	Dieldrin	ND	0.00069	0.00034	mg/kg	
72-54-8	4,4'-DDD	ND	0.00069	0.00044	mg/kg	
72-55-9	4,4'-DDE	ND	0.00069	0.00036	mg/kg	
50-29-3	4,4'-DDT	ND	0.00069	0.00041	mg/kg	
72-20-8	Endrin	ND	0.00069	0.00032	mg/kg	
1031-07-8	Endosulfan sulfate	ND	0.00069	0.00028	mg/kg	
7421-93-4	Endrin aldehyde	ND	0.00069	0.00041	mg/kg	
959-98-8	Endosulfan-I	ND	0.00069	0.00036	mg/kg	
33213-65-9	Endosulfan-II	ND	0.00069	0.00036	mg/kg	
76-44-8	Heptachlor	ND	0.00069	0.00034	mg/kg	
1024-57-3	Heptachlor epoxide	ND	0.00069	0.00037	mg/kg	
72-43-5	Methoxychlor	ND	0.0014	0.00034	mg/kg	
53494-70-5	Endrin ketone	ND	0.00069	0.00053	mg/kg	
8001-35-2	Toxaphene	ND	0.017	0.0071	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	75%		25-135%
877-09-8	Tetrachloro-m-xylene	80%		25-135%
2051-24-3	Decachlorobiphenyl	54%		10-156%
2051-24-3	Decachlorobiphenyl	62%		10-156%

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-03		
Lab Sample ID:	JC39018-3	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8082A SW846 3546	**Percent Solids:**	94.0
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5G67676.D	1	03/20/17	SP	03/18/17	OP1207	G5G1586
Run #2							

	Initial Weight	Final Volume
Run #1	15.5 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.034	0.017	mg/kg	
11104-28-2	Aroclor 1221	ND	0.034	0.017	mg/kg	
11141-16-5	Aroclor 1232	ND	0.034	0.014	mg/kg	
53469-21-9	Aroclor 1242	ND	0.034	0.012	mg/kg	
12672-29-6	Aroclor 1248	ND	0.034	0.022	mg/kg	
11097-69-1	Aroclor 1254	ND	0.034	0.017	mg/kg	
11096-82-5	Aroclor 1260	ND	0.034	0.015	mg/kg	
11100-14-4	Aroclor 1268	ND	0.034	0.012	mg/kg	
37324-23-5	Aroclor 1262	ND	0.034	0.023	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	83%		24-152%
877-09-8	Tetrachloro-m-xylene	87%		24-152%
2051-24-3	Decachlorobiphenyl	85%		10-166%
2051-24-3	Decachlorobiphenyl	87%		10-166%

ND = Not detected MDL = Method Detection Limit
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Report of Analysis

Client Sample ID:	RAIL-SB-03		
Lab Sample ID:	JC39018-3	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	94.0
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	2400	54	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 2.1	2.1	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Arsenic	< 2.1	2.1	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Barium	< 21	21	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Beryllium	< 0.21	0.21	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.54	0.54	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Calcium	4060	540	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Chromium	8.9	1.1	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Cobalt	< 5.4	5.4	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Copper	5.4	2.7	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Iron	4150	54	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Lead	4.8	2.1	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Magnesium	1590	540	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Manganese	84.8	1.6	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Mercury	< 0.034	0.034	mg/kg	1	03/17/17	03/18/17	JA	SW846 7471B [1]	SW846 7471B [4]
Nickel	7.8	4.3	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 2.1	2.1	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Silver	< 0.54	0.54	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Vanadium	6.0	5.4	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Zinc	7.5	5.4	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA41588
(2) Instrument QC Batch: MA41608
(3) Prep QC Batch: MP99308
(4) Prep QC Batch: MP99318

RL = Reporting Limit

Report of Analysis

Client Sample ID:	RAIL-SB-03		
Lab Sample ID:	JC39018-3	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	94.0
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	< 0.24	0.24	mg/kg	1	03/21/17 11:35	BM	SW846 9012B/LACHAT
Solids, Percent	94		%	1	03/17/17 09:50	TZW	SM2540 G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	RAIL-SB-03		
Lab Sample ID:	JC39018-3A	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8260C SW846 1311	**Percent Solids:**	94.0
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B149258.D	5	03/21/17	EH	03/17/17	GP3959	V2B6624
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.0025	0.00070	mg/l	
78-93-3	2-Butanone (MEK)	ND	D035	200	0.10	0.0095	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.0050	0.0027	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.0050	0.00087	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.0050	0.0011	mg/l	
106-46-7	1,4-Dichlorobenzene [a]	ND	D027	7.5	0.0050	0.0011	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.0050	0.0020	mg/l	
75-35-4	1,1-Dichloroethene	ND	D029	0.70	0.0050	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	D039	0.70	0.0050	0.0012	mg/l	
79-01-6	Trichloroethene	ND	D040	0.50	0.0050	0.0013	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.0050	0.0016	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	114%		76-120%
17060-07-0	1,2-Dichloroethane-D4	101%		64-135%
2037-26-5	Toluene-D8	99%		76-117%
460-00-4	4-Bromofluorobenzene	93%		72-122%

(a) This compound in BS is outside in house QC limits bias high.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-03		
Lab Sample ID:	JC39018-3A	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	94.0
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2M92704.D	1	03/21/17	SB	03/20/17	OP1257	E2M4116
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.020	0.0089	mg/l	
	3&4-Methylphenol	ND	D024	200	0.020	0.0088	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.10	0.014	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.013	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0092	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.020	0.0017	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.020	0.0055	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.020	0.0033	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.010	0.0049	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0039	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.020	0.0064	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.020	0.0039	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	32%		14-88%
4165-62-2	Phenol-d5	21%		10-110%
118-79-6	2,4,6-Tribromophenol	78%		39-149%
4165-60-0	Nitrobenzene-d5	78%		32-128%
321-60-8	2-Fluorobiphenyl	83%		35-119%
1718-51-0	Terphenyl-d14	93%		10-126%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-03		
Lab Sample ID:	JC39018-3A	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8151 SW846 8151/3510C	**Percent Solids:**	94.0
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G107170.D	1	03/22/17	RK	03/20/17	OP1259	G3G3742
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Herbicide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND	D016	10	0.0050	0.0039	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.0015	0.00047	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	140%		50-142%
19719-28-9	2,4-DCAA	83%		50-142%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-03		
Lab Sample ID:	JC39018-3A	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	94.0
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	8G3937.D	1	03/21/17	KD	03/20/17	OP1261	G8G116
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Pesticide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	D013	0.40	0.00010	0.000028	mg/l	
12789-03-6	Chlordane	ND	D020	0.030	0.0050	0.0011	mg/l	
72-20-8	Endrin	ND	D012	0.020	0.00010	0.000050	mg/l	
76-44-8	Heptachlor	ND	D031	0.0080	0.00010	0.000038	mg/l	
1024-57-3	Heptachlor epoxide	ND	D031	0.0080	0.00010	0.000065	mg/l	
72-43-5	Methoxychlor	ND	D014	10	0.00020	0.000057	mg/l	
8001-35-2	Toxaphene	ND	D015	0.50	0.0025	0.0018	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	45%		30-137%
877-09-8	Tetrachloro-m-xylene	44%		30-137%
2051-24-3	Decachlorobiphenyl	83%		10-137%
2051-24-3	Decachlorobiphenyl	79%		10-137%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-03		
Lab Sample ID:	JC39018-3A	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	94.0
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 0.50	D004	5.0	0.50	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Barium	< 1.0	D005	100	1.0	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 0.025	D006	1.0	0.025	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 0.050	D007	5.0	0.050	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Lead	< 0.50	D008	5.0	0.50	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	03/20/17	03/20/17	JPM	SW846 7470A [1]	SW846 7470A [4]
Selenium	< 0.50	D010	1.0	0.50	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Silver	< 0.050	D011	5.0	0.050	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA41592
(2) Instrument QC Batch: MA41600
(3) Prep QC Batch: MP99320
(4) Prep QC Batch: MP99334

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID:	RAIL-SB-03		
Lab Sample ID:	JC39018-3A	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	94.0
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Corrosivity as pH	8.06 NC		su	1	03/18/17 21:10	AT	SW846 9045D
Cyanide Reactivity	< 11	11	mg/kg	1	03/18/17 12:08	YZ	SW846 CHAP7/9012 B
Ignitability (Flashpoint)	> 200		Deg. F	1	03/18/17 22:10	AT	SW846 1010A/ASTM D93
Sulfide Reactivity	< 110	110	mg/kg	1	03/19/17 22:00	CB	SW846 CHAP7/9034

RL = Reporting Limit

Report of Analysis

Client Sample ID:	RAIL-SB-04		
Lab Sample ID:	JC39018-4	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8260C	**Percent Solids:**	98.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C217051.D	1	03/18/17	SY	n/a	n/a	VC7994
Run #2							

	Initial Weight
Run #1	5.3 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0048	0.0096	0.0048	mg/kg	J
71-43-2	Benzene	ND	0.00048	0.00011	mg/kg	
74-97-5	Bromochloromethane	ND	0.0048	0.00031	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0019	0.00015	mg/kg	
75-25-2	Bromoform	ND	0.0048	0.00025	mg/kg	
74-83-9	Bromomethane	ND	0.0048	0.00046	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.0096	0.0017	mg/kg	
75-15-0	Carbon disulfide	0.00024	0.0019	0.00016	mg/kg	J
56-23-5	Carbon tetrachloride	ND	0.0019	0.00016	mg/kg	
108-90-7	Chlorobenzene	ND	0.0019	0.00016	mg/kg	
75-00-3	Chloroethane	ND	0.0048	0.00041	mg/kg	
67-66-3	Chloroform	ND	0.0019	0.00023	mg/kg	
74-87-3	Chloromethane	ND	0.0048	0.00020	mg/kg	
110-82-7	Cyclohexane	ND	0.0019	0.00052	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0019	0.00046	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0019	0.00014	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.00096	0.00023	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.00096	0.00016	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.00096	0.00013	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.00096	0.00015	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0048	0.00052	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.00096	0.00018	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.00096	0.00016	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.00096	0.00015	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.00096	0.00042	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.00096	0.00015	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0019	0.00030	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0019	0.00019	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0019	0.00021	mg/kg	
100-41-4	Ethylbenzene	ND	0.00096	0.00014	mg/kg	
76-13-1	Freon 113	ND	0.0048	0.00046	mg/kg	
591-78-6	2-Hexanone	ND	0.0048	0.0013	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-04		
Lab Sample ID:	JC39018-4	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8260C	**Percent Solids:**	98.6
Project:	LIRR Expansion, Long Island, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	0.0019	0.00015	mg/kg	
79-20-9	Methyl Acetate	ND	0.0048	0.0019	mg/kg	
108-87-2	Methylcyclohexane	ND	0.0019	0.00048	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.00096	0.00025	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0048	0.00081	mg/kg	
75-09-2	Methylene chloride	ND	0.0048	0.00096	mg/kg	
100-42-5	Styrene	ND	0.0019	0.00014	mg/kg	
75-65-0	Tert Butyl Alcohol	ND	0.024	0.0029	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0019	0.00023	mg/kg	
127-18-4	Tetrachloroethene	0.00040	0.0019	0.00027	mg/kg	J
108-88-3	Toluene	ND	0.00096	0.00012	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0048	0.00048	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0048	0.00048	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0019	0.00016	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0019	0.00031	mg/kg	
79-01-6	Trichloroethene	ND	0.00096	0.00018	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0048	0.00060	mg/kg	
75-01-4	Vinyl chloride	ND	0.0019	0.00019	mg/kg	
	m,p-Xylene	ND	0.00096	0.00021	mg/kg	
95-47-6	o-Xylene	ND	0.00096	0.00019	mg/kg	
1330-20-7	Xylene (total)	ND	0.00096	0.00019	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		70-122%
17060-07-0	1,2-Dichloroethane-D4	83%		68-124%
2037-26-5	Toluene-D8	98%		77-125%
460-00-4	4-Bromofluorobenzene	103%		72-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-04		
Lab Sample ID:	JC39018-4	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	98.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5P36638.D	1	03/19/17	SB	03/18/17	OP1202	E5P1831
Run #2							

	Initial Weight	Final Volume
Run #1	31.1 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	0.065	0.016	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.16	0.020	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.16	0.028	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.16	0.058	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	0.16	0.12	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.16	0.035	mg/kg	
95-48-7	2-Methylphenol	ND	0.065	0.021	mg/kg	
	3&4-Methylphenol	ND	0.065	0.027	mg/kg	
88-75-5	2-Nitrophenol	ND	0.16	0.022	mg/kg	
100-02-7	4-Nitrophenol	ND	0.33	0.087	mg/kg	
87-86-5	Pentachlorophenol	ND	0.13	0.031	mg/kg	
108-95-2	Phenol	ND	0.065	0.017	mg/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.16	0.022	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.16	0.024	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.16	0.019	mg/kg	
83-32-9	Acenaphthene	ND	0.033	0.011	mg/kg	
208-96-8	Acenaphthylene	ND	0.033	0.017	mg/kg	
98-86-2	Acetophenone	ND	0.16	0.0070	mg/kg	
120-12-7	Anthracene	ND	0.033	0.020	mg/kg	
1912-24-9	Atrazine	ND	0.065	0.014	mg/kg	
56-55-3	Benzo(a)anthracene	0.0196	0.033	0.0092	mg/kg	J
50-32-8	Benzo(a)pyrene	0.0239	0.033	0.015	mg/kg	J
205-99-2	Benzo(b)fluoranthene	0.0301	0.033	0.014	mg/kg	J
191-24-2	Benzo(g,h,i)perylene	0.0231	0.033	0.016	mg/kg	J
207-08-9	Benzo(k)fluoranthene	ND	0.033	0.015	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.065	0.013	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.065	0.0080	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.065	0.0045	mg/kg	
100-52-7	Benzaldehyde	ND	0.16	0.0081	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.065	0.0078	mg/kg	
106-47-8	4-Chloroaniline	ND	0.16	0.012	mg/kg	
86-74-8	Carbazole	ND	0.065	0.0047	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-04		
Lab Sample ID:	JC39018-4	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	98.6
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	0.065	0.013	mg/kg	
218-01-9	Chrysene	0.0228	0.033	0.010	mg/kg	J
111-91-1	bis(2-Chloroethoxy)methane	ND	0.065	0.0070	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.065	0.014	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.065	0.012	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.065	0.011	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.033	0.010	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.033	0.016	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.065	0.027	mg/kg	
123-91-1	1,4-Dioxane	ND	0.033	0.022	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.033	0.014	mg/kg	
132-64-9	Dibenzofuran	ND	0.065	0.013	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.065	0.0053	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.065	0.0081	mg/kg	
84-66-2	Diethyl phthalate	ND	0.065	0.0069	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.065	0.0058	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.065	0.0076	mg/kg	
206-44-0	Fluoranthene	0.0354	0.033	0.015	mg/kg	
86-73-7	Fluorene	ND	0.033	0.015	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.065	0.0083	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.033	0.013	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.33	0.013	mg/kg	
67-72-1	Hexachloroethane	ND	0.16	0.016	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	0.0242	0.033	0.015	mg/kg	J
78-59-1	Isophorone	ND	0.065	0.0070	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.065	0.0074	mg/kg	
88-74-4	2-Nitroaniline	ND	0.16	0.0077	mg/kg	
99-09-2	3-Nitroaniline	ND	0.16	0.0082	mg/kg	
100-01-6	4-Nitroaniline	ND	0.16	0.0084	mg/kg	
91-20-3	Naphthalene	ND	0.033	0.0092	mg/kg	
98-95-3	Nitrobenzene	ND	0.065	0.013	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.065	0.0094	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.16	0.012	mg/kg	
85-01-8	Phenanthrene	0.0141	0.033	0.011	mg/kg	J
129-00-0	Pyrene	0.0335	0.033	0.010	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.16	0.0083	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	61%		23-115%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-04		
Lab Sample ID:	JC39018-4	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	98.6
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	60%		27-114%
118-79-6	2,4,6-Tribromophenol	60%		19-152%
4165-60-0	Nitrobenzene-d5	71%		26-134%
321-60-8	2-Fluorobiphenyl	70%		39-124%
1718-51-0	Terphenyl-d14	71%		36-134%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-04		
Lab Sample ID:	JC39018-4	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8151 SW846 8151/3550C	**Percent Solids:**	98.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OA124615.D	1	03/23/17	RK	03/21/17	OP1206	GOA4269
Run #2	3G107324.D	1	03/26/17	RK	03/25/17	OP1390	G3G3745

	Initial Weight	Final Volume
Run #1	15.4 g	5.0 ml
Run #2	15.4 g	5.0 ml

Herbicide List

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	0.016	0.0074	mg/kg	
93-72-1	2,4,5-TP (Silvex)	ND	0.0033	0.0012	mg/kg	
93-76-5	2,4,5-T	ND	0.0033	0.0013	mg/kg	
75-99-0	Dalapon	ND	0.0033	0.0022	mg/kg	
1918-00-9	Dicamba	ND	0.0033	0.0017	mg/kg	
120-36-5	Dichloroprop	ND	0.016	0.0046	mg/kg	
88-85-7	Dinoseb	ND [a]	0.016	0.011	mg/kg	
94-74-6	MCPA	ND	1.6	0.38	mg/kg	
93-65-2	MCPP	ND	1.6	0.36	mg/kg	
87-86-5	Pentachlorophenol	ND	0.0016	0.0014	mg/kg	
94-82-6	2,4-DB	ND	0.016	0.0053	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	99%	85%	10-159%
19719-28-9	2,4-DCAA	82%	114%	10-159%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-04		
Lab Sample ID:	JC39018-4	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8081B SW846 3546	**Percent Solids:**	98.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G133179.D	1	03/21/17	KD	03/18/17	OP1208	G1G4257
Run #2							

	Initial Weight	Final Volume
Run #1	15.6 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.00065	0.00031	mg/kg	
319-84-6	alpha-BHC	ND	0.00065	0.00035	mg/kg	
319-85-7	beta-BHC	ND	0.00065	0.00041	mg/kg	
319-86-8	delta-BHC	ND	0.00065	0.00029	mg/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.00065	0.00029	mg/kg	
5103-71-9	alpha-Chlordane	ND	0.00065	0.00031	mg/kg	
5103-74-2	gamma-Chlordane	ND	0.00065	0.00029	mg/kg	
60-57-1	Dieldrin	ND	0.00065	0.00033	mg/kg	
72-54-8	4,4'-DDD	ND	0.00065	0.00042	mg/kg	
72-55-9	4,4'-DDE	ND	0.00065	0.00034	mg/kg	
50-29-3	4,4'-DDT	ND	0.00065	0.00039	mg/kg	
72-20-8	Endrin	ND	0.00065	0.00030	mg/kg	
1031-07-8	Endosulfan sulfate	ND	0.00065	0.00026	mg/kg	
7421-93-4	Endrin aldehyde	ND	0.00065	0.00039	mg/kg	
959-98-8	Endosulfan-I	ND	0.00065	0.00034	mg/kg	
33213-65-9	Endosulfan-II	ND	0.00065	0.00034	mg/kg	
76-44-8	Heptachlor	ND	0.00065	0.00032	mg/kg	
1024-57-3	Heptachlor epoxide	ND	0.00065	0.00035	mg/kg	
72-43-5	Methoxychlor	ND	0.0013	0.00032	mg/kg	
53494-70-5	Endrin ketone	ND	0.00065	0.00050	mg/kg	
8001-35-2	Toxaphene	ND	0.016	0.0068	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	69%		25-135%
877-09-8	Tetrachloro-m-xylene	70%		25-135%
2051-24-3	Decachlorobiphenyl	49%		10-156%
2051-24-3	Decachlorobiphenyl	56%		10-156%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-04		
Lab Sample ID:	JC39018-4	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8082A SW846 3546	**Percent Solids:**	98.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5G67677.D	1	03/20/17	SP	03/18/17	OP1207	G5G1586
Run #2							

	Initial Weight	Final Volume
Run #1	15.6 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.033	0.016	mg/kg	
11104-28-2	Aroclor 1221	ND	0.033	0.016	mg/kg	
11141-16-5	Aroclor 1232	ND	0.033	0.013	mg/kg	
53469-21-9	Aroclor 1242	ND	0.033	0.012	mg/kg	
12672-29-6	Aroclor 1248	ND	0.033	0.021	mg/kg	
11097-69-1	Aroclor 1254	ND	0.033	0.016	mg/kg	
11096-82-5	Aroclor 1260	ND	0.033	0.014	mg/kg	
11100-14-4	Aroclor 1268	ND	0.033	0.012	mg/kg	
37324-23-5	Aroclor 1262	ND	0.033	0.022	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	70%		24-152%
877-09-8	Tetrachloro-m-xylene	75%		24-152%
2051-24-3	Decachlorobiphenyl	76%		10-166%
2051-24-3	Decachlorobiphenyl	77%		10-166%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-04		
Lab Sample ID:	JC39018-4	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	98.6
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	2160	51	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 2.0	2.0	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Arsenic	< 2.0	2.0	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Barium	< 20	20	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Beryllium	< 0.20	0.20	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.51	0.51	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Calcium	1880	510	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Chromium	8.6	1.0	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Cobalt	< 5.1	5.1	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Copper	3.5	2.5	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Iron	4200	51	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Lead	3.1	2.0	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Magnesium	846	510	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Manganese	79.1	1.5	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Mercury	< 0.031	0.031	mg/kg	1	03/17/17	03/18/17	JA	SW846 7471B [1]	SW846 7471B [4]
Nickel	6.3	4.1	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Potassium	< 1000	1000	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 2.0	2.0	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Silver	< 0.51	0.51	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 1000	1000	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 1.0	1.0	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Vanadium	5.3	5.1	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]
Zinc	6.3	5.1	mg/kg	1	03/17/17	03/21/17	ND	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA41588
(2) Instrument QC Batch: MA41608
(3) Prep QC Batch: MP99308
(4) Prep QC Batch: MP99318

RL = Reporting Limit

Report of Analysis

Client Sample ID:	RAIL-SB-04		
Lab Sample ID:	JC39018-4	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	98.6
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	< 0.21	0.21	mg/kg	1	03/21/17 11:36	BM	SW846 9012B/LACHAT
Solids, Percent	98.6		%	1	03/17/17 09:50	TZW	SM2540 G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	RAIL-SB-04		
Lab Sample ID:	JC39018-4A	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8260C SW846 1311	**Percent Solids:**	98.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B149259.D	5	03/21/17	EH	03/17/17	GP3959	V2B6624
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.0025	0.00070	mg/l	
78-93-3	2-Butanone (MEK)	ND	D035	200	0.10	0.0095	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.0050	0.0027	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.0050	0.00087	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.0050	0.0011	mg/l	
106-46-7	1,4-Dichlorobenzene [a]	ND	D027	7.5	0.0050	0.0011	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.0050	0.0020	mg/l	
75-35-4	1,1-Dichloroethene	ND	D029	0.70	0.0050	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	D039	0.70	0.0050	0.0012	mg/l	
79-01-6	Trichloroethene	ND	D040	0.50	0.0050	0.0013	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.0050	0.0016	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	115%		76-120%
17060-07-0	1,2-Dichloroethane-D4	102%		64-135%
2037-26-5	Toluene-D8	98%		76-117%
460-00-4	4-Bromofluorobenzene	94%		72-122%

(a) This compound in BS is outside in house QC limits bias high.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-04		
Lab Sample ID:	JC39018-4A	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	98.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2M92705.D	1	03/21/17	SB	03/20/17	OP1257	E2M4116
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.020	0.0089	mg/l	
	3&4-Methylphenol	ND	D024	200	0.020	0.0088	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.10	0.014	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.013	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0092	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.020	0.0017	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.020	0.0055	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.020	0.0033	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.010	0.0049	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0039	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.020	0.0064	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.020	0.0039	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	35%		14-88%
4165-62-2	Phenol-d5	24%		10-110%
118-79-6	2,4,6-Tribromophenol	77%		39-149%
4165-60-0	Nitrobenzene-d5	79%		32-128%
321-60-8	2-Fluorobiphenyl	84%		35-119%
1718-51-0	Terphenyl-d14	94%		10-126%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-04		
Lab Sample ID:	JC39018-4A	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8151 SW846 8151/3510C	**Percent Solids:**	98.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G107171.D	1	03/22/17	RK	03/20/17	OP1259	G3G3742
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Herbicide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND	D016	10	0.0050	0.0039	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.0015	0.00047	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	109%		50-142%
19719-28-9	2,4-DCAA	63%		50-142%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-04		
Lab Sample ID:	JC39018-4A	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	98.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	8G3938.D	1	03/21/17	KD	03/20/17	OP1261	G8G116
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Pesticide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	D013	0.40	0.00010	0.000028	mg/l	
12789-03-6	Chlordane	ND	D020	0.030	0.0050	0.0011	mg/l	
72-20-8	Endrin	ND	D012	0.020	0.00010	0.000050	mg/l	
76-44-8	Heptachlor	ND	D031	0.0080	0.00010	0.000038	mg/l	
1024-57-3	Heptachlor epoxide	ND	D031	0.0080	0.00010	0.000065	mg/l	
72-43-5	Methoxychlor	ND	D014	10	0.00020	0.000057	mg/l	
8001-35-2	Toxaphene	ND	D015	0.50	0.0025	0.0018	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	51%		30-137%
877-09-8	Tetrachloro-m-xylene	49%		30-137%
2051-24-3	Decachlorobiphenyl	96%		10-137%
2051-24-3	Decachlorobiphenyl	90%		10-137%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RAIL-SB-04		
Lab Sample ID:	JC39018-4A	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	98.6
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 0.50	D004	5.0	0.50	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Barium	< 1.0	D005	100	1.0	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 0.025	D006	1.0	0.025	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 0.050	D007	5.0	0.050	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Lead	< 0.50	D008	5.0	0.50	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	03/20/17	03/20/17	JPM	SW846 7470A [1]	SW846 7470A [4]
Selenium	< 0.50	D010	1.0	0.50	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]
Silver	< 0.050	D011	5.0	0.050	mg/l	5	03/18/17	03/20/17	AB	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA41592
(2) Instrument QC Batch: MA41600
(3) Prep QC Batch: MP99320
(4) Prep QC Batch: MP99334

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID:	RAIL-SB-04		
Lab Sample ID:	JC39018-4A	**Date Sampled:**	03/16/17
Matrix:	SO - Soil	**Date Received:**	03/16/17
		Percent Solids:	98.6
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Corrosivity as pH	8.51 NC		su	1	03/18/17 21:10	AT	SW846 9045D
Cyanide Reactivity	< 10	10	mg/kg	1	03/18/17 12:10	YZ	SW846 CHAP7/9012 B
Ignitability (Flashpoint)	> 200		Deg. F	1	03/18/17 22:10	AT	SW846 1010A/ASTM D93
Sulfide Reactivity	< 100	100	mg/kg	1	03/19/17 22:00	CB	SW846 CHAP7/9034

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

Parameter Certification Exceptions

Job Number: JC39018
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY

The following parameters included in this report are exceptions to NELAC certification.
The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Cyanide Reactivity		**SW846 CHAP7/9012 B**	SO	Accutest is not certified for this parameter.[a]
Sulfide Reactivity		**SW846 CHAP7/9034**	SO	Accutest is not certified for this parameter.[a]

(a) Reactivity analyzed following SW846 Chapter 7 is no longer recognized by regulatory agencies. Use of results should be verified through the program to which the data is being submitted.

Certification exceptions shown are based on the New Jersey DEP certifications. Applicability in other states may vary. Please contact your laboratory representative if additional information is required for a specific regulatory program.

SGS ACCUTEST SLC

CHAIN OF CUSTODY

SGS Accutest - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

PAGE 1 OF 1

FED-EX Tracking #: | Bottle Order Control #:
SGS Accutest Quote #: | SGS Accutest Job #: JC39018

Client / Reporting Information

Company Name: Matrix NewWorld
Street Address: 150 W 30th St
City: NY State: NY Zip: 10001
Project Contact: Brian Crespi E-mail: bcrespi@matrixnewworld.com
Phone #: 212-324-4251 Fax #: 973-240-1818
Sampler(s) Name(s): Lindsay Melchiorreth 201-201-1953 Phone #:

Project Information

Project Name: Long Island Rail Road (LIRR)
Street: Railroad Ave
City: Westbury State: NY
Project #: 16-144
Client Purchase Order #:
Project Manager: Brian Crespi

Billing Information (If different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

SGS Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	Ni Water	MEOH	ENCORE	FULTCLT	RCRA	FULTALKL	Herbicides/Pesticides	VOC						LAB USE ONLY
1	RAIL-SB-01		3/16/17	0830	LM	SO	6					3	2	1		X	X	X	X	X						C59
2	RAIL-SB-02		3/16/17	0940	LM	SO	6					3	2	1		X	X	X	X	X						4G4
3	RAIL-SB-03		3/16/17	1110	LM	SO	6					3	2	1		X	X	X	X	X						14F3
4	RAIL-SB-04		3/16/17	1230	LM	SO	6					3	2	1		X	X	X	X	X						4089

D.I. slurry voc vials frozen storage
Date: 3/16/17 Time: 15:00 Initials:

Turnaround Time (Business days)

- ☐ Std. 10 Business Days
- ☐ 5 Day RUSH
- ☑ 3 Day RUSH
- ☐ 2 Day RUSH
- ☐ 1 Day RUSH
- ☐ other_____

Emergency & Rush T/A data available VIA Lablink

Approved by (SGS Accutest PM): / Date:
INITIAL ASSESSMENT
LABEL VERIFICATION

Data Deliverable Information

- ☐ Commercial "a" (Level 1)
- ☐ Commercial "b" *Level 2)
- ☐ FULLT1 (Level 3+4)
- ☐ NJ Reduced
- ☐ Commercial "C"
- ☐ *NJ Data of Known Quality Protocol Reporting*
- ☑ NYASP Category A
- ☐ NYASP Category B
- ☐ State Forms
- ☐ EDD Format _____
- ☐ Other _____

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

CS#6201618
Samples on ice

Sample inventory is verified upon receipt in the Laboratory

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
	3/16/17 1400	1	2	3/16/17 15:55	2
Relinquished by Sampler: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by Sampler: 5	Date Time:	Received By: 5	Custody Seal # ☐ Intact ☐ Not intact	Preserved where applicable ☐	On Ice ☑ Cooler Temp 3.4°C, 3.9°C

SM088-01C Rev. Date: 9/13/16

JC39018: Chain of Custody
Page 1 of 3

SGS ACCUTEST

Soil VOC Vial Tracking Log

JOB NUMBER: JC39018

SAMPLE #	MeOH	MeOH	DIH2O / NaHSO4	DIH2O / NaHSO4
1	1009		304	303
2	1006		297	298
3	752		260	261
4	754		276	277

All strike outs must be initialed & dated. A reason code must be applied if not a transcription error.

Form: SM087-01

Rev Date: 6/1/16

4.2 4

JC39018: Chain of Custody

Page 2 of 3

SGS Accutest Sample Receipt Summary

Job Number: JC39018 **Client:** _____ **Project:** _____

Date / Time Received: 3/16/2017 3:55:00 PM **Delivery Method:** _____ **Airbill #'s:** _____

Cooler Temps (Raw Measured) °C: Cooler 1: (3.4); Cooler 2: (3.9);

Cooler Temps (Corrected) °C: Cooler 1: (4.0); Cooler 2: (4.5);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	2		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

SM089-02
Rev. Date 12/1/16

JC39018: Chain of Custody
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Internal Sample Tracking Chronicle

Matrix New World Engineering, Inc.

