From:	Gorin, Jonathan
To:	Arnold, Adam C.
Cc:	Yacovone, Krista
Subject:	RE: Linden Sampling Results
Date:	Thursday, September 14, 2017 4:05:00 PM
Attachments:	Figure 3 Soil Boring and Sediment Sample Plan.pdf image001.jpg April 19 Sample Table.xlsx

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Mr. Arnold, I believe the attached figure shows the locations for the sampling performed on April 19, 2017.

Please let me know if you need anything further.

Jon

From: Arnold, Adam C. [mailto:AArnold@gibbonslaw.com]
Sent: Thursday, September 14, 2017 3:28 PM
To: Gorin, Jonathan <Gorin.Jonathan@epa.gov>
Subject: Linden Sampling Results

Mr. Gorin:

I just spoke with Krista Yacovone and she suggested that I reach out to you. I submitted a FOIA back on June 14th (FOIA # is EPA-R2-2017-008410) for any sampling results, reports, etc. for sampling conducted by EPA in April 2017 along the border of the LCP and LPH sites in Linden, NJ. I received a response in July that provided the attached spreadsheet, but nothing else. Can you please provide any corresponding figures that would show the locations at which these samples were collected? I appreciate any information that you can provide. Thank you.

Regards,

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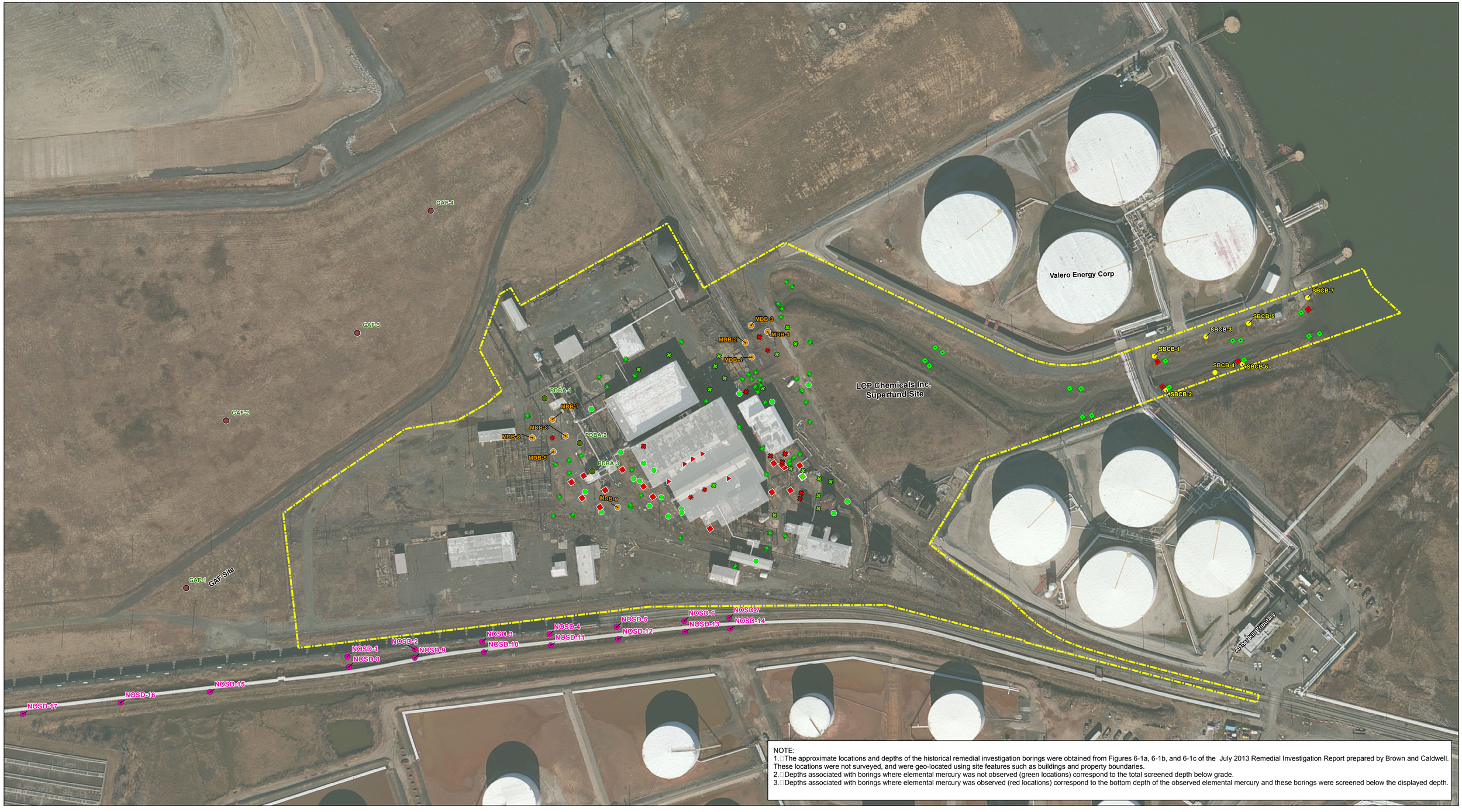

