
Technical Comments and Response Memorandum

Prepared For: East Goshen Township
1580 Paoli Pike
West Chester, PA 19380

Prepared By: Gannett Fleming Inc.
207 Senate Avenue
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Subject: Sediment Characterization Technical Memorandum, May 27, 2016
(Responses to Comments received via email dated June 6, 2016)
Milltown Reservoir
Chester County, PA

Date: June 14, 2016

INTRODUCTION

This memo provides a written response to comments received by East Goshen Township from Mr. Paul Knox via email on June 6, 2016.

Gannett Fleming, Inc. (GF) prepared an Environmental Sediment Sampling Technical Memorandum for East Goshen Township to summarize findings of the sediment sampling conducted at the Milltown Reservoir in May 2016. The memo was delivered to the Township. It documented the sampling methods, laboratory analytical results, and provided a comparison of detections to their respective PADEP clean fill concentration limits and Residential Statewide Human Health Standards. The memo concluded that land use surrounding the Milltown Reservoir was comprised entirely of residential properties. Results of the sediment analyses did not indicate a contamination issue. This material was determined to be clean fill.

COMMENTS

Comment #1: Email from Mr. Paul Knox to East Goshen Township on June 6, 2016.

"If you just take the results at face value, the sediments look pretty clean. That is a good thing, particularly if the reservoir were to be dredged. The sediment could be used as "clean" fill material without any additional costs associated with disposal of material that would be characterized as "hazardous." I do have two major problems with the evaluation however."

"The first problem I have is the fact that the analyses of the organic compounds did not achieve low enough detection limits to be of any use. It's like if you don't look very hard, you won't find any problems. The laboratory methodology did not achieve sufficiently low enough detection limits to detect concentrations of certain organic compounds that could potentially be a human health risk or ecological hazard. For instance: if the detection limit for a given compound is 10 µg/kg but the level of concern is 1 µg/kg, then the compound could be present at concentrations up to 9 µg/kg (9 times the level of concern), but still be reported by the laboratory as not detected. If you look at the lab report, virtually all of the organic compounds in all of the samples are not detected (ND). The Twp. is assuming that

everything that is reported as ND is not present in the sediment, when in fact it could be present in the sediment at concentrations that may be of concern, just less than the reporting limit. This is pretty technical stuff, but I think the Twp. did not get their money's worth as far as the quality of the analyses is concerned."

"The second issue I have with the report is that they compared the sediment analytical results to standards for fill material. They did not compare the sediment data to standards based on the protection of human health or ecological receptors. The comparison that was presented in the report will tell you if the sediment could be used as "clean" fill or not. The comparison does not tell you if the sediment could pose hazards to human health or ecological receptors."

GANNETT FLEMING RESPONSES

We appreciate the reviewer's comment and are providing the following responses:

1. The laboratory detection limits for all constituents analyzed were below their respective Pennsylvania Residential (R) Medium Specific Concentrations (MSCs) for Organic and Inorganic Regulated Substances in Soil (Direct Contact 0-15 feet). These are the Statewide Human Health Standards as listed in PADEP Title 25, PA Code Chapter 250 "Administration of the Land Recycling Program." This information was provided in Table 1 of the Tech Memo. These standards are regulation and not subject to regulatory discretion. The sediment sample results did not exceed any of their respective Statewide Human Health Standards, therefore the laboratory report and the report's conclusions remain unchanged. We originally provided a summary table of detections, Table 1. Based on the reviewer's concerns about non-detections (NDs) in the lab report and human health protection, we revised Table 1 to include the full suite of all the constituents analyzed along with their respective laboratory detection limit values to show that the detection limits were all below their respective Human Health Standard.
2. The laboratory ran a full scan, consisting of sixty-eight semivolatle organic compounds (SVOCs), according to EPA Method SW846 8270D. As previously mentioned, none of the SVOCs were detected above their respective Statewide Human Health Standard. As noted by the reviewer, the laboratory reporting detection limits (RDL) and method detection limits (MDL) were above their respective Pennsylvania Clean Fill Concentrations for six SVOCs. It does not mean that these compounds were detected, it means that the laboratory equipment did not detect those compounds above their respective detection limit.

During laboratory analysis each sample receives a specific RDL and MDL value. These values vary per sample based on equipment, saturation, and other factors. There are times when the detection limits are reported higher or lower than a respective measured value or standard used for comparison purposes. The results are still useful in providing a level of confidence that those organic compounds were not detected to the MDL values reported.

The results of the full suite analyses provide confidence that regulated organic compounds are not present in the sediments to suggest a concern for human health or material handling. The analytical lab report was updated on June 8, 2016 to list the MDL values in addition to the RDL values. For planning and decision making purposes, all of the results are valuable in determining if the sediment material suggests clean fill or waste. Our understanding of the watershed, followed by the analytical results indicates no evidence of a release of a regulated substance into the sediments of the Milltown Reservoir. Based on the technical guidance of the Management of Fill Policy, that information is enough to classify the material as clean fill.

3. This sediment sampling effort is a part of the planning and decision making process for the Milltown Reservoir. At this time, there is no reason to suspect contamination of reservoir sediments that would impact human health or classify the material as anything else but clean fill. If a decision is reached that involves the removal of sediments or soil for offsite re-use or offsite disposal purposes, the Contractor would follow the Management of Fill Policy and provide a Certification of Clean Fill FP-001 document for material leaving the project area.

Enclosures:

Table 1 (Revised): Sediment Analytical Results – Full Analyte List

Attachment A: Laboratory Analytical Report with MDL and RDL limits – June 8, 2016