Job No: JC39018

LIRR Expansion, Long Island, NY
Project No: 16-144, Railroad Ave. Parking Lot, Railroad Ave., Westbury

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC39018-1 Collected: 16-MAR-17 08:30 By: LM Received: 16-MAR-17 By: AS RAIL-SB-01						
JC39018-1	SM2540 G-97	17-MAR-17 09:50	TZW			SOL104
JC39018-1	SW846 7471B	18-MAR-17 09:28	JA	17-MAR-17	JA	HG
JC39018-1	SW846 8260C	18-MAR-17 18:35	SY			V8260TCL20
JC39018-1	SW846 8270D	19-MAR-17 19:16	SB	18-MAR-17	LL	AB8270TCL20
JC39018-1	SW846 8082A	20-MAR-17 13:09	SP	18-MAR-17	AC	P8082PCB11AO
JC39018-1	SW846 8081B	20-MAR-17 23:51	KD	18-MAR-17	AC	P8081PESTTCL
JC39018-1	SW846 9012B/LACHAT	21-MAR-17 11:32	BM	20-MAR-17	MP	CN
JC39018-1	SW846 6010C	21-MAR-17 13:20	ND	17-MAR-17	CSF	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC39018-1	SW846 8151	23-MAR-17 04:02	RK	21-MAR-17	AQ	H8151FL
JC39018-1	SW846 8151	26-MAR-17 07:21	RK	25-MAR-17	DH	H8151FL
JC39018-2 Collected: 16-MAR-17 09:40 By: LM Received: 16-MAR-17 By: AS RAIL-SB-02						
JC39018-2	SM2540 G-97	17-MAR-17 09:50	TZW			SOL104
JC39018-2	SW846 7471B	18-MAR-17 09:29	JA	17-MAR-17	JA	HG
JC39018-2	SW846 8260C	18-MAR-17 21:23	SY			V8260TCL20
JC39018-2	SW846 8270D	19-MAR-17 19:39	SB	18-MAR-17	LL	AB8270TCL20
JC39018-2	SW846 8082A	20-MAR-17 13:27	SP	18-MAR-17	AC	P8082PCB11AO
JC39018-2	SW846 8081B	21-MAR-17 00:08	KD	18-MAR-17	AC	P8081PESTTCL
JC39018-2	SW846 9012B/LACHAT	21-MAR-17 11:34	BM	20-MAR-17	MP	CN
JC39018-2	SW846 6010C	21-MAR-17 13:29	ND	17-MAR-17	CSF	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC39018-2	SW846 8151	23-MAR-17 04:30	RK	21-MAR-17	AQ	H8151FL
JC39018-2	SW846 8151	26-MAR-17 07:49	RK	25-MAR-17	DH	H8151FL
JC39018-3 Collected: 16-MAR-17 11:10 By: LM Received: 16-MAR-17 By: AS RAIL-SB-03						
JC39018-3	SM2540 G-97	17-MAR-17 09:50	TZW			SOL104
JC39018-3	SW846 7471B	18-MAR-17 09:31	JA	17-MAR-17	JA	HG
JC39018-3	SW846 8260C	18-MAR-17 18:06	SY			V8260TCL20
JC39018-3	SW846 8270D	19-MAR-17 20:03	SB	18-MAR-17	LL	AB8270TCL20
JC39018-3	SW846 8082A	20-MAR-17 13:45	SP	18-MAR-17	AC	P8082PCB11AO

Internal Sample Tracking Chronicle

Matrix New World Engineering, Inc.

Job No: JC39018

LIRR Expansion, Long Island, NY
Project No: 16-144, Railroad Ave. Parking Lot, Railroad Ave., Westbury

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC39018-3	SW846 8081B	21-MAR-17 00:24	KD	18-MAR-17	AC	P8081PESTTCL
JC39018-3	SW846 9012B/LACHAT	21-MAR-17 11:35	BM	20-MAR-17	MP	CN
JC39018-3	SW846 6010C	21-MAR-17 13:32	ND	17-MAR-17	CSF	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC39018-3	SW846 8151	23-MAR-17 04:58	RK	21-MAR-17	AQ	H8151FL
JC39018-3	SW846 8151	26-MAR-17 08:17	RK	25-MAR-17	DH	H8151FL
JC39018-4	Collected: 16-MAR-17 12:30 By: LM		Received: 16-MAR-17 By: AS			
RAIL-SB-04						
JC39018-4	SM2540 G-97	17-MAR-17 09:50	TZW			SOL104
JC39018-4	SW846 7471B	18-MAR-17 09:32	JA	17-MAR-17	JA	HG
JC39018-4	SW846 8260C	18-MAR-17 17:38	SY			V8260TCL20
JC39018-4	SW846 8270D	19-MAR-17 20:26	SB	18-MAR-17	LL	AB8270TCL20
JC39018-4	SW846 8082A	20-MAR-17 14:04	SP	18-MAR-17	AC	P8082PCB11AO
JC39018-4	SW846 8081B	21-MAR-17 00:41	KD	18-MAR-17	AC	P8081PESTTCL
JC39018-4	SW846 9012B/LACHAT	21-MAR-17 11:36	BM	20-MAR-17	MP	CN
JC39018-4	SW846 6010C	21-MAR-17 13:35	ND	17-MAR-17	CSF	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC39018-4	SW846 8151	23-MAR-17 05:27	RK	21-MAR-17	AQ	H8151FL
JC39018-4	SW846 8151	26-MAR-17 08:45	RK	25-MAR-17	DH	H8151FL
JC39018-1A	Collected: 16-MAR-17 08:30 By: LM		Received: 16-MAR-17 By: AS			
RAIL-SB-01						
JC39018-1A	SW846 CHAP7/9012 B	18-MAR-17 12:03	YZ	18-MAR-17	CB	CREAC
JC39018-1A	SW846 9045D	18-MAR-17 21:10	AT			CORR
JC39018-1A	SW846 1010A/ASTM D93	18-MAR-17 22:10	AT			IGN
JC39018-1A	SW846 CHAP7/9034	19-MAR-17 22:00	CB	18-MAR-17	CB	SREAC
JC39018-1A	SW846 7470A	20-MAR-17 13:42	JPM	20-MAR-17	JPM	EHG
JC39018-1A	SW846 6010C	20-MAR-17 15:44	AB	18-MAR-17	JA	EAG,EAS,EBA,ECD,ECR,EPB,ESE
JC39018-1A	SW846 8270D	21-MAR-17 07:51	SB	20-MAR-17	MS	AB8270TCLP
JC39018-1A	SW846 8081B	21-MAR-17 13:21	KD	20-MAR-17	AF	P8081TCLP
JC39018-1A	SW846 8260C	21-MAR-17 14:46	EH	17-MAR-17	MS	V8260TCLP
JC39018-1A	SW846 8151	22-MAR-17 05:32	RK	20-MAR-17	RF	H8151TCLP

Internal Sample Tracking Chronicle

Matrix New World Engineering, Inc.

Job No: JC39018

LIRR Expansion, Long Island, NY
Project No: 16-144, Railroad Ave. Parking Lot, Railroad Ave., Westbury

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC39018-2A	Collected: 16-MAR-17 09:40 By: LM		Received: 16-MAR-17 By: AS			
RAIL-SB-02						
JC39018-2A	SW846 CHAP7/9012 B	18-MAR-17 12:07	YZ	18-MAR-17	CB	CREAC
JC39018-2A	SW846 9045D	18-MAR-17 21:10	AT			CORR
JC39018-2A	SW846 1010A/ASTM D93	18-MAR-17 22:10	AT			IGN
JC39018-2A	SW846 CHAP7/9034	19-MAR-17 22:00	CB	18-MAR-17	CB	SREAC
JC39018-2A	SW846 7470A	20-MAR-17 13:43	JPM	20-MAR-17	JPM	EHG
JC39018-2A	SW846 6010C	20-MAR-17 15:47	AB	18-MAR-17	JA	EAG,EAS,EBA,ECD,ECR,EPB,ESE
JC39018-2A	SW846 8270D	21-MAR-17 08:17	SB	20-MAR-17	MS	AB8270TCLP
JC39018-2A	SW846 8081B	21-MAR-17 13:36	KD	20-MAR-17	AF	P8081TCLP
JC39018-2A	SW846 8260C	21-MAR-17 15:19	EH	17-MAR-17	MS	V8260TCLP
JC39018-2A	SW846 8151	22-MAR-17 06:56	RK	20-MAR-17	RF	H8151TCLP
JC39018-3A	Collected: 16-MAR-17 11:10 By: LM		Received: 16-MAR-17 By: AS			
RAIL-SB-03						
JC39018-3A	SW846 CHAP7/9012 B	18-MAR-17 12:08	YZ	18-MAR-17	CB	CREAC
JC39018-3A	SW846 9045D	18-MAR-17 21:10	AT			CORR
JC39018-3A	SW846 1010A/ASTM D93	18-MAR-17 22:10	AT			IGN
JC39018-3A	SW846 CHAP7/9034	19-MAR-17 22:00	CB	18-MAR-17	CB	SREAC
JC39018-3A	SW846 7470A	20-MAR-17 13:44	JPM	20-MAR-17	JPM	EHG
JC39018-3A	SW846 6010C	20-MAR-17 15:50	AB	18-MAR-17	JA	EAG,EAS,EBA,ECD,ECR,EPB,ESE
JC39018-3A	SW846 8270D	21-MAR-17 08:42	SB	20-MAR-17	MS	AB8270TCLP
JC39018-3A	SW846 8081B	21-MAR-17 13:51	KD	20-MAR-17	AF	P8081TCLP
JC39018-3A	SW846 8260C	21-MAR-17 15:50	EH	17-MAR-17	MS	V8260TCLP
JC39018-3A	SW846 8151	22-MAR-17 14:01	RK	20-MAR-17	RF	H8151TCLP
JC39018-4A	Collected: 16-MAR-17 12:30 By: LM		Received: 16-MAR-17 By: AS			
RAIL-SB-04						
JC39018-4A	SW846 CHAP7/9012 B	18-MAR-17 12:10	YZ	18-MAR-17	CB	CREAC
JC39018-4A	SW846 9045D	18-MAR-17 21:10	AT			CORR
JC39018-4A	SW846 1010A/ASTM D93	18-MAR-17 22:10	AT			IGN
JC39018-4A	SW846 CHAP7/9034	19-MAR-17 22:00	CB	18-MAR-17	CB	SREAC
JC39018-4A	SW846 7470A	20-MAR-17 13:45	JPM	20-MAR-17	JPM	EHG
JC39018-4A	SW846 6010C	20-MAR-17 15:53	AB	18-MAR-17	JA	EAG,EAS,EBA,ECD,ECR,EPB,ESE
JC39018-4A	SW846 8270D	21-MAR-17 09:07	SB	20-MAR-17	MS	AB8270TCLP
JC39018-4A	SW846 8081B	21-MAR-17 14:06	KD	20-MAR-17	AF	P8081TCLP

Internal Sample Tracking Chronicle

Matrix New World Engineering, Inc.

Job No: JC39018

LIRR Expansion, Long Island, NY
Project No: 16-144, Railroad Ave. Parking Lot, Railroad Ave., Westbury

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC39018-4A	SW846 8260C	21-MAR-17 16:20	EH	17-MAR-17	MS	V8260TCLP
JC39018-4A	SW846 8151	22-MAR-17 14:29	RK	20-MAR-17	RF	H8151TCLP

SGS Accutest Internal Chain of Custody

Job Number: JC39018
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/16/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC39018-1.1	Secured Storage	Todd Shoemaker	03/17/17 10:00	Retrieve from Storage
JC39018-1.1	Todd Shoemaker	Secured Staging Area	03/17/17 10:00	Return to Storage
JC39018-1.1	Secured Staging Area	Mark Setaro	03/17/17 10:06	Retrieve from Storage
JC39018-1.1	Mark Setaro	Secured Storage	03/17/17 13:38	Return to Storage
JC39018-1.1	Secured Storage	Edwin Gonzalez	03/17/17 15:18	Retrieve from Storage
JC39018-1.1	Edwin Gonzalez	Secured Staging Area	03/17/17 15:18	Return to Storage
JC39018-1.1	Secured Staging Area	Chelsea San Filippo	03/17/17 15:31	Retrieve from Storage
JC39018-1.1	Chelsea San Filippo	Secured Storage	03/17/17 17:37	Return to Storage
JC39018-1.1	Secured Storage	Arielle Cocozza	03/18/17 06:25	Retrieve from Storage
JC39018-1.1	Secured Storage	Sahara Feliciano	03/18/17 15:47	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JC39018-1.1	Sahara Feliciano	Secured Staging Area	03/18/17 15:47	Return to Storage
JC39018-1.1	Secured Staging Area	Amir Takla	03/18/17 18:31	Retrieve from Storage
JC39018-1.1	Amir Takla	Secured Storage	03/18/17 18:32	Return to Storage
JC39018-1.1	Secured Storage	Sahara Feliciano	03/19/17 15:08	Retrieve from Storage
JC39018-1.1	Sahara Feliciano	Secured Staging Area	03/19/17 15:08	Return to Storage
JC39018-1.1	Secured Staging Area	Miti Patel	03/20/17 09:23	Retrieve from Storage
JC39018-1.1	Miti Patel	Secured Storage	03/20/17 13:16	Return to Storage
JC39018-1.1	Secured Storage	Edwin Gonzalez	03/23/17 12:29	Retrieve from Storage
JC39018-1.1	Edwin Gonzalez	Secured Staging Area	03/23/17 12:29	Return to Storage
JC39018-1.1	Secured Staging Area	Lindsey Lee	03/23/17 15:08	Retrieve from Storage
JC39018-1.1	Lindsey Lee	Secured Storage	03/23/17 23:34	Return to Storage
JC39018-1.1	Secured Storage	Albert Quayson	03/24/17 14:59	Retrieve from Storage
JC39018-1.1	Albert Quayson	Secured Storage	03/24/17 18:18	Return to Storage
JC39018-1.1	Secured Storage	Lindsey Lee	03/25/17 06:13	Retrieve from Storage
JC39018-1.1	Lindsey Lee	Secured Storage	03/25/17 16:13	Return to Storage
JC39018-1.1.1	Mark Setaro	TCLP	03/17/17 10:06	Leachate from JC39018-1.1
JC39018-1.1.1	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39018-1.1
JC39018-1.1.1	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39018-1.1.1	Secured Storage	Jessica Adametz	03/18/17 11:11	Retrieve from Storage
JC39018-1.1.1	Jessica Adametz	Secured Storage	03/18/17 11:12	Return to Storage
JC39018-1.1.2	Chelsea San Filippo	Metals Digestion	03/17/17 17:35	Digestate from JC39018-1.1
JC39018-1.1.2	Metals Digestion	Chelsea San Filippo	03/17/17 17:35	Digestate from JC39018-1.1
JC39018-1.1.2	Chelsea San Filippo	Metals Digestate Storage	03/17/17 17:35	Return to Storage
JC39018-1.1.3	Arielle Cocozza	Organics Prep	03/18/17 06:26	Extract from JC39018-1.1
JC39018-1.1.3	Organics Prep	Arielle Cocozza	03/18/17 16:25	Extract from JC39018-1.1
JC39018-1.1.3	Arielle Cocozza	Extract Storage	03/18/17 16:25	Return to Storage
JC39018-1.1.3	Extract Storage	Humarah Bano	03/20/17 17:01	Retrieve from Storage
JC39018-1.1.3	Humarah Bano	GC5G	03/20/17 17:01	Load on Instrument
JC39018-1.1.3	GC5G	Humarah Bano	03/22/17 10:28	Unload from Instrument
JC39018-1.1.3	Humarah Bano	Extract Freezer	03/22/17 10:28	Return to Storage

SGS Accutest Internal Chain of Custody

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Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC39018-1.1.4	Arielle Cocozza	Organics Prep	03/18/17 06:26	Extract from JC39018-1.1
JC39018-1.1.4	Organics Prep	Arielle Cocozza	03/18/17 16:25	Extract from JC39018-1.1
JC39018-1.1.4	Arielle Cocozza	Extract Storage	03/18/17 16:25	Return to Storage
JC39018-1.1.4	Extract Storage	Christine Phillips	03/20/17 16:34	Retrieve from Storage
JC39018-1.1.4	Christine Phillips	GC1G	03/20/17 16:34	Load on Instrument
JC39018-1.1.5	Arielle Cocozza	Organics Prep	03/18/17 06:37	Extract from JC39018-1.1
JC39018-1.1.5	Organics Prep	Lindsey Lee	03/18/17 17:02	Extract from JC39018-1.1
JC39018-1.1.5	Lindsey Lee	Extract Storage	03/18/17 17:02	Return to Storage
JC39018-1.1.5	Extract Storage	Sean Block	03/19/17 13:11	Retrieve from Storage
JC39018-1.1.5	Sean Block	GCMS5P	03/19/17 13:11	Load on Instrument
JC39018-1.1.5	GCMS5P	Ashley Noble	03/21/17 13:08	Unload from Instrument
JC39018-1.1.5	Ashley Noble	Extract Freezer	03/21/17 13:08	Return to Storage
JC39018-1.1.6	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39018-1.1
JC39018-1.1.6	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39018-1.1.6	Secured Storage	Nicholas Goydish	03/20/17 08:04	Retrieve from Storage
JC39018-1.1.6	Nicholas Goydish	Jonathan Stanley	03/20/17 14:59	Custody Transfer
JC39018-1.1.6	Jonathan Stanley	Ryan Fantasia	03/20/17 15:16	Custody Transfer
JC39018-1.1.6	Ryan Fantasia	Secured Storage	03/20/17 23:02	Return to Storage
JC39018-1.1.7	Jessica Adametz	Metals Digestion	03/18/17 11:12	Digestate from JC39018-1.1.1
JC39018-1.1.7	Metals Digestion	Jessica Adametz	03/18/17 11:12	Digestate from JC39018-1.1.1
JC39018-1.1.7	Jessica Adametz	Metals Digestate Storage	03/18/17 11:12	Return to Storage
JC39018-1.1.8	Nicholas Goydish	Organics Prep	03/20/17 08:11	Extract from JC39018-1.1.6
JC39018-1.1.8	Organics Prep	Ryan Fantasia	03/20/17 23:34	Extract from JC39018-1.1.6
JC39018-1.1.8	Ryan Fantasia	Extract Storage	03/20/17 23:34	Return to Storage
JC39018-1.1.8	Extract Storage	Rebecca Krug	03/21/17 16:43	Retrieve from Storage
JC39018-1.1.8	Rebecca Krug	GC3G	03/21/17 16:43	Load on Instrument
JC39018-1.1.8	GC3G	Rebecca Krug	03/23/17 16:15	Unload from Instrument
JC39018-1.1.8	Rebecca Krug	Extract Freezer	03/23/17 16:15	Return to Storage
JC39018-1.1.9	Nicholas Goydish	Organics Prep	03/20/17 08:12	Extract from JC39018-1.1.6
JC39018-1.1.9	Organics Prep	Nicholas Goydish	03/20/17 16:46	Extract from JC39018-1.1.6
JC39018-1.1.9	Nicholas Goydish	Extract Storage	03/20/17 16:46	Return to Storage
JC39018-1.1.9	Extract Storage	Sean Block	03/20/17 23:22	Retrieve from Storage
JC39018-1.1.9	Sean Block	GCMS2M	03/20/17 23:22	Load on Instrument
JC39018-1.1.9	GCMS2M	Ashley Noble	03/21/17 09:42	Unload from Instrument
JC39018-1.1.9	Ashley Noble	Extract Freezer	03/21/17 09:42	Return to Storage
JC39018-1.1.10	Nicholas Goydish	Organics Prep	03/20/17 08:13	Extract from JC39018-1.1.6
JC39018-1.1.10	Organics Prep	Amanda Furka	03/20/17 23:01	Extract from JC39018-1.1.6

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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC39018-1.1.10	Amanda Furka	Extract Storage	03/20/17 23:01	Return to Storage
JC39018-1.1.10	Extract Storage	Christine Phillips	03/21/17 10:01	Retrieve from Storage
JC39018-1.1.10	Christine Phillips	GC8G	03/21/17 10:01	Load on Instrument
JC39018-1.1.11	Lindsey Lee	Organics Prep	03/23/17 15:23	Extract from JC39018-1.1
JC39018-1.1.11	Organics Prep	Sora Lynn Mathurin	03/24/17 12:14	Extract from JC39018-1.1
JC39018-1.1.11	Sora Lynn Mathurin	Extract Storage	03/24/17 12:14	Return to Storage
JC39018-1.1.11	Extract Storage	Rebecca Krug	03/24/17 12:26	Retrieve from Storage
JC39018-1.1.11	Rebecca Krug	GC3G	03/24/17 12:26	Load on Instrument
JC39018-1.1.12	Albert Quayson	Organics Prep	03/24/17 14:59	Extract from JC39018-1.1
JC39018-1.1.12	Organics Prep	Ryan Fantasia	03/24/17 23:51	Extract from JC39018-1.1
JC39018-1.1.12	Ryan Fantasia	Extract Storage	03/24/17 23:51	Return to Storage
JC39018-1.1.13	Albert Quayson	Organics Prep	03/24/17 14:59	Extract from JC39018-1.1
JC39018-1.1.13	Organics Prep	Ryan Fantasia	03/24/17 23:51	Extract from JC39018-1.1
JC39018-1.1.13	Ryan Fantasia	Extract Storage	03/24/17 23:51	Return to Storage
JC39018-1.1.14	Lindsey Lee	Organics Prep	03/25/17 06:55	Extract from JC39018-1.1
JC39018-1.1.14	Organics Prep	Albert Quayson	03/25/17 18:27	Extract from JC39018-1.1
JC39018-1.1.14	Albert Quayson	Extract Storage	03/25/17 18:27	Return to Storage
JC39018-1.1.14	Extract Storage	Rebecca Krug	03/26/17 06:30	Retrieve from Storage
JC39018-1.1.14	Rebecca Krug	GC3G	03/26/17 06:30	Load on Instrument
JC39018-1.2	Secured Storage	Todd Shoemaker	03/17/17 08:35	Retrieve from Storage
JC39018-1.2	Todd Shoemaker	Secured Staging Area	03/17/17 08:36	Return to Storage
JC39018-1.2	Secured Staging Area	Luis Villanueva	03/17/17 09:27	Retrieve from Storage
JC39018-1.2	Luis Villanueva	Secured Storage	03/17/17 10:54	Return to Storage
JC39018-1.2	Secured Storage	Sahara Feliciano	03/17/17 12:15	Retrieve from Storage
JC39018-1.2	Sahara Feliciano	Secured Staging Area	03/17/17 12:15	Return to Storage
JC39018-1.2	Secured Staging Area	Jessica Adametz	03/17/17 14:39	Retrieve from Storage
JC39018-1.2	Jessica Adametz	Secured Storage	03/17/17 14:42	Return to Storage
JC39018-1.2	Secured Storage	Edwin Gonzalez	03/17/17 17:23	Retrieve from Storage
JC39018-1.2	Edwin Gonzalez	Secured Staging Area	03/17/17 17:23	Return to Storage
JC39018-1.2	Secured Staging Area	Hans Seignon	03/17/17 17:30	Retrieve from Storage
JC39018-1.2	Hans Seignon	Chris Brunson	03/17/17 20:55	Custody Transfer
JC39018-1.2	Secured Storage	Sahara Feliciano	03/19/17 11:54	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JC39018-1.2	Sahara Feliciano	Secured Staging Area	03/19/17 11:55	Return to Storage
JC39018-1.2	Secured Staging Area	Steven Zarchy	03/20/17 06:59	Retrieve from Storage
JC39018-1.2	Steven Zarchy	Stephen Seuling	03/20/17 07:58	Custody Transfer
JC39018-1.2	Stephen Seuling	Secured Storage	03/20/17 11:39	Return to Storage
JC39018-1.2.1	Steven Zarchy	Organics Prep	03/20/17 07:17	Extract from JC39018-1.2

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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC39018-1.2.1	Organics Prep	Albert Quayson	03/21/17 12:03	Extract from JC39018-1.2
JC39018-1.2.1	Albert Quayson	Extract Storage	03/21/17 12:03	Return to Storage
JC39018-1.2.1	Extract Storage	Rebecca Krug	03/22/17 17:05	Retrieve from Storage
JC39018-1.2.1	Rebecca Krug	GCOA	03/22/17 17:05	Load on Instrument
JC39018-1.2.1	GCOA	Rebecca Krug	03/23/17 16:47	Unload from Instrument
JC39018-1.2.1	Rebecca Krug	Extract Freezer	03/23/17 16:47	Return to Storage
JC39018-1.3	Secured Storage	Todd Shoemaker	03/17/17 10:00	Retrieve from Storage
JC39018-1.3	Todd Shoemaker	Secured Staging Area	03/17/17 10:00	Return to Storage
JC39018-1.3	Secured Staging Area	Mark Setaro	03/17/17 10:06	Retrieve from Storage
JC39018-1.3	Mark Setaro	Secured Storage	03/17/17 13:38	Return to Storage
JC39018-1.3.1	Mark Setaro	TCLP	03/17/17 10:06	Leachate from JC39018-1.3
JC39018-1.3.1	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39018-1.3
JC39018-1.3.1	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39018-1.3.2	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39018-1.3
JC39018-1.3.2	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39018-1.3.2	Secured Storage	Eddie Huang	03/20/17 15:48	Retrieve from Storage
JC39018-1.3.2	Eddie Huang	GCMS2B	03/20/17 15:48	Load on Instrument
JC39018-1.3.2	GCMS2B	Eddie Huang	03/21/17 08:55	Unload from Instrument
JC39018-1.3.2	Eddie Huang	Secured Storage	03/21/17 08:55	Return to Storage
JC39018-1.3.2	Secured Storage	Eddie Huang	03/21/17 14:47	Retrieve from Storage
JC39018-1.3.2	Eddie Huang	GCMS2B	03/21/17 14:47	Load on Instrument
JC39018-1.3.2	GCMS2B	Eddie Huang	03/22/17 10:08	Unload from Instrument
JC39018-1.3.2	Eddie Huang	Secured Storage	03/22/17 10:08	Return to Storage
JC39018-1.5	Secured Storage	Sushila Yadav	03/17/17 15:40	Retrieve from Storage
JC39018-1.5	Sushila Yadav	GCMSC	03/17/17 15:40	Load on Instrument
JC39018-1.5	GCMSC	Sushila Yadav	03/18/17 11:16	Unload from Instrument
JC39018-1.5	Sushila Yadav	Secured Storage	03/18/17 11:16	Return to Storage
JC39018-1.5	Secured Storage	Sushila Yadav	03/18/17 15:48	Retrieve from Storage
JC39018-1.5	Sushila Yadav	GCMSC	03/18/17 15:48	Load on Instrument
JC39018-1.5	GCMSC	Sushila Yadav	03/25/17 15:45	Unload from Instrument
JC39018-1.5	Sushila Yadav	Secured Storage	03/25/17 15:45	Return to Storage
JC39018-2.1	Secured Storage	Todd Shoemaker	03/17/17 10:00	Retrieve from Storage
JC39018-2.1	Todd Shoemaker	Secured Staging Area	03/17/17 10:00	Return to Storage
JC39018-2.1	Secured Staging Area	Mark Setaro	03/17/17 10:06	Retrieve from Storage
JC39018-2.1	Mark Setaro	Secured Storage	03/17/17 13:38	Return to Storage
JC39018-2.1	Secured Storage	Edwin Gonzalez	03/17/17 15:18	Retrieve from Storage
JC39018-2.1	Edwin Gonzalez	Secured Staging Area	03/17/17 15:18	Return to Storage
JC39018-2.1	Secured Staging Area	Chelsea San Filippo	03/17/17 15:31	Retrieve from Storage
JC39018-2.1	Chelsea San Filippo	Secured Storage	03/17/17 17:37	Return to Storage

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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC39018-2.1	Secured Storage	Arielle Cocozza	03/18/17 06:25	Retrieve from Storage
JC39018-2.1	Secured Storage	Sahara Feliciano	03/18/17 15:47	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JC39018-2.1	Sahara Feliciano	Secured Staging Area	03/18/17 15:47	Return to Storage
JC39018-2.1	Secured Staging Area	Amir Takla	03/18/17 18:31	Retrieve from Storage
JC39018-2.1	Amir Takla	Secured Storage	03/18/17 18:32	Return to Storage
JC39018-2.1	Secured Storage	Sahara Feliciano	03/19/17 15:08	Retrieve from Storage
JC39018-2.1	Sahara Feliciano	Secured Staging Area	03/19/17 15:08	Return to Storage
JC39018-2.1	Secured Staging Area	Miti Patel	03/20/17 09:23	Retrieve from Storage
JC39018-2.1	Miti Patel	Secured Storage	03/20/17 13:16	Return to Storage
JC39018-2.1	Secured Storage	Edwin Gonzalez	03/23/17 12:29	Retrieve from Storage
JC39018-2.1	Edwin Gonzalez	Secured Staging Area	03/23/17 12:29	Return to Storage
JC39018-2.1	Secured Staging Area	Lindsey Lee	03/23/17 15:08	Retrieve from Storage
JC39018-2.1	Lindsey Lee	Secured Storage	03/23/17 23:34	Return to Storage
JC39018-2.1	Secured Storage	Albert Quayson	03/24/17 14:59	Retrieve from Storage
JC39018-2.1	Albert Quayson	Secured Storage	03/24/17 18:18	Return to Storage
JC39018-2.1	Secured Storage	Lindsey Lee	03/25/17 06:13	Retrieve from Storage
JC39018-2.1	Lindsey Lee	Secured Storage	03/25/17 16:13	Return to Storage
JC39018-2.1.1	Mark Setaro	TCLP	03/17/17 10:06	Leachate from JC39018-2.1
JC39018-2.1.1	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39018-2.1
JC39018-2.1.1	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39018-2.1.1	Secured Storage	Jessica Adametz	03/18/17 11:11	Retrieve from Storage
JC39018-2.1.1	Jessica Adametz	Secured Storage	03/18/17 11:12	Return to Storage
JC39018-2.1.2	Chelsea San Filippo	Metals Digestion	03/17/17 17:35	Digestate from JC39018-2.1
JC39018-2.1.2	Metals Digestion	Chelsea San Filippo	03/17/17 17:35	Digestate from JC39018-2.1
JC39018-2.1.2	Chelsea San Filippo	Metals Digestate Storage	03/17/17 17:35	Return to Storage
JC39018-2.1.3	Arielle Cocozza	Organics Prep	03/18/17 06:26	Extract from JC39018-2.1
JC39018-2.1.3	Organics Prep	Arielle Cocozza	03/18/17 16:25	Extract from JC39018-2.1
JC39018-2.1.3	Arielle Cocozza	Extract Storage	03/18/17 16:25	Return to Storage
JC39018-2.1.3	Extract Storage	Humarah Bano	03/20/17 17:01	Retrieve from Storage
JC39018-2.1.3	Humarah Bano	GC5G	03/20/17 17:01	Load on Instrument
JC39018-2.1.3	GC5G	Humarah Bano	03/22/17 10:28	Unload from Instrument
JC39018-2.1.3	Humarah Bano	Extract Freezer	03/22/17 10:28	Return to Storage
JC39018-2.1.4	Arielle Cocozza	Organics Prep	03/18/17 06:26	Extract from JC39018-2.1
JC39018-2.1.4	Organics Prep	Arielle Cocozza	03/18/17 16:25	Extract from JC39018-2.1
JC39018-2.1.4	Arielle Cocozza	Extract Storage	03/18/17 16:25	Return to Storage
JC39018-2.1.4	Extract Storage	Christine Phillips	03/20/17 16:34	Retrieve from Storage
JC39018-2.1.4	Christine Phillips	GC1G	03/20/17 16:34	Load on Instrument
JC39018-2.1.5	Arielle Cocozza	Organics Prep	03/18/17 06:37	Extract from JC39018-2.1