NOTE:
1. The approximate locations and depths of the historical remedial investigation borings were obtained from Figures 6-1a, 6-1b, and 6-1c of the July 2013 Remedial Investigation Report prepared by Brown and Caldwell. These locations were not surveyed, and were geo-located using site features such as buildings and property boundaries.
2. Depths associated with borings where elemental mercury was not observed (green locations) correspond to the total screened depth below grade.
3. Depths associated with borings where elemental mercury was observed (red locations) correspond to the bottom depth of the observed elemental mercury and these borings were screened below the displayed depth.

Legend

- Pipe Ditch Bridge Area Boring Locations
- GAF Off-Site Sample Locations
- Proposed South Branch Creek Sample Location
- Proposed Northern Offsite Ditch Sample Location
- Proposed Soil Boring
- Site Boundary

Mercury observed in Low Marsh Soils
- Not Detected
- Detected

Mercury observed between 10ft and 17ft
- Not Detected
- Detected

Mercury observed between 5ft and 10ft
- Not Detected
- Detected

Mercury observed between 2ft and 5ft
- Not Detected
- Detected

Mercury observed at surface grade
- Not Detected
- Detected

Mercury observed from 0ft to 2 ft
- Not Detected
- Detected

N W E S

0 50 100 200 Feet

Figure 3
Soil Boring and Sediment Sample Locations
LCP Chemicals, Inc.
Linden, NJ

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LCP Chemicals Inc.
April 19, 2017 Soil Samples
Linden, NJ

Sample ID:	MBDS90		MBDS91		MBDS92	
Sampling Location:	MDB-6-0.5-1-041917		MDB-6-2-2.5-041917		MDB-6-3.5-4-041917	
Sampling Date:	4/19/2017		4/19/2017		4/19/2017	
Units:	mg/kg		mg/kg		mg/kg	
Inorganic	Results	Qualifier	Results	Qualifier	Results	Qualifier
Mercury	130		0.086	J	119	

Notes:
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
mg/kg = milligrams per kilogram

LCP Chemicals Inc.
April 19, 2017 Groundwater Samples
Linden, NJ

Sample ID:	BDSL3	
Sampling Location:	MW-7S	
Sampling Date:	4/19/2017	
Units:	ug/L	
Semi-Volatile Organic Compounds (ug/L)	**Results**	**Qualifier**
4-Nitroaniline	10	U
4-Nitrophenol	10	U
Benzaldehyde	10	U
4-Bromophenyl-phenylether	5	U
Caprolactam	10	U
2,4-Dimethylphenol	5	U
4-Methylphenol	10	U
4-Chloroaniline	10	U
2,2'-Oxybis(1-chloropropane)	10	U
Phenol	10	U
Bis(2-chloroethyl) ether	10	U
Bis(2-chloroethoxy)methane	5	U
Bis(2-ethylhexyl)phthalate	5	U
Di-n-octylphthalate	10	U
Hexachlorobenzene	5	U
Anthracene	0.066	J
2,4-Dichlorophenol	5	U
2,4-Dinitrotoluene	5	U
1,4-Dioxane	2	UJ
Pyrene	0.42	
Dimethylphthalate	5	U
Dibenzofuran	5	U
Atrazine	10	U
Benzo(g,h,i)perylene	0.1	U
Indeno(1,2,3-cd)pyrene	0.1	U
Benzo(b)fluoranthene	0.1	U
Fluoranthene	0.37	
Benzo(k)fluoranthene	0.1	U
Acenaphthylene	0.1	U
Chrysene	0.1	U
Benzo(a)pyrene	0.1	U
2,4-Dinitrophenol	10	U
4,6-Dinitro-2-methylphenol	10	U
Dibenzo(a,h)anthracene	0.1	U
Benzo(a)anthracene	0.1	U
2,3,4,6-Tetrachlorophenol	5	U
4-Chloro-3-methylphenol	5	U
2,6-Dinitrotoluene	5	U
N-Nitroso-di-n propylamine	5	U
Hexachloroethane	5	U
4-Chlorophenyl-phenyl ether	5	U
Hexachlorocyclo-pentadiene	10	U
Isophorone	5	U
Acenaphthene	0.049	J
Diethylphthalate	5	U