cc: File 060466

Table 1 (Revised)
Full Suite - Sediment Analytical Results
Milltown Reservoir

Sample Name and Location	Site 1 Composite-001		Site 2 Composite-001		Site 2 Composite-002		Site 3 Composite-001		Site 3 Composite-002		Site 3 Composite-003		PADEP Act 2 MSC's for Organic and Inorganic Regulated Substances in Soil: Direct Contact Numeric Values	Pennsylvania Clean Fill Concentration for Organics and Metals ²	Units
	Sample Date	3-May-16	3-May-16	3-May-16	3-May-16	3-May-16	4-May-16	4-May-16	4-May-16	4-May-16	4-May-16	4-May-16			
Sample Time	1030		1150		1230		0930		1015		1100				
Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment				
Sampling Depth	0-3'		0-4'		4-7'		0-4'		4-8'		8-12'		Residential ¹		
Inorganic Compounds (Metals)	Results	DQ	Results	DQ	Results	DQ	Results	DQ	Results	DQ	Results	DQ	0-15'		
Aluminum, Total	3,300	-	1,260	-	1,530	-	5,360	-	47,700	-	46,300	-	190,000	-	mg/kg
Antimony, Total	<0.11	U	<0.14	U	<0.12	U	<0.16	U	<1.9	U	<1.9	U	88	-	mg/kg
Arsenic, Total	0.46	-	<0.21	U	0.27	-	0.9	-	7.2	-	7.9	-	12	-	mg/kg
Barium, Total	20.3	-	8.5	-	9.7	-	48.6	-	339	-	312	-	44,000	8,200	mg/kg
Beryllium, Total	0.095	-	<0.069	U	<0.059	U	0.19	-	1.6	-	1.6	-	440	320	mg/kg
Cadmium, Total	<0.053	U	<0.069	U	<0.059	U	0.096	-	<0.93	U	<0.95	U	110	38	mg/kg
Calcium, Total	314	-	168	-	86.2	-	694	-	3,850	-	2,690	-	-	-	mg/kg
Chromium, Total	4.8	-	1.8	-	2.0	-	10.1	-	76.1	-	68.5	-	660	94	mg/kg
Cobalt, Total	0.74	-	<0.35	U	0.38	-	1.5	-	12.6	-	12.3	-	66	8.1	mg/kg
Copper, Total	2.2	-	1.1	-	1.6	-	5.3	-	43.4	-	45.2	-	8,100	8,200	mg/kg
Iron, Total	3,050	-	1,290	-	1,450	-	6,070	-	47,200	-	47,900	-	150,000	-	mg/kg
Lead, Total	4.3	-	1.6	-	1.4	-	8.9	-	76.6	-	48.7	-	500	450	mg/kg
Magnesium, Total	498	-	234	-	194	-	1,020	-	7,790	-	6,500	-	-	-	mg/kg
Manganese, Total	35.8	-	17.0	-	21.6	-	77.2	-	702	-	741	-	10,000	31,000	mg/kg
Mercury, Total	<0.086		<0.1	U	<0.082		<0.12	U	<0.1	U	<0.1	U	35	10	mg/kg
Nickel, Total	2.40	-	1.0	-	1.2	-	5.3	-	40.9	-	41.3	-	4,400	650	mg/kg
Potassium, Total	265	-	102	-	102	-	398	-	3,620	-	3,060	-	-	-	mg/kg
Selenium, Total	0.52	-	<0.35	-	<0.29	-	0.74	-	5.5	-	7.6	-	1,100	26	mg/kg
Silver, Total	<0.11	U	<0.14	U	<0.12	U	<0.16	U	<1.9	U	<1.9	U	1,100	84	mg/kg
Sodium, Total	68.1	-	124	-	36.8	-	132	-	274	-	164	-	-	-	mg/kg
Thallium, Total	<0.053	U	<0.069	U	<0.059	U	<0.080	U	<0.93	U	<0.95	U	15	14	mg/kg
Vanadium, Total	5.6	-	2.0	-	2.4	-	11.0	-	90.4	-	82.9	-	1,500	1,500	mg/kg
Zinc, Total	10.4	-	4.5	-	3.8	-	25.6	-	165	-	141	-	66,000	12,000	mg/kg
Semivolatile Organic Compounds (SVOCs)															
Acenaphthene	<0.151	U	<0.183	U	<0.156	U	<0.234	U	<0.196	U	<0.176	U	13,000	2,700	mg/kg
Acenaphthylene	<0.151	U	<0.183	U	<0.156	U	<0.234	U	<0.196	U	<0.176	U	13,000	2,500	mg/kg
Acetophenone	<0.301	U	<0.366	U	<0.312	U	<0.469	U	<0.393	U	<0.353	U	10,000	200	mg/kg
Anthracene	<0.151	U	<0.183	U	<0.156	U	<0.234	U	<0.196	U	<0.176	U	66,000	350	mg/kg
Atrazine	<0.0331	U	<0.0403	U	<0.0343	U	<0.0516	U	<0.0432	U	<0.0388	U	78	0.13	mg/kg
Benzaldehyde	<0.602	U	<0.732	U	<0.624	U	<0.938	U	<0.786	U	<0.706	U	-	-	mg/kg
Benzo(a)anthracene	<0.151	U	<0.183	U	<0.156	U	<0.234	U	<0.196	U	<0.176	U	5.7	25	mg/kg
Benzo(a)pyrene	<0.151	U	<0.183	U	<0.156	U	<0.234	U	<0.196	U	<0.176	U	0.57	2.5	mg/kg
Benzo(b)fluoranthene	<0.151	U	<0.183	U	<0.156	U	<0.234	U	<0.196	U	<0.176	U	5.7	25	mg/kg
Benzo(g,h,i)perylene	<0.151	U	<0.183	U	<0.156	U	<0.234	U	<0.196	U	<0.176	U	13,000	180	mg/kg
Benzo(k)fluoranthene	<0.151	U	<0.183	U	<0.156	U	<0.234	U	<0.196	U	<0.176	U	57	250	mg/kg
Biphenyl	<0.301	U	<0.366	U	<0.312	U	<0.469	U	<0.393	U	<0.353	U	11,000	790	mg/kg
4-Bromophenyl-phenylether	<0.301	U	<0.366	U	<0.312	U	<0.469	U	<0.393	U	<0.353	U	100	-	mg/kg
Butylbenzylphthalate	<0.301	U	<0.366	U	<0.312	U	<0.469	U	<0.393	U	<0.353	U	9.4	10,000	mg/kg
Caprolactam	<0.602	U	<0.732	U	<0.624	U	<0.938	U	<0.786	U	<0.706	U	-	-	mg/kg
Carbazole	<0.301	U	<0.366	U	<0.312	U	<0.469	U	<0.393	U	<0.353	U	900	21	mg/kg
4-Chloro-3-methylphenol	<0.602	U	<0.732	U	<0.624	U	<0.938	U	<0.786	U	<0.706	U	1,100	37	mg/kg
4-Chloroaniline	<0.602	U	<0.732	U	<0.624	U	<0.938	U	<0.786	U	<0.706	U	90	19	mg/kg
bis(2-Chloroethoxy)methane	<0.301	U	<0.366	U	<0.312	U	<0.469	U	<0.393	U	<0.353	U	660	-	mg/kg
bis(2-Chloroethyl)ether	<0.0392	U	<0.0476	U	<0.0406	U	<0.0610	U	<0.0511	U	<0.0459	U	1.3	0.0039	mg/kg
bis(2-Chloroisopropyl)ether	<0.301	U	<0.366	U	<0.312	U	<0.469	U	<0.393	U	<0.353	U	44	8	mg/kg
2-Chloronaphthalene	<0.301	U	<0.366	U	<0.312	U	<0.469	U	<0.393	U	<0.353	U	18,000	6,200	mg/kg
2-Chlorophenol	<0.602	U	<0.732	U	<0.624	U	<0.938	U	<0.786	U	<0.706	U	1,100	4.4	mg/kg
4-Chlorophenyl-phenylether	<0.301	U	<0.366	U	<0.312	U	<0.469	U	<0.393	U	<0.353	U	100	-	mg/kg
Chrysene	<0.151	U	0.226	-	<0.156	U	<0.234	U	<0.196	U	<0.176	U	570	230	mg/kg
mp-Cresol	<0.602	U	<0.732	U	<0.624	U	<0.938	U	<0.786	U	<0.706	U	-	-	mg/kg
o-Cresol	<0.602	U	<0.732	U	<0.624	U	<0.938	U	<0.786	U	<0.706	U	11,000	64	mg/kg
Di-n-Butylphthalate	<0.301	U	<0.366	U	<0.312	U	<0.469	U	<0.393	U	<0.353	U	10,000	1,500	mg/kg
Di-n-Octylphthalate	<0.301	U	<0.366	U	<0.312	U	<0.469	U	<0.393	U	<0.353	U	8,800	4,400	mg/kg
Dibenzo(a,h)anthracene	<0.151	U	<0.183	U	<0.156	U	<0.234	U	<0.196	U	<0.176	U	0.57	2.5	mg/kg
Dibenzofuran	<0.301	U	<0.366	U	<0.312	U	<0.469	U	<0.393	U	<0.353	U	220	-	mg/kg
3,3-Dichlorobenzidine	<0.602	U	<0.732	U	<0.624	U	<0.938	U	<0.786	U	<0.706	U	40	8.3	mg/kg
2,4-Dichlorophenol	<0.602	U	<0.732	U	<0.624	U	<0.938	U	<0.786	U	<0.706	U	660	1	mg/kg
Diethylphthalate	<0.301	U	<0.366	U	<0.312	U	<0.469	U	<0.393	U	<0.353	U	10,000	160	mg/kg
2,4-Dimethylphenol	<0.602	U	<0.732	U	<0.624	U	<0.938	U	<0.786	U	<0.706	U	4,400	32	mg/kg
Dimethylphthalate	<0.301	U	<0.366	U	<0.312	U	<0.469	U	<0.393	U	<0.353	U	100	-	mg/kg
2,4-Dinitrophenol	<0.012	U	<0.146	U	<0.125	U	<0.188	U	<0.157	U	<0.141	U	440	0.21	mg/kg
2,4-Dinitrotoluene	<0.0361	U	<0.0329	U	<0.0281	U	<0.0422	U	<0.0354	U	<0.0318	U	58	0.05	mg/kg
2,6-Dinitrotoluene	<0.301	U	<0.366	U	<0.312	U	<0.469	U	<0.393	U	<0.353	U	220	1.1	mg/kg
1,4-Dioxane	<0.148	U	<0.179	U	<0.153	U	<0.23	U	<0.192	U	<0.173	U	58	0.073	mg/kg
bis(2-Ethylhexyl)phthalate	<0.301	U	<0.366	U	<0.312	U	<0.469	U	<0.393	U	<0.353	U	1,300	130	mg/kg
Fluoranthene	0.158	-	0.194	-	<0.156	U	<0.234	U	<0.196	U	<0.176	U	8,800	3,200	mg/kg
Fluorene	<0.151	U	<0.183	U	<0.156	U	<0.234	U	<0.196	U	<0.176	U	8,800	3,000	mg/kg
Hexachlorobenzene	<0.301	U	<0.366	U	<0.312	U	<0.469	U	<0.393	U	<0.353	U	11	0.96	mg/kg
Hexachlorobutadiene	<0.301	U	<0.366	U	<0.312	U	<0.469	U	<0.393	U	<0.353	U	220	1.2	mg/kg
Hexachlorocyclopentadiene	<0.602	U	<0.732	U	<0.624	U	<0.938	U	<0.786	U	<0.706	U	1,300	91	mg/kg
Hexachloroethane	<0.301	U	<0.366	U	<0.312	U	<0.469	U	<0.393	U	<0.353	U	110	0.56	mg/kg
Indeno(1,2,3-cd)pyrene	<0.151	U	<0.183	U	<0.156	U	<0.234	U	<0.196	U	<0.176	U	5.7	25	mg/kg
Isophorone	<0.301	U	<0.366	U	<0.312	U	<0.469	U	<0.393	U	<0.353	U	10,000	1.9	mg/kg
2-Methyl-4,6-dinitrophenol	<0.602	U	<0.732	U	<0.624	U	<0.938	U	<0.786	U	<0.706	U	22	3.1	mg/kg
2-Methylnaphthalene	<0.301	U	<0.366	U	<0.312	U	<0.469	U	<0.393	U	<0.353	U	880	2,900	mg/kg
Naphthalene	<0.151	U	<0.183	U	<0.156	U	<0.234	U	<0.196	U	<0.176	U	4,400	25	mg/kg
2-Nitroaniline	<0.0361	U	<0.0439	U	<0.0374	U	<0.0563	U	<0.0471	U	<0.0424	U	660	0.038	mg/kg
3-Nitroaniline	<0.0602	U	<0.0732	U	<0.0624	U	<0.0938	U	<0.0786	U	<0.0706	U	66	0.033	mg/kg
4-Nitroaniline	<0.0241	U	<0.0293	U	<0.025	U	<0.0375	U	<0.0314	U	<0.0282	U	880	0.031	mg/kg
Nitrobenzene	<0.301	U	<0.366	U	<0.312	U	<0.469	U	<0.393	U	<0.353	U	440	0.79	mg/kg
2-Nitrophenol	<0.602	U	<0.732	U	<0.624	U	<0.938	U	<0.786	U	<0.706	U	1,800	5.9	mg/kg
4-Nitrophenol	<0.602	U	<0.732	U	<0.624	U	<0.938	U	<0.786	U	<0.706	U	1,800		