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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC39018-2.1.5	Organics Prep	Lindsey Lee	03/18/17 17:02	Extract from JC39018-2.1
JC39018-2.1.5	Lindsey Lee	Extract Storage	03/18/17 17:02	Return to Storage
JC39018-2.1.5	Extract Storage	Sean Block	03/19/17 13:11	Retrieve from Storage
JC39018-2.1.5	Sean Block	GCMS5P	03/19/17 13:11	Load on Instrument
JC39018-2.1.5	GCMS5P	Ashley Noble	03/21/17 13:08	Unload from Instrument
JC39018-2.1.5	Ashley Noble	Extract Freezer	03/21/17 13:08	Return to Storage
JC39018-2.1.6	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39018-2.1
JC39018-2.1.6	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39018-2.1.6	Secured Storage	Nicholas Goydish	03/20/17 08:04	Retrieve from Storage
JC39018-2.1.6	Nicholas Goydish	Jonathan Stanley	03/20/17 14:59	Custody Transfer
JC39018-2.1.6	Jonathan Stanley	Ryan Fantasia	03/20/17 15:16	Custody Transfer
JC39018-2.1.6	Ryan Fantasia	Secured Storage	03/20/17 23:02	Return to Storage
JC39018-2.1.7	Jessica Adametz	Metals Digestion	03/18/17 11:12	Digestate from JC39018-2.1.1
JC39018-2.1.7	Metals Digestion	Jessica Adametz	03/18/17 11:12	Digestate from JC39018-2.1.1
JC39018-2.1.7	Jessica Adametz	Metals Digestate Storage	03/18/17 11:12	Return to Storage
JC39018-2.1.8	Nicholas Goydish	Organics Prep	03/20/17 08:11	Extract from JC39018-2.1.6
JC39018-2.1.8	Organics Prep	Ryan Fantasia	03/20/17 23:34	Extract from JC39018-2.1.6
JC39018-2.1.8	Ryan Fantasia	Extract Storage	03/20/17 23:34	Return to Storage
JC39018-2.1.8	Extract Storage	Rebecca Krug	03/21/17 16:43	Retrieve from Storage
JC39018-2.1.8	Rebecca Krug	GC3G	03/21/17 16:43	Load on Instrument
JC39018-2.1.8	GC3G	Rebecca Krug	03/23/17 16:15	Unload from Instrument
JC39018-2.1.8	Rebecca Krug	Extract Freezer	03/23/17 16:15	Return to Storage
JC39018-2.1.9	Nicholas Goydish	Organics Prep	03/20/17 08:12	Extract from JC39018-2.1.6
JC39018-2.1.9	Organics Prep	Nicholas Goydish	03/20/17 16:46	Extract from JC39018-2.1.6
JC39018-2.1.9	Nicholas Goydish	Extract Storage	03/20/17 16:46	Return to Storage
JC39018-2.1.9	Extract Storage	Sean Block	03/20/17 23:22	Retrieve from Storage
JC39018-2.1.9	Sean Block	GCMS2M	03/20/17 23:22	Load on Instrument
JC39018-2.1.9	GCMS2M	Ashley Noble	03/21/17 09:42	Unload from Instrument
JC39018-2.1.9	Ashley Noble	Extract Freezer	03/21/17 09:42	Return to Storage
JC39018-2.1.10	Nicholas Goydish	Organics Prep	03/20/17 08:13	Extract from JC39018-2.1.6
JC39018-2.1.10	Organics Prep	Amanda Furka	03/20/17 23:01	Extract from JC39018-2.1.6
JC39018-2.1.10	Amanda Furka	Extract Storage	03/20/17 23:01	Return to Storage
JC39018-2.1.10	Extract Storage	Christine Phillips	03/21/17 10:01	Retrieve from Storage
JC39018-2.1.10	Christine Phillips	GC8G	03/21/17 10:01	Load on Instrument
JC39018-2.1.11	Lindsey Lee	Organics Prep	03/23/17 15:23	Extract from JC39018-2.1
JC39018-2.1.11	Organics Prep	Sora Lynn Mathurin	03/24/17 12:14	Extract from JC39018-2.1
JC39018-2.1.11	Sora Lynn Mathurin	Extract Storage	03/24/17 12:14	Return to Storage
JC39018-2.1.11	Extract Storage	Rebecca Krug	03/24/17 12:26	Retrieve from Storage

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Job Number: JC39018
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC39018-2.1.11	Rebecca Krug	GC3G	03/24/17 12:26	Load on Instrument
JC39018-2.1.12	Albert Quayson	Organics Prep	03/24/17 14:59	Extract from JC39018-2.1
JC39018-2.1.12	Organics Prep	Ryan Fantasia	03/24/17 23:51	Extract from JC39018-2.1
JC39018-2.1.12	Ryan Fantasia	Extract Storage	03/24/17 23:51	Return to Storage
JC39018-2.1.13	Albert Quayson	Organics Prep	03/24/17 14:59	Extract from JC39018-2.1
JC39018-2.1.13	Organics Prep	Ryan Fantasia	03/24/17 23:51	Extract from JC39018-2.1
JC39018-2.1.13	Ryan Fantasia	Extract Storage	03/24/17 23:51	Return to Storage
JC39018-2.1.14	Lindsey Lee	Organics Prep	03/25/17 06:55	Extract from JC39018-2.1
JC39018-2.1.14	Organics Prep	Albert Quayson	03/25/17 18:27	Extract from JC39018-2.1
JC39018-2.1.14	Albert Quayson	Extract Storage	03/25/17 18:27	Return to Storage
JC39018-2.1.14	Extract Storage	Rebecca Krug	03/26/17 06:30	Retrieve from Storage
JC39018-2.1.14	Rebecca Krug	GC3G	03/26/17 06:30	Load on Instrument
JC39018-2.2	Secured Storage	Todd Shoemaker	03/17/17 08:35	Retrieve from Storage
JC39018-2.2	Todd Shoemaker	Secured Staging Area	03/17/17 08:36	Return to Storage
JC39018-2.2	Secured Staging Area	Luis Villanueva	03/17/17 09:27	Retrieve from Storage
JC39018-2.2	Luis Villanueva	Secured Storage	03/17/17 10:54	Return to Storage
JC39018-2.2	Secured Storage	Sahara Feliciano	03/17/17 12:15	Retrieve from Storage
JC39018-2.2	Sahara Feliciano	Secured Staging Area	03/17/17 12:15	Return to Storage
JC39018-2.2	Secured Staging Area	Jessica Adametz	03/17/17 14:39	Retrieve from Storage
JC39018-2.2	Jessica Adametz	Secured Storage	03/17/17 14:42	Return to Storage
JC39018-2.2	Secured Storage	Edwin Gonzalez	03/17/17 17:23	Retrieve from Storage
JC39018-2.2	Edwin Gonzalez	Secured Staging Area	03/17/17 17:23	Return to Storage
JC39018-2.2	Secured Staging Area	Hans Seignon	03/17/17 17:30	Retrieve from Storage
JC39018-2.2	Hans Seignon	Chris Brunson	03/17/17 20:55	Custody Transfer
JC39018-2.2	Secured Storage	Sahara Feliciano	03/19/17 11:54	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JC39018-2.2	Sahara Feliciano	Secured Staging Area	03/19/17 11:55	Return to Storage
JC39018-2.2	Secured Staging Area	Steven Zarchy	03/20/17 06:59	Retrieve from Storage
JC39018-2.2	Steven Zarchy	Stephen Seuling	03/20/17 07:58	Custody Transfer
JC39018-2.2	Stephen Seuling	Secured Storage	03/20/17 11:39	Return to Storage
JC39018-2.2.1	Steven Zarchy	Organics Prep	03/20/17 07:17	Extract from JC39018-2.2
JC39018-2.2.1	Organics Prep	Albert Quayson	03/21/17 12:03	Extract from JC39018-2.2
JC39018-2.2.1	Albert Quayson	Extract Storage	03/21/17 12:03	Return to Storage
JC39018-2.2.1	Extract Storage	Rebecca Krug	03/22/17 17:05	Retrieve from Storage
JC39018-2.2.1	Rebecca Krug	GCOA	03/22/17 17:05	Load on Instrument
JC39018-2.2.1	GCOA	Rebecca Krug	03/23/17 16:47	Unload from Instrument
JC39018-2.2.1	Rebecca Krug	Extract Freezer	03/23/17 16:47	Return to Storage
JC39018-2.3	Secured Storage	Todd Shoemaker	03/17/17 10:00	Retrieve from Storage

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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC39018-2.3	Todd Shoemaker	Secured Staging Area	03/17/17 10:00	Return to Storage
JC39018-2.3	Secured Staging Area	Mark Setaro	03/17/17 10:06	Retrieve from Storage
JC39018-2.3	Mark Setaro	Secured Storage	03/17/17 13:38	Return to Storage
JC39018-2.3.1	Mark Setaro	TCLP	03/17/17 10:06	Leachate from JC39018-2.3
JC39018-2.3.1	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39018-2.3
JC39018-2.3.1	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39018-2.3.1	Secured Storage	Eddie Huang	03/20/17 15:48	Retrieve from Storage
JC39018-2.3.1	Eddie Huang	GCMS2B	03/20/17 15:48	Load on Instrument
JC39018-2.3.1	GCMS2B	Eddie Huang	03/21/17 08:55	Unload from Instrument
JC39018-2.3.1	Eddie Huang	Secured Storage	03/21/17 08:55	Return to Storage
JC39018-2.3.1	Secured Storage	Eddie Huang	03/21/17 14:47	Retrieve from Storage
JC39018-2.3.1	Eddie Huang	GCMS2B	03/21/17 14:47	Load on Instrument
JC39018-2.3.1	GCMS2B	Eddie Huang	03/22/17 10:08	Unload from Instrument
JC39018-2.3.1	Eddie Huang	Secured Storage	03/22/17 10:08	Return to Storage
JC39018-2.3.2	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39018-2.3
JC39018-2.3.2	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39018-2.5	Secured Storage	Sushila Yadav	03/17/17 15:40	Retrieve from Storage
JC39018-2.5	Sushila Yadav	GCMSC	03/17/17 15:40	Load on Instrument
JC39018-2.5	GCMSC	Sushila Yadav	03/18/17 11:16	Unload from Instrument
JC39018-2.5	Sushila Yadav	Secured Storage	03/18/17 11:16	Return to Storage
JC39018-2.5	Secured Storage	Sushila Yadav	03/18/17 15:48	Retrieve from Storage
JC39018-2.5	Sushila Yadav	GCMSC	03/18/17 15:48	Load on Instrument
JC39018-2.5	GCMSC	Sushila Yadav	03/25/17 15:45	Unload from Instrument
JC39018-2.5	Sushila Yadav	Secured Storage	03/25/17 15:45	Return to Storage
JC39018-3.1	Secured Storage	Todd Shoemaker	03/17/17 10:00	Retrieve from Storage
JC39018-3.1	Todd Shoemaker	Secured Staging Area	03/17/17 10:00	Return to Storage
JC39018-3.1	Secured Staging Area	Mark Setaro	03/17/17 10:06	Retrieve from Storage
JC39018-3.1	Mark Setaro	Secured Storage	03/17/17 13:38	Return to Storage
JC39018-3.1	Secured Storage	Edwin Gonzalez	03/17/17 15:18	Retrieve from Storage
JC39018-3.1	Edwin Gonzalez	Secured Staging Area	03/17/17 15:18	Return to Storage
JC39018-3.1	Secured Staging Area	Chelsea San Filippo	03/17/17 15:31	Retrieve from Storage
JC39018-3.1	Chelsea San Filippo	Secured Storage	03/17/17 17:37	Return to Storage
JC39018-3.1	Secured Storage	Arielle Cocozza	03/18/17 06:25	Retrieve from Storage
JC39018-3.1	Secured Storage	Sahara Feliciano	03/18/17 15:47	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JC39018-3.1	Sahara Feliciano	Secured Staging Area	03/18/17 15:47	Return to Storage
JC39018-3.1	Secured Staging Area	Amir Takla	03/18/17 18:31	Retrieve from Storage
JC39018-3.1	Amir Takla	Secured Storage	03/18/17 18:32	Return to Storage
JC39018-3.1	Secured Storage	Sahara Feliciano	03/19/17 15:08	Retrieve from Storage
JC39018-3.1	Sahara Feliciano	Secured Staging Area	03/19/17 15:08	Return to Storage

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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC39018-3.1	Secured Staging Area	Miti Patel	03/20/17 09:23	Retrieve from Storage
JC39018-3.1	Miti Patel	Secured Storage	03/20/17 13:16	Return to Storage
JC39018-3.1	Secured Storage	Edwin Gonzalez	03/23/17 12:29	Retrieve from Storage
JC39018-3.1	Edwin Gonzalez	Secured Staging Area	03/23/17 12:29	Return to Storage
JC39018-3.1	Secured Staging Area	Lindsey Lee	03/23/17 15:08	Retrieve from Storage
JC39018-3.1	Lindsey Lee	Secured Storage	03/23/17 23:34	Return to Storage
JC39018-3.1	Secured Storage	Albert Quayson	03/24/17 14:59	Retrieve from Storage
JC39018-3.1	Albert Quayson	Secured Storage	03/24/17 18:18	Return to Storage
JC39018-3.1	Secured Storage	Lindsey Lee	03/25/17 06:13	Retrieve from Storage
JC39018-3.1	Lindsey Lee	Secured Storage	03/25/17 16:13	Return to Storage
JC39018-3.1.1	Mark Setaro	TCLP	03/17/17 10:06	Leachate from JC39018-3.1
JC39018-3.1.1	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39018-3.1
JC39018-3.1.1	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39018-3.1.1	Secured Storage	Jessica Adametz	03/18/17 11:11	Retrieve from Storage
JC39018-3.1.1	Jessica Adametz	Secured Storage	03/18/17 11:12	Return to Storage
JC39018-3.1.2	Chelsea San Filippo	Metals Digestion	03/17/17 17:35	Digestate from JC39018-3.1
JC39018-3.1.2	Metals Digestion	Chelsea San Filippo	03/17/17 17:35	Digestate from JC39018-3.1
JC39018-3.1.2	Chelsea San Filippo	Metals Digestate Storage	03/17/17 17:35	Return to Storage
JC39018-3.1.3	Arielle Cocozza	Organics Prep	03/18/17 06:26	Extract from JC39018-3.1
JC39018-3.1.3	Organics Prep	Arielle Cocozza	03/18/17 16:25	Extract from JC39018-3.1
JC39018-3.1.3	Arielle Cocozza	Extract Storage	03/18/17 16:25	Return to Storage
JC39018-3.1.3	Extract Storage	Humarah Bano	03/20/17 17:01	Retrieve from Storage
JC39018-3.1.3	Humarah Bano	GC5G	03/20/17 17:01	Load on Instrument
JC39018-3.1.3	GC5G	Humarah Bano	03/22/17 10:28	Unload from Instrument
JC39018-3.1.3	Humarah Bano	Extract Freezer	03/22/17 10:28	Return to Storage
JC39018-3.1.4	Arielle Cocozza	Organics Prep	03/18/17 06:26	Extract from JC39018-3.1
JC39018-3.1.4	Organics Prep	Arielle Cocozza	03/18/17 16:25	Extract from JC39018-3.1
JC39018-3.1.4	Arielle Cocozza	Extract Storage	03/18/17 16:25	Return to Storage
JC39018-3.1.4	Extract Storage	Christine Phillips	03/20/17 16:34	Retrieve from Storage
JC39018-3.1.4	Christine Phillips	GC1G	03/20/17 16:34	Load on Instrument
JC39018-3.1.5	Arielle Cocozza	Organics Prep	03/18/17 06:37	Extract from JC39018-3.1
JC39018-3.1.5	Organics Prep	Lindsey Lee	03/18/17 17:02	Extract from JC39018-3.1
JC39018-3.1.5	Lindsey Lee	Extract Storage	03/18/17 17:02	Return to Storage
JC39018-3.1.5	Extract Storage	Sean Block	03/19/17 13:11	Retrieve from Storage
JC39018-3.1.5	Sean Block	GCMS5P	03/19/17 13:11	Load on Instrument
JC39018-3.1.5	GCMS5P	Ashley Noble	03/21/17 13:08	Unload from Instrument
JC39018-3.1.5	Ashley Noble	Extract Freezer	03/21/17 13:08	Return to Storage
JC39018-3.1.6	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39018-3.1

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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC39018-3.1.6	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39018-3.1.6	Secured Storage	Nicholas Goydish	03/20/17 08:04	Retrieve from Storage
JC39018-3.1.6	Nicholas Goydish	Jonathan Stanley	03/20/17 14:59	Custody Transfer
JC39018-3.1.6	Jonathan Stanley	Ryan Fantasia	03/20/17 15:16	Custody Transfer
JC39018-3.1.6	Ryan Fantasia	Secured Storage	03/20/17 23:02	Return to Storage
JC39018-3.1.7	Jessica Adametz	Metals Digestion	03/18/17 11:12	Digestate from JC39018-3.1.1
JC39018-3.1.7	Metals Digestion	Jessica Adametz	03/18/17 11:12	Digestate from JC39018-3.1.1
JC39018-3.1.7	Jessica Adametz	Metals Digestate Storage	03/18/17 11:12	Return to Storage
JC39018-3.1.8	Nicholas Goydish	Organics Prep	03/20/17 08:11	Extract from JC39018-3.1.6
JC39018-3.1.8	Organics Prep	Ryan Fantasia	03/20/17 23:34	Extract from JC39018-3.1.6
JC39018-3.1.8	Ryan Fantasia	Extract Storage	03/20/17 23:34	Return to Storage
JC39018-3.1.8	Extract Storage	Rebecca Krug	03/21/17 16:43	Retrieve from Storage
JC39018-3.1.8	Rebecca Krug	GC3G	03/21/17 16:43	Load on Instrument
JC39018-3.1.8	GC3G	Rebecca Krug	03/23/17 16:15	Unload from Instrument
JC39018-3.1.8	Rebecca Krug	Extract Freezer	03/23/17 16:15	Return to Storage
JC39018-3.1.9	Nicholas Goydish	Organics Prep	03/20/17 08:12	Extract from JC39018-3.1.6
JC39018-3.1.9	Organics Prep	Nicholas Goydish	03/20/17 16:46	Extract from JC39018-3.1.6
JC39018-3.1.9	Nicholas Goydish	Extract Storage	03/20/17 16:46	Return to Storage
JC39018-3.1.9	Extract Storage	Sean Block	03/20/17 23:22	Retrieve from Storage
JC39018-3.1.9	Sean Block	GCMS2M	03/20/17 23:22	Load on Instrument
JC39018-3.1.9	GCMS2M	Ashley Noble	03/21/17 09:42	Unload from Instrument
JC39018-3.1.9	Ashley Noble	Extract Freezer	03/21/17 09:42	Return to Storage
JC39018-3.1.10	Nicholas Goydish	Organics Prep	03/20/17 08:13	Extract from JC39018-3.1.6
JC39018-3.1.10	Organics Prep	Amanda Furka	03/20/17 23:01	Extract from JC39018-3.1.6
JC39018-3.1.10	Amanda Furka	Extract Storage	03/20/17 23:01	Return to Storage
JC39018-3.1.10	Extract Storage	Christine Phillips	03/21/17 10:01	Retrieve from Storage
JC39018-3.1.10	Christine Phillips	GC8G	03/21/17 10:01	Load on Instrument
JC39018-3.1.11	Lindsey Lee	Organics Prep	03/23/17 15:23	Extract from JC39018-3.1
JC39018-3.1.11	Organics Prep	Sora Lynn Mathurin	03/24/17 12:14	Extract from JC39018-3.1
JC39018-3.1.11	Sora Lynn Mathurin	Extract Storage	03/24/17 12:14	Return to Storage
JC39018-3.1.11	Extract Storage	Rebecca Krug	03/24/17 12:26	Retrieve from Storage
JC39018-3.1.11	Rebecca Krug	GC3G	03/24/17 12:26	Load on Instrument
JC39018-3.1.12	Albert Quayson	Organics Prep	03/24/17 14:59	Extract from JC39018-3.1
JC39018-3.1.12	Organics Prep	Ryan Fantasia	03/24/17 23:51	Extract from JC39018-3.1
JC39018-3.1.12	Ryan Fantasia	Extract Storage	03/24/17 23:51	Return to Storage
JC39018-3.1.13	Albert Quayson	Organics Prep	03/24/17 14:59	Extract from JC39018-3.1
JC39018-3.1.13	Organics Prep	Ryan Fantasia	03/24/17 23:51	Extract from JC39018-3.1

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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC39018-3.1.13	Ryan Fantasia	Extract Storage	03/24/17 23:51	Return to Storage
JC39018-3.1.14	Lindsey Lee	Organics Prep	03/25/17 06:55	Extract from JC39018-3.1
JC39018-3.1.14	Organics Prep	Albert Quayson	03/25/17 18:27	Extract from JC39018-3.1
JC39018-3.1.14	Albert Quayson	Extract Storage	03/25/17 18:27	Return to Storage
JC39018-3.1.14	Extract Storage	Rebecca Krug	03/26/17 06:30	Retrieve from Storage
JC39018-3.1.14	Rebecca Krug	GC3G	03/26/17 06:30	Load on Instrument
JC39018-3.2	Secured Storage	Todd Shoemaker	03/17/17 08:35	Retrieve from Storage
JC39018-3.2	Todd Shoemaker	Secured Staging Area	03/17/17 08:36	Return to Storage
JC39018-3.2	Secured Staging Area	Luis Villanueva	03/17/17 09:27	Retrieve from Storage
JC39018-3.2	Luis Villanueva	Secured Storage	03/17/17 10:54	Return to Storage
JC39018-3.2	Secured Storage	Sahara Feliciano	03/17/17 12:15	Retrieve from Storage
JC39018-3.2	Sahara Feliciano	Secured Staging Area	03/17/17 12:15	Return to Storage
JC39018-3.2	Secured Staging Area	Jessica Adametz	03/17/17 14:39	Retrieve from Storage
JC39018-3.2	Jessica Adametz	Secured Storage	03/17/17 14:42	Return to Storage
JC39018-3.2	Secured Storage	Edwin Gonzalez	03/17/17 17:23	Retrieve from Storage
JC39018-3.2	Edwin Gonzalez	Secured Staging Area	03/17/17 17:23	Return to Storage
JC39018-3.2	Secured Staging Area	Hans Seignon	03/17/17 17:30	Retrieve from Storage
JC39018-3.2	Hans Seignon	Chris Brunson	03/17/17 20:55	Custody Transfer
JC39018-3.2	Secured Storage	Sahara Feliciano	03/19/17 11:54	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JC39018-3.2	Sahara Feliciano	Secured Staging Area	03/19/17 11:55	Return to Storage
JC39018-3.2	Secured Staging Area	Steven Zarchy	03/20/17 06:59	Retrieve from Storage
JC39018-3.2	Steven Zarchy	Stephen Seuling	03/20/17 07:58	Custody Transfer
JC39018-3.2	Stephen Seuling	Secured Storage	03/20/17 11:39	Return to Storage
JC39018-3.2.1	Steven Zarchy	Organics Prep	03/20/17 07:17	Extract from JC39018-3.2
JC39018-3.2.1	Organics Prep	Albert Quayson	03/21/17 12:03	Extract from JC39018-3.2
JC39018-3.2.1	Albert Quayson	Extract Storage	03/21/17 12:03	Return to Storage
JC39018-3.2.1	Extract Storage	Rebecca Krug	03/22/17 17:05	Retrieve from Storage
JC39018-3.2.1	Rebecca Krug	GCOA	03/22/17 17:05	Load on Instrument
JC39018-3.2.1	GCOA	Rebecca Krug	03/23/17 16:47	Unload from Instrument
JC39018-3.2.1	Rebecca Krug	Extract Freezer	03/23/17 16:47	Return to Storage
JC39018-3.3	Secured Storage	Todd Shoemaker	03/17/17 10:00	Retrieve from Storage
JC39018-3.3	Todd Shoemaker	Secured Staging Area	03/17/17 10:00	Return to Storage
JC39018-3.3	Secured Staging Area	Mark Setaro	03/17/17 10:06	Retrieve from Storage
JC39018-3.3	Mark Setaro	Secured Storage	03/17/17 13:38	Return to Storage
JC39018-3.3.1	Mark Setaro	TCLP	03/17/17 10:06	Leachate from JC39018-3.3
JC39018-3.3.1	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39018-3.3
JC39018-3.3.1	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39018-3.3.1	Secured Storage	Eddie Huang	03/20/17 15:48	Retrieve from Storage

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JC39018-3.3.1	Eddie Huang	GCMS2B	03/20/17 15:48	Load on Instrument
JC39018-3.3.1	GCMS2B	Eddie Huang	03/21/17 08:55	Unload from Instrument
JC39018-3.3.1	Eddie Huang	Secured Storage	03/21/17 08:55	Return to Storage
JC39018-3.3.1	Secured Storage	Eddie Huang	03/21/17 14:47	Retrieve from Storage
JC39018-3.3.1	Eddie Huang	GCMS2B	03/21/17 14:47	Load on Instrument
JC39018-3.3.1	GCMS2B	Eddie Huang	03/22/17 10:08	Unload from Instrument
JC39018-3.3.1	Eddie Huang	Secured Storage	03/22/17 10:08	Return to Storage
JC39018-3.3.2	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39018-3.3
JC39018-3.3.2	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39018-3.5	Secured Storage	Sushila Yadav	03/17/17 15:40	Retrieve from Storage
JC39018-3.5	Sushila Yadav	GCMSC	03/17/17 15:40	Load on Instrument
JC39018-3.5	GCMSC	Sushila Yadav	03/18/17 11:16	Unload from Instrument
JC39018-3.5	Sushila Yadav	Secured Storage	03/18/17 11:16	Return to Storage
JC39018-3.5	Secured Storage	Sushila Yadav	03/18/17 15:48	Retrieve from Storage
JC39018-3.5	Sushila Yadav	GCMSC	03/18/17 15:48	Load on Instrument
JC39018-3.5	GCMSC	Sushila Yadav	03/25/17 15:45	Unload from Instrument
JC39018-3.5	Sushila Yadav	Secured Storage	03/25/17 15:45	Return to Storage
JC39018-4.1	Secured Storage	Todd Shoemaker	03/17/17 10:00	Retrieve from Storage
JC39018-4.1	Todd Shoemaker	Secured Staging Area	03/17/17 10:00	Return to Storage
JC39018-4.1	Secured Staging Area	Mark Setaro	03/17/17 10:06	Retrieve from Storage
JC39018-4.1	Mark Setaro	Secured Storage	03/17/17 13:38	Return to Storage
JC39018-4.1	Secured Storage	Edwin Gonzalez	03/17/17 15:18	Retrieve from Storage
JC39018-4.1	Edwin Gonzalez	Secured Staging Area	03/17/17 15:18	Return to Storage
JC39018-4.1	Secured Staging Area	Chelsea San Filippo	03/17/17 15:31	Retrieve from Storage
JC39018-4.1	Chelsea San Filippo	Secured Storage	03/17/17 17:37	Return to Storage
JC39018-4.1	Secured Storage	Arielle Cocozza	03/18/17 06:25	Retrieve from Storage
JC39018-4.1	Secured Storage	Sahara Feliciano	03/18/17 15:47	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JC39018-4.1	Sahara Feliciano	Secured Staging Area	03/18/17 15:47	Return to Storage
JC39018-4.1	Secured Staging Area	Amir Takla	03/18/17 18:31	Retrieve from Storage
JC39018-4.1	Amir Takla	Secured Storage	03/18/17 18:32	Return to Storage
JC39018-4.1	Secured Storage	Sahara Feliciano	03/19/17 15:08	Retrieve from Storage
JC39018-4.1	Sahara Feliciano	Secured Staging Area	03/19/17 15:08	Return to Storage
JC39018-4.1	Secured Staging Area	Miti Patel	03/20/17 09:23	Retrieve from Storage
JC39018-4.1	Miti Patel	Secured Storage	03/20/17 13:16	Return to Storage
JC39018-4.1	Secured Storage	Edwin Gonzalez	03/23/17 12:29	Retrieve from Storage
JC39018-4.1	Edwin Gonzalez	Secured Staging Area	03/23/17 12:29	Return to Storage
JC39018-4.1	Secured Staging Area	Lindsey Lee	03/23/17 15:08	Retrieve from Storage
JC39018-4.1	Lindsey Lee	Secured Storage	03/23/17 23:34	Return to Storage
JC39018-4.1	Secured Storage	Albert Quayson	03/24/17 14:59	Retrieve from Storage
JC39018-4.1	Albert Quayson	Secured Storage	03/24/17 18:18	Return to Storage

SGS Accutest Internal Chain of Custody

Job Number: JC39018
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/16/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC39018-4.1	Secured Storage	Lindsey Lee	03/25/17 06:13	Retrieve from Storage
JC39018-4.1	Lindsey Lee	Secured Storage	03/25/17 16:13	Return to Storage
JC39018-4.1.1	Mark Setaro	TCLP	03/17/17 10:06	Leachate from JC39018-4.1
JC39018-4.1.1	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39018-4.1
JC39018-4.1.1	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39018-4.1.1	Secured Storage	Jessica Adametz	03/18/17 11:11	Retrieve from Storage
JC39018-4.1.1	Jessica Adametz	Secured Storage	03/18/17 11:12	Return to Storage
JC39018-4.1.2	Chelsea San Filippo	Metals Digestion	03/17/17 17:35	Digestate from JC39018-4.1
JC39018-4.1.2	Metals Digestion	Chelsea San Filippo	03/17/17 17:35	Digestate from JC39018-4.1
JC39018-4.1.2	Chelsea San Filippo	Metals Digestate Storage	03/17/17 17:35	Return to Storage
JC39018-4.1.3	Arielle Cocozza	Organics Prep	03/18/17 06:26	Extract from JC39018-4.1
JC39018-4.1.3	Organics Prep	Arielle Cocozza	03/18/17 16:25	Extract from JC39018-4.1
JC39018-4.1.3	Arielle Cocozza	Extract Storage	03/18/17 16:25	Return to Storage
JC39018-4.1.3	Extract Storage	Humarah Bano	03/20/17 17:01	Retrieve from Storage
JC39018-4.1.3	Humarah Bano	GC5G	03/20/17 17:01	Load on Instrument
JC39018-4.1.3	GC5G	Humarah Bano	03/22/17 10:28	Unload from Instrument
JC39018-4.1.3	Humarah Bano	Extract Freezer	03/22/17 10:28	Return to Storage
JC39018-4.1.4	Arielle Cocozza	Organics Prep	03/18/17 06:26	Extract from JC39018-4.1
JC39018-4.1.4	Organics Prep	Arielle Cocozza	03/18/17 16:25	Extract from JC39018-4.1
JC39018-4.1.4	Arielle Cocozza	Extract Storage	03/18/17 16:25	Return to Storage
JC39018-4.1.4	Extract Storage	Christine Phillips	03/20/17 16:34	Retrieve from Storage
JC39018-4.1.4	Christine Phillips	GC1G	03/20/17 16:34	Load on Instrument
JC39018-4.1.5	Arielle Cocozza	Organics Prep	03/18/17 06:37	Extract from JC39018-4.1
JC39018-4.1.5	Organics Prep	Lindsey Lee	03/18/17 17:02	Extract from JC39018-4.1
JC39018-4.1.5	Lindsey Lee	Extract Storage	03/18/17 17:02	Return to Storage
JC39018-4.1.5	Extract Storage	Sean Block	03/19/17 13:11	Retrieve from Storage
JC39018-4.1.5	Sean Block	GCMS5P	03/19/17 13:11	Load on Instrument
JC39018-4.1.5	GCMS5P	Ashley Noble	03/21/17 13:08	Unload from Instrument
JC39018-4.1.5	Ashley Noble	Extract Freezer	03/21/17 13:08	Return to Storage
JC39018-4.1.6	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39018-4.1
JC39018-4.1.6	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39018-4.1.6	Secured Storage	Nicholas Goydish	03/20/17 08:04	Retrieve from Storage
JC39018-4.1.6	Nicholas Goydish	Jonathan Stanley	03/20/17 14:59	Custody Transfer
JC39018-4.1.6	Jonathan Stanley	Ryan Fantasia	03/20/17 15:16	Custody Transfer
JC39018-4.1.6	Ryan Fantasia	Secured Storage	03/20/17 23:02	Return to Storage
JC39018-4.1.7	Jessica Adametz	Metals Digestion	03/18/17 11:12	Digestate from JC39018-4.1.1
JC39018-4.1.7	Metals Digestion	Jessica Adametz	03/18/17 11:12	Digestate from JC39018-4.1.1