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Di-n-butylphthalate	5	U
Phenanthrene	0.1	U
Butylbenzylphthalate	5	U
N-Nitrosodiphenylamine	5	U
Fluorene	0.1	U
Carbazole	10	UJ
Hexachlorobutadiene	5	U
Pentachlorophenol	0.2	UJ
2,4,6-Trichlorophenol	5	U
2-Nitroaniline	5	U
2-Nitrophenol	5	U
Naphthalene	0.1	U
2-Methylnaphthalene	0.1	U
2-Chloronaphthalene	5	U
3,3'-Dichlorobenzidine	10	U
1,1'-Biphenyl	5	U
2-Methylphenol	10	U
2-Chlorophenol	5	U
1,2,4,5-Tetrachlorobenzene	5	U
2,4,5-Trichlorophenol	5	U
Acetophenone	10	U
Nitrobenzene	5	U
3-Nitroaniline	10	U
Aroclors (ug/L)		
Aroclor-1260	1	U
Aroclor-1254	1	U
Aroclor-1268	1	U
Aroclor-1221	1	U
Aroclor-1232	1	U
Aroclor-1248	1	U
Aroclor-1016	1	U
Aroclor-1262	1	U
Aroclor-1242	1	U
Volatile Organic Compounds (ug/L)		
Ethylbenzene	0.5	U
Styrene	0.5	U
cis-1,3-Dichloropropene	0.5	U
trans-1,3-Dichloropropene	0.5	U
1,4-Dichlorobenzene	0.5	U
1,2-Dibromoethane	0.5	U
1,2-Dichloroethane	0.5	U
4-Methyl-2-Pentanone	5	U
Methylcyclohexane	0.5	U
Toluene	0.5	U
Chlorobenzene	0.5	U
Cyclohexane	0.5	U
1,2,4-Trichlorobenzene	0.5	U
Dibromochloromethane	0.5	U
Tetrachloroethene	0.5	U
cis-1,2-Dichloroethene	0.5	U

trans-1,2-Dichloroethene	0.5	U
Methyl tert-butyl ether	0.5	U
m,p-Xylene	0.5	U
1,3-Dichlorobenzene	0.5	U
Carbon tetrachloride	0.5	U
2-Hexanone	5	U
Acetone	5	U
Chloroform	0.5	U
Benzene	0.5	U
1,1,1-Trichloroethane	0.5	U
Bromomethane	0.5	U
Chloromethane	0.5	U
Bromochloromethane	0.5	U
Chloroethane	0.5	U
Vinyl chloride	0.5	U
Methylene chloride	0.5	U
Carbon disulfide	0.5	U
Bromoform	0.5	U
Bromodichloromethane	0.5	U
1,1-Dichloroethane	0.5	U
1,1-Dichloroethene	0.5	U
Trichlorofluoromethane	0.5	U
Dichlorodifluoromethane	0.5	U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.5	U
1,2-Dichloropropane	0.5	U
2-Butanone	5	U
1,1,2-Trichloroethane	0.5	U
Trichloroethene	0.5	U
Methyl acetate	0.5	U
1,1,2,2-Tetrachloroethane	0.5	U
1,2,3-Trichlorobenzene	0.5	U
o-Xylene	0.5	U
1,2-Dichlorobenzene	0.5	U
1,2-Dibromo-3-chloropropane	0.5	U
Isopropylbenzene	0.5	U
Pesticides (ug/L)		
Heptachlor epoxide	0.05	U
Endosulfan sulfate	0.1	U
Aldrin	0.05	U
alpha-BHC	0.05	U
beta-BHC	0.05	U
delta-BHC	0.05	U
Endosulfan II	0.1	U
4,4'-DDT	0.1	U
cis-Chlordane	0.05	U
trans-Chlordane	0.05	U
Endrin ketone	0.1	U
gamma-BHC (Lindane)	0.05	U
Dieldrin	0.1	U
Endrin	0.1	U