Table 1 (Revised)
Full Suite - Sediment Analytical Results
Milltown Reservoir

PCBs															
Aroclor-1016	<0.078	U	<0.15	U	<0.11	U	<0.15	U	<0.11	U	<0.13	U	15	15	mg/kg
Aroclor-1221	<0.078	U	<0.15	U	<0.11	U	<0.15	U	<0.11	U	<0.13	U	9	0.63	mg/kg
Aroclor-1232	<0.078	U	<0.15	U	<0.11	U	<0.15	U	<0.11	U	<0.13	U	9	0.5	mg/kg
Aroclor-1242	<0.078	U	<0.15	U	<0.11	U	<0.15	U	<0.11	U	<0.13	U	9	16	mg/kg
Aroclor-1248	<0.078	U	<0.15	U	<0.11	U	<0.15	U	<0.11	U	<0.13	U	9	9.9	mg/kg
Aroclor-1254	<0.078	U	<0.15	U	<0.11	U	<0.15	U	<0.11	U	<0.13	U	4.4	4.4	mg/kg
Aroclor-1260	<0.078	U	<0.15	U	<0.11	U	<0.15	U	<0.11	U	<0.13	U	9	30	mg/kg
Aroclor-1262	<0.078	U	<0.15	U	<0.11	U	<0.15	U	<0.11	U	<0.13	U	-	-	mg/kg
Aroclor-1268	<0.078	U	<0.15	U	<0.11	U	<0.15	U	<0.11	U	<0.13	U	-	-	mg/kg
PESTICIDES															
Aldrin	<0.02	U	<0.0386	U	<0.0284	U	<0.038	U	<0.0272	U	<0.0338	U	1.1	0.1	mg/kg
alpha-BHC	<0.02	U	<0.0386	U	<0.0284	U	<0.038	U	<0.0272	U	<0.0338	U	2.8	0.046	mg/kg
beta-BHC	<0.02	U	<0.0386	U	<0.0284	U	<0.038	U	<0.0272	U	<0.0338	U	9.9	0.22	mg/kg
delta-BHC	<0.02	U	<0.0386	U	<0.0284	U	<0.038	U	<0.0272	U	<0.0338	U	16	11	mg/kg
gamma-BHC	<0.02	U	<0.0386	U	<0.0284	U	<0.038	U	<0.0272	U	<0.0338	U	16	0.072	mg/kg
alpha-Chlordane	<0.02	U	<0.0386	U	<0.0284	U	<0.038	U	<0.0272	U	<0.0338	U	-	-	mg/kg
4,4'-DDD	<0.0389	U	<0.0749	U	<0.0551	U	<0.0738	U	<0.0529	U	<0.0656	U	75	6.8	mg/kg
4,4'-DDT	<0.0389	U	<0.0749	U	<0.0551	U	<0.0738	U	<0.0529	U	<0.0656	U	53	53	mg/kg
Dieldrin	<0.0389	U	<0.0749	U	<0.0551	U	<0.0738	U	<0.0529	U	<0.0656	U	1.1	0.11	mg/kg
Endosulfan I	<0.02	U	<0.0386	U	<0.0284	U	<0.038	U	<0.0272	U	<0.0338	U	1,300	110	mg/kg
Endosulfan II	<0.0389	U	<0.0749	U	<0.0551	U	<0.0738	U	<0.0529	U	<0.0656	U	1,300	130	mg/kg
Endosulfan Sulfate	<0.0389	U	<0.0749	U	<0.0551	U	<0.0738	U	<0.0529	U	<0.0656	U	1,300	70	mg/kg
Endrin	<0.0389	U	<0.0749	U	<0.0551	U	<0.0738	U	<0.0529	U	<0.0656	U	66	5.5	mg/kg
Endrin Aldehyde	<0.0389	U	<0.0749	U	<0.0551	U	<0.0738	U	<0.0529	U	<0.0656	U	-	-	mg/kg
Endrin Ketone	<0.0389	U	<0.0749	U	<0.0551	U	<0.0738	U	<0.0529	U	<0.0656	U	-	-	mg/kg
Heptachlor	<0.02	U	<0.0386	U	<0.0284	U	<0.038	U	<0.0272	U	<0.0338	U	4	0.68	mg/kg
Heptachlor Epoxide	<0.02	U	<0.0386	U	<0.0284	U	<0.038	U	<0.0272	U	<0.0338	U	2	1.1	mg/kg
Methoxychlor	<0.0389	U	<0.0749	U	<0.0551	U	<0.0738	U	<0.0529	U	<0.0656	U	1,100	630	mg/kg
Toxaphene	<0.412	U	<0.794	U	<0.585	U	<0.783	U	<0.561	U	<0.696	U	16	1.2	mg/kg
HERBICIDES															
2,4-D	<0.115	U	<0.148	U	<0.125	U	<0.169	U	<0.146	U	<0.137	U	2,200	1.8	mg/kg
2,4-DB	<0.115	U	<0.148	U	<0.125	U	<0.169	U	<0.146	U	<0.137	U	-	-	mg/kg
Dalapon	<0.115	U	<0.148	U	<0.125	U	<0.169	U	<0.146	U	<0.137	U	6,600	5.3	mg/kg
Dicamba	<0.115	U	<0.148	U	<0.125	U	<0.169	U	<0.146	U	<0.137	U	6,600	-	mg/kg
Dichloroprop	<0.115	U	<0.148	U	<0.125	U	<0.169	U	<0.146	U	<0.137	U	-	-	mg/kg
Dinoseb	<0.115	U	<0.148	U	<0.125	U	<0.169	U	<0.146	U	<0.137	U	220	0.29	mg/kg
Pentachlorophenol	<0.286	U	<0.368	U	<0.312	U	<0.421	U	<0.364	U	<0.341	U	150	5	mg/kg
2,4,5-T	<0.115	U	<0.148	U	<0.125	U	<0.169	U	<0.146	U	<0.137	U	2,200	1.5	mg/kg
2,4,5-TP	<0.115	U	<0.148	U	<0.125	U	<0.169	U	<0.146	U	<0.137	U	1,800	22	mg/kg
General Chemistry															
pH	6.97	-	6.93	-	6.91	-	6.87	-	6.91	-	6.85	-	-	-	SU

Notes:

1. Residential (R) Medium Specific Concentrations (MSC) for Organic and Inorganic Related Substances in Soil (Direct Contact 0-15 feet), Pennsylvania Department of Environmental Protection (PADEP) listed in Title 25, PA Code, Chapter 250, "Administration of the Land Recycling Program" regulations, Appendix A, Table 3A, dated November 24, 2001 and revised January 8, 2011.
2. Pennsylvania Department of Environmental Protection, Management of Fill, August 27, 2010, Doc # 258-2182-773, Clean Fill Concentrations Limits for Organics (Table FP-1a) and Metals (Table FP-1b).
3. Results in **bold** type indicate that the measured level of the parameter exceeded the laboratory method detection limit.
4. "U" - Compound was not detected above its respective Reporting Detection Limit (RDL) or its Method Detection Limit (MDL).
5. "-" Indicates a blank cell with no value.
6. DQ - detection qualifier.

June 8, 2016

Mr. David Graff
Gannett Fleming Inc. (Hbg)
207 Senate Avenue
Camp Hill, PA 17011

Certificate of Analysis

Revised Report - 6/8/2016 4:32:24 PM - See workorder comment section for explanation

Project Name:	2016-MILLTOWN	Workorder:	2141551
Purchase Order:	060466	Workorder ID:	Millerstown Reservoir

Dear Mr. Graff:

Enclosed are the analytical results for samples received by the laboratory on Thursday, May 5, 2016.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Shannon Butler (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

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ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

Ms. Shannon Butler
Project Coordinator

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

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SAMPLE SUMMARY

Workorder: 2141551 Millerstown Reservoir

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2141551001	Site 1-Composite 1	Solid	5/3/2016 10:30	5/5/2016 10:39	Collected by Client
2141551002	Site 2-Composite 1	Solid	5/3/2016 11:50	5/5/2016 10:39	Collected by Client
2141551003	Site 2-Composite 2	Solid	5/3/2016 12:30	5/5/2016 10:39	Collected by Client
2141551004	Site 3-Composite 1	Solid	5/4/2016 09:30	5/5/2016 10:39	Collected by Client
2141551005	Site 3-Composite 2	Solid	5/4/2016 10:15	5/5/2016 10:39	Collected by Client
2141551006	Site 3-Composite 3	Solid	5/4/2016 11:00	5/5/2016 10:39	Collected by Client
2141551007	Equipment Blank	Water	5/3/2016 14:00	5/5/2016 10:39	Collected by Client

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SAMPLE SUMMARY

Workorder: 2141551 Millerstown Reservoir

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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PROJECT SUMMARY

Workorder: 2141551 Millerstown Reservoir

Workorder Comments

This work order was re-issued to report to the MDL. SB 06/08/16.

Sample Comments

Lab ID: 2141551001	Sample ID: Site 1-Composite 1	Sample Type: SAMPLE
This sample was analyzed at a dilution in the 8081 Pesticide analysis due to sample matrix interference. Reporting limits were adjusted accordingly.		
Lab ID: 2141551002	Sample ID: Site 2-Composite 1	Sample Type: SAMPLE
This sample was analyzed at a dilution in the 8081 Pesticide analysis due to sample matrix interference. Reporting limits were adjusted accordingly.		
Lab ID: 2141551003	Sample ID: Site 2-Composite 2	Sample Type: SAMPLE
This sample was analyzed at a dilution in the 8081 Pesticide analysis due to sample matrix interference. Reporting limits were adjusted accordingly.		
Lab ID: 2141551004	Sample ID: Site 3-Composite 1	Sample Type: SAMPLE
This sample was analyzed at a dilution in the 8081 Pesticide analysis due to sample matrix interference. Reporting limits were adjusted accordingly.		
Lab ID: 2141551005	Sample ID: Site 3-Composite 2	Sample Type: SAMPLE
This sample was analyzed at a dilution in the 8081 Pesticide analysis due to sample matrix interference. Reporting limits were adjusted accordingly.		
Lab ID: 2141551006	Sample ID: Site 3-Composite 3	Sample Type: SAMPLE
This sample was analyzed at a dilution in the 8081 Pesticide analysis due to sample matrix interference. Reporting limits were adjusted accordingly.		
Lab ID: 2141551007	Sample ID: Equipment Blank	Sample Type: SAMPLE
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.		