SGS Accutest Internal Chain of Custody

Job Number: JC39018
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/16/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC39018-4.1.7	Jessica Adametz	Metals Digestate Storage	03/18/17 11:12	Return to Storage
JC39018-4.1.8	Nicholas Goydish	Organics Prep	03/20/17 08:11	Extract from JC39018-4.1.6
JC39018-4.1.8	Organics Prep	Ryan Fantasia	03/20/17 23:34	Extract from JC39018-4.1.6
JC39018-4.1.8	Ryan Fantasia	Extract Storage	03/20/17 23:34	Return to Storage
JC39018-4.1.8	Extract Storage	Rebecca Krug	03/21/17 16:43	Retrieve from Storage
JC39018-4.1.8	Rebecca Krug	GC3G	03/21/17 16:43	Load on Instrument
JC39018-4.1.8	GC3G	Rebecca Krug	03/23/17 16:15	Unload from Instrument
JC39018-4.1.8	Rebecca Krug	Extract Freezer	03/23/17 16:15	Return to Storage
JC39018-4.1.9	Nicholas Goydish	Organics Prep	03/20/17 08:12	Extract from JC39018-4.1.6
JC39018-4.1.9	Organics Prep	Nicholas Goydish	03/20/17 16:46	Extract from JC39018-4.1.6
JC39018-4.1.9	Nicholas Goydish	Extract Storage	03/20/17 16:46	Return to Storage
JC39018-4.1.9	Extract Storage	Sean Block	03/20/17 23:22	Retrieve from Storage
JC39018-4.1.9	Sean Block	GCMS2M	03/20/17 23:22	Load on Instrument
JC39018-4.1.9	GCMS2M	Ashley Noble	03/21/17 09:42	Unload from Instrument
JC39018-4.1.9	Ashley Noble	Extract Freezer	03/21/17 09:42	Return to Storage
JC39018-4.1.10	Nicholas Goydish	Organics Prep	03/20/17 08:13	Extract from JC39018-4.1.6
JC39018-4.1.10	Organics Prep	Amanda Furka	03/20/17 23:01	Extract from JC39018-4.1.6
JC39018-4.1.10	Amanda Furka	Extract Storage	03/20/17 23:01	Return to Storage
JC39018-4.1.10	Extract Storage	Christine Phillips	03/21/17 10:01	Retrieve from Storage
JC39018-4.1.10	Christine Phillips	GC8G	03/21/17 10:01	Load on Instrument
JC39018-4.1.11	Lindsey Lee	Organics Prep	03/23/17 15:23	Extract from JC39018-4.1
JC39018-4.1.11	Organics Prep	Sora Lynn Mathurin	03/24/17 12:14	Extract from JC39018-4.1
JC39018-4.1.11	Sora Lynn Mathurin	Extract Storage	03/24/17 12:14	Return to Storage
JC39018-4.1.11	Extract Storage	Rebecca Krug	03/24/17 14:25	Retrieve from Storage
JC39018-4.1.11	Rebecca Krug	GC3G	03/24/17 14:25	Load on Instrument
JC39018-4.1.12	Albert Quayson	Organics Prep	03/24/17 14:59	Extract from JC39018-4.1
JC39018-4.1.12	Organics Prep	Ryan Fantasia	03/24/17 23:51	Extract from JC39018-4.1
JC39018-4.1.12	Ryan Fantasia	Extract Storage	03/24/17 23:51	Return to Storage
JC39018-4.1.13	Albert Quayson	Organics Prep	03/24/17 14:59	Extract from JC39018-4.1
JC39018-4.1.13	Organics Prep	Ryan Fantasia	03/24/17 23:51	Extract from JC39018-4.1
JC39018-4.1.13	Ryan Fantasia	Extract Storage	03/24/17 23:51	Return to Storage
JC39018-4.1.14	Lindsey Lee	Organics Prep	03/25/17 06:55	Extract from JC39018-4.1
JC39018-4.1.14	Organics Prep	Albert Quayson	03/25/17 18:27	Extract from JC39018-4.1
JC39018-4.1.14	Albert Quayson	Extract Storage	03/25/17 18:27	Return to Storage
JC39018-4.1.14	Extract Storage	Rebecca Krug	03/26/17 06:30	Retrieve from Storage
JC39018-4.1.14	Rebecca Krug	GC3G	03/26/17 06:30	Load on Instrument

SGS Accutest Internal Chain of Custody

Job Number: JC39018
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/16/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC39018-4.2	Secured Storage	Todd Shoemaker	03/17/17 08:35	Retrieve from Storage
JC39018-4.2	Todd Shoemaker	Secured Staging Area	03/17/17 08:36	Return to Storage
JC39018-4.2	Secured Staging Area	Luis Villanueva	03/17/17 09:27	Retrieve from Storage
JC39018-4.2	Luis Villanueva	Secured Storage	03/17/17 10:54	Return to Storage
JC39018-4.2	Secured Storage	Sahara Feliciano	03/17/17 12:15	Retrieve from Storage
JC39018-4.2	Sahara Feliciano	Secured Staging Area	03/17/17 12:15	Return to Storage
JC39018-4.2	Secured Staging Area	Jessica Adametz	03/17/17 14:39	Retrieve from Storage
JC39018-4.2	Jessica Adametz	Secured Storage	03/17/17 14:42	Return to Storage
JC39018-4.2	Secured Storage	Edwin Gonzalez	03/17/17 17:23	Retrieve from Storage
JC39018-4.2	Edwin Gonzalez	Secured Staging Area	03/17/17 17:23	Return to Storage
JC39018-4.2	Secured Staging Area	Hans Seignon	03/17/17 17:30	Retrieve from Storage
JC39018-4.2	Hans Seignon	Chris Brunson	03/17/17 20:55	Custody Transfer
JC39018-4.2	Secured Storage	Sahara Feliciano	03/19/17 11:54	Retrieve from Storage
Bottle was returned to secure storage, but inadvertently not scanned.				
JC39018-4.2	Sahara Feliciano	Secured Staging Area	03/19/17 11:55	Return to Storage
JC39018-4.2	Secured Staging Area	Steven Zarchy	03/20/17 06:59	Retrieve from Storage
JC39018-4.2	Steven Zarchy	Stephen Seuling	03/20/17 07:58	Custody Transfer
JC39018-4.2	Stephen Seuling	Secured Storage	03/20/17 11:39	Return to Storage
JC39018-4.2.1	Steven Zarchy	Organics Prep	03/20/17 07:17	Extract from JC39018-4.2
JC39018-4.2.1	Organics Prep	Albert Quayson	03/21/17 12:03	Extract from JC39018-4.2
JC39018-4.2.1	Albert Quayson	Extract Storage	03/21/17 12:03	Return to Storage
JC39018-4.2.1	Extract Storage	Rebecca Krug	03/22/17 17:05	Retrieve from Storage
JC39018-4.2.1	Rebecca Krug	GCOA	03/22/17 17:05	Load on Instrument
JC39018-4.2.1	GCOA	Rebecca Krug	03/23/17 16:47	Unload from Instrument
JC39018-4.2.1	Rebecca Krug	Extract Freezer	03/23/17 16:47	Return to Storage
JC39018-4.3	Secured Storage	Todd Shoemaker	03/17/17 10:00	Retrieve from Storage
JC39018-4.3	Todd Shoemaker	Secured Staging Area	03/17/17 10:00	Return to Storage
JC39018-4.3	Secured Staging Area	Mark Setaro	03/17/17 10:06	Retrieve from Storage
JC39018-4.3	Mark Setaro	Secured Storage	03/17/17 13:38	Return to Storage
JC39018-4.3.1	Mark Setaro	TCLP	03/17/17 10:06	Leachate from JC39018-4.3
JC39018-4.3.1	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39018-4.3
JC39018-4.3.1	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39018-4.3.2	TCLP	Minhaj Hashmi	03/18/17 08:35	Leachate from JC39018-4.3
JC39018-4.3.2	Minhaj Hashmi	Secured Storage	03/18/17 08:41	Return to Storage
JC39018-4.3.2	Secured Storage	Eddie Huang	03/20/17 15:48	Retrieve from Storage
JC39018-4.3.2	Eddie Huang	GCMS2B	03/20/17 15:48	Load on Instrument
JC39018-4.3.2	GCMS2B	Eddie Huang	03/21/17 08:55	Unload from Instrument
JC39018-4.3.2	Eddie Huang	Secured Storage	03/21/17 08:55	Return to Storage
JC39018-4.3.2	Secured Storage	Eddie Huang	03/21/17 14:47	Retrieve from Storage
JC39018-4.3.2	Eddie Huang	GCMS2B	03/21/17 14:47	Load on Instrument

SGS Accutest Internal Chain of Custody

Job Number: JC39018
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/16/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC39018-4.3.2	GCMS2B	Eddie Huang	03/22/17 10:08	Unload from Instrument
JC39018-4.3.2	Eddie Huang	Secured Storage	03/22/17 10:08	Return to Storage
JC39018-4.5	Secured Storage	Sushila Yadav	03/17/17 15:40	Retrieve from Storage
JC39018-4.5	Sushila Yadav	GCMSC	03/17/17 15:40	Load on Instrument
JC39018-4.5	GCMSC	Sushila Yadav	03/18/17 11:16	Unload from Instrument
JC39018-4.5	Sushila Yadav	Secured Storage	03/18/17 11:16	Return to Storage
JC39018-4.5	Secured Storage	Sushila Yadav	03/18/17 15:48	Retrieve from Storage
JC39018-4.5	Sushila Yadav	GCMSC	03/18/17 15:48	Load on Instrument
JC39018-4.5	GCMSC	Sushila Yadav	03/25/17 15:45	Unload from Instrument
JC39018-4.5	Sushila Yadav	Secured Storage	03/25/17 15:45	Return to Storage

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Automated Report

Technical Report for

Matrix New World Engineering, Inc.

LIRR Expansion, Long Island, NY

16-144, Scally Place Parking Lot, Scally Place, Westbury

SGS Accutest Job Number: JC38632

Sampling Date: 03/08/17

Report to:

Matrix New World Engineering, Inc.
26 Columbia Turnpike
Florham Park, NJ 07932
bcrespi@matrixneworld.com; mclelland@matrixneworld.com;
mhorowitz@matrixneworld.com
ATTN: Brian Crespi

Total number of pages in report: 95

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Nancy Cole
Laboratory Director

Client Service contact: Tammy McCloskey 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (L-A-B L2248)

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Test results relate only to samples analyzed.

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March 24, 2017

Mr. Brian Crespi
Matrix New World Engineering, Inc.
26 Columbia Turnpike
Florham Park, NJ 07932

Re: SGS Accutest –Dayton, Jobs # JC38631, JC38632, and JC38633 – Reissues

Dear Mr. Crespi,

The final report for SGS Accutest jobs number JC38631, JC38632, and JC38633 have edited to reflect corrections to the data package. These edits have been incorporated into the revised report attached.

Specifically, the Herbicide list has been reivsed per Ms. Lindsey Melicharek's request on 3/22/2017 . This information has been retrieved and is included in this revised report.

Please contact client services at (732) 355-4562 if I can be of further assistance in this matter.

Sincerely,

Report Department

SGS Accutest

SGS ACCUTEST IS PART OF SGS, THE WORLD'S LEADING INSPECTION, VERIFICATION, TESTING AND CERTIFICATION COMPANY.

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SGS Accutest

Sample Summary

Matrix New World Engineering, Inc.

Job No: JC38632

LIRR Expansion, Long Island, NY
Project No: 16-144, Scally Place Parking Lot, Scally Place, Westbury

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC38632-1	03/08/17	09:15	LM	03/09/17	SO	Soil	SCAL-SB-01
JC38632-1A	03/08/17	09:15	LM	03/09/17	SO	Soil	SCAL-SB-01
JC38632-2	03/08/17	10:15	LM	03/09/17	SO	Soil	SCAL-SB-02
JC38632-2A	03/08/17	10:15	LM	03/09/17	SO	Soil	SCAL-SB-02
JC38632-3	03/08/17	12:15	LM	03/09/17	SO	Soil	SCAL-SB-03
JC38632-3A	03/08/17	12:15	LM	03/09/17	SO	Soil	SCAL-SB-03
JC38632-4	03/08/17	13:35	LM	03/09/17	SO	Soil	SCAL-SB-04
JC38632-4A	03/08/17	13:35	LM	03/09/17	SO	Soil	SCAL-SB-04

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

2

Summary of Hits

Job Number: JC38632
Account: Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Collected: 03/08/17

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC38632-1	**SCAL-SB-01**					
Caprolactam		0.0981	0.068	0.013	mg/kg	SW846 8270D
Fluoranthene		0.0160 J	0.034	0.015	mg/kg	SW846 8270D
Pyrene		0.0217 J	0.034	0.011	mg/kg	SW846 8270D
Aluminum		1720	52		mg/kg	SW846 6010C
Chromium		3.0	1.0		mg/kg	SW846 6010C
Iron		3030	52		mg/kg	SW846 6010C
Lead		2.6	2.1		mg/kg	SW846 6010C
Manganese		46.3	1.6		mg/kg	SW846 6010C
JC38632-1A	**SCAL-SB-01**					
Corrosivity as pH		4.84 NC			su	SW846 9045D
Ignitability (Flashpoint)		> 200			Deg. F	SW846 1010A/ASTM D93
JC38632-2	**SCAL-SB-02**					
Acetone		0.0148	0.0094	0.0047	mg/kg	SW846 8260C
m,p-Xylene		0.00036 J	0.00094	0.00021	mg/kg	SW846 8260C
o-Xylene		0.00022 J	0.00094	0.00019	mg/kg	SW846 8260C
Xylene (total)		0.00058 J	0.00094	0.00019	mg/kg	SW846 8260C
Benzo(a)anthracene		0.0153 J	0.034	0.0096	mg/kg	SW846 8270D
Benzo(a)pyrene		0.0168 J	0.034	0.015	mg/kg	SW846 8270D
Benzo(b)fluoranthene		0.0194 J	0.034	0.015	mg/kg	SW846 8270D
Chrysene		0.0217 J	0.034	0.011	mg/kg	SW846 8270D
Fluoranthene		0.0194 J	0.034	0.015	mg/kg	SW846 8270D
Phenanthrene		0.0160 J	0.034	0.011	mg/kg	SW846 8270D
Pyrene		0.0272 J	0.034	0.011	mg/kg	SW846 8270D
4,4'-DDD		0.0021	0.00068	0.00044	mg/kg	SW846 8081B
4,4'-DDE		0.0016	0.00068	0.00035	mg/kg	SW846 8081B
4,4'-DDT		0.00078	0.00068	0.00040	mg/kg	SW846 8081B
Aluminum		4130	52		mg/kg	SW846 6010C
Chromium		5.5	1.0		mg/kg	SW846 6010C
Copper		3.6	2.6		mg/kg	SW846 6010C
Iron		4790	52		mg/kg	SW846 6010C
Lead		3.8	2.1		mg/kg	SW846 6010C
Magnesium		540	520		mg/kg	SW846 6010C
Manganese		72.3	1.6		mg/kg	SW846 6010C
Vanadium		8.1	5.2		mg/kg	SW846 6010C
Zinc		7.2	5.2		mg/kg	SW846 6010C
JC38632-2A	**SCAL-SB-02**					
Corrosivity as pH		7.24 NC			su	SW846 9045D

Summary of Hits

Job Number: JC38632
Account: Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Collected: 03/08/17

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Ignitability (Flashpoint)		> 200			Deg. F	SW846 1010A/ASTM D93
JC38632-3	**SCAL-SB-03**					
Acetone		0.0140	0.0096	0.0048	mg/kg	SW846 8260C
Carbon disulfide		0.00030 J	0.0019	0.00016	mg/kg	SW846 8260C
Acenaphthene		0.0140 J	0.035	0.012	mg/kg	SW846 8270D
Acenaphthylene		0.0819	0.035	0.018	mg/kg	SW846 8270D
Anthracene		0.147	0.035	0.022	mg/kg	SW846 8270D
Benzo(a)anthracene		0.371	0.035	0.010	mg/kg	SW846 8270D
Benzo(a)pyrene		0.353	0.035	0.016	mg/kg	SW846 8270D
Benzo(b)fluoranthene		0.455	0.035	0.016	mg/kg	SW846 8270D
Benzo(g,h,i)perylene		0.245	0.035	0.018	mg/kg	SW846 8270D
Benzo(k)fluoranthene		0.134	0.035	0.016	mg/kg	SW846 8270D
Carbazole		0.0602 J	0.070	0.0051	mg/kg	SW846 8270D
Chrysene		0.340	0.035	0.011	mg/kg	SW846 8270D
Dibenzo(a,h)anthracene		0.0868	0.035	0.016	mg/kg	SW846 8270D
Fluoranthene		0.754	0.035	0.016	mg/kg	SW846 8270D
Fluorene		0.0204 J	0.035	0.016	mg/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		0.285	0.035	0.017	mg/kg	SW846 8270D
2-Methylnaphthalene		0.0331 J	0.070	0.0080	mg/kg	SW846 8270D
Naphthalene		0.0205 J	0.035	0.0099	mg/kg	SW846 8270D
Phenanthrene		0.349	0.035	0.012	mg/kg	SW846 8270D
Pyrene		0.616	0.035	0.011	mg/kg	SW846 8270D
alpha-Chlordane [a]		0.0018	0.00064	0.00031	mg/kg	SW846 8081B
gamma-Chlordane		0.0016	0.00064	0.00028	mg/kg	SW846 8081B
4,4'-DDD [a]		0.00058 J	0.00064	0.00041	mg/kg	SW846 8081B
4,4'-DDE		0.0028	0.00064	0.00034	mg/kg	SW846 8081B
4,4'-DDT		0.0051	0.00064	0.00038	mg/kg	SW846 8081B
Aluminum		6790	52		mg/kg	SW846 6010C
Arsenic		4.9	2.1		mg/kg	SW846 6010C
Barium		128	21		mg/kg	SW846 6010C
Beryllium		0.28	0.21		mg/kg	SW846 6010C
Cadmium		1.1	0.52		mg/kg	SW846 6010C
Calcium		20700	520		mg/kg	SW846 6010C
Chromium		19.8	1.0		mg/kg	SW846 6010C
Copper		148	2.6		mg/kg	SW846 6010C
Iron		9410	52		mg/kg	SW846 6010C
Lead		1590	6.3		mg/kg	SW846 6010C
Magnesium		1400	520		mg/kg	SW846 6010C
Manganese		147	1.6		mg/kg	SW846 6010C
Mercury		0.038	0.034		mg/kg	SW846 7471B
Nickel		10.3	4.2		mg/kg	SW846 6010C
Vanadium		21.3	5.2		mg/kg	SW846 6010C
Zinc		228	5.2		mg/kg	SW846 6010C

Summary of Hits

Job Number: JC38632
Account: Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Collected: 03/08/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC38632-3A	**SCAL-SB-03**					
Corrosivity as pH		8.25 NC			su	SW846 9045D
Ignitability (Flashpoint)		> 200			Deg. F	SW846 1010A/ASTM D93
JC38632-4	**SCAL-SB-04**					
Acetone		0.0192	0.0093	0.0047	mg/kg	SW846 8260C
Carbon disulfide		0.00024 J	0.0019	0.00016	mg/kg	SW846 8260C
Benzo(a)anthracene		0.0421	0.034	0.0096	mg/kg	SW846 8270D
Benzo(a)pyrene		0.0440	0.034	0.015	mg/kg	SW846 8270D
Benzo(b)fluoranthene		0.0592	0.034	0.015	mg/kg	SW846 8270D
Benzo(g,h,i)perylene		0.0426	0.034	0.017	mg/kg	SW846 8270D
Benzo(k)fluoranthene		0.0189 J	0.034	0.016	mg/kg	SW846 8270D
Caprolactam		0.0561 J	0.068	0.013	mg/kg	SW846 8270D
Chrysene		0.0554	0.034	0.011	mg/kg	SW846 8270D
Fluoranthene		0.0775	0.034	0.015	mg/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		0.0428	0.034	0.016	mg/kg	SW846 8270D
2-Methylnaphthalene		0.0160 J	0.068	0.0077	mg/kg	SW846 8270D
Naphthalene		0.0146 J	0.034	0.0096	mg/kg	SW846 8270D
Phenanthrene		0.0441	0.034	0.011	mg/kg	SW846 8270D
Pyrene		0.103	0.034	0.011	mg/kg	SW846 8270D
4,4'-DDD [a]		0.00091	0.00069	0.00044	mg/kg	SW846 8081B
4,4'-DDE [a]		0.00039 J	0.00069	0.00036	mg/kg	SW846 8081B
4,4'-DDT		0.00070	0.00069	0.00041	mg/kg	SW846 8081B
Aluminum		2190	51		mg/kg	SW846 6010C
Chromium		3.6	1.0		mg/kg	SW846 6010C
Iron		3180	51		mg/kg	SW846 6010C
Lead		4.4	2.1		mg/kg	SW846 6010C
Manganese		97.4	1.5		mg/kg	SW846 6010C
Mercury		0.040	0.027		mg/kg	SW846 7471B
Zinc		5.3	5.1		mg/kg	SW846 6010C
JC38632-4A	**SCAL-SB-04**					
Corrosivity as pH		6.16 NC			su	SW846 9045D
Ignitability (Flashpoint)		> 200			Deg. F	SW846 1010A/ASTM D93

(a) More than 40 % RPD for detected concentrations between the two GC columns.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	SCAL-SB-01		
Lab Sample ID:	JC38632-1	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8260C	**Percent Solids:**	97.3
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C216897.D	1	03/13/17	SY	n/a	n/a	VC7988
Run #2							

	Initial Weight
Run #1	4.7 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.011	0.0055	mg/kg	
71-43-2	Benzene	ND	0.00055	0.00013	mg/kg	
74-97-5	Bromochloromethane	ND	0.0055	0.00035	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0022	0.00017	mg/kg	
75-25-2	Bromoform	ND	0.0055	0.00029	mg/kg	
74-83-9	Bromomethane	ND	0.0055	0.00053	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.011	0.0019	mg/kg	
75-15-0	Carbon disulfide	ND	0.0022	0.00019	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0022	0.00018	mg/kg	
108-90-7	Chlorobenzene	ND	0.0022	0.00018	mg/kg	
75-00-3	Chloroethane	ND	0.0055	0.00047	mg/kg	
67-66-3	Chloroform	ND	0.0022	0.00026	mg/kg	
74-87-3	Chloromethane	ND	0.0055	0.00023	mg/kg	
110-82-7	Cyclohexane	ND	0.0022	0.00060	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0022	0.00053	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0022	0.00016	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.0011	0.00026	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0011	0.00019	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0011	0.00015	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0011	0.00017	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0055	0.00060	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0011	0.00020	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0011	0.00019	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0011	0.00017	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0011	0.00048	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0011	0.00017	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0022	0.00034	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0022	0.00021	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0022	0.00024	mg/kg	
100-41-4	Ethylbenzene	ND	0.0011	0.00016	mg/kg	
76-13-1	Freon 113	ND	0.0055	0.00053	mg/kg	
591-78-6	2-Hexanone	ND	0.0055	0.0015	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-01		
Lab Sample ID:	JC38632-1	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8260C	**Percent Solids:**	97.3
Project:	LIRR Expansion, Long Island, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	0.0022	0.00017	mg/kg	
79-20-9	Methyl Acetate	ND	0.0055	0.0022	mg/kg	
108-87-2	Methylcyclohexane	ND	0.0022	0.00055	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0011	0.00029	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0055	0.00093	mg/kg	
75-09-2	Methylene chloride	ND	0.0055	0.0011	mg/kg	
100-42-5	Styrene	ND	0.0022	0.00016	mg/kg	
75-65-0	Tert Butyl Alcohol	ND	0.027	0.0033	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0022	0.00026	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0022	0.00031	mg/kg	
108-88-3	Toluene	ND	0.0011	0.00014	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0055	0.00055	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0055	0.00055	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0022	0.00018	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0022	0.00035	mg/kg	
79-01-6	Trichloroethene	ND	0.0011	0.00021	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0055	0.00069	mg/kg	
75-01-4	Vinyl chloride	ND	0.0022	0.00022	mg/kg	
	m,p-Xylene	ND	0.0011	0.00024	mg/kg	
95-47-6	o-Xylene	ND	0.0011	0.00022	mg/kg	
1330-20-7	Xylene (total)	ND	0.0011	0.00022	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		70-122%
17060-07-0	1,2-Dichloroethane-D4	94%		68-124%
2037-26-5	Toluene-D8	102%		77-125%
460-00-4	4-Bromofluorobenzene	100%		72-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-01		
Lab Sample ID:	JC38632-1	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	97.3
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5P36324.D	1	03/11/17	CS	03/10/17	OP1064	E5P1820
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	0.068	0.017	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.17	0.021	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.17	0.029	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.17	0.061	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	0.17	0.13	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.17	0.037	mg/kg	
95-48-7	2-Methylphenol	ND	0.068	0.022	mg/kg	
	3&4-Methylphenol	ND	0.068	0.028	mg/kg	
88-75-5	2-Nitrophenol	ND	0.17	0.023	mg/kg	
100-02-7	4-Nitrophenol	ND	0.34	0.091	mg/kg	
87-86-5	Pentachlorophenol	ND	0.14	0.032	mg/kg	
108-95-2	Phenol	ND	0.068	0.018	mg/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.17	0.023	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.17	0.026	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.17	0.020	mg/kg	
83-32-9	Acenaphthene	ND	0.034	0.012	mg/kg	
208-96-8	Acenaphthylene	ND	0.034	0.017	mg/kg	
98-86-2	Acetophenone	ND	0.17	0.0073	mg/kg	
120-12-7	Anthracene	ND	0.034	0.021	mg/kg	
1912-24-9	Atrazine	ND	0.068	0.015	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.034	0.0097	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.034	0.016	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.034	0.015	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.034	0.017	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.034	0.016	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.068	0.013	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.068	0.0083	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.068	0.0047	mg/kg	
100-52-7	Benzaldehyde	ND	0.17	0.0085	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.068	0.0081	mg/kg	
106-47-8	4-Chloroaniline	ND	0.17	0.012	mg/kg	
86-74-8	Carbazole	ND	0.068	0.0050	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-01		
Lab Sample ID:	JC38632-1	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	97.3
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	0.0981	0.068	0.013	mg/kg	
218-01-9	Chrysene	ND	0.034	0.011	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.068	0.0073	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.068	0.015	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.068	0.012	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.068	0.011	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.034	0.011	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.034	0.017	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.068	0.028	mg/kg	
123-91-1	1,4-Dioxane	ND	0.034	0.023	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.034	0.015	mg/kg	
132-64-9	Dibenzofuran	ND	0.068	0.014	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.068	0.0056	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.068	0.0085	mg/kg	
84-66-2	Diethyl phthalate	ND	0.068	0.0073	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.068	0.0061	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.068	0.0080	mg/kg	
206-44-0	Fluoranthene	0.0160	0.034	0.015	mg/kg	J
86-73-7	Fluorene	ND	0.034	0.016	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.068	0.0086	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.034	0.014	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.34	0.014	mg/kg	
67-72-1	Hexachloroethane	ND	0.17	0.017	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.034	0.016	mg/kg	
78-59-1	Isophorone	ND	0.068	0.0073	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.068	0.0077	mg/kg	
88-74-4	2-Nitroaniline	ND	0.17	0.0081	mg/kg	
99-09-2	3-Nitroaniline	ND	0.17	0.0085	mg/kg	
100-01-6	4-Nitroaniline	ND	0.17	0.0088	mg/kg	
91-20-3	Naphthalene	ND	0.034	0.0096	mg/kg	
98-95-3	Nitrobenzene	ND	0.068	0.013	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.068	0.0099	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.17	0.012	mg/kg	
85-01-8	Phenanthrene	ND	0.034	0.011	mg/kg	
129-00-0	Pyrene	0.0217	0.034	0.011	mg/kg	J
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.17	0.0087	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	76%		23-115%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-01		
Lab Sample ID:	JC38632-1	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	97.3
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	74%		27-114%
118-79-6	2,4,6-Tribromophenol	86%		19-152%
4165-60-0	Nitrobenzene-d5	81%		26-134%
321-60-8	2-Fluorobiphenyl	89%		39-124%
1718-51-0	Terphenyl-d14	90%		36-134%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-01		
Lab Sample ID:	JC38632-1	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8151 SW846 8151/3550C	**Percent Solids:**	97.3
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OA124459.D	1	03/18/17	VDT	03/17/17	OP1193	GOA4266
Run #2							

	Initial Weight	Final Volume
Run #1	15.4 g	5.0 ml
Run #2		

Herbicide List

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	0.017	0.0075	mg/kg	
93-72-1	2,4,5-TP (Silvex)	ND	0.0033	0.0012	mg/kg	
93-76-5	2,4,5-T	ND	0.0033	0.0013	mg/kg	
75-99-0	Dalapon	ND	0.0033	0.0023	mg/kg	
1918-00-9	Dicamba	ND	0.0033	0.0017	mg/kg	
120-36-5	Dichloroprop	ND	0.017	0.0047	mg/kg	
88-85-7	Dinoseb	ND	0.017	0.011	mg/kg	
94-74-6	MCPA	ND	1.7	0.38	mg/kg	
93-65-2	MCPP	ND	1.7	0.36	mg/kg	
87-86-5	Pentachlorophenol	ND	0.0017	0.0015	mg/kg	
94-82-6	2,4-DB	ND	0.017	0.0054	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	67%		10-159%
19719-28-9	2,4-DCAA	51%		10-159%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-01		
Lab Sample ID:	JC38632-1	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8081B SW846 3546	**Percent Solids:**	97.3
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G133043.D	1	03/13/17	RK	03/11/17	OP1060	G1G4254
Run #2							

	Initial Weight	Final Volume
Run #1	16.0 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.00064	0.00031	mg/kg	
319-84-6	alpha-BHC	ND	0.00064	0.00034	mg/kg	
319-85-7	beta-BHC	ND	0.00064	0.00040	mg/kg	
319-86-8	delta-BHC	ND	0.00064	0.00029	mg/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.00064	0.00028	mg/kg	
5103-71-9	alpha-Chlordane	ND	0.00064	0.00031	mg/kg	
5103-74-2	gamma-Chlordane	ND	0.00064	0.00028	mg/kg	
60-57-1	Dieldrin	ND	0.00064	0.00032	mg/kg	
72-54-8	4,4'-DDD	ND	0.00064	0.00041	mg/kg	
72-55-9	4,4'-DDE	ND	0.00064	0.00033	mg/kg	
50-29-3	4,4'-DDT	ND	0.00064	0.00038	mg/kg	
72-20-8	Endrin	ND	0.00064	0.00030	mg/kg	
1031-07-8	Endosulfan sulfate	ND	0.00064	0.00026	mg/kg	
7421-93-4	Endrin aldehyde	ND	0.00064	0.00038	mg/kg	
959-98-8	Endosulfan-I	ND	0.00064	0.00034	mg/kg	
33213-65-9	Endosulfan-II	ND	0.00064	0.00034	mg/kg	
76-44-8	Heptachlor	ND	0.00064	0.00031	mg/kg	
1024-57-3	Heptachlor epoxide	ND	0.00064	0.00035	mg/kg	
72-43-5	Methoxychlor	ND	0.0013	0.00032	mg/kg	
53494-70-5	Endrin ketone	ND	0.00064	0.00050	mg/kg	
8001-35-2	Toxaphene	ND	0.016	0.0067	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	66%		25-135%
877-09-8	Tetrachloro-m-xylene	67%		25-135%
2051-24-3	Decachlorobiphenyl	64%		10-156%
2051-24-3	Decachlorobiphenyl	68%		10-156%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-01		
Lab Sample ID:	JC38632-1	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8082A SW846 3546	**Percent Solids:**	97.3
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX206394.D	1	03/13/17	HB	03/11/17	OP1061	GXX5965
Run #2							

	Initial Weight	Final Volume
Run #1	16.0 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.032	0.016	mg/kg	
11104-28-2	Aroclor 1221	ND	0.032	0.016	mg/kg	
11141-16-5	Aroclor 1232	ND	0.032	0.013	mg/kg	
53469-21-9	Aroclor 1242	ND	0.032	0.011	mg/kg	
12672-29-6	Aroclor 1248	ND	0.032	0.020	mg/kg	
11097-69-1	Aroclor 1254	ND	0.032	0.016	mg/kg	
11096-82-5	Aroclor 1260	ND	0.032	0.014	mg/kg	
11100-14-4	Aroclor 1268	ND	0.032	0.011	mg/kg	
37324-23-5	Aroclor 1262	ND	0.032	0.022	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	84%		24-152%
877-09-8	Tetrachloro-m-xylene	94%		24-152%
2051-24-3	Decachlorobiphenyl	70%		10-166%
2051-24-3	Decachlorobiphenyl	85%		10-166%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-01		
Lab Sample ID:	JC38632-1	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	97.3
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	1720	52	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 2.1	2.1	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Arsenic	< 2.1	2.1	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Barium	< 21	21	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Beryllium	< 0.21	0.21	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.52	0.52	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Calcium	< 520	520	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Chromium	3.0	1.0	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Cobalt	< 5.2	5.2	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Copper	< 2.6	2.6	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Iron	3030	52	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Lead	2.6	2.1	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Magnesium	< 520	520	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Manganese	46.3	1.6	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Mercury	< 0.026	0.026	mg/kg	1	03/11/17	03/11/17	JA	SW846 7471B [1]	SW846 7471B [4]
Nickel	< 4.2	4.2	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Potassium	< 1000	1000	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 2.1	2.1	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Silver	< 0.52	0.52	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 1000	1000	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 1.0	1.0	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Vanadium	< 5.2	5.2	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Zinc	< 5.2	5.2	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA41540
(2) Instrument QC Batch: MA41549
(3) Prep QC Batch: MP99155
(4) Prep QC Batch: MP99158