Methoxychlor	0.5	U
4,4'-DDD	0.1	U
4,4'-DDE	0.1	U
Endrin aldehyde	0.1	U
Heptachlor	0.05	U
Toxaphene	5	U
Endosulfan I	0.05	U
Gas/Diesel Range Organics (ug/L)		
Gasoline Range Organics	100	U
Diesel Range Organics	100	U
Inorganics (ug/L)		
Aluminum	20	U
Iron	14200	
Lead	1	U
Magnesium	130000	
Manganese	166	
Molybdenum	10	U
Nickel	6.2	
Potassium	65000	
Silver	1	U
Sodium	4280000	
Thallium	1	U
Antimony	2	U
Arsenic	2.1	
Barium	29.7	
Beryllium	1	U
Cadmium	1	U
Chromium	2.4	
Cobalt	1.2	
Copper	3.5	
Vanadium	5	U
Zinc	124	
Calcium	624000	
Selenium	5	U
Mercury	0.14	J
Oil & Grease (mg/L)		
Oil & Grease	5.1	U
General Chemistry (mg/L)		
Alkalinity Bicarbonate	290	
Ammonia [As N]	1.0	
Biochemical Oxygen Demand	3.9	
Chloride	6600	
Cyanide, Total	10	U
Chemical Oxygen Demand	100	U
Chromium, Hexavalent	17	L
Organic Carbon	1.6	
Sulfide	1.3	
Residue, Filterable	15000	
Residue, Non-Filterable	52	
Phosphorus	2.9	

Sulfate	2800	

Notes:
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
L = Analyte was detected, but result is biased low.
mg/L = miligrams per liter
U = Not detected
UJ = Not detected, associated reporting detection limit is estimated
ug/L = micrograms per liter

LCP Chemicals Inc.
April 19, 2017 Soil Samples
Linden, NJ

Sample ID:	MBDS69		MBDS70		MBDS71		MBDS72		MBDS73		MBDS90		MBDS91		MBDS92	
Sampling Location:	GAF-1		GAF-1		GAF-2		GAF-3		GAF-4		MDB-6-0.5-1-041917		MDB-6-2-2.5-041917		MDB-6-3.5-4-041917	
Sampling Date:	4/19/2017		4/19/2017		4/19/2017		4/19/2017		4/19/2017		4/19/2017		4/19/2017		4/19/2017	
Units:	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Inorganic	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier
Mercury	0.19		0.14		0.11	J	0.1	J	0.14		130		0.086	J	119	

Notes:
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
mg/kg = milligrams per kilogram

LCP Chemicals Inc.
April 19, 2017 Groundwater Samples
Linden, NJ

Location	PDBA-1		PDBA-1		PDBA-1		PDBA-2		PDBA-2		PDBA-3		PDBA-3	
Sample #	PDBA-1-1-2-041917		PDBA-1-9-10-041917		PDBA-91-1-2-041917		PDBA-2-1.5-2.5-041917		PDBA-2-5-6-041917		PDBA-3-5-5.5-041917		PDBA-3-7-7.5-041917	
Sample Date	4/19/2017		4/19/2017		4/19/2017		4/19/2017		4/19/2017		4/19/2017		4/19/2017	
Sample Depth (ft btic)	1-2		9-10		1-2		1.5-2.5		5-6		5-5.5		7-7.5	
Sample Type	N		N		FD		N		N		N		N	
Parent Sample #					PDBA-1-1-2-041917									
Mercury Speciation (ng/g)														
Mineral-Bound Mercury	378	J	16700	J	410	J	7520	J	998	J	4120	J	6180	J
Organo-Complexed Mercury	99.4	UJ	807	J	97.6	UJ	514	J	451	J	594	J	712	J
Stomach Acid Soluble Mercury	4.68	J	27.5	UJ	24.4	UJ	159	J	26.5	UJ	42.1	UJ	11.7	J
Strongly-Bound Mercury	5060	J	8230	J	6110	J	18800	J	2170	J	26200	J	5810	J
Volatile Elemental Mercury	12.6	UJ	14	UJ	25.3	J	14.1	J	13.5	UJ	21.4	UJ	48.3	J
Water Soluble Mercury	669	J	1450	J	478	J	7130	J	53	UJ	6430	J	2070	J
Methyl Mercury (ng/g)														
Methyl Mercury	2.5		33.7		2.2		9.57		13.2		89.1		26.5	
Total Mercury (ng/g)														
Mercury	2870	J	6420	J	4230	J	24900	J	5520	J	34100	J	14300	J
Percent Solids (%)														
Percent Solids	90.43		82.15		90.49		86.27		80.4		51.25		80.85	

Notes:
FD = field duplicate
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
L = Analyte was detected, but result is biased low.
N = normal field sample
ng/g = nanograms per gram
UJ = Not detected, associated reporting detection limit is estimated