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

Lab ID: 2141551001 **Date Collected:** 5/3/2016 10:30 **Matrix:** Solid
Sample ID: Site 1-Composite 1 **Date Received:** 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
SEMIVOLATILES										
Acenaphthene	ND		ug/kg	151	18.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
Acenaphthylene	ND		ug/kg	151	21.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
Acetophenone	ND		ug/kg	301	24.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
Anthracene	ND		ug/kg	151	24.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
Atrazine	ND		ug/kg	301	33.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
Benzaldehyde	ND		ug/kg	602	51.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
Benzo(a)anthracene	ND		ug/kg	151	15.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
Benzo(a)pyrene	76.7J	J	ug/kg	151	12.0	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
Benzo(b)fluoranthene	110J	J	ug/kg	151	15.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
Benzo(g,h,i)perylene	72.0J	J	ug/kg	151	15.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
Benzo(k)fluoranthene	53.7J	J	ug/kg	151	15.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
Biphenyl	ND		ug/kg	301	21.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
4-Bromophenyl-phenylether	ND		ug/kg	301	27.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
Butylbenzylphthalate	ND		ug/kg	301	21.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
Caprolactam	ND		ug/kg	602	54.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
Carbazole	ND		ug/kg	301	21.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
4-Chloro-3-methylphenol	ND		ug/kg	602	30.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
4-Chloroaniline	ND		ug/kg	602	36.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
bis(2-Chloroethoxy)methane	ND		ug/kg	301	27.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
bis(2-Chloroethyl)ether	ND		ug/kg	301	39.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
bis(2-Chloroisopropyl)ether	ND		ug/kg	301	45.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
2-Chloronaphthalene	ND		ug/kg	301	18.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
2-Chlorophenol	ND		ug/kg	602	24.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
4-Chlorophenyl-phenylether	ND		ug/kg	301	24.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
Chrysene	79.4J	J	ug/kg	151	15.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
mp-Cresol	ND		ug/kg	602	24.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
o-Cresol	ND		ug/kg	602	33.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
Di-n-Butylphthalate	ND		ug/kg	301	24.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
Di-n-Octylphthalate	ND		ug/kg	301	21.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
Dibenzo(a,h)anthracene	ND		ug/kg	151	18.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
Dibenzofuran	ND		ug/kg	301	24.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
3,3-Dichlorobenzidine	ND		ug/kg	602	114	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
2,4-Dichlorophenol	ND		ug/kg	602	24.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
Diethylphthalate	ND		ug/kg	301	24.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
2,4-Dimethylphenol	ND		ug/kg	602	45.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
Dimethylphthalate	ND		ug/kg	301	21.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A
2,4-Dinitrophenol	ND		ug/kg	602	120	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

Lab ID: **2141551001**
Sample ID: **Site 1-Composite 1**

Date Collected: 5/3/2016 10:30 Matrix: Solid
Date Received: 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr	
2,4-Dinitrotoluene	ND		ug/kg	301	27.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
2,6-Dinitrotoluene	ND		ug/kg	301	36.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
1,4-Dioxane	ND		ug/kg	301	148	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
bis(2-Ethylhexyl)phthalate	74.9J	J	ug/kg	301	21.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
Fluoranthene	158		ug/kg	151	15.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
Fluorene	ND		ug/kg	151	18.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
Hexachlorobenzene	ND		ug/kg	301	33.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
Hexachlorobutadiene	ND		ug/kg	301	30.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
Hexachlorocyclopentadiene	ND		ug/kg	602	33.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
Hexachloroethane	ND		ug/kg	301	27.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
Indeno(1,2,3-cd)pyrene	68.3J	J	ug/kg	151	21.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
Isophorone	ND		ug/kg	301	18.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
2-Methyl-4,6-dinitrophenol	ND		ug/kg	602	78.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
2-Methylnaphthalene	ND		ug/kg	301	15.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
Naphthalene	ND		ug/kg	151	18.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
2-Nitroaniline	ND		ug/kg	602	36.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
3-Nitroaniline	ND		ug/kg	602	60.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
4-Nitroaniline	ND		ug/kg	602	24.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
Nitrobenzene	ND		ug/kg	301	36.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
2-Nitrophenol	ND		ug/kg	602	33.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
4-Nitrophenol	ND		ug/kg	602	42.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
N-Nitroso-di-n-propylamine	ND		ug/kg	301	24.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
N-Nitrosodiphenylamine	ND		ug/kg	301	24.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
Pentachlorophenol	ND		ug/kg	602	78.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
Phenanthrene	59.1J	J	ug/kg	151	15.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
Phenol	ND		ug/kg	602	30.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
Pyrene	124J	J	ug/kg	151	15.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	301	21.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
2,3,4,6-Tetrachlorophenol	ND		ug/kg	602	36.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
2,4,5-Trichlorophenol	ND		ug/kg	602	36.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
2,4,6-Trichlorophenol	ND		ug/kg	602	36.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
2,4,6-Tribromophenol (S)	59.8		%	19 - 132		SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
2-Fluorobiphenyl (S)	49.1		%	40 - 110		SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
2-Fluorophenol (S)	83.1		%	26 - 116		SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
Nitrobenzene-d5 (S)	69.4		%	38 - 112		SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
Phenol-d5 (S)	82		%	35 - 111		SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	
Terphenyl-d14 (S)	46.8		%	45 - 126		SW846 8270D	5/11/16 02:25 VLM	5/11/16 11:34	CGS	A	

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

 Lab ID: **2141551001**
 Sample ID: **Site 1-Composite 1**

 Date Collected: 5/3/2016 10:30 Matrix: Solid
 Date Received: 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
PCBs										
Aroclor-1016	ND		mg/kg	0.078	0.014	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:35	KJH A
Aroclor-1221	ND		mg/kg	0.078	0.0071	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:35	KJH A
Aroclor-1232	ND		mg/kg	0.078	0.014	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:35	KJH A
Aroclor-1242	ND		mg/kg	0.078	0.021	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:35	KJH A
Aroclor-1248	ND		mg/kg	0.078	0.014	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:35	KJH A
Aroclor-1254	0.052J	J	mg/kg	0.078	0.014	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:35	KJH A
Aroclor-1260	0.027J	J	mg/kg	0.078	0.014	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:35	KJH A
Aroclor-1262	ND		mg/kg	0.078	0.016	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:35	KJH A
Aroclor-1268	ND		mg/kg	0.078	0.021	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:35	KJH A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i> <i>Cntr</i>
Decachlorobiphenyls (S)	77.4		%	49 - 115		SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:35	KJH A
Tetrachloro-m-xylene (S)	91.1		%	27 - 137		SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:35	KJH A
PESTICIDES										
Aldrin	ND		ug/kg	20.0	6.5	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS A
alpha-BHC	ND		ug/kg	20.0	1.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS A
beta-BHC	ND		ug/kg	20.0	2.1	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS A
delta-BHC	ND		ug/kg	20.0	1.5	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS A
gamma-BHC	ND		ug/kg	20.0	1.6	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS A
alpha-Chlordane	ND		ug/kg	20.0	2.1	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS A
gamma-Chlordane	ND		ug/kg	20.0	3.4	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS A
4,4'-DDD	ND		ug/kg	38.9	3.2	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS A
4,4'-DDE	ND		ug/kg	38.9	5.3	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS A
4,4'-DDT	ND		ug/kg	38.9	4.5	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS A
Dieldrin	ND		ug/kg	38.9	4.5	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS A
Endosulfan I	ND		ug/kg	20.0	2.5	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS A
Endosulfan II	ND		ug/kg	38.9	8.1	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS A
Endosulfan Sulfate	ND		ug/kg	38.9	2.6	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS A
Endrin	ND		ug/kg	38.9	2.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS A
Endrin Aldehyde	ND		ug/kg	38.9	4.2	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS A
Endrin Ketone	ND		ug/kg	38.9	5.4	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS A
Heptachlor	ND		ug/kg	20.0	2.0	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS A
Heptachlor Epoxide	ND		ug/kg	20.0	2.0	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS A
Methoxychlor	ND		ug/kg	38.9	5.2	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS A
Toxaphene	ND		ug/kg	412	68.3	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i> <i>Cntr</i>
Decachlorobiphenyls (S)	94.4		%	30 - 135		SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS A

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

 Lab ID: **2141551001** Date Collected: 5/3/2016 10:30 Matrix: Solid
 Sample ID: **Site 1-Composite 1** Date Received: 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Tetrachloro-m-xylene (S)	69.3		%	30 - 111		SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS A
HERBICIDES										
2,4-D	ND		ug/kg	115	44.6	SW846 8151A	5/9/16 06:20	VLM	5/11/16 14:42	KJH A
2,4-DB	ND		ug/kg	115	61.8	SW846 8151A	5/9/16 06:20	VLM	5/11/16 14:42	KJH A
Dalapon	ND		ug/kg	115	29.2	SW846 8151A	5/9/16 06:20	VLM	5/11/16 14:42	KJH A
Dicamba	ND		ug/kg	115	41.2	SW846 8151A	5/9/16 06:20	VLM	5/11/16 14:42	KJH A
Dichloroprop	ND		ug/kg	115	46.3	SW846 8151A	5/9/16 06:20	VLM	5/11/16 14:42	KJH A
Dinoseb	ND		ug/kg	286	58.3	SW846 8151A	5/9/16 06:20	VLM	5/11/16 14:42	KJH A
Pentachlorophenol	ND		ug/kg	115	65.2	SW846 8151A	5/9/16 06:20	VLM	5/11/16 14:42	KJH A
2,4,5-T	ND		ug/kg	115	48.0	SW846 8151A	5/9/16 06:20	VLM	5/11/16 14:42	KJH A
2,4,5-TP	ND		ug/kg	115	53.2	SW846 8151A	5/9/16 06:20	VLM	5/11/16 14:42	KJH A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i> <i>Cntr</i>
2,4-Dichlorophenylacetic acid (S)	69.3		%	36 - 113		SW846 8151A	5/9/16 06:20	VLM	5/11/16 14:42	KJH A
WET CHEMISTRY										
Moisture	42.1		%	0.1	0.01	S2540G-11			5/11/16 10:52	SLC A
pH	6.97	1	pH_Units		1	SW846 9045D			5/7/16 06:25	MSA A
Total Solids	57.9		%	0.1	0.01	S2540G-11			5/11/16 10:52	SLC A
METALS										
Aluminum, Total	3300		mg/kg	4.2	1.4	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO A1
Antimony, Total	ND		mg/kg	0.11	0.035	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO A1
Arsenic, Total	0.46		mg/kg	0.16	0.053	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO A1
Barium, Total	20.3		mg/kg	0.26	0.085	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO A1
Beryllium, Total	0.095		mg/kg	0.053	0.017	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO A1
Cadmium, Total	0.039J	J	mg/kg	0.053	0.017	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO A1
Calcium, Total	314		mg/kg	5.3	1.7	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO A1
Chromium, Total	4.8		mg/kg	0.11	0.035	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO A1
Cobalt, Total	0.74		mg/kg	0.26	0.085	SW846 6020A	5/10/16 13:40	JPS	5/20/16 09:32	MO A1
Copper, Total	2.2		mg/kg	0.26	0.085	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO A1
Iron, Total	3050		mg/kg	2.6	0.85	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO A1
Lead, Total	4.3		mg/kg	0.11	0.035	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO A1
Magnesium, Total	498		mg/kg	5.3	1.7	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO A1
Manganese, Total	35.8		mg/kg	0.26	0.085	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO A1
Mercury, Total	0.028J	J	mg/kg	0.086	0.028	SW846 7471B	5/16/16 10:30	MNP	5/16/16 13:17	MNP A2
Nickel, Total	2.4		mg/kg	0.26	0.085	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO A1
Potassium, Total	265		mg/kg	5.3	1.7	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO A1
Selenium, Total	0.52		mg/kg	0.26	0.085	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO A1