RL = Reporting Limit

Report of Analysis

Client Sample ID:	SCAL-SB-01		
Lab Sample ID:	JC38632-1	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	97.3
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	< 0.23	0.23	mg/kg	1	03/13/17 08:58	YZ	SW846 9012B/LACHAT
Solids, Percent	97.3		%	1	03/10/17 16:30	TZW	SM2540 G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	SCAL-SB-01		
Lab Sample ID:	JC38632-1A	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8260C SW846 1311	**Percent Solids:**	97.3
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B149052.D	5	03/13/17	EH	03/10/17	GP3819	V2B6616
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.0025	0.00070	mg/l	
78-93-3	2-Butanone (MEK)	ND	D035	200	0.10	0.0095	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.0050	0.0027	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.0050	0.00087	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.0050	0.0011	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.0050	0.0011	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.0050	0.0020	mg/l	
75-35-4	1,1-Dichloroethene	ND	D029	0.70	0.0050	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	D039	0.70	0.0050	0.0012	mg/l	
79-01-6	Trichloroethene	ND	D040	0.50	0.0050	0.0013	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.0050	0.0016	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	112%		76-120%
17060-07-0	1,2-Dichloroethane-D4	103%		64-135%
2037-26-5	Toluene-D8	99%		76-117%
460-00-4	4-Bromofluorobenzene	97%		72-122%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-01		
Lab Sample ID:	JC38632-1A	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	97.3
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6P35597.D	1	03/13/17	AC	03/12/17	OP1073	E6P1642
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.020	0.0089	mg/l	
	3&4-Methylphenol	ND	D024	200	0.020	0.0088	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.10	0.014	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.013	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0092	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.020	0.0017	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.020	0.0055	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.020	0.0033	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.010	0.0049	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0039	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.020	0.0064	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.020	0.0039	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	38%		14-88%
4165-62-2	Phenol-d5	25%		10-110%
118-79-6	2,4,6-Tribromophenol	75%		39-149%
4165-60-0	Nitrobenzene-d5	72%		32-128%
321-60-8	2-Fluorobiphenyl	75%		35-119%
1718-51-0	Terphenyl-d14	90%		10-126%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-01		
Lab Sample ID:	JC38632-1A	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8151 SW846 8151/3510C	**Percent Solids:**	97.3
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G106935.D	1	03/13/17	VDT	03/11/17	OP1072	G3G3736
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Herbicide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND	D016	10	0.0050	0.0039	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.0015	0.00047	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	98%		50-142%
19719-28-9	2,4-DCAA	94%		50-142%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-01		
Lab Sample ID:	JC38632-1A	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	97.3
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	8G3734.D	1	03/13/17	RK	03/12/17	OP1074	G8G110
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Pesticide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	D013	0.40	0.00010	0.000028	mg/l	
12789-03-6	Chlordane	ND	D020	0.030	0.0050	0.0011	mg/l	
72-20-8	Endrin	ND	D012	0.020	0.00010	0.000050	mg/l	
76-44-8	Heptachlor	ND	D031	0.0080	0.00010	0.000038	mg/l	
1024-57-3	Heptachlor epoxide	ND	D031	0.0080	0.00010	0.000065	mg/l	
72-43-5	Methoxychlor	ND	D014	10	0.00020	0.000057	mg/l	
8001-35-2	Toxaphene	ND	D015	0.50	0.0025	0.0018	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	90%		30-137%
877-09-8	Tetrachloro-m-xylene	93%		30-137%
2051-24-3	Decachlorobiphenyl	84%		10-137%
2051-24-3	Decachlorobiphenyl	81%		10-137%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-01		
Lab Sample ID:	JC38632-1A	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	97.3
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 0.50	D004	5.0	0.50	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Barium	< 1.0	D005	100	1.0	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 0.025	D006	1.0	0.025	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 0.050	D007	5.0	0.050	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Lead	< 0.50	D008	5.0	0.50	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	03/13/17	03/13/17	JPM	SW846 7470A [1]	SW846 7470A [4]
Selenium	< 0.50	D010	1.0	0.50	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Silver	< 0.050	D011	5.0	0.050	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA41553
(2) Instrument QC Batch: MA41554
(3) Prep QC Batch: MP99157
(4) Prep QC Batch: MP99205

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID:	SCAL-SB-01		
Lab Sample ID:	JC38632-1A	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	97.3
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Corrosivity as pH	4.84 NC		su	1	03/11/17 11:00	AT	SW846 9045D
Cyanide Reactivity	< 10	10	mg/kg	1	03/13/17 15:49	YZ	SW846 CHAP7/9012 B
Ignitability (Flashpoint)	> 200		Deg. F	1	03/11/17 15:00	AT	SW846 1010A/ASTM D93
Sulfide Reactivity	< 100	100	mg/kg	1	03/13/17 01:33	MP	SW846 CHAP7/9034

RL = Reporting Limit

Report of Analysis

Client Sample ID:	SCAL-SB-02		
Lab Sample ID:	JC38632-2	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8260C	**Percent Solids:**	94.8
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C216898.D	1	03/13/17	SY	n/a	n/a	VC7988
Run #2							

	Initial Weight
Run #1	5.6 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0148	0.0094	0.0047	mg/kg	
71-43-2	Benzene	ND	0.00047	0.00011	mg/kg	
74-97-5	Bromochloromethane	ND	0.0047	0.00030	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0019	0.00014	mg/kg	
75-25-2	Bromoform	ND	0.0047	0.00025	mg/kg	
74-83-9	Bromomethane	ND	0.0047	0.00046	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.0094	0.0017	mg/kg	
75-15-0	Carbon disulfide	ND	0.0019	0.00016	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0019	0.00016	mg/kg	
108-90-7	Chlorobenzene	ND	0.0019	0.00015	mg/kg	
75-00-3	Chloroethane	ND	0.0047	0.00040	mg/kg	
67-66-3	Chloroform	ND	0.0019	0.00022	mg/kg	
74-87-3	Chloromethane	ND	0.0047	0.00020	mg/kg	
110-82-7	Cyclohexane	ND	0.0019	0.00051	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0019	0.00046	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0019	0.00014	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.00094	0.00023	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.00094	0.00016	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.00094	0.00013	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.00094	0.00014	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0047	0.00051	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.00094	0.00018	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.00094	0.00016	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.00094	0.00014	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.00094	0.00041	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.00094	0.00015	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0019	0.00029	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0019	0.00018	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0019	0.00021	mg/kg	
100-41-4	Ethylbenzene	ND	0.00094	0.00014	mg/kg	
76-13-1	Freon 113	ND	0.0047	0.00046	mg/kg	
591-78-6	2-Hexanone	ND	0.0047	0.0013	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-02		
Lab Sample ID:	JC38632-2	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8260C	**Percent Solids:**	94.8
Project:	LIRR Expansion, Long Island, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	0.0019	0.00015	mg/kg	
79-20-9	Methyl Acetate	ND	0.0047	0.0019	mg/kg	
108-87-2	Methylcyclohexane	ND	0.0019	0.00048	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.00094	0.00025	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0047	0.00080	mg/kg	
75-09-2	Methylene chloride	ND	0.0047	0.00094	mg/kg	
100-42-5	Styrene	ND	0.0019	0.00014	mg/kg	
75-65-0	Tert Butyl Alcohol	ND	0.024	0.0029	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0019	0.00023	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0019	0.00026	mg/kg	
108-88-3	Toluene	ND	0.00094	0.00012	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0047	0.00047	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0047	0.00047	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0019	0.00016	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0019	0.00030	mg/kg	
79-01-6	Trichloroethene	ND	0.00094	0.00018	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0047	0.00059	mg/kg	
75-01-4	Vinyl chloride	ND	0.0019	0.00019	mg/kg	
	m,p-Xylene	0.00036	0.00094	0.00021	mg/kg	J
95-47-6	o-Xylene	0.00022	0.00094	0.00019	mg/kg	J
1330-20-7	Xylene (total)	0.00058	0.00094	0.00019	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		70-122%
17060-07-0	1,2-Dichloroethane-D4	95%		68-124%
2037-26-5	Toluene-D8	98%		77-125%
460-00-4	4-Bromofluorobenzene	103%		72-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-02		
Lab Sample ID:	JC38632-2	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	94.8
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5P36363.D	1	03/12/17	AN	03/10/17	OP1064	E5P1821
Run #2							

	Initial Weight	Final Volume
Run #1	31.0 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	0.068	0.017	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.17	0.021	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.17	0.029	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.17	0.061	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	0.17	0.13	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.17	0.036	mg/kg	
95-48-7	2-Methylphenol	ND	0.068	0.022	mg/kg	
	3&4-Methylphenol	ND	0.068	0.028	mg/kg	
88-75-5	2-Nitrophenol	ND	0.17	0.022	mg/kg	
100-02-7	4-Nitrophenol	ND	0.34	0.091	mg/kg	
87-86-5	Pentachlorophenol	ND	0.14	0.032	mg/kg	
108-95-2	Phenol	ND	0.068	0.018	mg/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.17	0.023	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.17	0.025	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.17	0.020	mg/kg	
83-32-9	Acenaphthene	ND	0.034	0.012	mg/kg	
208-96-8	Acenaphthylene	ND	0.034	0.017	mg/kg	
98-86-2	Acetophenone	ND	0.17	0.0073	mg/kg	
120-12-7	Anthracene	ND	0.034	0.021	mg/kg	
1912-24-9	Atrazine	ND	0.068	0.015	mg/kg	
56-55-3	Benzo(a)anthracene	0.0153	0.034	0.0096	mg/kg	J
50-32-8	Benzo(a)pyrene	0.0168	0.034	0.015	mg/kg	J
205-99-2	Benzo(b)fluoranthene	0.0194	0.034	0.015	mg/kg	J
191-24-2	Benzo(g,h,i)perylene	ND	0.034	0.017	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.034	0.016	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.068	0.013	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.068	0.0083	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.068	0.0047	mg/kg	
100-52-7	Benzaldehyde	ND	0.17	0.0084	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.068	0.0081	mg/kg	
106-47-8	4-Chloroaniline	ND	0.17	0.012	mg/kg	
86-74-8	Carbazole	ND	0.068	0.0049	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-02		
Lab Sample ID:	JC38632-2	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	94.8
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	0.068	0.013	mg/kg	
218-01-9	Chrysene	0.0217	0.034	0.011	mg/kg	J
111-91-1	bis(2-Chloroethoxy)methane	ND	0.068	0.0073	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.068	0.015	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.068	0.012	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.068	0.011	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.034	0.011	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.034	0.017	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.068	0.028	mg/kg	
123-91-1	1,4-Dioxane	ND	0.034	0.022	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.034	0.015	mg/kg	
132-64-9	Dibenzofuran	ND	0.068	0.014	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.068	0.0055	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.068	0.0085	mg/kg	
84-66-2	Diethyl phthalate	ND	0.068	0.0072	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.068	0.0061	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.068	0.0080	mg/kg	
206-44-0	Fluoranthene	0.0194	0.034	0.015	mg/kg	J
86-73-7	Fluorene	ND	0.034	0.016	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.068	0.0086	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.034	0.014	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.34	0.014	mg/kg	
67-72-1	Hexachloroethane	ND	0.17	0.017	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.034	0.016	mg/kg	
78-59-1	Isophorone	ND	0.068	0.0073	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.068	0.0077	mg/kg	
88-74-4	2-Nitroaniline	ND	0.17	0.0080	mg/kg	
99-09-2	3-Nitroaniline	ND	0.17	0.0085	mg/kg	
100-01-6	4-Nitroaniline	ND	0.17	0.0088	mg/kg	
91-20-3	Naphthalene	ND	0.034	0.0096	mg/kg	
98-95-3	Nitrobenzene	ND	0.068	0.013	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.068	0.0098	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.17	0.012	mg/kg	
85-01-8	Phenanthrene	0.0160	0.034	0.011	mg/kg	J
129-00-0	Pyrene	0.0272	0.034	0.011	mg/kg	J
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.17	0.0086	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	66%		23-115%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-02		
Lab Sample ID:	JC38632-2	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	94.8
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	66%		27-114%
118-79-6	2,4,6-Tribromophenol	72%		19-152%
4165-60-0	Nitrobenzene-d5	69%		26-134%
321-60-8	2-Fluorobiphenyl	79%		39-124%
1718-51-0	Terphenyl-d14	80%		36-134%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-02		
Lab Sample ID:	JC38632-2	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8151 SW846 8151/3550C	**Percent Solids:**	94.8
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OA124460.D	1	03/18/17	VDT	03/17/17	OP1193	GOA4266
Run #2							

	Initial Weight	Final Volume
Run #1	16.6 g	5.0 ml
Run #2		

Herbicide List

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	0.016	0.0071	mg/kg	
93-72-1	2,4,5-TP (Silvex)	ND	0.0032	0.0012	mg/kg	
93-76-5	2,4,5-T	ND	0.0032	0.0012	mg/kg	
75-99-0	Dalapon	ND	0.0032	0.0021	mg/kg	
1918-00-9	Dicamba	ND	0.0032	0.0016	mg/kg	
120-36-5	Dichloroprop	ND	0.016	0.0045	mg/kg	
88-85-7	Dinoseb	ND	0.016	0.011	mg/kg	
94-74-6	MCPA	ND	1.6	0.37	mg/kg	
93-65-2	MCPP	ND	1.6	0.35	mg/kg	
87-86-5	Pentachlorophenol	ND	0.0016	0.0014	mg/kg	
94-82-6	2,4-DB	ND	0.016	0.0051	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	56%		10-159%
19719-28-9	2,4-DCAA	46%		10-159%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-02		
Lab Sample ID:	JC38632-2	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8081B SW846 3546	**Percent Solids:**	94.8
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G133046.D	1	03/13/17	RK	03/11/17	OP1060	G1G4254
Run #2							

	Initial Weight	Final Volume
Run #1	15.5 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.00068	0.00033	mg/kg	
319-84-6	alpha-BHC	ND	0.00068	0.00036	mg/kg	
319-85-7	beta-BHC	ND	0.00068	0.00043	mg/kg	
319-86-8	delta-BHC	ND	0.00068	0.00031	mg/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.00068	0.00030	mg/kg	
5103-71-9	alpha-Chlordane	ND	0.00068	0.00032	mg/kg	
5103-74-2	gamma-Chlordane	ND	0.00068	0.00030	mg/kg	
60-57-1	Dieldrin	ND	0.00068	0.00034	mg/kg	
72-54-8	4,4'-DDD	0.0021	0.00068	0.00044	mg/kg	
72-55-9	4,4'-DDE	0.0016	0.00068	0.00035	mg/kg	
50-29-3	4,4'-DDT	0.00078	0.00068	0.00040	mg/kg	
72-20-8	Endrin	ND	0.00068	0.00032	mg/kg	
1031-07-8	Endosulfan sulfate	ND	0.00068	0.00027	mg/kg	
7421-93-4	Endrin aldehyde	ND	0.00068	0.00040	mg/kg	
959-98-8	Endosulfan-I	ND	0.00068	0.00036	mg/kg	
33213-65-9	Endosulfan-II	ND	0.00068	0.00036	mg/kg	
76-44-8	Heptachlor	ND	0.00068	0.00033	mg/kg	
1024-57-3	Heptachlor epoxide	ND	0.00068	0.00037	mg/kg	
72-43-5	Methoxychlor	ND	0.0014	0.00034	mg/kg	
53494-70-5	Endrin ketone	ND	0.00068	0.00052	mg/kg	
8001-35-2	Toxaphene	ND	0.017	0.0071	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	75%		25-135%
877-09-8	Tetrachloro-m-xylene	78%		25-135%
2051-24-3	Decachlorobiphenyl	55%		10-156%
2051-24-3	Decachlorobiphenyl	65%		10-156%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-02		
Lab Sample ID:	JC38632-2	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8082A SW846 3546	**Percent Solids:**	94.8
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX206379.D	1	03/13/17	HB	03/11/17	OP1061	GXX5965
Run #2							

	Initial Weight	Final Volume
Run #1	15.5 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.034	0.017	mg/kg	
11104-28-2	Aroclor 1221	ND	0.034	0.017	mg/kg	
11141-16-5	Aroclor 1232	ND	0.034	0.013	mg/kg	
53469-21-9	Aroclor 1242	ND	0.034	0.012	mg/kg	
12672-29-6	Aroclor 1248	ND	0.034	0.022	mg/kg	
11097-69-1	Aroclor 1254	ND	0.034	0.017	mg/kg	
11096-82-5	Aroclor 1260	ND	0.034	0.014	mg/kg	
11100-14-4	Aroclor 1268	ND	0.034	0.012	mg/kg	
37324-23-5	Aroclor 1262	ND	0.034	0.023	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	99%		24-152%
877-09-8	Tetrachloro-m-xylene	110%		24-152%
2051-24-3	Decachlorobiphenyl	79%		10-166%
2051-24-3	Decachlorobiphenyl	95%		10-166%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-02		
Lab Sample ID:	JC38632-2	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	94.8
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	4130	52	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 2.1	2.1	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Arsenic	< 2.1	2.1	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Barium	< 21	21	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Beryllium	< 0.21	0.21	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.52	0.52	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Calcium	< 520	520	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Chromium	5.5	1.0	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Cobalt	< 5.2	5.2	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Copper	3.6	2.6	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Iron	4790	52	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Lead	3.8	2.1	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Magnesium	540	520	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Manganese	72.3	1.6	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Mercury	< 0.035	0.035	mg/kg	1	03/11/17	03/11/17	JA	SW846 7471B [1]	SW846 7471B [4]
Nickel	< 4.1	4.1	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Potassium	< 1000	1000	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 2.1	2.1	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Silver	< 0.52	0.52	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 1000	1000	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 1.0	1.0	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Vanadium	8.1	5.2	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Zinc	7.2	5.2	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA41540
(2) Instrument QC Batch: MA41549
(3) Prep QC Batch: MP99155
(4) Prep QC Batch: MP99158

RL = Reporting Limit

Report of Analysis

Client Sample ID:	SCAL-SB-02		
Lab Sample ID:	JC38632-2	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	94.8
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	< 0.24	0.24	mg/kg	1	03/13/17 08:59	YZ	SW846 9012B/LACHAT
Solids, Percent	94.8		%	1	03/10/17 16:30	TZW	SM2540 G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	SCAL-SB-02		
Lab Sample ID:	JC38632-2A	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8260C SW846 1311	**Percent Solids:**	94.8
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B149053.D	5	03/13/17	EH	03/10/17	GP3819	V2B6616
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.0025	0.00070	mg/l	
78-93-3	2-Butanone (MEK)	ND	D035	200	0.10	0.0095	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.0050	0.0027	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.0050	0.00087	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.0050	0.0011	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.0050	0.0011	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.0050	0.0020	mg/l	
75-35-4	1,1-Dichloroethene	ND	D029	0.70	0.0050	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	D039	0.70	0.0050	0.0012	mg/l	
79-01-6	Trichloroethene	ND	D040	0.50	0.0050	0.0013	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.0050	0.0016	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		76-120%
17060-07-0	1,2-Dichloroethane-D4	102%		64-135%
2037-26-5	Toluene-D8	99%		76-117%
460-00-4	4-Bromofluorobenzene	98%		72-122%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-02		
Lab Sample ID:	JC38632-2A	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	94.8
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6P35598.D	1	03/13/17	AC	03/12/17	OP1073	E6P1642
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.020	0.0089	mg/l	
	3&4-Methylphenol	ND	D024	200	0.020	0.0088	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.10	0.014	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.013	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0092	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.020	0.0017	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.020	0.0055	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.020	0.0033	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.010	0.0049	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0039	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.020	0.0064	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.020	0.0039	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	45%		14-88%
4165-62-2	Phenol-d5	30%		10-110%
118-79-6	2,4,6-Tribromophenol	86%		39-149%
4165-60-0	Nitrobenzene-d5	82%		32-128%
321-60-8	2-Fluorobiphenyl	84%		35-119%
1718-51-0	Terphenyl-d14	103%		10-126%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-02		
Lab Sample ID:	JC38632-2A	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8151 SW846 8151/3510C	**Percent Solids:**	94.8
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G106936.D	1	03/13/17	VDT	03/11/17	OP1072	G3G3736
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Herbicide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND	D016	10	0.0050	0.0039	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.0015	0.00047	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	96%		50-142%
19719-28-9	2,4-DCAA	88%		50-142%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-02		
Lab Sample ID:	JC38632-2A	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	94.8
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	8G3735.D	1	03/13/17	RK	03/12/17	OP1074	G8G110
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Pesticide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	D013	0.40	0.00010	0.000028	mg/l	
12789-03-6	Chlordane	ND	D020	0.030	0.0050	0.0011	mg/l	
72-20-8	Endrin	ND	D012	0.020	0.00010	0.000050	mg/l	
76-44-8	Heptachlor	ND	D031	0.0080	0.00010	0.000038	mg/l	
1024-57-3	Heptachlor epoxide	ND	D031	0.0080	0.00010	0.000065	mg/l	
72-43-5	Methoxychlor	ND	D014	10	0.00020	0.000057	mg/l	
8001-35-2	Toxaphene	ND	D015	0.50	0.0025	0.0018	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	89%		30-137%
877-09-8	Tetrachloro-m-xylene	94%		30-137%
2051-24-3	Decachlorobiphenyl	91%		10-137%
2051-24-3	Decachlorobiphenyl	88%		10-137%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-02		
Lab Sample ID:	JC38632-2A	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	94.8
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 0.50	D004	5.0	0.50	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Barium	< 1.0	D005	100	1.0	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 0.025	D006	1.0	0.025	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 0.050	D007	5.0	0.050	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Lead	< 0.50	D008	5.0	0.50	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	03/13/17	03/13/17	JPM	SW846 7470A [1]	SW846 7470A [4]
Selenium	< 0.50	D010	1.0	0.50	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Silver	< 0.050	D011	5.0	0.050	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA41553
(2) Instrument QC Batch: MA41554
(3) Prep QC Batch: MP99157
(4) Prep QC Batch: MP99205

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID:	SCAL-SB-02		
Lab Sample ID:	JC38632-2A	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	94.8
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Corrosivity as pH	7.24 NC		su	1	03/11/17 11:00	AT	SW846 9045D
Cyanide Reactivity	< 11	11	mg/kg	1	03/13/17 15:50	YZ	SW846 CHAP7/9012 B
Ignitability (Flashpoint)	> 200		Deg. F	1	03/11/17 15:00	AT	SW846 1010A/ASTM D93
Sulfide Reactivity	< 110	110	mg/kg	1	03/13/17 01:33	MP	SW846 CHAP7/9034

RL = Reporting Limit

Report of Analysis

Client Sample ID:	SCAL-SB-03		
Lab Sample ID:	JC38632-3	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8260C	**Percent Solids:**	93.4
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C216899.D	1	03/13/17	SY	n/a	n/a	VC7988
Run #2							

	Initial Weight
Run #1	5.6 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0140	0.0096	0.0048	mg/kg	
71-43-2	Benzene	ND	0.00048	0.00011	mg/kg	
74-97-5	Bromochloromethane	ND	0.0048	0.00030	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0019	0.00015	mg/kg	
75-25-2	Bromoform	ND	0.0048	0.00025	mg/kg	
74-83-9	Bromomethane	ND	0.0048	0.00046	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.0096	0.0017	mg/kg	
75-15-0	Carbon disulfide	0.00030	0.0019	0.00016	mg/kg	J
56-23-5	Carbon tetrachloride	ND	0.0019	0.00016	mg/kg	
108-90-7	Chlorobenzene	ND	0.0019	0.00015	mg/kg	
75-00-3	Chloroethane	ND	0.0048	0.00041	mg/kg	
67-66-3	Chloroform	ND	0.0019	0.00023	mg/kg	
74-87-3	Chloromethane	ND	0.0048	0.00020	mg/kg	
110-82-7	Cyclohexane	ND	0.0019	0.00052	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0019	0.00046	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0019	0.00014	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.00096	0.00023	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.00096	0.00016	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.00096	0.00013	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.00096	0.00015	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0048	0.00052	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.00096	0.00018	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.00096	0.00016	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.00096	0.00015	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.00096	0.00042	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.00096	0.00015	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0019	0.00030	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0019	0.00019	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0019	0.00021	mg/kg	
100-41-4	Ethylbenzene	ND	0.00096	0.00014	mg/kg	
76-13-1	Freon 113	ND	0.0048	0.00046	mg/kg	
591-78-6	2-Hexanone	ND	0.0048	0.0013	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-03		
Lab Sample ID:	JC38632-3	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8260C	**Percent Solids:**	93.4
Project:	LIRR Expansion, Long Island, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	0.0019	0.00015	mg/kg	
79-20-9	Methyl Acetate	ND	0.0048	0.0019	mg/kg	
108-87-2	Methylcyclohexane	ND	0.0019	0.00048	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.00096	0.00025	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0048	0.00081	mg/kg	
75-09-2	Methylene chloride	ND	0.0048	0.00096	mg/kg	
100-42-5	Styrene	ND	0.0019	0.00014	mg/kg	
75-65-0	Tert Butyl Alcohol	ND	0.024	0.0029	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0019	0.00023	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0019	0.00027	mg/kg	
108-88-3	Toluene	ND	0.00096	0.00012	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0048	0.00048	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0048	0.00048	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0019	0.00016	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0019	0.00031	mg/kg	
79-01-6	Trichloroethene	ND	0.00096	0.00018	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0048	0.00060	mg/kg	
75-01-4	Vinyl chloride	ND	0.0019	0.00019	mg/kg	
	m,p-Xylene	ND	0.00096	0.00021	mg/kg	
95-47-6	o-Xylene	ND	0.00096	0.00019	mg/kg	
1330-20-7	Xylene (total)	ND	0.00096	0.00019	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		70-122%
17060-07-0	1,2-Dichloroethane-D4	96%		68-124%
2037-26-5	Toluene-D8	96%		77-125%
460-00-4	4-Bromofluorobenzene	102%		72-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-03		
Lab Sample ID:	JC38632-3	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	93.4
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5P36327.D	1	03/11/17	CS	03/10/17	OP1064	E5P1820
Run #2							

	Initial Weight	Final Volume
Run #1	30.4 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	0.070	0.017	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.18	0.022	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.18	0.030	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.18	0.063	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	0.18	0.13	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.18	0.038	mg/kg	
95-48-7	2-Methylphenol	ND	0.070	0.023	mg/kg	
	3&4-Methylphenol	ND	0.070	0.029	mg/kg	
88-75-5	2-Nitrophenol	ND	0.18	0.023	mg/kg	
100-02-7	4-Nitrophenol	ND	0.35	0.094	mg/kg	
87-86-5	Pentachlorophenol	ND	0.14	0.033	mg/kg	
108-95-2	Phenol	ND	0.070	0.018	mg/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.18	0.023	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.18	0.026	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.18	0.021	mg/kg	
83-32-9	Acenaphthene	0.0140	0.035	0.012	mg/kg	J
208-96-8	Acenaphthylene	0.0819	0.035	0.018	mg/kg	
98-86-2	Acetophenone	ND	0.18	0.0076	mg/kg	
120-12-7	Anthracene	0.147	0.035	0.022	mg/kg	
1912-24-9	Atrazine	ND	0.070	0.015	mg/kg	
56-55-3	Benzo(a)anthracene	0.371	0.035	0.010	mg/kg	
50-32-8	Benzo(a)pyrene	0.353	0.035	0.016	mg/kg	
205-99-2	Benzo(b)fluoranthene	0.455	0.035	0.016	mg/kg	
191-24-2	Benzo(g,h,i)perylene	0.245	0.035	0.018	mg/kg	
207-08-9	Benzo(k)fluoranthene	0.134	0.035	0.016	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.070	0.014	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.070	0.0086	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.070	0.0048	mg/kg	
100-52-7	Benzaldehyde	ND	0.18	0.0087	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.070	0.0084	mg/kg	
106-47-8	4-Chloroaniline	ND	0.18	0.013	mg/kg	
86-74-8	Carbazole	0.0602	0.070	0.0051	mg/kg	J

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-03		
Lab Sample ID:	JC38632-3	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	93.4
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	0.070	0.014	mg/kg	
218-01-9	Chrysene	0.340	0.035	0.011	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.070	0.0075	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.070	0.015	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.070	0.013	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.070	0.011	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.035	0.011	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.035	0.018	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.070	0.029	mg/kg	
123-91-1	1,4-Dioxane	ND	0.035	0.023	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	0.0868	0.035	0.016	mg/kg	
132-64-9	Dibenzofuran	ND	0.070	0.014	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.070	0.0057	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.070	0.0088	mg/kg	
84-66-2	Diethyl phthalate	ND	0.070	0.0075	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.070	0.0063	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.070	0.0082	mg/kg	
206-44-0	Fluoranthene	0.754	0.035	0.016	mg/kg	
86-73-7	Fluorene	0.0204	0.035	0.016	mg/kg	J
118-74-1	Hexachlorobenzene	ND	0.070	0.0089	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.035	0.014	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.35	0.014	mg/kg	
67-72-1	Hexachloroethane	ND	0.18	0.017	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	0.285	0.035	0.017	mg/kg	
78-59-1	Isophorone	ND	0.070	0.0075	mg/kg	
91-57-6	2-Methylnaphthalene	0.0331	0.070	0.0080	mg/kg	J
88-74-4	2-Nitroaniline	ND	0.18	0.0083	mg/kg	
99-09-2	3-Nitroaniline	ND	0.18	0.0088	mg/kg	
100-01-6	4-Nitroaniline	ND	0.18	0.0091	mg/kg	
91-20-3	Naphthalene	0.0205	0.035	0.0099	mg/kg	J
98-95-3	Nitrobenzene	ND	0.070	0.014	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.070	0.010	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.18	0.013	mg/kg	
85-01-8	Phenanthrene	0.349	0.035	0.012	mg/kg	
129-00-0	Pyrene	0.616	0.035	0.011	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.18	0.0089	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	81%		23-115%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-03		
Lab Sample ID:	JC38632-3	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	93.4
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	77%		27-114%
118-79-6	2,4,6-Tribromophenol	82%		19-152%
4165-60-0	Nitrobenzene-d5	86%		26-134%
321-60-8	2-Fluorobiphenyl	93%		39-124%
1718-51-0	Terphenyl-d14	84%		36-134%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-03		
Lab Sample ID:	JC38632-3	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8151 SW846 8151/3550C	**Percent Solids:**	93.4
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OA124464.D	2	03/18/17	VDT	03/17/17	OP1193	GOA4266
Run #2							

	Initial Weight	Final Volume
Run #1	15.0 g	5.0 ml
Run #2		

Herbicide List

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	0.036	0.016	mg/kg	
93-72-1	2,4,5-TP (Silvex)	ND	0.0071	0.0026	mg/kg	
93-76-5	2,4,5-T	ND	0.0071	0.0027	mg/kg	
75-99-0	Dalapon	ND	0.0071	0.0048	mg/kg	
1918-00-9	Dicamba	ND	0.0071	0.0036	mg/kg	
120-36-5	Dichloroprop	ND	0.036	0.010	mg/kg	
88-85-7	Dinoseb	ND	0.036	0.024	mg/kg	
94-74-6	MCPA	ND	3.6	0.82	mg/kg	
93-65-2	MCPP	ND	3.6	0.78	mg/kg	
87-86-5	Pentachlorophenol	ND	0.0036	0.0031	mg/kg	
94-82-6	2,4-DB	ND	0.036	0.012	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	88%		10-159%
19719-28-9	2,4-DCAA	73%		10-159%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-03		
Lab Sample ID:	JC38632-3	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8081B SW846 3546	**Percent Solids:**	93.4
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G133079.D	1	03/13/17	RK	03/11/17	OP1060	G1G4254
Run #2							

	Initial Weight	Final Volume
Run #1	16.6 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.00064	0.00031	mg/kg	
319-84-6	alpha-BHC	ND	0.00064	0.00035	mg/kg	
319-85-7	beta-BHC	ND	0.00064	0.00041	mg/kg	
319-86-8	delta-BHC	ND	0.00064	0.00029	mg/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.00064	0.00029	mg/kg	
5103-71-9	alpha-Chlordane [a]	0.0018	0.00064	0.00031	mg/kg	
5103-74-2	gamma-Chlordane	0.0016	0.00064	0.00028	mg/kg	
60-57-1	Dieldrin	ND	0.00064	0.00032	mg/kg	
72-54-8	4,4'-DDD [a]	0.00058	0.00064	0.00041	mg/kg	J
72-55-9	4,4'-DDE	0.0028	0.00064	0.00034	mg/kg	
50-29-3	4,4'-DDT	0.0051	0.00064	0.00038	mg/kg	
72-20-8	Endrin	ND	0.00064	0.00030	mg/kg	
1031-07-8	Endosulfan sulfate	ND	0.00064	0.00026	mg/kg	
7421-93-4	Endrin aldehyde	ND	0.00064	0.00038	mg/kg	
959-98-8	Endosulfan-I	ND	0.00064	0.00034	mg/kg	
33213-65-9	Endosulfan-II	ND	0.00064	0.00034	mg/kg	
76-44-8	Heptachlor	ND	0.00064	0.00032	mg/kg	
1024-57-3	Heptachlor epoxide	ND	0.00064	0.00035	mg/kg	
72-43-5	Methoxychlor	ND	0.0013	0.00032	mg/kg	
53494-70-5	Endrin ketone	ND	0.00064	0.00050	mg/kg	
8001-35-2	Toxaphene	ND	0.016	0.0067	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	70%		25-135%
877-09-8	Tetrachloro-m-xylene	72%		25-135%
2051-24-3	Decachlorobiphenyl	52%		10-156%
2051-24-3	Decachlorobiphenyl	72%		10-156%

(a) More than 40 % RPD for detected concentrations between the two GC columns.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-03		
Lab Sample ID:	JC38632-3	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8082A SW846 3546	**Percent Solids:**	93.4
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX206395.D	1	03/13/17	HB	03/11/17	OP1061	GXX5965
Run #2							

	Initial Weight	Final Volume
Run #1	16.6 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.032	0.016	mg/kg	
11104-28-2	Aroclor 1221	ND	0.032	0.016	mg/kg	
11141-16-5	Aroclor 1232	ND	0.032	0.013	mg/kg	
53469-21-9	Aroclor 1242	ND	0.032	0.011	mg/kg	
12672-29-6	Aroclor 1248	ND	0.032	0.020	mg/kg	
11097-69-1	Aroclor 1254	ND	0.032	0.016	mg/kg	
11096-82-5	Aroclor 1260	ND	0.032	0.014	mg/kg	
11100-14-4	Aroclor 1268	ND	0.032	0.011	mg/kg	
37324-23-5	Aroclor 1262	ND	0.032	0.022	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	81%		24-152%
877-09-8	Tetrachloro-m-xylene	169% [a]		24-152%
2051-24-3	Decachlorobiphenyl	66%		10-166%
2051-24-3	Decachlorobiphenyl	86%		10-166%

(a) Outside control limits due to matrix interference.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-03		
Lab Sample ID:	JC38632-3	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	93.4
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	6790	52	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [4]
Antimony	< 2.1	2.1	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [4]
Arsenic	4.9	2.1	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [4]
Barium	128	21	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [4]
Beryllium	0.28	0.21	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [4]
Cadmium	1.1	0.52	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [4]
Calcium	20700	520	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [4]
Chromium	19.8	1.0	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [4]
Cobalt	< 5.2	5.2	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [4]
Copper	148	2.6	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [4]
Iron	9410	52	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [4]
Lead	1590	6.3	mg/kg	3	03/11/17	03/14/17	ND	SW846 6010C [3]	SW846 3050B [4]
Magnesium	1400	520	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [4]
Manganese	147	1.6	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [4]
Mercury	0.038	0.034	mg/kg	1	03/11/17	03/11/17	JA	SW846 7471B [1]	SW846 7471B [5]
Nickel	10.3	4.2	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [4]
Potassium	< 1000	1000	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [4]
Selenium	< 2.1	2.1	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [4]
Silver	< 0.52	0.52	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [4]
Sodium	< 1000	1000	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [4]
Thallium	< 1.0	1.0	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [4]
Vanadium	21.3	5.2	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [4]
Zinc	228	5.2	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA41540
(2) Instrument QC Batch: MA41549
(3) Instrument QC Batch: MA41563
(4) Prep QC Batch: MP99155
(5) Prep QC Batch: MP99158

RL = Reporting Limit

Report of Analysis

Client Sample ID:	SCAL-SB-03		
Lab Sample ID:	JC38632-3	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	93.4
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	< 0.23	0.23	mg/kg	1	03/13/17 09:01	YZ	SW846 9012B/LACHAT
Solids, Percent	93.4		%	1	03/10/17 16:30	TZW	SM2540 G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	SCAL-SB-03		
Lab Sample ID:	JC38632-3A	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8260C SW846 1311	**Percent Solids:**	93.4
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B149054.D	5	03/13/17	EH	03/10/17	GP3819	V2B6616
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.0025	0.00070	mg/l	
78-93-3	2-Butanone (MEK)	ND	D035	200	0.10	0.0095	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.0050	0.0027	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.0050	0.00087	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.0050	0.0011	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.0050	0.0011	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.0050	0.0020	mg/l	
75-35-4	1,1-Dichloroethene	ND	D029	0.70	0.0050	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	D039	0.70	0.0050	0.0012	mg/l	
79-01-6	Trichloroethene	ND	D040	0.50	0.0050	0.0013	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.0050	0.0016	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	113%		76-120%
17060-07-0	1,2-Dichloroethane-D4	102%		64-135%
2037-26-5	Toluene-D8	100%		76-117%
460-00-4	4-Bromofluorobenzene	97%		72-122%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-03		
Lab Sample ID:	JC38632-3A	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	93.4
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6P35599A.D	1	03/13/17	AC	03/12/17	OP1073	E6P1642
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.020	0.0089	mg/l	
	3&4-Methylphenol	ND	D024	200	0.020	0.0088	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.10	0.014	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.013	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0092	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.020	0.0017	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.020	0.0055	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.020	0.0033	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.010	0.0049	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0039	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.020	0.0064	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.020	0.0039	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	45%		14-88%
4165-62-2	Phenol-d5	29%		10-110%
118-79-6	2,4,6-Tribromophenol	86%		39-149%
4165-60-0	Nitrobenzene-d5	82%		32-128%
321-60-8	2-Fluorobiphenyl	86%		35-119%
1718-51-0	Terphenyl-d14	104%		10-126%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-03		
Lab Sample ID:	JC38632-3A	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8151 SW846 8151/3510C	**Percent Solids:**	93.4
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G106939.D	1	03/13/17	VDT	03/11/17	OP1072	G3G3736
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Herbicide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND	D016	10	0.0050	0.0039	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.0015	0.00047	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	97%		50-142%
19719-28-9	2,4-DCAA	88%		50-142%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-03		
Lab Sample ID:	JC38632-3A	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	93.4
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	8G3736.D	1	03/13/17	RK	03/12/17	OP1074	G8G110
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Pesticide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	D013	0.40	0.00010	0.000028	mg/l	
12789-03-6	Chlordane	ND	D020	0.030	0.0050	0.0011	mg/l	
72-20-8	Endrin	ND	D012	0.020	0.00010	0.000050	mg/l	
76-44-8	Heptachlor	ND	D031	0.0080	0.00010	0.000038	mg/l	
1024-57-3	Heptachlor epoxide	ND	D031	0.0080	0.00010	0.000065	mg/l	
72-43-5	Methoxychlor	ND	D014	10	0.00020	0.000057	mg/l	
8001-35-2	Toxaphene	ND	D015	0.50	0.0025	0.0018	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	48%		30-137%
877-09-8	Tetrachloro-m-xylene	50%		30-137%
2051-24-3	Decachlorobiphenyl	50%		10-137%
2051-24-3	Decachlorobiphenyl	47%		10-137%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-03		
Lab Sample ID:	JC38632-3A	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	93.4
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 0.50	D004	5.0	0.50	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Barium	< 1.0	D005	100	1.0	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 0.025	D006	1.0	0.025	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 0.050	D007	5.0	0.050	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Lead	< 0.50	D008	5.0	0.50	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	03/13/17	03/13/17	JPM	SW846 7470A [1]	SW846 7470A [4]
Selenium	< 0.50	D010	1.0	0.50	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Silver	< 0.050	D011	5.0	0.050	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA41553
(2) Instrument QC Batch: MA41554
(3) Prep QC Batch: MP99157
(4) Prep QC Batch: MP99205

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID:	SCAL-SB-03		
Lab Sample ID:	JC38632-3A	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	93.4
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Corrosivity as pH	8.25 NC		su	1	03/11/17 11:00	AT	SW846 9045D
Cyanide Reactivity	< 11	11	mg/kg	1	03/13/17 15:51	YZ	SW846 CHAP7/9012 B
Ignitability (Flashpoint)	> 200		Deg. F	1	03/11/17 15:00	AT	SW846 1010A/ASTM D93
Sulfide Reactivity	< 110	110	mg/kg	1	03/13/17 01:33	MP	SW846 CHAP7/9034

RL = Reporting Limit

Report of Analysis

Client Sample ID:	SCAL-SB-04		
Lab Sample ID:	JC38632-4	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8260C	**Percent Solids:**	95.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C216900.D	1	03/13/17	SY	n/a	n/a	VC7988
Run #2							

	Initial Weight
Run #1	5.6 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0192	0.0093	0.0047	mg/kg	
71-43-2	Benzene	ND	0.00047	0.00011	mg/kg	
74-97-5	Bromochloromethane	ND	0.0047	0.00030	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0019	0.00014	mg/kg	
75-25-2	Bromoform	ND	0.0047	0.00025	mg/kg	
74-83-9	Bromomethane	ND	0.0047	0.00045	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.0093	0.0016	mg/kg	
75-15-0	Carbon disulfide	0.00024	0.0019	0.00016	mg/kg	J
56-23-5	Carbon tetrachloride	ND	0.0019	0.00016	mg/kg	
108-90-7	Chlorobenzene	ND	0.0019	0.00015	mg/kg	
75-00-3	Chloroethane	ND	0.0047	0.00040	mg/kg	
67-66-3	Chloroform	ND	0.0019	0.00022	mg/kg	
74-87-3	Chloromethane	ND	0.0047	0.00020	mg/kg	
110-82-7	Cyclohexane	ND	0.0019	0.00051	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0019	0.00045	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0019	0.00014	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.00093	0.00023	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.00093	0.00016	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.00093	0.00013	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.00093	0.00014	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0047	0.00051	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.00093	0.00017	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.00093	0.00016	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.00093	0.00014	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.00093	0.00041	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.00093	0.00015	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0019	0.00029	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0019	0.00018	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0019	0.00021	mg/kg	
100-41-4	Ethylbenzene	ND	0.00093	0.00014	mg/kg	
76-13-1	Freon 113	ND	0.0047	0.00045	mg/kg	
591-78-6	2-Hexanone	ND	0.0047	0.0013	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-04		
Lab Sample ID:	JC38632-4	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8260C	**Percent Solids:**	95.6
Project:	LIRR Expansion, Long Island, NY		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	0.0019	0.00014	mg/kg	
79-20-9	Methyl Acetate	ND	0.0047	0.0019	mg/kg	
108-87-2	Methylcyclohexane	ND	0.0019	0.00047	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.00093	0.00025	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0047	0.00079	mg/kg	
75-09-2	Methylene chloride	ND	0.0047	0.00093	mg/kg	
100-42-5	Styrene	ND	0.0019	0.00014	mg/kg	
75-65-0	Tert Butyl Alcohol	ND	0.023	0.0028	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0019	0.00022	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0019	0.00026	mg/kg	
108-88-3	Toluene	ND	0.00093	0.00012	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0047	0.00047	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0047	0.00047	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0019	0.00016	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0019	0.00030	mg/kg	
79-01-6	Trichloroethene	ND	0.00093	0.00018	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0047	0.00059	mg/kg	
75-01-4	Vinyl chloride	ND	0.0019	0.00019	mg/kg	
	m,p-Xylene	ND	0.00093	0.00020	mg/kg	
95-47-6	o-Xylene	ND	0.00093	0.00019	mg/kg	
1330-20-7	Xylene (total)	ND	0.00093	0.00019	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		70-122%
17060-07-0	1,2-Dichloroethane-D4	94%		68-124%
2037-26-5	Toluene-D8	97%		77-125%
460-00-4	4-Bromofluorobenzene	103%		72-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-04		
Lab Sample ID:	JC38632-4	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	95.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5P36328.D	1	03/11/17	CS	03/10/17	OP1064	E5P1820
Run #2							

	Initial Weight	Final Volume
Run #1	30.8 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	0.068	0.017	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.17	0.021	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.17	0.029	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.17	0.060	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	0.17	0.13	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.17	0.036	mg/kg	
95-48-7	2-Methylphenol	ND	0.068	0.022	mg/kg	
	3&4-Methylphenol	ND	0.068	0.028	mg/kg	
88-75-5	2-Nitrophenol	ND	0.17	0.022	mg/kg	
100-02-7	4-Nitrophenol	ND	0.34	0.091	mg/kg	
87-86-5	Pentachlorophenol	ND	0.14	0.032	mg/kg	
108-95-2	Phenol	ND	0.068	0.018	mg/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.17	0.022	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.17	0.025	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.17	0.020	mg/kg	
83-32-9	Acenaphthene	ND	0.034	0.012	mg/kg	
208-96-8	Acenaphthylene	ND	0.034	0.017	mg/kg	
98-86-2	Acetophenone	ND	0.17	0.0073	mg/kg	
120-12-7	Anthracene	ND	0.034	0.021	mg/kg	
1912-24-9	Atrazine	ND	0.068	0.015	mg/kg	
56-55-3	Benzo(a)anthracene	0.0421	0.034	0.0096	mg/kg	
50-32-8	Benzo(a)pyrene	0.0440	0.034	0.015	mg/kg	
205-99-2	Benzo(b)fluoranthene	0.0592	0.034	0.015	mg/kg	
191-24-2	Benzo(g,h,i)perylene	0.0426	0.034	0.017	mg/kg	
207-08-9	Benzo(k)fluoranthene	0.0189	0.034	0.016	mg/kg	J
101-55-3	4-Bromophenyl phenyl ether	ND	0.068	0.013	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.068	0.0083	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.068	0.0047	mg/kg	
100-52-7	Benzaldehyde	ND	0.17	0.0084	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.068	0.0081	mg/kg	
106-47-8	4-Chloroaniline	ND	0.17	0.012	mg/kg	
86-74-8	Carbazole	ND	0.068	0.0049	mg/kg	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-04		
Lab Sample ID:	JC38632-4	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	95.6
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	0.0561	0.068	0.013	mg/kg	J
218-01-9	Chrysene	0.0554	0.034	0.011	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.068	0.0073	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.068	0.015	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.068	0.012	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.068	0.011	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.034	0.011	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.034	0.017	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.068	0.028	mg/kg	
123-91-1	1,4-Dioxane	ND	0.034	0.022	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.034	0.015	mg/kg	
132-64-9	Dibenzofuran	ND	0.068	0.014	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.068	0.0055	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.068	0.0085	mg/kg	
84-66-2	Diethyl phthalate	ND	0.068	0.0072	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.068	0.0060	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.068	0.0079	mg/kg	
206-44-0	Fluoranthene	0.0775	0.034	0.015	mg/kg	
86-73-7	Fluorene	ND	0.034	0.016	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.068	0.0086	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.034	0.014	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.34	0.014	mg/kg	
67-72-1	Hexachloroethane	ND	0.17	0.017	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	0.0428	0.034	0.016	mg/kg	
78-59-1	Isophorone	ND	0.068	0.0073	mg/kg	
91-57-6	2-Methylnaphthalene	0.0160	0.068	0.0077	mg/kg	J
88-74-4	2-Nitroaniline	ND	0.17	0.0080	mg/kg	
99-09-2	3-Nitroaniline	ND	0.17	0.0085	mg/kg	
100-01-6	4-Nitroaniline	ND	0.17	0.0088	mg/kg	
91-20-3	Naphthalene	0.0146	0.034	0.0096	mg/kg	J
98-95-3	Nitrobenzene	ND	0.068	0.013	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.068	0.0098	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.17	0.012	mg/kg	
85-01-8	Phenanthrene	0.0441	0.034	0.011	mg/kg	
129-00-0	Pyrene	0.103	0.034	0.011	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.17	0.0086	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	81%		23-115%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-04		
Lab Sample ID:	JC38632-4	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	95.6
Project:	LIRR Expansion, Long Island, NY		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	77%		27-114%
118-79-6	2,4,6-Tribromophenol	85%		19-152%
4165-60-0	Nitrobenzene-d5	87%		26-134%
321-60-8	2-Fluorobiphenyl	88%		39-124%
1718-51-0	Terphenyl-d14	81%		36-134%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-04		
Lab Sample ID:	JC38632-4	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8151 SW846 8151/3550C	**Percent Solids:**	95.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OA124465.D	1	03/18/17	VDT	03/17/17	OP1193	GOA4266
Run #2							

	Initial Weight	Final Volume
Run #1	15.0 g	5.0 ml
Run #2		

Herbicide List

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	0.017	0.0078	mg/kg	
93-72-1	2,4,5-TP (Silvex)	ND	0.0035	0.0013	mg/kg	
93-76-5	2,4,5-T	ND	0.0035	0.0013	mg/kg	
75-99-0	Dalapon	ND	0.0035	0.0024	mg/kg	
1918-00-9	Dicamba	ND	0.0035	0.0018	mg/kg	
120-36-5	Dichloroprop	ND	0.017	0.0049	mg/kg	
88-85-7	Dinoseb	ND	0.017	0.012	mg/kg	
94-74-6	MCPA	ND	1.7	0.40	mg/kg	
93-65-2	MCPP	ND	1.7	0.38	mg/kg	
87-86-5	Pentachlorophenol	ND	0.0017	0.0015	mg/kg	
94-82-6	2,4-DB	ND	0.017	0.0056	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	50%		10-159%
19719-28-9	2,4-DCAA	38%		10-159%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-04		
Lab Sample ID:	JC38632-4	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8081B SW846 3546	**Percent Solids:**	95.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G133080.D	1	03/13/17	RK	03/11/17	OP1060	G1G4254
Run #2							

	Initial Weight	Final Volume
Run #1	15.2 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.00069	0.00033	mg/kg	
319-84-6	alpha-BHC	ND	0.00069	0.00037	mg/kg	
319-85-7	beta-BHC	ND	0.00069	0.00043	mg/kg	
319-86-8	delta-BHC	ND	0.00069	0.00031	mg/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.00069	0.00030	mg/kg	
5103-71-9	alpha-Chlordane	ND	0.00069	0.00033	mg/kg	
5103-74-2	gamma-Chlordane	ND	0.00069	0.00030	mg/kg	
60-57-1	Dieldrin	ND	0.00069	0.00034	mg/kg	
72-54-8	4,4'-DDD [a]	0.00091	0.00069	0.00044	mg/kg	
72-55-9	4,4'-DDE [a]	0.00039	0.00069	0.00036	mg/kg	J
50-29-3	4,4'-DDT	0.00070	0.00069	0.00041	mg/kg	
72-20-8	Endrin	ND	0.00069	0.00032	mg/kg	
1031-07-8	Endosulfan sulfate	ND	0.00069	0.00028	mg/kg	
7421-93-4	Endrin aldehyde	ND	0.00069	0.00041	mg/kg	
959-98-8	Endosulfan-I	ND	0.00069	0.00036	mg/kg	
33213-65-9	Endosulfan-II	ND	0.00069	0.00036	mg/kg	
76-44-8	Heptachlor	ND	0.00069	0.00034	mg/kg	
1024-57-3	Heptachlor epoxide	ND	0.00069	0.00037	mg/kg	
72-43-5	Methoxychlor	ND	0.0014	0.00034	mg/kg	
53494-70-5	Endrin ketone	ND	0.00069	0.00053	mg/kg	
8001-35-2	Toxaphene	ND	0.017	0.0072	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	72%		25-135%
877-09-8	Tetrachloro-m-xylene	75%		25-135%
2051-24-3	Decachlorobiphenyl	45%		10-156%
2051-24-3	Decachlorobiphenyl	66%		10-156%

(a) More than 40 % RPD for detected concentrations between the two GC columns.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-04		
Lab Sample ID:	JC38632-4	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8082A SW846 3546	**Percent Solids:**	95.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX206447.D	1	03/14/17	KM	03/11/17	OP1061	GXX5966
Run #2							

	Initial Weight	Final Volume
Run #1	15.2 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.034	0.017	mg/kg	
11104-28-2	Aroclor 1221	ND	0.034	0.017	mg/kg	
11141-16-5	Aroclor 1232	ND	0.034	0.014	mg/kg	
53469-21-9	Aroclor 1242	ND	0.034	0.012	mg/kg	
12672-29-6	Aroclor 1248	ND	0.034	0.022	mg/kg	
11097-69-1	Aroclor 1254	ND	0.034	0.017	mg/kg	
11096-82-5	Aroclor 1260	ND	0.034	0.015	mg/kg	
11100-14-4	Aroclor 1268	ND	0.034	0.012	mg/kg	
37324-23-5	Aroclor 1262	ND	0.034	0.023	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	90%		24-152%
877-09-8	Tetrachloro-m-xylene	98%		24-152%
2051-24-3	Decachlorobiphenyl	74%		10-166%
2051-24-3	Decachlorobiphenyl	91%		10-166%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-04		
Lab Sample ID:	JC38632-4	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	95.6
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	2190	51	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Antimony	< 2.1	2.1	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Arsenic	< 2.1	2.1	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Barium	< 21	21	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Beryllium	< 0.21	0.21	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Cadmium	< 0.51	0.51	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Calcium	< 510	510	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Chromium	3.6	1.0	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Cobalt	< 5.1	5.1	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Copper	< 2.6	2.6	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Iron	3180	51	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Lead	4.4	2.1	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Magnesium	< 510	510	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Manganese	97.4	1.5	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Mercury	0.040	0.027	mg/kg	1	03/11/17	03/11/17	JA	SW846 7471B [1]	SW846 7471B [4]
Nickel	< 4.1	4.1	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Potassium	< 1000	1000	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Selenium	< 2.1	2.1	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Silver	< 0.51	0.51	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Sodium	< 1000	1000	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Thallium	< 1.0	1.0	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Vanadium	< 5.1	5.1	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]
Zinc	5.3	5.1	mg/kg	1	03/11/17	03/12/17	GT	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA41540
(2) Instrument QC Batch: MA41549
(3) Prep QC Batch: MP99155
(4) Prep QC Batch: MP99158

RL = Reporting Limit

Report of Analysis

Client Sample ID:	SCAL-SB-04		
Lab Sample ID:	JC38632-4	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	95.6
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	< 0.23	0.23	mg/kg	1	03/13/17 09:02	YZ	SW846 9012B/LACHAT
Solids, Percent	95.6		%	1	03/10/17 16:30	TZW	SM2540 G-97

RL = Reporting Limit

Report of Analysis

Client Sample ID:	SCAL-SB-04		
Lab Sample ID:	JC38632-4A	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8260C SW846 1311	**Percent Solids:**	95.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B149055.D	5	03/13/17	EH	03/10/17	GP3819	V2B6616
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.0025	0.00070	mg/l	
78-93-3	2-Butanone (MEK)	ND	D035	200	0.10	0.0095	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.0050	0.0027	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.0050	0.00087	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.0050	0.0011	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.0050	0.0011	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.0050	0.0020	mg/l	
75-35-4	1,1-Dichloroethene	ND	D029	0.70	0.0050	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	D039	0.70	0.0050	0.0012	mg/l	
79-01-6	Trichloroethene	ND	D040	0.50	0.0050	0.0013	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.0050	0.0016	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		76-120%
17060-07-0	1,2-Dichloroethane-D4	102%		64-135%
2037-26-5	Toluene-D8	100%		76-117%
460-00-4	4-Bromofluorobenzene	97%		72-122%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-04		
Lab Sample ID:	JC38632-4A	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	95.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6P35600.D	1	03/13/17	AC	03/12/17	OP1073	E6P1642
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.020	0.0089	mg/l	
	3&4-Methylphenol	ND	D024	200	0.020	0.0088	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.10	0.014	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.013	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0092	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.020	0.0017	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.020	0.0055	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.020	0.0033	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.010	0.0049	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0039	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.020	0.0064	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.020	0.0039	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	45%		14-88%
4165-62-2	Phenol-d5	28%		10-110%
118-79-6	2,4,6-Tribromophenol	82%		39-149%
4165-60-0	Nitrobenzene-d5	79%		32-128%
321-60-8	2-Fluorobiphenyl	83%		35-119%
1718-51-0	Terphenyl-d14	102%		10-126%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-04		
Lab Sample ID:	JC38632-4A	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8151 SW846 8151/3510C	**Percent Solids:**	95.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G106940.D	1	03/13/17	VDT	03/11/17	OP1072	G3G3736
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Herbicide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND	D016	10	0.0050	0.0039	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.0015	0.00047	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	94%		50-142%
19719-28-9	2,4-DCAA	88%		50-142%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-04		
Lab Sample ID:	JC38632-4A	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
Method:	SW846 8081B SW846 3510C	**Percent Solids:**	95.6
Project:	LIRR Expansion, Long Island, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	8G3739.D	1	03/13/17	RK	03/12/17	OP1074	G8G110
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Pesticide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	D013	0.40	0.00010	0.000028	mg/l	
12789-03-6	Chlordane	ND	D020	0.030	0.0050	0.0011	mg/l	
72-20-8	Endrin	ND	D012	0.020	0.00010	0.000050	mg/l	
76-44-8	Heptachlor	ND	D031	0.0080	0.00010	0.000038	mg/l	
1024-57-3	Heptachlor epoxide	ND	D031	0.0080	0.00010	0.000065	mg/l	
72-43-5	Methoxychlor	ND	D014	10	0.00020	0.000057	mg/l	
8001-35-2	Toxaphene	ND	D015	0.50	0.0025	0.0018	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	86%		30-137%
877-09-8	Tetrachloro-m-xylene	91%		30-137%
2051-24-3	Decachlorobiphenyl	90%		10-137%
2051-24-3	Decachlorobiphenyl	90%		10-137%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SCAL-SB-04		
Lab Sample ID:	JC38632-4A	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	95.6
Project:	LIRR Expansion, Long Island, NY		

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 0.50	D004	5.0	0.50	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Barium	< 1.0	D005	100	1.0	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 0.025	D006	1.0	0.025	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 0.050	D007	5.0	0.050	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Lead	< 0.50	D008	5.0	0.50	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	03/13/17	03/13/17	JPM	SW846 7470A [1]	SW846 7470A [4]
Selenium	< 0.50	D010	1.0	0.50	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]
Silver	< 0.050	D011	5.0	0.050	mg/l	5	03/11/17	03/13/17	ND	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA41553
(2) Instrument QC Batch: MA41554
(3) Prep QC Batch: MP99157
(4) Prep QC Batch: MP99205

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID:	SCAL-SB-04		
Lab Sample ID:	JC38632-4A	**Date Sampled:**	03/08/17
Matrix:	SO - Soil	**Date Received:**	03/09/17
		Percent Solids:	95.6
Project:	LIRR Expansion, Long Island, NY		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Corrosivity as pH	6.16 NC		su	1	03/11/17 11:00	AT	SW846 9045D
Cyanide Reactivity	< 10	10	mg/kg	1	03/13/17 15:53	YZ	SW846 CHAP7/9012 B
Ignitability (Flashpoint)	> 200		Deg. F	1	03/11/17 15:00	AT	SW846 1010A/ASTM D93
Sulfide Reactivity	< 100	100	mg/kg	1	03/13/17 01:33	MP	SW846 CHAP7/9034

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

Parameter Certification Exceptions

Job Number: JC38632
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY

The following parameters included in this report are exceptions to NELAC certification.
The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Cyanide Reactivity		**SW846 CHAP7/9012 B**	SO	Accutest is not certified for this parameter.[a]
Sulfide Reactivity		**SW846 CHAP7/9034**	SO	Accutest is not certified for this parameter.[a]

(a) Reactivity analyzed following SW846 Chapter 7 is no longer recognized by regulatory agencies. Use of results should be verified through the program to which the data is being submitted.

Certification exceptions shown are based on the New Jersey DEP certifications. Applicability in other states may vary. Please contact your laboratory representative if additional information is required for a specific regulatory program.

SGS ACCUTEST

SCL

CHAIN OF CUSTODY

SGS Accutest - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

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FED-EX Tracking #:
Bottle Order Control #:
SGS Accutest Quote #:
SGS Accutest Job #: JC38632

Client / Reporting Information

Company Name: Matrix New World
Street Address: 150 W 30th St
City: NY State: NY Zip: 10001
Project Contact: Brian Crespi E-mail: bcrespi@matrixnewworld.com
Phone #: 212-324-4251 Fax #: 973-240-1818
Sampler(s) Name(s): Lindsey Melchreth 201-934-1653 Phone #:

Project Information

Project Name: Long Island Railroad (LIRR)
Street: Scally Pl.
City: Westbury State: NY
Project #: 116-144
Client Purchase Order #:
Project Manager: Brian Crespi

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

SGS Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	NI Water	MEOH	ENCORE	FULL TCLP	RCRA	FULL TCL/TAL	Herbicide/Pesticide	VOC	LAB USE ONLY
1	SCAL-SB-01		3/8/17	0915	LM	SO	6					3	2	1		X	X	X	X	X	C36
2	SCAL-SB-02		3/8/17	1045	LM	SO	6					3	2	1		X	X	X	X	X	814
3	SCAL-SB-03		3/8/17	1215	LM	SO	6					3	2	1		X	X	X	X	X	1405
4	SCAL-SB-04		3/8/17	1335	LM	SO	6					3	2	1		X	X	X	X	X	4074

D.I. slurry voc vials frozen storage
Date: 3/9/17 Time: 2:20 initials:

INITIAL ASESSMENT 3B
LABEL VERIFICATION

Turnaround Time (Business days)

Approved by (SGS Accutest PM): / Date:

- ☐ Std. 10 Business Days
- ☐ 5 Day RUSH
- ☑ 3 Day RUSH
- ☐ 2 Day RUSH
- ☐ 1 Day RUSH
- ☐ other

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

- ☐ Commercial "a" (Level 1)
- ☐ Commercial "b" *Level 2)
- ☐ FULLT1 (Level 3+4)
- ☐ NJ Reduced
- ☐ Commercial "C"
- ☐ *NJ Data of Known Quality Protocol Reporting*
- ☑ NYASP Category A
- ☐ NYASP Category B
- ☐ State Forms
- ☐ EDD Format
- ☐ Other

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Samples on ice
Custody Seal #612/614

Sample inventory is verified upon receipt in the Laboratory

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	3/9/17 1500	1	2	3/9/17 17:15	2
Relinquished by Sampler: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by Sampler: 5	Date Time:	Received By: 5	Custody Seal # ☐ Intact ☐ Not intact	Preserved where applicable ☐	On Ice ☑ Cooler Temp. 2.7°C

SM088-01C Rev. Date: 9/13/16

4.2
4

JC38632: Chain of Custody
Page 1 of 4

SGS ACCUTEST

Soil VOC Vial Tracking Log

JOB NUMBER: JC38632

SAMPLE #	MeOH	MeOH	DIH2O / NaHSO4	DIH2O / NaHSO4
1		1000	286	285
2		1002	290	289
3		759	283	284
4		1003	291	292

All strike outs must be initialed & dated. A reason code must be applied if not a transcription error.

Form: SM087-01

Rev Date: 6/1/16

JC38632: Chain of Custody

Page 2 of 4

4.2 4

SGS Accutest Sample Receipt Summary

Job Number: JC38632 **Client:** **Project:**

Date / Time Received: 3/9/2017 5:15:00 PM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (2.7);

Cooler Temps (Corrected) °C: Cooler 1: (4.1);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

SM089-02
Rev. Date 12/1/16

Job Change Order: JC38632

Requested Date:	3/17/2017	**Received Date:**	3/9/2017
Account Name:	Matrix New World Engineering, In	**Due Date:**	3/14/2017
Project Description:	LIRR, Scally Place, Westburg, NY	**Deliverable:**	NYASPA
CSR:	rocus.peters	**TAT (Days):**	2

==========

Sample #: JC38632-all

Dept:

TAT: 2

Change:
Revise the project to MTXFPNJ71029, LIRR Expansion, Long Island,NY

==========

Above Changes Per: Lindsey Melicharek **Date/Time:** 3/17/2017 12:44:37 PM

To Client: This Change Order is confirmation of the revisions, previously discussed with the SGS Accutest Client Service Representative.

Internal Sample Tracking Chronicle

Matrix New World Engineering, Inc.