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

Lab ID: **2141551001** Date Collected: 5/3/2016 10:30 Matrix: Solid
Sample ID: **Site 1-Composite 1** Date Received: 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Silver, Total	ND		mg/kg	0.11	0.035	SW846 6020A	5/10/16 13:40 JPS	5/20/16 09:32	MO	A1
Sodium, Total	68.1		mg/kg	5.3	1.7	SW846 6020A	5/10/16 13:40 JPS	5/19/16 16:49	MO	A1
Thallium, Total	0.020J	J	mg/kg	0.053	0.017	SW846 6020A	5/10/16 13:40 JPS	5/20/16 09:32	MO	A1
Vanadium, Total	5.6		mg/kg	0.11	0.035	SW846 6020A	5/10/16 13:40 JPS	5/19/16 16:49	MO	A1
Zinc, Total	10.4		mg/kg	0.26	0.085	SW846 6020A	5/10/16 13:40 JPS	5/19/16 16:49	MO	A1



Ms. Shannon Butler
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

Lab ID: **2141551002** Date Collected: 5/3/2016 11:50 Matrix: Solid
Sample ID: **Site 2-Composite 1** Date Received: 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
SEMIVOLATILES										
Acenaphthene	ND		ug/kg	183	22.0	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
Acenaphthylene	ND		ug/kg	183	25.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
Acetophenone	ND		ug/kg	366	29.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
Anthracene	ND		ug/kg	183	29.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
Atrazine	ND		ug/kg	366	40.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
Benzaldehyde	ND		ug/kg	732	62.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
Benzo(a)anthracene	67.3J	J	ug/kg	183	18.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
Benzo(a)pyrene	113J	J	ug/kg	183	14.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
Benzo(b)fluoranthene	173J	J	ug/kg	183	18.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
Benzo(g,h,i)perylene	118J	J	ug/kg	183	18.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
Benzo(k)fluoranthene	53.0J	J	ug/kg	183	18.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
Biphenyl	ND		ug/kg	366	25.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
4-Bromophenyl-phenylether	ND		ug/kg	366	32.9	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
Butylbenzylphthalate	ND		ug/kg	366	25.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
Caprolactam	ND		ug/kg	732	65.9	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
Carbazole	ND		ug/kg	366	25.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
4-Chloro-3-methylphenol	ND		ug/kg	732	36.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
4-Chloroaniline	ND		ug/kg	732	43.9	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
bis(2-Chloroethoxy)methane	ND		ug/kg	366	32.9	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
bis(2-Chloroethyl)ether	ND		ug/kg	366	47.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
bis(2-Chloroisopropyl)ether	ND		ug/kg	366	54.9	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
2-Chloronaphthalene	ND		ug/kg	366	22.0	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
2-Chlorophenol	ND		ug/kg	732	29.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
4-Chlorophenyl-phenylether	ND		ug/kg	366	29.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
Chrysene	226		ug/kg	183	18.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
mp-Cresol	ND		ug/kg	732	29.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
o-Cresol	ND		ug/kg	732	40.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
Di-n-Butylphthalate	ND		ug/kg	366	29.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
Di-n-Octylphthalate	ND		ug/kg	366	25.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
Dibenzo(a,h)anthracene	44.7J	J	ug/kg	183	22.0	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
Dibenzofuran	ND		ug/kg	366	29.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
3,3-Dichlorobenzidine	ND		ug/kg	732	139	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
2,4-Dichlorophenol	ND		ug/kg	732	29.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
Diethylphthalate	ND		ug/kg	366	29.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
2,4-Dimethylphenol	ND		ug/kg	732	54.9	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
Dimethylphthalate	ND		ug/kg	366	25.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A
2,4-Dinitrophenol	ND		ug/kg	732	146	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

Lab ID: **2141551002**
Sample ID: **Site 2-Composite 1**

Date Collected: 5/3/2016 11:50 Matrix: Solid
Date Received: 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr	
2,4-Dinitrotoluene	ND		ug/kg	366	32.9	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
2,6-Dinitrotoluene	ND		ug/kg	366	43.9	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
1,4-Dioxane	ND		ug/kg	366	179	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
bis(2-Ethylhexyl)phthalate	ND		ug/kg	366	25.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
Fluoranthene	194		ug/kg	183	18.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
Fluorene	ND		ug/kg	183	22.0	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
Hexachlorobenzene	ND		ug/kg	366	40.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
Hexachlorobutadiene	ND		ug/kg	366	36.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
Hexachlorocyclopentadiene	ND		ug/kg	732	40.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
Hexachloroethane	ND		ug/kg	366	32.9	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
Indeno(1,2,3-cd)pyrene	119J	J	ug/kg	183	25.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
Isophorone	ND		ug/kg	366	22.0	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
2-Methyl-4,6-dinitrophenol	ND		ug/kg	732	95.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
2-Methylnaphthalene	ND		ug/kg	366	18.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
Naphthalene	ND		ug/kg	183	22.0	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
2-Nitroaniline	ND		ug/kg	732	43.9	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
3-Nitroaniline	ND		ug/kg	732	73.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
4-Nitroaniline	ND		ug/kg	732	29.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
Nitrobenzene	ND		ug/kg	366	43.9	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
2-Nitrophenol	ND		ug/kg	732	40.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
4-Nitrophenol	ND		ug/kg	732	51.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
N-Nitroso-di-n-propylamine	ND		ug/kg	366	29.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
N-Nitrosodiphenylamine	ND		ug/kg	366	29.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
Pentachlorophenol	ND		ug/kg	732	95.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
Phenanthrene	58.9J	J	ug/kg	183	18.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
Phenol	ND		ug/kg	732	36.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
Pyrene	148J	J	ug/kg	183	18.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	366	25.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
2,3,4,6-Tetrachlorophenol	ND		ug/kg	732	43.9	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
2,4,5-Trichlorophenol	ND		ug/kg	732	43.9	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
2,4,6-Trichlorophenol	ND		ug/kg	732	43.9	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
2,4,6-Tribromophenol (S)	51.3		%	19 - 132		SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
2-Fluorobiphenyl (S)	42		%	40 - 110		SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
2-Fluorophenol (S)	85.3		%	26 - 116		SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
Nitrobenzene-d5 (S)	69		%	38 - 112		SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
Phenol-d5 (S)	82.8		%	35 - 111		SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	
Terphenyl-d14 (S)	41	1	%	45 - 126		SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:00	CGS	A	

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

Lab ID: **2141551002** Date Collected: 5/3/2016 11:50 Matrix: Solid
Sample ID: **Site 2-Composite 1** Date Received: 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
PCBs										
Aroclor-1016	ND		mg/kg	0.15	0.027	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:46	KJH A
Aroclor-1221	ND		mg/kg	0.15	0.014	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:46	KJH A
Aroclor-1232	ND		mg/kg	0.15	0.027	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:46	KJH A
Aroclor-1242	ND		mg/kg	0.15	0.041	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:46	KJH A
Aroclor-1248	ND		mg/kg	0.15	0.027	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:46	KJH A
Aroclor-1254	ND		mg/kg	0.15	0.027	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:46	KJH A
Aroclor-1260	ND		mg/kg	0.15	0.027	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:46	KJH A
Aroclor-1262	ND		mg/kg	0.15	0.032	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:46	KJH A
Aroclor-1268	ND		mg/kg	0.15	0.041	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:46	KJH A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i> <i>Cntr</i>
Decachlorobiphenyls (S)	87.8		%	49 - 115		SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:46	KJH A
Tetrachloro-m-xylene (S)	95.8		%	27 - 137		SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:46	KJH A
PESTICIDES										
Aldrin	ND		ug/kg	38.6	12.5	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS A
alpha-BHC	ND		ug/kg	38.6	3.4	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS A
beta-BHC	ND		ug/kg	38.6	4.1	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS A
delta-BHC	ND		ug/kg	38.6	2.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS A
gamma-BHC	ND		ug/kg	38.6	3.2	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS A
alpha-Chlordane	ND		ug/kg	38.6	4.1	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS A
gamma-Chlordane	ND		ug/kg	38.6	6.6	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS A
4,4'-DDD	ND		ug/kg	74.9	6.1	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS A
4,4'-DDE	ND		ug/kg	74.9	10.2	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS A
4,4'-DDT	ND		ug/kg	74.9	8.6	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS A
Dieldrin	ND		ug/kg	74.9	8.6	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS A
Endosulfan I	ND		ug/kg	38.6	4.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS A
Endosulfan II	ND		ug/kg	74.9	15.7	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS A
Endosulfan Sulfate	ND		ug/kg	74.9	5.0	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS A
Endrin	ND		ug/kg	74.9	5.4	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS A
Endrin Aldehyde	ND		ug/kg	74.9	8.2	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS A
Endrin Ketone	ND		ug/kg	74.9	10.4	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS A
Heptachlor	ND		ug/kg	38.6	3.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS A
Heptachlor Epoxide	ND		ug/kg	38.6	3.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS A
Methoxychlor	ND		ug/kg	74.9	10	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS A
Toxaphene	ND		ug/kg	794	132	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i> <i>Cntr</i>
Decachlorobiphenyls (S)	87.3		%	30 - 135		SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS A