Job No: JC38632

LIRR Expansion, Long Island, NY
Project No: 16-144, Scally Place Parking Lot, Scally Place, Westbury

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC38632-1 Collected: 08-MAR-17 09:15 By: LM Received: 09-MAR-17 By: AS SCAL-SB-01						
JC38632-1	SM2540 G-97	10-MAR-17 16:30	TZW			SOL104
JC38632-1	SW846 8270D	11-MAR-17 04:55	CS	10-MAR-17	NS	AB8270TCL20+
JC38632-1	SW846 7471B	11-MAR-17 09:18	JA	11-MAR-17	JA	HG
JC38632-1	SW846 6010C	12-MAR-17 23:30	GT	11-MAR-17	AA	AG,AL,AS,BA,BE,CA,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN
JC38632-1	SW846 9012B/LACHAT	13-MAR-17 08:58	YZ	11-MAR-17	RP	CN
JC38632-1	SW846 8081B	13-MAR-17 10:23	RK	11-MAR-17	MS	P8081PESTTCL
JC38632-1	SW846 8260C	13-MAR-17 11:53	SY			V8260TCL20
JC38632-1	SW846 8082A	13-MAR-17 15:17	HB	11-MAR-17	MS	P8082PCB11AO
JC38632-1	SW846 8151	18-MAR-17 00:37	VDT	17-MAR-17	AQ	H8151STD
JC38632-2 Collected: 08-MAR-17 10:15 By: LM Received: 09-MAR-17 By: AS SCAL-SB-02						
JC38632-2	SM2540 G-97	10-MAR-17 16:30	TZW			SOL104
JC38632-2	SW846 7471B	11-MAR-17 09:20	JA	11-MAR-17	JA	HG
JC38632-2	SW846 8270D	12-MAR-17 19:09	AN	10-MAR-17	NS	AB8270TCL20+
JC38632-2	SW846 6010C	12-MAR-17 23:34	GT	11-MAR-17	AA	AG,AL,AS,BA,BE,CA,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,PB,SB,SE,TL,V,ZN
JC38632-2	SW846 9012B/LACHAT	13-MAR-17 08:59	YZ	11-MAR-17	RP	CN
JC38632-2	SW846 8082A	13-MAR-17 10:08	HB	11-MAR-17	MS	P8082PCB11AO
JC38632-2	SW846 8081B	13-MAR-17 11:13	RK	11-MAR-17	MS	P8081PESTTCL
JC38632-2	SW846 8260C	13-MAR-17 12:21	SY			V8260TCL20
JC38632-2	SW846 8151	18-MAR-17 01:05	VDT	17-MAR-17	AQ	H8151STD
JC38632-3 Collected: 08-MAR-17 12:15 By: LM Received: 09-MAR-17 By: AS SCAL-SB-03						
JC38632-3	SM2540 G-97	10-MAR-17 16:30	TZW			SOL104
JC38632-3	SW846 8270D	11-MAR-17 06:06	CS	10-MAR-17	NS	AB8270TCL20+
JC38632-3	SW846 7471B	11-MAR-17 09:21	JA	11-MAR-17	JA	HG
JC38632-3	SW846 6010C	12-MAR-17 23:39	GT	11-MAR-17	AA	AG,AL,AS,BA,BE,CA,CD,CO,CR,CU,FE,K,MG,MN,NA,NI,SB,SE,TL,V,ZN
JC38632-3	SW846 9012B/LACHAT	13-MAR-17 09:01	YZ	11-MAR-17	RP	CN

Internal Sample Tracking Chronicle

Matrix New World Engineering, Inc.

Job No: JC38632

LIRR Expansion, Long Island, NY
Project No: 16-144, Scally Place Parking Lot, Scally Place, Westbury

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC38632-3	SW846 8260C	13-MAR-17 12:49	SY			V8260TCL20
JC38632-3	SW846 8082A	13-MAR-17 15:33	HB	11-MAR-17	MS	P8082PCB11AO
JC38632-3	SW846 8081B	13-MAR-17 22:08	RK	11-MAR-17	MS	P8081PESTTCL
JC38632-3	SW846 6010C	14-MAR-17 14:08	ND	11-MAR-17	AA	PB
JC38632-3	SW846 8151	18-MAR-17 02:58	VDT	17-MAR-17	AQ	H8151STD
JC38632-4	Collected: 08-MAR-17 13:35 By: LM		Received: 09-MAR-17 By: AS			
SCAL-SB-04						
JC38632-4	SM2540 G-97	10-MAR-17 16:30	TZW			SOL104
JC38632-4	SW846 8270D	11-MAR-17 06:29	CS	10-MAR-17	NS	AB8270TCL20+
JC38632-4	SW846 7471B	11-MAR-17 09:22	JA	11-MAR-17	JA	HG
JC38632-4	SW846 6010C	12-MAR-17 23:43	GT	11-MAR-17	AA	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC38632-4	SW846 9012B/LACHAT	13-MAR-17 09:02	YZ	11-MAR-17	RP	CN
JC38632-4	SW846 8260C	13-MAR-17 13:17	SY			V8260TCL20
JC38632-4	SW846 8081B	13-MAR-17 22:25	RK	11-MAR-17	MS	P8081PESTTCL
JC38632-4	SW846 8082A	14-MAR-17 14:03	KM	11-MAR-17	MS	P8082PCB11AO
JC38632-4	SW846 8151	18-MAR-17 03:26	VDT	17-MAR-17	AQ	H8151STD
JC38632-1A	Collected: 08-MAR-17 09:15 By: LM		Received: 09-MAR-17 By: AS			
SCAL-SB-01						
JC38632-1A	SW846 9045D	11-MAR-17 11:00	AT			CORR
JC38632-1A	SW846 1010A/ASTM D93	13-MAR-17 15:00	AT			IGN
JC38632-1A	SW846 CHAP7/9034	13-MAR-17 01:33	MP	13-MAR-17	CD	SREAC
JC38632-1A	SW846 8270D	13-MAR-17 11:00	AC	12-MAR-17	NG	AB8270TCLP
JC38632-1A	SW846 6010C	13-MAR-17 12:56	ND	11-MAR-17	CSF	EAG,EAS,EBA,ECD,ECR,EPB,ESE
JC38632-1A	SW846 8151	13-MAR-17 13:29	VDT	11-MAR-17	NG	H8151TCLP
JC38632-1A	SW846 8260C	13-MAR-17 13:53	EH	10-MAR-17	MS	V8260TCLP
JC38632-1A	SW846 7470A	13-MAR-17 14:03	JPM	13-MAR-17	JPM	EHG
JC38632-1A	SW846 CHAP7/9012 B	13-MAR-17 15:49	YZ	13-MAR-17	CD	CREAC
JC38632-1A	SW846 8081B	13-MAR-17 18:12	RK	12-MAR-17	RC	P8081TCLP
JC38632-2A	Collected: 08-MAR-17 10:15 By: LM		Received: 09-MAR-17 By: AS			
SCAL-SB-02						
JC38632-2A	SW846 9045D	11-MAR-17 11:00	AT			CORR
JC38632-2A	SW846 1010A/ASTM D93	13-MAR-17 15:00	AT			IGN

Internal Sample Tracking Chronicle

Matrix New World Engineering, Inc.

Job No: JC38632

LIRR Expansion, Long Island, NY
Project No: 16-144, Scally Place Parking Lot, Scally Place, Westbury

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC38632-2A	SW846 CHAP7/9034	13-MAR-17 01:33	MP	13-MAR-17	CD	SREAC
JC38632-2A	SW846 8270D	13-MAR-17 11:23	AC	12-MAR-17	NG	AB8270TCLP
JC38632-2A	SW846 6010C	13-MAR-17 12:59	ND	11-MAR-17	CSF	EAG,EAS,EBA,ECD,ECR,EPB,ESE
JC38632-2A	SW846 8151	13-MAR-17 13:57	VDT	11-MAR-17	NG	H8151TCLP
JC38632-2A	SW846 7470A	13-MAR-17 14:04	JPM	13-MAR-17	JPM	EHG
JC38632-2A	SW846 8260C	13-MAR-17 14:24	EH	10-MAR-17	MS	V8260TCLP
JC38632-2A	SW846 CHAP7/9012 B	13-MAR-17 15:50	YZ	13-MAR-17	CD	CREAC
JC38632-2A	SW846 8081B	13-MAR-17 18:27	RK	12-MAR-17	RC	P8081TCLP
JC38632-3A	Collected: 08-MAR-17 12:15 By: LM		Received: 09-MAR-17 By: AS			
SCAL-SB-03						
JC38632-3A	SW846 9045D	11-MAR-17 11:00	AT			CORR
JC38632-3A	SW846 1010A/ASTM D93	13-MAR-17 15:00	AT			IGN
JC38632-3A	SW846 CHAP7/9034	13-MAR-17 01:33	MP	13-MAR-17	CD	SREAC
JC38632-3A	SW846 8270D	13-MAR-17 12:18	AC	12-MAR-17	NG	AB8270TCLP
JC38632-3A	SW846 6010C	13-MAR-17 13:02	ND	11-MAR-17	CSF	EAG,EAS,EBA,ECD,ECR,EPB,ESE
JC38632-3A	SW846 7470A	13-MAR-17 14:05	JPM	13-MAR-17	JPM	EHG
JC38632-3A	SW846 8260C	13-MAR-17 14:55	EH	10-MAR-17	MS	V8260TCLP
JC38632-3A	SW846 8151	13-MAR-17 15:51	VDT	11-MAR-17	NG	H8151TCLP
JC38632-3A	SW846 CHAP7/9012 B	13-MAR-17 15:51	YZ	13-MAR-17	CD	CREAC
JC38632-3A	SW846 8081B	13-MAR-17 18:42	RK	12-MAR-17	RC	P8081TCLP
JC38632-4A	Collected: 08-MAR-17 13:35 By: LM		Received: 09-MAR-17 By: AS			
SCAL-SB-04						
JC38632-4A	SW846 9045D	11-MAR-17 11:00	AT			CORR
JC38632-4A	SW846 1010A/ASTM D93	13-MAR-17 15:00	AT			IGN
JC38632-4A	SW846 CHAP7/9034	13-MAR-17 01:33	MP	13-MAR-17	CD	SREAC
JC38632-4A	SW846 8270D	13-MAR-17 12:41	AC	12-MAR-17	NG	AB8270TCLP
JC38632-4A	SW846 6010C	13-MAR-17 13:30	ND	11-MAR-17	CSF	EAG,EAS,EBA,ECD,ECR,EPB,ESE
JC38632-4A	SW846 7470A	13-MAR-17 14:10	JPM	13-MAR-17	JPM	EHG
JC38632-4A	SW846 8260C	13-MAR-17 15:26	EH	10-MAR-17	MS	V8260TCLP
JC38632-4A	SW846 CHAP7/9012 B	13-MAR-17 15:53	YZ	13-MAR-17	CD	CREAC
JC38632-4A	SW846 8151	13-MAR-17 16:20	VDT	11-MAR-17	NG	H8151TCLP
JC38632-4A	SW846 8081B	13-MAR-17 19:27	RK	12-MAR-17	RC	P8081TCLP

SGS Accutest Internal Chain of Custody

Job Number: JC38632
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/09/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38632-1.1	Secured Storage	Mark Setaro	03/09/17 20:14	Retrieve from Storage
JC38632-1.1	Mark Setaro	Secured Storage	03/09/17 20:15	Return to Storage
JC38632-1.1	Secured Storage	Todd Shoemaker	03/10/17 13:16	Retrieve from Storage
JC38632-1.1	Todd Shoemaker	Secured Staging Area	03/10/17 13:17	Return to Storage
JC38632-1.1	Secured Staging Area	Todd Shoemaker	03/10/17 13:18	Retrieve from Storage
JC38632-1.1	Todd Shoemaker	Secured Storage	03/10/17 13:18	Return to Storage
JC38632-1.1	Secured Storage	Todd Shoemaker	03/10/17 14:34	Retrieve from Storage
JC38632-1.1	Todd Shoemaker	Secured Staging Area	03/10/17 14:35	Return to Storage
JC38632-1.1	Secured Staging Area	Luis Villanueva	03/10/17 16:16	Retrieve from Storage
JC38632-1.1	Luis Villanueva	Secured Storage	03/10/17 16:36	Return to Storage
JC38632-1.1	Secured Storage	Edwin Gonzalez	03/10/17 18:19	Retrieve from Storage
JC38632-1.1	Edwin Gonzalez	Secured Staging Area	03/10/17 18:19	Return to Storage
JC38632-1.1	Secured Staging Area	Amir Takla	03/11/17 06:13	Retrieve from Storage
JC38632-1.1	Amir Takla	Secured Storage	03/11/17 14:15	Return to Storage
JC38632-1.1	Secured Storage	Luis Villanueva	03/11/17 15:10	Retrieve from Storage
JC38632-1.1	Luis Villanueva	Secured Staging Area	03/11/17 15:10	Return to Storage
JC38632-1.1	Secured Staging Area	Courtney Dringus	03/13/17 07:30	Retrieve from Storage
JC38632-1.1	Courtney Dringus	Secured Storage	03/13/17 12:45	Return to Storage
JC38632-1.1	Secured Storage	Stephen Seuling	03/15/17 08:07	Retrieve from Storage
JC38632-1.1	Stephen Seuling	Albert Quayson	03/15/17 08:30	Custody Transfer
JC38632-1.1	Albert Quayson	Stephen Seuling	03/15/17 13:01	Custody Transfer
JC38632-1.1	Stephen Seuling	Mahendra Patel	03/15/17 13:05	Custody Transfer
JC38632-1.1	Mahendra Patel	Stephen Seuling	03/15/17 13:08	Custody Transfer
JC38632-1.1	Stephen Seuling	Secured Storage	03/15/17 13:09	Return to Storage
JC38632-1.1	Secured Storage	Sahara Feliciano	03/16/17 17:12	Retrieve from Storage
JC38632-1.1	Sahara Feliciano	Secured Staging Area	03/16/17 17:12	Return to Storage
JC38632-1.1	Secured Staging Area	Autumn Yun	03/16/17 18:13	Retrieve from Storage
JC38632-1.1	Autumn Yun	Secured Storage	03/16/17 20:56	Return to Storage
JC38632-1.1.1	Mark Setaro	TCLP	03/09/17 20:14	Leachate from JC38632-1.1
JC38632-1.1.1	TCLP	Mark Setaro	03/09/17 20:15	Leachate from JC38632-1.1
JC38632-1.1.1	Mark Setaro	Secured Storage	03/09/17 20:15	Return to Storage
JC38632-1.1.1	Secured Storage	Vikas Parikh	03/11/17 07:51	Retrieve from Storage
JC38632-1.1.1	Vikas Parikh	Secured Storage	03/11/17 15:54	Return to Storage
JC38632-1.1.1	Secured Storage	Nicholas Goydish	03/12/17 07:58	Retrieve from Storage
JC38632-1.1.1	Nicholas Goydish	Secured Storage	03/12/17 16:57	Return to Storage
JC38632-1.1.2	TCLP	Mark Setaro	03/09/17 20:15	Leachate from JC38632-1.1
JC38632-1.1.2	Mark Setaro	Secured Storage	03/09/17 20:15	Return to Storage
JC38632-1.1.2	Secured Storage	Ariel Alcala	03/11/17 09:02	Retrieve from Storage
JC38632-1.1.2	Ariel Alcala	Secured Storage	03/11/17 11:15	Return to Storage
JC38632-1.1.3	Vikas Parikh	Organics Prep	03/11/17 08:25	Extract from JC38632-1.1.1
JC38632-1.1.3	Organics Prep	Nicholas Goydish	03/12/17 15:54	Extract from JC38632-1.1.1

SGS Accutest Internal Chain of Custody

Job Number: JC38632
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/09/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38632-1.1.3	Nicholas Goydish	Extract Storage	03/12/17 15:54	Return to Storage
JC38632-1.1.3	Extract Storage	Vincent Drago	03/13/17 11:57	Retrieve from Storage
JC38632-1.1.3	Vincent Drago	GC3G	03/13/17 11:57	Load on Instrument
JC38632-1.1.3	GC3G	Vincent Drago	03/16/17 09:49	Unload from Instrument
JC38632-1.1.3	Vincent Drago	Extract Freezer	03/16/17 09:49	Return to Storage
JC38632-1.1.4	Ariel Alcala	Metals Digestion	03/11/17 11:14	Digestate from JC38632-1.1.2
JC38632-1.1.4	Metals Digestion	Ariel Alcala	03/11/17 11:14	Digestate from JC38632-1.1.2
JC38632-1.1.4	Ariel Alcala	Metals Digestate Storage	03/11/17 11:14	Return to Storage
JC38632-1.1.5	Nicholas Goydish	Organics Prep	03/12/17 08:00	Extract from JC38632-1.1.1
JC38632-1.1.5	Organics Prep	Ryan Callaghan	03/12/17 19:10	Extract from JC38632-1.1.1
JC38632-1.1.5	Ryan Callaghan	Extract Storage	03/12/17 19:10	Return to Storage
JC38632-1.1.5	Extract Storage	Christine Phillips	03/13/17 16:56	Retrieve from Storage
JC38632-1.1.5	Christine Phillips	GC8G	03/13/17 16:56	Load on Instrument
JC38632-1.1.6	Nicholas Goydish	Organics Prep	03/12/17 08:11	Extract from JC38632-1.1.1
JC38632-1.1.6	Organics Prep	Nicholas Goydish	03/12/17 16:55	Extract from JC38632-1.1.1
JC38632-1.1.6	Nicholas Goydish	Extract Storage	03/12/17 16:55	Return to Storage
JC38632-1.1.6	Extract Storage	Arielle Cocozza	03/13/17 07:51	Retrieve from Storage
JC38632-1.1.6	Arielle Cocozza	GCMSZ	03/13/17 07:51	Load on Instrument
JC38632-1.1.6	GCMSZ	Arielle Cocozza	03/22/17 10:52	Unload from Instrument
JC38632-1.1.6	Arielle Cocozza	Extract Freezer	03/22/17 10:52	Return to Storage
JC38632-1.1.7	Albert Quayson	Organics Prep	03/15/17 08:34	Extract from JC38632-1.1
JC38632-1.1.7	Organics Prep	Ryan Fantasia	03/15/17 23:11	Extract from JC38632-1.1
JC38632-1.1.7	Ryan Fantasia	Extract Storage	03/15/17 23:11	Return to Storage
JC38632-1.1.8	Autumn Yun	Organics Prep	03/16/17 18:14	Extract from JC38632-1.1
JC38632-1.1.8	Organics Prep	Albert Quayson	03/17/17 13:20	Extract from JC38632-1.1
JC38632-1.1.8	Albert Quayson	Extract Storage	03/17/17 13:20	Return to Storage
JC38632-1.1.8	Extract Storage	Vincent Drago	03/17/17 18:00	Retrieve from Storage
JC38632-1.1.8	Vincent Drago	GCOA	03/17/17 18:00	Load on Instrument
JC38632-1.1.8	GCOA	Rebecca Krug	03/23/17 16:47	Unload from Instrument
JC38632-1.1.8	Rebecca Krug	Extract Freezer	03/23/17 16:47	Return to Storage
JC38632-1.2	Secured Storage	Martin Serwatka	03/10/17 11:35	Retrieve from Storage
JC38632-1.2	Martin Serwatka	Secured Storage	03/10/17 13:26	Return to Storage
JC38632-1.2	Secured Storage	Max Ponce	03/10/17 16:52	Retrieve from Storage
JC38632-1.2	Max Ponce	Secured Storage	03/10/17 18:56	Return to Storage
JC38632-1.2	Secured Storage	Sauvelson Auguste	03/11/17 06:20	Retrieve from Storage
JC38632-1.2	Sauvelson Auguste	Stephen Seuling	03/11/17 06:35	Custody Transfer
JC38632-1.2	Stephen Seuling	Rinku Patel	03/11/17 09:45	Custody Transfer
JC38632-1.2	Rinku Patel	Secured Storage	03/11/17 16:25	Return to Storage

SGS Accutest Internal Chain of Custody

Job Number: JC38632
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/09/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38632-1.2.1	Max Ponce	Organics Prep	03/10/17 16:52	Extract from JC38632-1.2
JC38632-1.2.1	Organics Prep	Natalie Scanlan	03/10/17 21:53	Extract from JC38632-1.2
JC38632-1.2.1	Natalie Scanlan	Extract Storage	03/10/17 21:53	Return to Storage
JC38632-1.2.1	Extract Storage	Christopher Sowa	03/11/17 01:52	Retrieve from Storage
JC38632-1.2.1	Christopher Sowa	GCMS5P	03/11/17 01:52	Load on Instrument
JC38632-1.2.1	GCMS5P	Ashley Noble	03/12/17 13:06	Unload from Instrument
JC38632-1.2.1	Ashley Noble	Extract Freezer	03/12/17 13:06	Return to Storage
JC38632-1.2.2	Stephen Seuling	Organics Prep	03/11/17 06:44	Extract from JC38632-1.2
JC38632-1.2.2	Organics Prep	Matthew Stoecklin	03/11/17 16:00	Extract from JC38632-1.2
JC38632-1.2.2	Matthew Stoecklin	Extract Storage	03/11/17 16:00	Return to Storage
JC38632-1.2.2	Extract Storage	Christine Phillips	03/13/17 10:05	Retrieve from Storage
JC38632-1.2.2	Christine Phillips	GC1G	03/13/17 10:05	Load on Instrument
JC38632-1.2.2	GC1G	Rebecca Krug	03/13/17 16:17	Unload from Instrument
JC38632-1.2.2	Rebecca Krug	Extract Freezer	03/13/17 16:18	Return to Storage
JC38632-1.2.3	Stephen Seuling	Organics Prep	03/11/17 06:46	Extract from JC38632-1.2
JC38632-1.2.3	Organics Prep	Matthew Stoecklin	03/11/17 16:00	Extract from JC38632-1.2
JC38632-1.2.3	Matthew Stoecklin	Extract Storage	03/11/17 16:00	Return to Storage
JC38632-1.2.3	Extract Storage	Humarah Bano	03/13/17 16:53	Retrieve from Storage
JC38632-1.2.3	Humarah Bano	GCXX	03/13/17 16:53	Load on Instrument
JC38632-1.2.3	GCXX	Humarah Bano	03/17/17 12:16	Unload from Instrument
JC38632-1.2.3	Humarah Bano	Extract Freezer	03/17/17 12:16	Return to Storage
JC38632-1.3	Secured Storage	Todd Shoemaker	03/10/17 13:25	Retrieve from Storage
JC38632-1.3	Todd Shoemaker	Secured Staging Area	03/10/17 13:25	Return to Storage
JC38632-1.3	Secured Staging Area	Mark Setaro	03/10/17 14:10	Retrieve from Storage
JC38632-1.3	Mark Setaro	Secured Storage	03/10/17 15:55	Return to Storage
JC38632-1.3	Secured Storage	Edwin Gonzalez	03/10/17 18:27	Retrieve from Storage
JC38632-1.3	Edwin Gonzalez	Secured Staging Area	03/10/17 18:27	Return to Storage
JC38632-1.3	Secured Staging Area	Ariel Alcala	03/11/17 07:12	Retrieve from Storage
JC38632-1.3	Ariel Alcala	Secured Storage	03/11/17 11:15	Return to Storage
JC38632-1.3.1	Mark Setaro	TCLP	03/10/17 14:10	Leachate from JC38632-1.3
JC38632-1.3.1	TCLP	Minhaj Hashmi	03/11/17 08:34	Leachate from JC38632-1.3
JC38632-1.3.1	Minhaj Hashmi	Secured Storage	03/11/17 08:43	Return to Storage
JC38632-1.3.1	Secured Storage	Eddie Huang	03/13/17 15:22	Retrieve from Storage
JC38632-1.3.1	Eddie Huang	GCMS2B	03/13/17 15:22	Load on Instrument
JC38632-1.3.1	GCMS2B	Eddie Huang	03/15/17 08:23	Unload from Instrument
JC38632-1.3.1	Eddie Huang	Secured Storage	03/15/17 08:23	Return to Storage
JC38632-1.3.2	TCLP	Minhaj Hashmi	03/11/17 08:34	Leachate from JC38632-1.3
JC38632-1.3.2	Minhaj Hashmi	Secured Storage	03/11/17 08:43	Return to Storage

SGS Accutest Internal Chain of Custody

Job Number: JC38632
Account: MTXFPNJ Matrix New World Engineering, Inc.
Project: LIRR Expansion, Long Island, NY
Received: 03/09/17

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38632-1.3.3	Ariel Alcala	Metals Digestion	03/11/17 11:11	Digestate from JC38632-1.3
JC38632-1.3.3	Metals Digestion	Ariel Alcala	03/11/17 11:12	Digestate from JC38632-1.3
JC38632-1.3.3	Ariel Alcala	Metals Digestate Storage	03/11/17 11:12	Return to Storage
JC38632-1.5	Secured Storage	Prashant Shukla	03/13/17 12:22	Retrieve from Storage
JC38632-1.5	Prashant Shukla	GCMSC	03/13/17 12:22	Load on Instrument
JC38632-1.5	GCMSC	Sushila Yadav	03/15/17 10:15	Unload from Instrument
JC38632-1.5	Sushila Yadav		03/15/17 10:15	Depleted
JC38632-1.6	Secured Storage	Prashant Shukla	03/13/17 11:25	Retrieve from Storage
JC38632-1.6	Prashant Shukla	GCMSC	03/13/17 11:25	Load on Instrument
JC38632-1.6	GCMSC	Sushila Yadav	03/15/17 10:15	Unload from Instrument
JC38632-1.6	Sushila Yadav		03/15/17 10:15	Depleted
JC38632-2.1	Secured Storage	Mark Setaro	03/09/17 20:14	Retrieve from Storage
JC38632-2.1	Mark Setaro	Secured Storage	03/09/17 20:15	Return to Storage
JC38632-2.1	Secured Storage	Todd Shoemaker	03/10/17 13:16	Retrieve from Storage
JC38632-2.1	Todd Shoemaker	Secured Staging Area	03/10/17 13:17	Return to Storage
JC38632-2.1	Secured Staging Area	Todd Shoemaker	03/10/17 13:18	Retrieve from Storage
JC38632-2.1	Todd Shoemaker	Secured Storage	03/10/17 13:18	Return to Storage
JC38632-2.1	Secured Storage	Todd Shoemaker	03/10/17 14:34	Retrieve from Storage
JC38632-2.1	Todd Shoemaker	Secured Staging Area	03/10/17 14:35	Return to Storage
JC38632-2.1	Secured Staging Area	Luis Villanueva	03/10/17 16:16	Retrieve from Storage
JC38632-2.1	Luis Villanueva	Secured Storage	03/10/17 16:36	Return to Storage
JC38632-2.1	Secured Storage	Edwin Gonzalez	03/10/17 18:19	Retrieve from Storage
JC38632-2.1	Edwin Gonzalez	Secured Staging Area	03/10/17 18:19	Return to Storage
JC38632-2.1	Secured Staging Area	Amir Takla	03/11/17 06:13	Retrieve from Storage
JC38632-2.1	Amir Takla	Secured Storage	03/11/17 14:15	Return to Storage
JC38632-2.1	Secured Storage	Luis Villanueva	03/11/17 15:10	Retrieve from Storage
JC38632-2.1	Luis Villanueva	Secured Staging Area	03/11/17 15:10	Return to Storage
JC38632-2.1	Secured Staging Area	Courtney Dringus	03/13/17 07:30	Retrieve from Storage
JC38632-2.1	Courtney Dringus	Secured Storage	03/13/17 12:45	Return to Storage
JC38632-2.1	Secured Storage	Stephen Seuling	03/15/17 08:07	Retrieve from Storage
JC38632-2.1	Stephen Seuling	Albert Quayson	03/15/17 08:30	Custody Transfer
JC38632-2.1	Albert Quayson	Stephen Seuling	03/15/17 13:01	Custody Transfer
JC38632-2.1	Stephen Seuling	Mahendra Patel	03/15/17 13:05	Custody Transfer
JC38632-2.1	Mahendra Patel	Stephen Seuling	03/15/17 13:08	Custody Transfer
JC38632-2.1	Stephen Seuling	Secured Storage	03/15/17 13:09	Return to Storage
JC38632-2.1	Secured Storage	Sahara Feliciano	03/16/17 17:12	Retrieve from Storage
JC38632-2.1	Sahara Feliciano	Secured Staging Area	03/16/17 17:12	Return to Storage
JC38632-2.1	Secured Staging Area	Autumn Yun	03/16/17 18:13	Retrieve from Storage
JC38632-2.1	Autumn Yun	Secured Storage	03/16/17 20:56	Return to Storage

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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38632-2.1.1	Mark Setaro	TCLP	03/09/17 20:14	Leachate from JC38632-2.1
JC38632-2.1.1	TCLP	Mark Setaro	03/09/17 20:15	Leachate from JC38632-2.1
JC38632-2.1.1	Mark Setaro	Secured Storage	03/09/17 20:15	Return to Storage
JC38632-2.1.1	Secured Storage	Vikas Parikh	03/11/17 07:51	Retrieve from Storage
JC38632-2.1.1	Vikas Parikh	Secured Storage	03/11/17 15:54	Return to Storage
JC38632-2.1.1	Secured Storage	Nicholas Goydish	03/12/17 07:58	Retrieve from Storage
JC38632-2.1.1	Nicholas Goydish	Secured Storage	03/12/17 16:57	Return to Storage
JC38632-2.1.2	TCLP	Mark Setaro	03/09/17 20:15	Leachate from JC38632-2.1
JC38632-2.1.2	Mark Setaro	Secured Storage	03/09/17 20:15	Return to Storage
JC38632-2.1.2	Secured Storage	Ariel Alcala	03/11/17 09:02	Retrieve from Storage
JC38632-2.1.2	Ariel Alcala	Secured Storage	03/11/17 11:15	Return to Storage
JC38632-2.1.3	Vikas Parikh	Organics Prep	03/11/17 08:25	Extract from JC38632-2.1.1
JC38632-2.1.3	Organics Prep	Nicholas Goydish	03/12/17 15:54	Extract from JC38632-2.1.1
JC38632-2.1.3	Nicholas Goydish	Extract Storage	03/12/17 15:54	Return to Storage
JC38632-2.1.3	Extract Storage	Vincent Drago	03/13/17 11:57	Retrieve from Storage
JC38632-2.1.3	Vincent Drago	GC3G	03/13/17 11:57	Load on Instrument
JC38632-2.1.3	GC3G	Vincent Drago	03/16/17 09:49	Unload from Instrument
JC38632-2.1.3	Vincent Drago	Extract Freezer	03/16/17 09:49	Return to Storage
JC38632-2.1.4	Ariel Alcala	Metals Digestion	03/11/17 11:14	Digestate from JC38632-2.1.2
JC38632-2.1.4	Metals Digestion	Ariel Alcala	03/11/17 11:14	Digestate from JC38632-2.1.2
JC38632-2.1.4	Ariel Alcala	Metals Digestate Storage	03/11/17 11:14	Return to Storage
JC38632-2.1.5	Nicholas Goydish	Organics Prep	03/12/17 08:00	Extract from JC38632-2.1.1
JC38632-2.1.5	Organics Prep	Ryan Callaghan	03/12/17 19:10	Extract from JC38632-2.1.1
JC38632-2.1.5	Ryan Callaghan	Extract Storage	03/12/17 19:10	Return to Storage
JC38632-2.1.5	Extract Storage	Christine Phillips	03/13/17 16:56	Retrieve from Storage
JC38632-2.1.5	Christine Phillips	GC8G	03/13/17 16:56	Load on Instrument
JC38632-2.1.6	Nicholas Goydish	Organics Prep	03/12/17 08:11	Extract from JC38632-2.1.1
JC38632-2.1.6	Organics Prep	Nicholas Goydish	03/12/17 16:55	Extract from JC38632-2.1.1
JC38632-2.1.6	Nicholas Goydish	Extract Storage	03/12/17 16:55	Return to Storage
JC38632-2.1.6	Extract Storage	Arielle Cocozza	03/13/17 07:51	Retrieve from Storage
JC38632-2.1.6	Arielle Cocozza	GCMSZ	03/13/17 07:51	Load on Instrument
JC38632-2.1.6	GCMSZ	Arielle Cocozza	03/22/17 10:52	Unload from Instrument
JC38632-2.1.6	Arielle Cocozza	Extract Freezer	03/22/17 10:52	Return to Storage
JC38632-2.1.7	Albert Quayson	Organics Prep	03/15/17 08:34	Extract from JC38632-2.1
JC38632-2.1.7	Organics Prep	Ryan Fantasia	03/15/17 23:11	Extract from JC38632-2.1
JC38632-2.1.7	Ryan Fantasia	Extract Storage	03/15/17 23:11	Return to Storage
JC38632-2.1.8	Autumn Yun	Organics Prep	03/16/17 18:14	Extract from JC38632-2.1