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

Lab ID: **2141551002**
Sample ID: **Site 2-Composite 1**

Date Collected: 5/3/2016 11:50 Matrix: Solid
Date Received: 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Tetrachloro-m-xylene (S)	60.2		%	30 - 111		SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS A
HERBICIDES										
2,4-D	ND		ug/kg	148	57.3	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:19	KJH A
2,4-DB	ND		ug/kg	148	79.3	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:19	KJH A
Dalapon	ND		ug/kg	148	37.4	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:19	KJH A
Dicamba	ND		ug/kg	148	52.9	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:19	KJH A
Dichloroprop	ND		ug/kg	148	59.5	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:19	KJH A
Dinoseb	ND		ug/kg	368	74.9	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:19	KJH A
Pentachlorophenol	ND		ug/kg	148	83.7	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:19	KJH A
2,4,5-T	ND		ug/kg	148	61.7	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:19	KJH A
2,4,5-TP	ND		ug/kg	148	68.3	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:19	KJH A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i> <i>Cntr</i>
2,4-Dichlorophenylacetic acid (S)	69.7		%	36 - 113		SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:19	KJH A
WET CHEMISTRY										
Moisture	55.9		%	0.1	0.01	S2540G-11			5/11/16 10:52	SLC A
pH	6.93	2	pH_Units		1	SW846 9045D			5/7/16 06:28	MSA A
Total Solids	44.1		%	0.1	0.01	S2540G-11			5/11/16 10:52	SLC A
METALS										
Aluminum, Total	1260		mg/kg	5.5	1.8	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO A1
Antimony, Total	ND		mg/kg	0.14	0.046	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO A1
Arsenic, Total	0.20J	J	mg/kg	0.21	0.069	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO A1
Barium, Total	8.5		mg/kg	0.35	0.11	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO A1
Beryllium, Total	0.039J	J	mg/kg	0.069	0.023	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO A1
Cadmium, Total	ND		mg/kg	0.069	0.023	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO A1
Calcium, Total	168		mg/kg	6.9	2.3	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO A1
Chromium, Total	1.8		mg/kg	0.14	0.046	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO A1
Cobalt, Total	0.30J	J	mg/kg	0.35	0.11	SW846 6020A	5/10/16 13:40	JPS	5/20/16 09:35	MO A1
Copper, Total	1.1		mg/kg	0.35	0.11	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO A1
Iron, Total	1290		mg/kg	3.5	1.1	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO A1
Lead, Total	1.6		mg/kg	0.14	0.046	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO A1
Magnesium, Total	234		mg/kg	6.9	2.3	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO A1
Manganese, Total	17.0		mg/kg	0.35	0.11	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO A1
Mercury, Total	0.049J	J	mg/kg	0.10	0.032	SW846 7471B	5/16/16 10:30	MNP	5/16/16 13:21	MNP A2
Nickel, Total	1.0		mg/kg	0.35	0.11	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO A1
Potassium, Total	102		mg/kg	6.9	2.3	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO A1
Selenium, Total	0.21J	J	mg/kg	0.35	0.11	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO A1

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

Lab ID: **2141551003**
Sample ID: **Site 2-Composite 2**

Date Collected: 5/3/2016 12:30 Matrix: Solid
Date Received: 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
SEMIVOLATILES										
Acenaphthene	ND		ug/kg	156	18.7	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
Acenaphthylene	ND		ug/kg	156	21.8	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
Acetophenone	ND		ug/kg	312	25.0	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
Anthracene	ND		ug/kg	156	25.0	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
Atrazine	ND		ug/kg	312	34.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
Benzaldehyde	ND		ug/kg	624	53.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
Benzo(a)anthracene	ND		ug/kg	156	15.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
Benzo(a)pyrene	19.9J	J	ug/kg	156	12.5	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
Benzo(b)fluoranthene	ND		ug/kg	156	15.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
Benzo(g,h,i)perylene	19.6J	J	ug/kg	156	15.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
Benzo(k)fluoranthene	ND		ug/kg	156	15.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
Biphenyl	ND		ug/kg	312	21.8	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
4-Bromophenyl-phenylether	ND		ug/kg	312	28.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
Butylbenzylphthalate	ND		ug/kg	312	21.8	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
Caprolactam	ND		ug/kg	624	56.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
Carbazole	ND		ug/kg	312	21.8	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
4-Chloro-3-methylphenol	ND		ug/kg	624	31.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
4-Chloroaniline	ND		ug/kg	624	37.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
bis(2-Chloroethoxy)methane	ND		ug/kg	312	28.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
bis(2-Chloroethyl)ether	ND		ug/kg	312	40.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
bis(2-Chloroisopropyl)ether	ND		ug/kg	312	46.8	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
2-Chloronaphthalene	ND		ug/kg	312	18.7	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
2-Chlorophenol	ND		ug/kg	624	25.0	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
4-Chlorophenyl-phenylether	ND		ug/kg	312	25.0	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
Chrysene	ND		ug/kg	156	15.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
mp-Cresol	ND		ug/kg	624	25.0	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
o-Cresol	ND		ug/kg	624	34.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
Di-n-Butylphthalate	ND		ug/kg	312	25.0	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
Di-n-Octylphthalate	ND		ug/kg	312	21.8	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
Dibenzo(a,h)anthracene	ND		ug/kg	156	18.7	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
Dibenzofuran	ND		ug/kg	312	25.0	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
3,3-Dichlorobenzidine	ND		ug/kg	624	119	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
2,4-Dichlorophenol	ND		ug/kg	624	25.0	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
Diethylphthalate	ND		ug/kg	312	25.0	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
2,4-Dimethylphenol	ND		ug/kg	624	46.8	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
Dimethylphthalate	ND		ug/kg	312	21.8	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A
2,4-Dinitrophenol	ND		ug/kg	624	125	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

Lab ID: **2141551003**
Sample ID: **Site 2-Composite 2**

Date Collected: 5/3/2016 12:30 Matrix: Solid
Date Received: 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr	
2,4-Dinitrotoluene	ND		ug/kg	312	28.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
2,6-Dinitrotoluene	ND		ug/kg	312	37.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
1,4-Dioxane	ND		ug/kg	312	153	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
bis(2-Ethylhexyl)phthalate	ND		ug/kg	312	21.8	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
Fluoranthene	31.4J	J	ug/kg	156	15.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
Fluorene	ND		ug/kg	156	18.7	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
Hexachlorobenzene	ND		ug/kg	312	34.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
Hexachlorobutadiene	ND		ug/kg	312	31.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
Hexachlorocyclopentadiene	ND		ug/kg	624	34.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
Hexachloroethane	ND		ug/kg	312	28.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
Indeno(1,2,3-cd)pyrene	ND		ug/kg	156	21.8	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
Isophorone	ND		ug/kg	312	18.7	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
2-Methyl-4,6-dinitrophenol	ND		ug/kg	624	81.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
2-Methylnaphthalene	ND		ug/kg	312	15.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
Naphthalene	ND		ug/kg	156	18.7	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
2-Nitroaniline	ND		ug/kg	624	37.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
3-Nitroaniline	ND		ug/kg	624	62.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
4-Nitroaniline	ND		ug/kg	624	25.0	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
Nitrobenzene	ND		ug/kg	312	37.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
2-Nitrophenol	ND		ug/kg	624	34.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
4-Nitrophenol	ND		ug/kg	624	43.7	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
N-Nitroso-di-n-propylamine	ND		ug/kg	312	25.0	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
N-Nitrosodiphenylamine	ND		ug/kg	312	25.0	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
Pentachlorophenol	ND		ug/kg	624	81.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
Phenanthrene	16.2J	J	ug/kg	156	15.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
Phenol	ND		ug/kg	624	31.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
Pyrene	28.3J	J	ug/kg	156	15.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	312	21.8	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
2,3,4,6-Tetrachlorophenol	ND		ug/kg	624	37.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
2,4,5-Trichlorophenol	ND		ug/kg	624	37.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
2,4,6-Trichlorophenol	ND		ug/kg	624	37.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
2,4,6-Tribromophenol (S)	45.9		%	19 - 132		SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
2-Fluorobiphenyl (S)	36.5	1	%	40 - 110		SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
2-Fluorophenol (S)	78.6		%	26 - 116		SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
Nitrobenzene-d5 (S)	60.7		%	38 - 112		SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
Phenol-d5 (S)	77.3		%	35 - 111		SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	
Terphenyl-d14 (S)	37.8	2	%	45 - 126		SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:26	CGS	A	

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

 Lab ID: **2141551003** Date Collected: 5/3/2016 12:30 Matrix: Solid
 Sample ID: **Site 2-Composite 2** Date Received: 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
PCBs										
Aroclor-1016	ND		mg/kg	0.11	0.020	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:58	KJH A
Aroclor-1221	ND		mg/kg	0.11	0.010	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:58	KJH A
Aroclor-1232	ND		mg/kg	0.11	0.020	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:58	KJH A
Aroclor-1242	ND		mg/kg	0.11	0.030	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:58	KJH A
Aroclor-1248	ND		mg/kg	0.11	0.020	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:58	KJH A
Aroclor-1254	ND		mg/kg	0.11	0.020	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:58	KJH A
Aroclor-1260	ND		mg/kg	0.11	0.020	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:58	KJH A
Aroclor-1262	ND		mg/kg	0.11	0.023	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:58	KJH A
Aroclor-1268	ND		mg/kg	0.11	0.030	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:58	KJH A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i> <i>Cntr</i>
Decachlorobiphenyls (S)	84.2		%	49 - 115		SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:58	KJH A
Tetrachloro-m-xylene (S)	88.1		%	27 - 137		SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:58	KJH A
PESTICIDES										
Aldrin	ND		ug/kg	28.4	9.2	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS A
alpha-BHC	ND		ug/kg	28.4	2.5	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS A
beta-BHC	ND		ug/kg	28.4	3.0	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS A
delta-BHC	ND		ug/kg	28.4	2.2	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS A
gamma-BHC	ND		ug/kg	28.4	2.3	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS A
alpha-Chlordane	ND		ug/kg	28.4	3.0	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS A
gamma-Chlordane	ND		ug/kg	28.4	4.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS A
4,4'-DDD	ND		ug/kg	55.1	4.5	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS A
4,4'-DDE	ND		ug/kg	55.1	7.5	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS A
4,4'-DDT	ND		ug/kg	55.1	6.3	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS A
Dieldrin	ND		ug/kg	55.1	6.3	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS A
Endosulfan I	ND		ug/kg	28.4	3.5	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS A
Endosulfan II	ND		ug/kg	55.1	11.5	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS A
Endosulfan Sulfate	ND		ug/kg	55.1	3.7	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS A
Endrin	ND		ug/kg	55.1	4.0	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS A
Endrin Aldehyde	ND		ug/kg	55.1	6.0	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS A
Endrin Ketone	ND		ug/kg	55.1	7.7	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS A
Heptachlor	ND		ug/kg	28.4	2.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS A
Heptachlor Epoxide	ND		ug/kg	28.4	2.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS A
Methoxychlor	ND		ug/kg	55.1	7.4	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS A
Toxaphene	ND		ug/kg	585	96.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i> <i>Cntr</i>
Decachlorobiphenyls (S)	80.4		%	30 - 135		SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS A