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JC38632-2.1.8	Organics Prep	Albert Quayson	03/17/17 13:20	Extract from JC38632-2.1
JC38632-2.1.8	Albert Quayson	Extract Storage	03/17/17 13:20	Return to Storage
JC38632-2.1.8	Extract Storage	Vincent Drago	03/17/17 18:00	Retrieve from Storage
JC38632-2.1.8	Vincent Drago	GCOA	03/17/17 18:00	Load on Instrument
JC38632-2.1.8	GCOA	Rebecca Krug	03/23/17 16:47	Unload from Instrument
JC38632-2.1.8	Rebecca Krug	Extract Freezer	03/23/17 16:47	Return to Storage
JC38632-2.2	Secured Storage	Martin Serwatka	03/10/17 11:35	Retrieve from Storage
JC38632-2.2	Martin Serwatka	Secured Storage	03/10/17 13:26	Return to Storage
JC38632-2.2	Secured Storage	Max Ponce	03/10/17 16:52	Retrieve from Storage
JC38632-2.2	Max Ponce	Secured Storage	03/10/17 18:56	Return to Storage
JC38632-2.2	Secured Storage	Sauvelson Auguste	03/11/17 06:20	Retrieve from Storage
JC38632-2.2	Sauvelson Auguste	Stephen Seuling	03/11/17 06:35	Custody Transfer
JC38632-2.2	Stephen Seuling	Rinku Patel	03/11/17 09:45	Custody Transfer
JC38632-2.2	Rinku Patel	Secured Storage	03/11/17 16:25	Return to Storage
JC38632-2.2.1	Max Ponce	Organics Prep	03/10/17 16:52	Extract from JC38632-2.2
JC38632-2.2.1	Organics Prep	Natalie Scanlan	03/10/17 21:53	Extract from JC38632-2.2
JC38632-2.2.1	Natalie Scanlan	Extract Storage	03/10/17 21:53	Return to Storage
JC38632-2.2.1	Extract Storage	Christopher Sowa	03/11/17 01:52	Retrieve from Storage
JC38632-2.2.1	Christopher Sowa	GCMS5P	03/11/17 01:52	Load on Instrument
JC38632-2.2.1	GCMS5P	Ashley Noble	03/13/17 09:04	Unload from Instrument
JC38632-2.2.1	Ashley Noble	Extract Freezer	03/13/17 09:04	Return to Storage
JC38632-2.2.2	Stephen Seuling	Organics Prep	03/11/17 06:44	Extract from JC38632-2.2
JC38632-2.2.2	Organics Prep	Matthew Stoecklin	03/11/17 16:00	Extract from JC38632-2.2
JC38632-2.2.2	Matthew Stoecklin	Extract Storage	03/11/17 16:00	Return to Storage
JC38632-2.2.2	Extract Storage	Christine Phillips	03/13/17 10:05	Retrieve from Storage
JC38632-2.2.2	Christine Phillips	GC1G	03/13/17 10:05	Load on Instrument
JC38632-2.2.2	GC1G	Rebecca Krug	03/13/17 16:17	Unload from Instrument
JC38632-2.2.2	Rebecca Krug	Extract Freezer	03/13/17 16:18	Return to Storage
JC38632-2.2.3	Stephen Seuling	Organics Prep	03/11/17 06:46	Extract from JC38632-2.2
JC38632-2.2.3	Organics Prep	Matthew Stoecklin	03/11/17 16:00	Extract from JC38632-2.2
JC38632-2.2.3	Matthew Stoecklin	Extract Storage	03/11/17 16:00	Return to Storage
JC38632-2.2.3	Extract Storage	Humarah Bano	03/13/17 09:05	Retrieve from Storage
JC38632-2.2.3	Humarah Bano	GCXX	03/13/17 09:05	Load on Instrument
JC38632-2.2.3	GCXX	Humarah Bano	03/17/17 12:16	Unload from Instrument
JC38632-2.2.3	Humarah Bano	Extract Freezer	03/17/17 12:16	Return to Storage
JC38632-2.3	Secured Storage	Todd Shoemaker	03/10/17 13:25	Retrieve from Storage
JC38632-2.3	Todd Shoemaker	Secured Staging Area	03/10/17 13:25	Return to Storage
JC38632-2.3	Secured Staging Area	Mark Setaro	03/10/17 14:10	Retrieve from Storage
JC38632-2.3	Mark Setaro	Secured Storage	03/10/17 15:55	Return to Storage

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JC38632-2.3	Secured Storage	Edwin Gonzalez	03/10/17 18:27	Retrieve from Storage
JC38632-2.3	Edwin Gonzalez	Secured Staging Area	03/10/17 18:27	Return to Storage
JC38632-2.3	Secured Staging Area	Ariel Alcala	03/11/17 07:12	Retrieve from Storage
JC38632-2.3	Ariel Alcala	Secured Storage	03/11/17 11:15	Return to Storage
JC38632-2.3.1	Mark Setaro	TCLP	03/10/17 14:10	Leachate from JC38632-2.3
JC38632-2.3.1	TCLP	Minhaj Hashmi	03/11/17 08:34	Leachate from JC38632-2.3
JC38632-2.3.1	Minhaj Hashmi	Secured Storage	03/11/17 08:43	Return to Storage
JC38632-2.3.1	Secured Storage	Eddie Huang	03/13/17 15:22	Retrieve from Storage
JC38632-2.3.1	Eddie Huang	GCMS2B	03/13/17 15:22	Load on Instrument
JC38632-2.3.1	GCMS2B	Eddie Huang	03/15/17 08:23	Unload from Instrument
JC38632-2.3.1	Eddie Huang	Secured Storage	03/15/17 08:23	Return to Storage
JC38632-2.3.2	TCLP	Minhaj Hashmi	03/11/17 08:34	Leachate from JC38632-2.3
JC38632-2.3.2	Minhaj Hashmi	Secured Storage	03/11/17 08:43	Return to Storage
JC38632-2.3.3	Ariel Alcala	Metals Digestion	03/11/17 11:11	Digestate from JC38632-2.3
JC38632-2.3.3	Metals Digestion	Ariel Alcala	03/11/17 11:12	Digestate from JC38632-2.3
JC38632-2.3.3	Ariel Alcala	Metals Digestate Storage	03/11/17 11:12	Return to Storage
JC38632-2.5	Secured Storage	Prashant Shukla	03/13/17 11:25	Retrieve from Storage
JC38632-2.5	Prashant Shukla	GCMSC	03/13/17 11:25	Load on Instrument
JC38632-2.5	GCMSC	Sushila Yadav	03/15/17 10:15	Unload from Instrument
JC38632-2.5	Sushila Yadav		03/15/17 10:15	Depleted
JC38632-2.6	Secured Storage	Prashant Shukla	03/13/17 13:22	Retrieve from Storage
JC38632-2.6	Prashant Shukla	GCMSC	03/13/17 13:22	Load on Instrument
JC38632-2.6	GCMSC	Sushila Yadav	03/15/17 10:15	Unload from Instrument
JC38632-2.6	Sushila Yadav		03/15/17 10:15	Depleted
JC38632-3.1	Secured Storage	Mark Setaro	03/09/17 20:14	Retrieve from Storage
JC38632-3.1	Mark Setaro	Secured Storage	03/09/17 20:15	Return to Storage
JC38632-3.1	Secured Storage	Todd Shoemaker	03/10/17 13:16	Retrieve from Storage
JC38632-3.1	Todd Shoemaker	Secured Staging Area	03/10/17 13:17	Return to Storage
JC38632-3.1	Secured Staging Area	Todd Shoemaker	03/10/17 13:18	Retrieve from Storage
JC38632-3.1	Todd Shoemaker	Secured Storage	03/10/17 13:18	Return to Storage
JC38632-3.1	Secured Storage	Todd Shoemaker	03/10/17 14:34	Retrieve from Storage
JC38632-3.1	Todd Shoemaker	Secured Staging Area	03/10/17 14:35	Return to Storage
JC38632-3.1	Secured Staging Area	Luis Villanueva	03/10/17 16:16	Retrieve from Storage
JC38632-3.1	Luis Villanueva	Secured Storage	03/10/17 16:36	Return to Storage
JC38632-3.1	Secured Storage	Edwin Gonzalez	03/10/17 18:19	Retrieve from Storage
JC38632-3.1	Edwin Gonzalez	Secured Staging Area	03/10/17 18:19	Return to Storage
JC38632-3.1	Secured Staging Area	Amir Takla	03/11/17 06:13	Retrieve from Storage
JC38632-3.1	Amir Takla	Secured Storage	03/11/17 14:15	Return to Storage

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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38632-3.1	Secured Storage	Luis Villanueva	03/11/17 15:10	Retrieve from Storage
JC38632-3.1	Luis Villanueva	Secured Staging Area	03/11/17 15:10	Return to Storage
JC38632-3.1	Secured Staging Area	Courtney Dringus	03/13/17 07:30	Retrieve from Storage
JC38632-3.1	Courtney Dringus	Secured Storage	03/13/17 12:45	Return to Storage
JC38632-3.1	Secured Storage	Stephen Seuling	03/15/17 08:07	Retrieve from Storage
JC38632-3.1	Stephen Seuling	Albert Quayson	03/15/17 08:30	Custody Transfer
JC38632-3.1	Albert Quayson	Stephen Seuling	03/15/17 13:01	Custody Transfer
JC38632-3.1	Stephen Seuling	Mahendra Patel	03/15/17 13:05	Custody Transfer
JC38632-3.1	Mahendra Patel	Stephen Seuling	03/15/17 13:08	Custody Transfer
JC38632-3.1	Stephen Seuling	Secured Storage	03/15/17 13:09	Return to Storage
JC38632-3.1	Secured Storage	Sahara Feliciano	03/16/17 17:12	Retrieve from Storage
JC38632-3.1	Sahara Feliciano	Secured Staging Area	03/16/17 17:12	Return to Storage
JC38632-3.1	Secured Staging Area	Autumn Yun	03/16/17 18:13	Retrieve from Storage
JC38632-3.1	Autumn Yun	Secured Storage	03/16/17 20:56	Return to Storage
JC38632-3.1.1	Mark Setaro	TCLP	03/09/17 20:14	Leachate from JC38632-3.1
JC38632-3.1.1	TCLP	Mark Setaro	03/09/17 20:15	Leachate from JC38632-3.1
JC38632-3.1.1	Mark Setaro	Secured Storage	03/09/17 20:15	Return to Storage
JC38632-3.1.1	Secured Storage	Vikas Parikh	03/11/17 07:51	Retrieve from Storage
JC38632-3.1.1	Vikas Parikh	Secured Storage	03/11/17 15:54	Return to Storage
JC38632-3.1.1	Secured Storage	Nicholas Goydish	03/12/17 07:58	Retrieve from Storage
JC38632-3.1.1	Nicholas Goydish	Secured Storage	03/12/17 16:57	Return to Storage
JC38632-3.1.2	TCLP	Mark Setaro	03/09/17 20:15	Leachate from JC38632-3.1
JC38632-3.1.2	Mark Setaro	Secured Storage	03/09/17 20:15	Return to Storage
JC38632-3.1.2	Secured Storage	Ariel Alcala	03/11/17 09:02	Retrieve from Storage
JC38632-3.1.2	Ariel Alcala	Secured Storage	03/11/17 11:15	Return to Storage
JC38632-3.1.3	Vikas Parikh	Organics Prep	03/11/17 08:25	Extract from JC38632-3.1.1
JC38632-3.1.3	Organics Prep	Nicholas Goydish	03/12/17 15:54	Extract from JC38632-3.1.1
JC38632-3.1.3	Nicholas Goydish	Extract Storage	03/12/17 15:54	Return to Storage
JC38632-3.1.3	Extract Storage	Vincent Drago	03/13/17 11:57	Retrieve from Storage
JC38632-3.1.3	Vincent Drago	GC3G	03/13/17 11:57	Load on Instrument
JC38632-3.1.3	GC3G	Vincent Drago	03/16/17 09:49	Unload from Instrument
JC38632-3.1.3	Vincent Drago	Extract Freezer	03/16/17 09:49	Return to Storage
JC38632-3.1.4	Ariel Alcala	Metals Digestion	03/11/17 11:14	Digestate from JC38632-3.1.2
JC38632-3.1.4	Metals Digestion	Ariel Alcala	03/11/17 11:14	Digestate from JC38632-3.1.2
JC38632-3.1.4	Ariel Alcala	Metals Digestate Storage	03/11/17 11:14	Return to Storage
JC38632-3.1.5	Nicholas Goydish	Organics Prep	03/12/17 08:00	Extract from JC38632-3.1.1
JC38632-3.1.5	Organics Prep	Ryan Callaghan	03/12/17 19:10	Extract from JC38632-3.1.1
JC38632-3.1.5	Ryan Callaghan	Extract Storage	03/12/17 19:10	Return to Storage
JC38632-3.1.5	Extract Storage	Christine Phillips	03/13/17 16:56	Retrieve from Storage

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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38632-3.1.5	Christine Phillips	GC8G	03/13/17 16:56	Load on Instrument
JC38632-3.1.6	Nicholas Goydish	Organics Prep	03/12/17 08:11	Extract from JC38632-3.1.1
JC38632-3.1.6	Organics Prep	Nicholas Goydish	03/12/17 16:55	Extract from JC38632-3.1.1
JC38632-3.1.6	Nicholas Goydish	Extract Storage	03/12/17 16:55	Return to Storage
JC38632-3.1.6	Extract Storage	Arielle Cocozza	03/13/17 07:51	Retrieve from Storage
JC38632-3.1.6	Arielle Cocozza	GCMSZ	03/13/17 07:51	Load on Instrument
JC38632-3.1.6	GCMSZ	Arielle Cocozza	03/22/17 10:52	Unload from Instrument
JC38632-3.1.6	Arielle Cocozza	Extract Freezer	03/22/17 10:52	Return to Storage
JC38632-3.1.7	Albert Quayson	Organics Prep	03/15/17 08:34	Extract from JC38632-3.1
JC38632-3.1.7	Organics Prep	Ryan Fantasia	03/15/17 23:11	Extract from JC38632-3.1
JC38632-3.1.7	Ryan Fantasia	Extract Storage	03/15/17 23:11	Return to Storage
JC38632-3.1.8	Autumn Yun	Organics Prep	03/16/17 18:14	Extract from JC38632-3.1
JC38632-3.1.8	Organics Prep	Albert Quayson	03/17/17 13:20	Extract from JC38632-3.1
JC38632-3.1.8	Albert Quayson	Extract Storage	03/17/17 13:20	Return to Storage
JC38632-3.1.8	Extract Storage	Vincent Drago	03/17/17 18:00	Retrieve from Storage
JC38632-3.1.8	Vincent Drago	GCOA	03/17/17 18:00	Load on Instrument
JC38632-3.1.8	GCOA	Rebecca Krug	03/23/17 16:47	Unload from Instrument
JC38632-3.1.8	Rebecca Krug	Extract Freezer	03/23/17 16:47	Return to Storage
JC38632-3.2	Secured Storage	Martin Serwatka	03/10/17 11:35	Retrieve from Storage
JC38632-3.2	Martin Serwatka	Secured Storage	03/10/17 13:26	Return to Storage
JC38632-3.2	Secured Storage	Max Ponce	03/10/17 16:52	Retrieve from Storage
JC38632-3.2	Max Ponce	Secured Storage	03/10/17 18:56	Return to Storage
JC38632-3.2	Secured Storage	Sauvelson Auguste	03/11/17 06:20	Retrieve from Storage
JC38632-3.2	Sauvelson Auguste	Stephen Seuling	03/11/17 06:35	Custody Transfer
JC38632-3.2	Stephen Seuling	Rinku Patel	03/11/17 09:45	Custody Transfer
JC38632-3.2	Rinku Patel	Secured Storage	03/11/17 16:25	Return to Storage
JC38632-3.2.1	Max Ponce	Organics Prep	03/10/17 16:52	Extract from JC38632-3.2
JC38632-3.2.1	Organics Prep	Natalie Scanlan	03/10/17 21:53	Extract from JC38632-3.2
JC38632-3.2.1	Natalie Scanlan	Extract Storage	03/10/17 21:53	Return to Storage
JC38632-3.2.1	Extract Storage	Christopher Sowa	03/11/17 01:52	Retrieve from Storage
JC38632-3.2.1	Christopher Sowa	GCMS5P	03/11/17 01:52	Load on Instrument
JC38632-3.2.1	GCMS5P	Ashley Noble	03/12/17 13:06	Unload from Instrument
JC38632-3.2.1	Ashley Noble	Extract Freezer	03/12/17 13:06	Return to Storage
JC38632-3.2.2	Stephen Seuling	Organics Prep	03/11/17 06:44	Extract from JC38632-3.2
JC38632-3.2.2	Organics Prep	Matthew Stoecklin	03/11/17 16:00	Extract from JC38632-3.2
JC38632-3.2.2	Matthew Stoecklin	Extract Storage	03/11/17 16:00	Return to Storage
JC38632-3.2.2	Extract Storage	Christine Phillips	03/13/17 10:05	Retrieve from Storage
JC38632-3.2.2	Christine Phillips	GC1G	03/13/17 10:05	Load on Instrument

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Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC38632-3.2.3	Stephen Seuling	Organics Prep	03/11/17 06:46	Extract from JC38632-3.2
JC38632-3.2.3	Organics Prep	Matthew Stoecklin	03/11/17 16:00	Extract from JC38632-3.2
JC38632-3.2.3	Matthew Stoecklin	Extract Storage	03/11/17 16:00	Return to Storage
JC38632-3.2.3	Extract Storage	Humarah Bano	03/13/17 16:53	Retrieve from Storage
JC38632-3.2.3	Humarah Bano	GCXX	03/13/17 16:53	Load on Instrument
JC38632-3.2.3	GCXX	Humarah Bano	03/17/17 12:16	Unload from Instrument
JC38632-3.2.3	Humarah Bano	Extract Freezer	03/17/17 12:16	Return to Storage
JC38632-3.3	Secured Storage	Todd Shoemaker	03/10/17 13:25	Retrieve from Storage
JC38632-3.3	Todd Shoemaker	Secured Staging Area	03/10/17 13:25	Return to Storage
JC38632-3.3	Secured Staging Area	Mark Setaro	03/10/17 14:10	Retrieve from Storage
JC38632-3.3	Mark Setaro	Secured Storage	03/10/17 15:55	Return to Storage
JC38632-3.3	Secured Storage	Edwin Gonzalez	03/10/17 18:27	Retrieve from Storage
JC38632-3.3	Edwin Gonzalez	Secured Staging Area	03/10/17 18:27	Return to Storage
JC38632-3.3	Secured Staging Area	Ariel Alcala	03/11/17 07:12	Retrieve from Storage
JC38632-3.3	Ariel Alcala	Secured Storage	03/11/17 11:15	Return to Storage
JC38632-3.3.1	Mark Setaro	TCLP	03/10/17 14:10	Leachate from JC38632-3.3
JC38632-3.3.1	TCLP	Minhaj Hashmi	03/11/17 08:34	Leachate from JC38632-3.3
JC38632-3.3.1	Minhaj Hashmi	Secured Storage	03/11/17 08:43	Return to Storage
JC38632-3.3.2	TCLP	Minhaj Hashmi	03/11/17 08:34	Leachate from JC38632-3.3
JC38632-3.3.2	Minhaj Hashmi	Secured Storage	03/11/17 08:43	Return to Storage
JC38632-3.3.2	Secured Storage	Eddie Huang	03/13/17 15:22	Retrieve from Storage
JC38632-3.3.2	Eddie Huang	GCMS2B	03/13/17 15:22	Load on Instrument
JC38632-3.3.2	GCMS2B	Eddie Huang	03/15/17 08:23	Unload from Instrument
JC38632-3.3.2	Eddie Huang	Secured Storage	03/15/17 08:23	Return to Storage
JC38632-3.3.3	Ariel Alcala	Metals Digestion	03/11/17 11:11	Digestate from JC38632-3.3
JC38632-3.3.3	Metals Digestion	Ariel Alcala	03/11/17 11:12	Digestate from JC38632-3.3
JC38632-3.3.3	Ariel Alcala	Metals Digestate Storage	03/11/17 11:12	Return to Storage
JC38632-3.6	Secured Storage	Prashant Shukla	03/13/17 11:25	Retrieve from Storage
JC38632-3.6	Prashant Shukla	GCMSC	03/13/17 11:25	Load on Instrument
JC38632-3.6	GCMSC	Sushila Yadav	03/15/17 10:15	Unload from Instrument
JC38632-3.6	Sushila Yadav		03/15/17 10:15	Depleted
JC38632-4.1	Secured Storage	Mark Setaro	03/09/17 20:14	Retrieve from Storage
JC38632-4.1	Mark Setaro	Secured Storage	03/09/17 20:15	Return to Storage
JC38632-4.1	Secured Storage	Todd Shoemaker	03/10/17 13:16	Retrieve from Storage
JC38632-4.1	Todd Shoemaker	Secured Staging Area	03/10/17 13:17	Return to Storage
JC38632-4.1	Secured Staging Area	Todd Shoemaker	03/10/17 13:18	Retrieve from Storage
JC38632-4.1	Todd Shoemaker	Secured Storage	03/10/17 13:18	Return to Storage

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JC38632-4.1	Secured Storage	Todd Shoemaker	03/10/17 14:34	Retrieve from Storage
JC38632-4.1	Todd Shoemaker	Secured Staging Area	03/10/17 14:35	Return to Storage
JC38632-4.1	Secured Staging Area	Luis Villanueva	03/10/17 16:16	Retrieve from Storage
JC38632-4.1	Luis Villanueva	Secured Storage	03/10/17 16:36	Return to Storage
JC38632-4.1	Secured Storage	Edwin Gonzalez	03/10/17 18:19	Retrieve from Storage
JC38632-4.1	Edwin Gonzalez	Secured Staging Area	03/10/17 18:19	Return to Storage
JC38632-4.1	Secured Staging Area	Amir Takla	03/11/17 06:13	Retrieve from Storage
JC38632-4.1	Amir Takla	Secured Storage	03/11/17 14:15	Return to Storage
JC38632-4.1	Secured Storage	Luis Villanueva	03/11/17 15:10	Retrieve from Storage
JC38632-4.1	Luis Villanueva	Secured Staging Area	03/11/17 15:10	Return to Storage
JC38632-4.1	Secured Staging Area	Courtney Dringus	03/13/17 07:30	Retrieve from Storage
JC38632-4.1	Courtney Dringus	Secured Storage	03/13/17 12:45	Return to Storage
JC38632-4.1	Secured Storage	Stephen Seuling	03/15/17 08:07	Retrieve from Storage
JC38632-4.1	Stephen Seuling	Albert Quayson	03/15/17 08:30	Custody Transfer
JC38632-4.1	Albert Quayson	Stephen Seuling	03/15/17 13:01	Custody Transfer
JC38632-4.1	Stephen Seuling	Mahendra Patel	03/15/17 13:05	Custody Transfer
JC38632-4.1	Mahendra Patel	Stephen Seuling	03/15/17 13:08	Custody Transfer
JC38632-4.1	Stephen Seuling	Secured Storage	03/15/17 13:09	Return to Storage
JC38632-4.1	Secured Storage	Sahara Feliciano	03/16/17 17:12	Retrieve from Storage
JC38632-4.1	Sahara Feliciano	Secured Staging Area	03/16/17 17:12	Return to Storage
JC38632-4.1	Secured Staging Area	Autumn Yun	03/16/17 18:13	Retrieve from Storage
JC38632-4.1	Autumn Yun	Secured Storage	03/16/17 20:56	Return to Storage
JC38632-4.1.1	Mark Setaro	TCLP	03/09/17 20:14	Leachate from JC38632-4.1
JC38632-4.1.1	TCLP	Mark Setaro	03/09/17 20:15	Leachate from JC38632-4.1
JC38632-4.1.1	Mark Setaro	Secured Storage	03/09/17 20:15	Return to Storage
JC38632-4.1.1	Secured Storage	Vikas Parikh	03/11/17 07:51	Retrieve from Storage
JC38632-4.1.1	Vikas Parikh	Secured Storage	03/11/17 15:54	Return to Storage
JC38632-4.1.1	Secured Storage	Nicholas Goydish	03/12/17 07:58	Retrieve from Storage
JC38632-4.1.1	Nicholas Goydish	Secured Storage	03/12/17 16:57	Return to Storage
JC38632-4.1.2	TCLP	Mark Setaro	03/09/17 20:15	Leachate from JC38632-4.1
JC38632-4.1.2	Mark Setaro	Secured Storage	03/09/17 20:15	Return to Storage
JC38632-4.1.2	Secured Storage	Ariel Alcala	03/11/17 09:02	Retrieve from Storage
JC38632-4.1.2	Ariel Alcala	Secured Storage	03/11/17 11:15	Return to Storage
JC38632-4.1.3	Vikas Parikh	Organics Prep	03/11/17 08:25	Extract from JC38632-4.1.1
JC38632-4.1.3	Organics Prep	Nicholas Goydish	03/12/17 15:54	Extract from JC38632-4.1.1
JC38632-4.1.3	Nicholas Goydish	Extract Storage	03/12/17 15:54	Return to Storage
JC38632-4.1.3	Extract Storage	Vincent Drago	03/13/17 11:57	Retrieve from Storage
JC38632-4.1.3	Vincent Drago	GC3G	03/13/17 11:57	Load on Instrument
JC38632-4.1.3	GC3G	Vincent Drago	03/16/17 09:49	Unload from Instrument
JC38632-4.1.3	Vincent Drago	Extract Freezer	03/16/17 09:49	Return to Storage

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JC38632-4.1.4	Ariel Alcala	Metals Digestion	03/11/17 11:14	Digestate from JC38632-4.1.2
JC38632-4.1.4	Metals Digestion	Ariel Alcala	03/11/17 11:14	Digestate from JC38632-4.1.2
JC38632-4.1.4	Ariel Alcala	Metals Digestate Storage	03/11/17 11:14	Return to Storage
JC38632-4.1.5	Nicholas Goydish	Organics Prep	03/12/17 08:00	Extract from JC38632-4.1.1
JC38632-4.1.5	Organics Prep	Ryan Callaghan	03/12/17 19:10	Extract from JC38632-4.1.1
JC38632-4.1.5	Ryan Callaghan	Extract Storage	03/12/17 19:10	Return to Storage
JC38632-4.1.5	Extract Storage	Christine Phillips	03/13/17 16:56	Retrieve from Storage
JC38632-4.1.5	Christine Phillips	GC8G	03/13/17 16:56	Load on Instrument
JC38632-4.1.6	Nicholas Goydish	Organics Prep	03/12/17 08:11	Extract from JC38632-4.1.1
JC38632-4.1.6	Organics Prep	Nicholas Goydish	03/12/17 16:55	Extract from JC38632-4.1.1
JC38632-4.1.6	Nicholas Goydish	Extract Storage	03/12/17 16:55	Return to Storage
JC38632-4.1.6	Extract Storage	Arielle Cocozza	03/13/17 07:51	Retrieve from Storage
JC38632-4.1.6	Arielle Cocozza	GCMSZ	03/13/17 07:51	Load on Instrument
JC38632-4.1.6	GCMSZ	Arielle Cocozza	03/22/17 10:52	Unload from Instrument
JC38632-4.1.6	Arielle Cocozza	Extract Freezer	03/22/17 10:52	Return to Storage
JC38632-4.1.7	Albert Quayson	Organics Prep	03/15/17 08:34	Extract from JC38632-4.1
JC38632-4.1.7	Organics Prep	Ryan Fantasia	03/15/17 23:11	Extract from JC38632-4.1
JC38632-4.1.7	Ryan Fantasia	Extract Storage	03/15/17 23:11	Return to Storage
JC38632-4.1.8	Autumn Yun	Organics Prep	03/16/17 18:14	Extract from JC38632-4.1
JC38632-4.1.8	Organics Prep	Albert Quayson	03/17/17 13:20	Extract from JC38632-4.1
JC38632-4.1.8	Albert Quayson	Extract Storage	03/17/17 13:20	Return to Storage
JC38632-4.1.8	Extract Storage	Vincent Drago	03/17/17 18:00	Retrieve from Storage
JC38632-4.1.8	Vincent Drago	GCOA	03/17/17 18:00	Load on Instrument
JC38632-4.1.8	GCOA	Rebecca Krug	03/23/17 16:47	Unload from Instrument
JC38632-4.1.8	Rebecca Krug	Extract Freezer	03/23/17 16:47	Return to Storage
JC38632-4.2	Secured Storage	Martin Serwatka	03/10/17 11:35	Retrieve from Storage
JC38632-4.2	Martin Serwatka	Secured Storage	03/10/17 13:26	Return to Storage
JC38632-4.2	Secured Storage	Max Ponce	03/10/17 16:52	Retrieve from Storage
JC38632-4.2	Max Ponce	Secured Storage	03/10/17 18:56	Return to Storage
JC38632-4.2	Secured Storage	Sauvelson Auguste	03/11/17 06:20	Retrieve from Storage
JC38632-4.2	Sauvelson Auguste	Stephen Seuling	03/11/17 06:35	Custody Transfer
JC38632-4.2	Stephen Seuling	Rinku Patel	03/11/17 09:45	Custody Transfer
JC38632-4.2	Rinku Patel	Secured Storage	03/11/17 16:25	Return to Storage
JC38632-4.2.1	Max Ponce	Organics Prep	03/10/17 16:52	Extract from JC38632-4.2
JC38632-4.2.1	Organics Prep	Natalie Scanlan	03/10/17 21:53	Extract from JC38632-4.2
JC38632-4.2.1	Natalie Scanlan	Extract Storage	03/10/17 21:53	Return to Storage
JC38632-4.2.1	Extract Storage	Christopher Sowa	03/11/17 01:52	Retrieve from Storage
JC38632-4.2.1	Christopher Sowa	GCMS5P	03/11/17 01:52	Load on Instrument

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JC38632-4.2.1	GCMS5P	Ashley Noble	03/12/17 13:06	Unload from Instrument
JC38632-4.2.1	Ashley Noble	Extract Freezer	03/12/17 13:06	Return to Storage
JC38632-4.2.2	Stephen Seuling	Organics Prep	03/11/17 06:44	Extract from JC38632-4.2
JC38632-4.2.2	Organics Prep	Matthew Stoecklin	03/11/17 16:00	Extract from JC38632-4.2
JC38632-4.2.2	Matthew Stoecklin	Extract Storage	03/11/17 16:00	Return to Storage
JC38632-4.2.2	Extract Storage	Christine Phillips	03/13/17 10:05	Retrieve from Storage
JC38632-4.2.2	Christine Phillips	GC1G	03/13/17 10:05	Load on Instrument
JC38632-4.2.3	Stephen Seuling	Organics Prep	03/11/17 06:46	Extract from JC38632-4.2
JC38632-4.2.3	Organics Prep	Matthew Stoecklin	03/11/17 16:00	Extract from JC38632-4.2
JC38632-4.2.3	Matthew Stoecklin	Extract Storage	03/11/17 16:00	Return to Storage
JC38632-4.2.3	Extract Storage	Humarah Bano	03/13/17 16:53	Retrieve from Storage
JC38632-4.2.3	Humarah Bano	GCXX	03/13/17 16:53	Load on Instrument
JC38632-4.2.3	GCXX	Humarah Bano	03/17/17 12:16	Unload from Instrument
JC38632-4.2.3	Humarah Bano	Extract Freezer	03/17/17 12:16	Return to Storage
JC38632-4.3	Secured Storage	Todd Shoemaker	03/10/17 13:25	Retrieve from Storage
JC38632-4.3	Todd Shoemaker	Secured Staging Area	03/10/17 13:25	Return to Storage
JC38632-4.3	Secured Staging Area	Mark Setaro	03/10/17 14:10	Retrieve from Storage
JC38632-4.3	Mark Setaro	Secured Storage	03/10/17 15:55	Return to Storage
JC38632-4.3	Secured Storage	Edwin Gonzalez	03/10/17 18:27	Retrieve from Storage
JC38632-4.3	Edwin Gonzalez	Secured Staging Area	03/10/17 18:27	Return to Storage
JC38632-4.3	Secured Staging Area	Ariel Alcala	03/11/17 07:12	Retrieve from Storage
JC38632-4.3	Ariel Alcala	Secured Storage	03/11/17 11:15	Return to Storage
JC38632-4.3.1	Mark Setaro	TCLP	03/10/17 14:10	Leachate from JC38632-4.3
JC38632-4.3.1	TCLP	Minhaj Hashmi	03/11/17 08:34	Leachate from JC38632-4.3
JC38632-4.3.1	Minhaj Hashmi	Secured Storage	03/11/17 08:43	Return to Storage
JC38632-4.3.2	TCLP	Minhaj Hashmi	03/11/17 08:34	Leachate from JC38632-4.3
JC38632-4.3.2	Minhaj Hashmi	Secured Storage	03/11/17 08:43	Return to Storage
JC38632-4.3.2	Secured Storage	Eddie Huang	03/13/17 15:22	Retrieve from Storage
JC38632-4.3.2	Eddie Huang	GCMS2B	03/13/17 15:22	Load on Instrument
JC38632-4.3.2	GCMS2B	Eddie Huang	03/15/17 08:23	Unload from Instrument
JC38632-4.3.2	Eddie Huang	Secured Storage	03/15/17 08:23	Return to Storage
JC38632-4.3.3	Ariel Alcala	Metals Digestion	03/11/17 11:11	Digestate from JC38632-4.3
JC38632-4.3.3	Metals Digestion	Ariel Alcala	03/11/17 11:12	Digestate from JC38632-4.3
JC38632-4.3.3	Ariel Alcala	Metals Digestate Storage	03/11/17 11:12	Return to Storage
JC38632-4.6	Secured Storage	Prashant Shukla	03/13/17 11:25	Retrieve from Storage
JC38632-4.6	Prashant Shukla	GCMSC	03/13/17 11:25	Load on Instrument
JC38632-4.6	GCMSC	Sushila Yadav	03/15/17 10:15	Unload from Instrument

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JC38632-4.6	Sushila Yadav		03/15/17 10:15	Depleted