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

 Lab ID: **2141551003** Date Collected: 5/3/2016 12:30 Matrix: Solid
 Sample ID: **Site 2-Composite 2** Date Received: 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Tetrachloro-m-xylene (S)	54.7		%	30 - 111		SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS A
HERBICIDES										
2,4-D	ND		ug/kg	125	48.6	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:56	KJH A
2,4-DB	ND		ug/kg	125	67.3	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:56	KJH A
Dalapon	ND		ug/kg	125	31.8	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:56	KJH A
Dicamba	ND		ug/kg	125	44.8	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:56	KJH A
Dichloroprop	ND		ug/kg	125	50.4	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:56	KJH A
Dinoseb	ND		ug/kg	312	63.5	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:56	KJH A
Pentachlorophenol	ND		ug/kg	125	71.0	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:56	KJH A
2,4,5-T	ND		ug/kg	125	52.3	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:56	KJH A
2,4,5-TP	ND		ug/kg	125	57.9	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:56	KJH A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i> <i>Cntr</i>
2,4-Dichlorophenylacetic acid (S)	62.1		%	36 - 113		SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:56	KJH A
WET CHEMISTRY										
Moisture	47.2		%	0.1	0.01	S2540G-11			5/11/16 10:52	SLC A
pH	6.91	3	pH_Units		1	SW846 9045D			5/7/16 06:34	MSA A
Total Solids	52.8		%	0.1	0.01	S2540G-11			5/11/16 10:52	SLC A
METALS										
Aluminum, Total	1530		mg/kg	4.7	1.5	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO A1
Antimony, Total	ND		mg/kg	0.12	0.039	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO A1
Arsenic, Total	0.27		mg/kg	0.18	0.059	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO A1
Barium, Total	9.7		mg/kg	0.29	0.094	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO A1
Beryllium, Total	0.053J	J	mg/kg	0.059	0.019	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO A1
Cadmium, Total	ND		mg/kg	0.059	0.019	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO A1
Calcium, Total	86.2		mg/kg	5.9	1.9	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO A1
Chromium, Total	2.0		mg/kg	0.12	0.039	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO A1
Cobalt, Total	0.38		mg/kg	0.29	0.094	SW846 6020A	5/10/16 13:40	JPS	5/20/16 09:39	MO A1
Copper, Total	1.6		mg/kg	0.29	0.094	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO A1
Iron, Total	1450		mg/kg	2.9	0.94	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO A1
Lead, Total	1.4		mg/kg	0.12	0.039	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO A1
Magnesium, Total	194		mg/kg	5.9	1.9	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO A1
Manganese, Total	21.6		mg/kg	0.29	0.094	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO A1
Mercury, Total	0.055J	J	mg/kg	0.082	0.026	SW846 7471B	5/16/16 10:30	MNP	5/16/16 13:22	MNP A2
Nickel, Total	1.2		mg/kg	0.29	0.094	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO A1
Potassium, Total	102		mg/kg	5.9	1.9	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO A1
Selenium, Total	0.16J	J	mg/kg	0.29	0.094	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO A1

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

Lab ID: **2141551004**

Date Collected: 5/4/2016 09:30

Matrix: Solid

Sample ID: **Site 3-Composite 1**

Date Received: 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
SEMIVOLATILES										
Acenaphthene	ND		ug/kg	234	28.1	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
Acenaphthylene	ND		ug/kg	234	32.8	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
Acetophenone	ND		ug/kg	469	37.5	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
Anthracene	ND		ug/kg	234	37.5	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
Atrazine	ND		ug/kg	469	51.6	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
Benzaldehyde	ND		ug/kg	938	79.7	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
Benzo(a)anthracene	ND		ug/kg	234	23.4	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
Benzo(a)pyrene	94.8J	J	ug/kg	234	18.8	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
Benzo(b)fluoranthene	146J	J	ug/kg	234	23.4	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
Benzo(g,h,i)perylene	87.2J	J	ug/kg	234	23.4	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
Benzo(k)fluoranthene	54.7J	J	ug/kg	234	23.4	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
Biphenyl	ND		ug/kg	469	32.8	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
4-Bromophenyl-phenylether	ND		ug/kg	469	42.2	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
Butylbenzylphthalate	ND		ug/kg	469	32.8	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
Caprolactam	ND		ug/kg	938	84.4	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
Carbazole	ND		ug/kg	469	32.8	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
4-Chloro-3-methylphenol	ND		ug/kg	938	46.9	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
4-Chloroaniline	ND		ug/kg	938	56.3	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
bis(2-Chloroethoxy)methane	ND		ug/kg	469	42.2	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
bis(2-Chloroethyl)ether	ND		ug/kg	469	61.0	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
bis(2-Chloroisopropyl)ether	ND		ug/kg	469	70.3	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
2-Chloronaphthalene	ND		ug/kg	469	28.1	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
2-Chlorophenol	ND		ug/kg	938	37.5	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
4-Chlorophenyl-phenylether	ND		ug/kg	469	37.5	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
Chrysene	133J	J	ug/kg	234	23.4	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
mp-Cresol	ND		ug/kg	938	37.5	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
o-Cresol	ND		ug/kg	938	51.6	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
Di-n-Butylphthalate	ND		ug/kg	469	37.5	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
Di-n-Octylphthalate	ND		ug/kg	469	32.8	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
Dibenzo(a,h)anthracene	34.0J	J	ug/kg	234	28.1	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
Dibenzofuran	ND		ug/kg	469	37.5	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
3,3-Dichlorobenzidine	ND		ug/kg	938	178	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
2,4-Dichlorophenol	ND		ug/kg	938	37.5	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
Diethylphthalate	ND		ug/kg	469	37.5	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
2,4-Dimethylphenol	ND		ug/kg	938	70.3	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
Dimethylphthalate	ND		ug/kg	469	32.8	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A
2,4-Dinitrophenol	ND		ug/kg	938	188	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS A

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

Lab ID: **2141551004**
Sample ID: **Site 3-Composite 1**

Date Collected: 5/4/2016 09:30 Matrix: Solid
Date Received: 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr	
2,4-Dinitrotoluene	ND		ug/kg	469	42.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
2,6-Dinitrotoluene	ND		ug/kg	469	56.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
1,4-Dioxane	ND		ug/kg	469	230	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
bis(2-Ethylhexyl)phthalate	ND		ug/kg	469	32.8	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
Fluoranthene	186J	J	ug/kg	234	23.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
Fluorene	ND		ug/kg	234	28.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
Hexachlorobenzene	ND		ug/kg	469	51.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
Hexachlorobutadiene	ND		ug/kg	469	46.9	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
Hexachlorocyclopentadiene	ND		ug/kg	938	51.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
Hexachloroethane	ND		ug/kg	469	42.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
Indeno(1,2,3-cd)pyrene	97.2J	J	ug/kg	234	32.8	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
Isophorone	ND		ug/kg	469	28.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
2-Methyl-4,6-dinitrophenol	ND		ug/kg	938	122	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
2-Methylnaphthalene	ND		ug/kg	469	23.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
Naphthalene	ND		ug/kg	234	28.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
2-Nitroaniline	ND		ug/kg	938	56.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
3-Nitroaniline	ND		ug/kg	938	93.8	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
4-Nitroaniline	ND		ug/kg	938	37.5	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
Nitrobenzene	ND		ug/kg	469	56.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
2-Nitrophenol	ND		ug/kg	938	51.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
4-Nitrophenol	ND		ug/kg	938	65.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
N-Nitroso-di-n-propylamine	ND		ug/kg	469	37.5	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
N-Nitrosodiphenylamine	ND		ug/kg	469	37.5	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
Pentachlorophenol	ND		ug/kg	938	122	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
Phenanthrene	70.9J	J	ug/kg	234	23.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
Phenol	ND		ug/kg	938	46.9	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
Pyrene	122J	J	ug/kg	234	23.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	469	32.8	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
2,3,4,6-Tetrachlorophenol	ND		ug/kg	938	56.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
2,4,5-Trichlorophenol	ND		ug/kg	938	56.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
2,4,6-Trichlorophenol	ND		ug/kg	938	56.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
2,4,6-Tribromophenol (S)	42.6		%	19 - 132		SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
2-Fluorobiphenyl (S)	31	1	%	40 - 110		SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
2-Fluorophenol (S)	75.5		%	26 - 116		SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
Nitrobenzene-d5 (S)	58.8		%	38 - 112		SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
Phenol-d5 (S)	75		%	35 - 111		SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	
Terphenyl-d14 (S)	34.7	2	%	45 - 126		SW846 8270D	5/11/16 02:25 VLM	5/11/16 12:51	CGS	A	

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

Lab ID: 2141551004 **Date Collected:** 5/4/2016 09:30 **Matrix:** Solid
Sample ID: Site 3-Composite 1 **Date Received:** 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
PCBs										
Aroclor-1016	ND		mg/kg	0.15	0.027	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:09	KJH A
Aroclor-1221	ND		mg/kg	0.15	0.013	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:09	KJH A
Aroclor-1232	ND		mg/kg	0.15	0.027	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:09	KJH A
Aroclor-1242	ND		mg/kg	0.15	0.040	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:09	KJH A
Aroclor-1248	ND		mg/kg	0.15	0.027	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:09	KJH A
Aroclor-1254	ND		mg/kg	0.15	0.027	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:09	KJH A
Aroclor-1260	ND		mg/kg	0.15	0.027	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:09	KJH A
Aroclor-1262	ND		mg/kg	0.15	0.031	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:09	KJH A
Aroclor-1268	ND		mg/kg	0.15	0.040	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:09	KJH A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i> <i>Cntr</i>
Decachlorobiphenyls (S)	76.9		%	49 - 115		SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:09	KJH A
Tetrachloro-m-xylene (S)	91.6		%	27 - 137		SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:09	KJH A
PESTICIDES										
Aldrin	ND		ug/kg	38.0	12.3	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS A
alpha-BHC	ND		ug/kg	38.0	3.4	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS A
beta-BHC	ND		ug/kg	38.0	4.0	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS A
delta-BHC	ND		ug/kg	38.0	2.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS A
gamma-BHC	ND		ug/kg	38.0	3.1	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS A
alpha-Chlordane	ND		ug/kg	38.0	4.0	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS A
gamma-Chlordane	ND		ug/kg	38.0	6.5	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS A
4,4'-DDD	ND		ug/kg	73.8	6.0	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS A
4,4'-DDE	ND		ug/kg	73.8	10.1	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS A
4,4'-DDT	ND		ug/kg	73.8	8.5	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS A
Dieldrin	ND		ug/kg	73.8	8.5	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS A
Endosulfan I	ND		ug/kg	38.0	4.7	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS A
Endosulfan II	ND		ug/kg	73.8	15.4	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS A
Endosulfan Sulfate	ND		ug/kg	73.8	4.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS A
Endrin	ND		ug/kg	73.8	5.4	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS A
Endrin Aldehyde	ND		ug/kg	73.8	8.1	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS A
Endrin Ketone	ND		ug/kg	73.8	10.3	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS A
Heptachlor	ND		ug/kg	38.0	3.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS A
Heptachlor Epoxide	ND		ug/kg	38.0	3.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS A
Methoxychlor	ND		ug/kg	73.8	9.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS A
Toxaphene	ND		ug/kg	783	130	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i> <i>Cntr</i>
Decachlorobiphenyls (S)	96.6		%	30 - 135		SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS A

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

Lab ID: 2141551004 **Date Collected:** 5/4/2016 09:30 **Matrix:** Solid
Sample ID: Site 3-Composite 1 **Date Received:** 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Tetrachloro-m-xylene (S)	121	3	%	30 - 111		SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS A
HERBICIDES										
2,4-D	ND		ug/kg	169	65.5	SW846 8151A	5/9/16 06:20	VLM	5/11/16 16:33	KJH A
2,4-DB	ND		ug/kg	169	90.7	SW846 8151A	5/9/16 06:20	VLM	5/11/16 16:33	KJH A
Dalapon	ND		ug/kg	169	42.8	SW846 8151A	5/9/16 06:20	VLM	5/11/16 16:33	KJH A
Dicamba	ND		ug/kg	169	60.5	SW846 8151A	5/9/16 06:20	VLM	5/11/16 16:33	KJH A
Dichloroprop	ND		ug/kg	169	68.0	SW846 8151A	5/9/16 06:20	VLM	5/11/16 16:33	KJH A
Dinoseb	ND		ug/kg	421	85.6	SW846 8151A	5/9/16 06:20	VLM	5/11/16 16:33	KJH A
Pentachlorophenol	ND		ug/kg	169	95.7	SW846 8151A	5/9/16 06:20	VLM	5/11/16 16:33	KJH A
2,4,5-T	ND		ug/kg	169	70.5	SW846 8151A	5/9/16 06:20	VLM	5/11/16 16:33	KJH A
2,4,5-TP	ND		ug/kg	169	78.1	SW846 8151A	5/9/16 06:20	VLM	5/11/16 16:33	KJH A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i> <i>Cntr</i>
2,4-Dichlorophenylacetic acid (S)	65.5		%	36 - 113		SW846 8151A	5/9/16 06:20	VLM	5/11/16 16:33	KJH A
WET CHEMISTRY										
Moisture	61.5		%	0.1	0.01	S2540G-11			5/11/16 10:52	SLC A
pH	6.87	4	pH_Units		1	SW846 9045D			5/7/16 06:38	MSA A
Total Solids	38.5		%	0.1	0.01	S2540G-11			5/11/16 10:52	SLC A
METALS										
Aluminum, Total	5360		mg/kg	6.4	2.1	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO A1
Antimony, Total	0.071J	J	mg/kg	0.16	0.053	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO A1
Arsenic, Total	0.90		mg/kg	0.24	0.080	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO A1
Barium, Total	48.6		mg/kg	0.40	0.13	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO A1
Beryllium, Total	0.19		mg/kg	0.080	0.027	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO A1
Cadmium, Total	0.096		mg/kg	0.080	0.027	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO A1
Calcium, Total	694		mg/kg	8.0	2.7	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO A1
Chromium, Total	10.1		mg/kg	0.16	0.053	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO A1
Cobalt, Total	1.5		mg/kg	0.40	0.13	SW846 6020A	5/10/16 13:40	JPS	5/20/16 09:43	MO A1
Copper, Total	5.3		mg/kg	0.40	0.13	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO A1
Iron, Total	6070		mg/kg	4.0	1.3	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO A1
Lead, Total	8.9		mg/kg	0.16	0.053	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO A1
Magnesium, Total	1020		mg/kg	8.0	2.7	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO A1
Manganese, Total	77.2		mg/kg	0.40	0.13	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO A1
Mercury, Total	0.063J	J	mg/kg	0.12	0.040	SW846 7471B	5/16/16 10:30	MNP	5/16/16 13:23	MNP A2
Nickel, Total	5.3		mg/kg	0.40	0.13	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO A1
Potassium, Total	398		mg/kg	8.0	2.7	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO A1
Selenium, Total	0.74		mg/kg	0.40	0.13	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO A1

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

Lab ID: **2141551004** Date Collected: 5/4/2016 09:30 Matrix: Solid
Sample ID: **Site 3-Composite 1** Date Received: 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Silver, Total	ND		mg/kg	0.16	0.053	SW846 6020A	5/10/16 13:40 JPS	5/20/16 09:43	MO	A1
Sodium, Total	132		mg/kg	8.0	2.7	SW846 6020A	5/10/16 13:40 JPS	5/19/16 17:01	MO	A1
Thallium, Total	0.031J	J	mg/kg	0.080	0.027	SW846 6020A	5/10/16 13:40 JPS	5/20/16 09:43	MO	A1
Vanadium, Total	11.0		mg/kg	0.16	0.053	SW846 6020A	5/10/16 13:40 JPS	5/19/16 17:01	MO	A1
Zinc, Total	25.6		mg/kg	0.40	0.13	SW846 6020A	5/10/16 13:40 JPS	5/19/16 17:01	MO	A1



Ms. Shannon Butler
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

Lab ID: **2141551005** Date Collected: 5/4/2016 10:15 Matrix: Solid
Sample ID: **Site 3-Composite 2** Date Received: 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
SEMIVOLATILES										
Acenaphthene	ND		ug/kg	196	23.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
Acenaphthylene	ND		ug/kg	196	27.5	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
Acetophenone	ND		ug/kg	393	31.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
Anthracene	ND		ug/kg	196	31.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
Atrazine	ND		ug/kg	393	43.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
Benzaldehyde	ND		ug/kg	786	66.8	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
Benzo(a)anthracene	ND		ug/kg	196	19.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
Benzo(a)pyrene	26.6J	J	ug/kg	196	15.7	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
Benzo(b)fluoranthene	ND		ug/kg	196	19.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
Benzo(g,h,i)perylene	22.2J	J	ug/kg	196	19.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
Benzo(k)fluoranthene	ND		ug/kg	196	19.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
Biphenyl	ND		ug/kg	393	27.5	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
4-Bromophenyl-phenylether	ND		ug/kg	393	35.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
Butylbenzylphthalate	ND		ug/kg	393	27.5	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
Caprolactam	ND		ug/kg	786	70.7	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
Carbazole	ND		ug/kg	393	27.5	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
4-Chloro-3-methylphenol	ND		ug/kg	786	39.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
4-Chloroaniline	ND		ug/kg	786	47.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
bis(2-Chloroethoxy)methane	ND		ug/kg	393	35.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
bis(2-Chloroethyl)ether	ND		ug/kg	393	51.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
bis(2-Chloroisopropyl)ether	ND		ug/kg	393	58.9	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
2-Chloronaphthalene	ND		ug/kg	393	23.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
2-Chlorophenol	ND		ug/kg	786	31.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
4-Chlorophenyl-phenylether	ND		ug/kg	393	31.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
Chrysene	ND		ug/kg	196	19.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
mp-Cresol	ND		ug/kg	786	31.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
o-Cresol	ND		ug/kg	786	43.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
Di-n-Butylphthalate	ND		ug/kg	393	31.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
Di-n-Octylphthalate	ND		ug/kg	393	27.5	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
Dibenzo(a,h)anthracene	ND		ug/kg	196	23.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
Dibenzofuran	ND		ug/kg	393	31.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
3,3-Dichlorobenzidine	ND		ug/kg	786	149	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
2,4-Dichlorophenol	ND		ug/kg	786	31.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
Diethylphthalate	ND		ug/kg	393	31.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
2,4-Dimethylphenol	ND		ug/kg	786	58.9	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
Dimethylphthalate	ND		ug/kg	393	27.5	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A
2,4-Dinitrophenol	ND		ug/kg	786	157	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

Lab ID: **2141551005** Date Collected: 5/4/2016 10:15 Matrix: Solid
Sample ID: **Site 3-Composite 2** Date Received: 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr	
2,4-Dinitrotoluene	ND		ug/kg	393	35.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
2,6-Dinitrotoluene	ND		ug/kg	393	47.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
1,4-Dioxane	ND		ug/kg	393	192	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
bis(2-Ethylhexyl)phthalate	ND		ug/kg	393	27.5	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
Fluoranthene	38.1J	J	ug/kg	196	19.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
Fluorene	ND		ug/kg	196	23.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
Hexachlorobenzene	ND		ug/kg	393	43.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
Hexachlorobutadiene	ND		ug/kg	393	39.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
Hexachlorocyclopentadiene	ND		ug/kg	786	43.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
Hexachloroethane	ND		ug/kg	393	35.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
Indeno(1,2,3-cd)pyrene	ND		ug/kg	196	27.5	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
Isophorone	ND		ug/kg	393	23.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
2-Methyl-4,6-dinitrophenol	ND		ug/kg	786	102	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
2-Methylnaphthalene	ND		ug/kg	393	19.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
Naphthalene	ND		ug/kg	196	23.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
2-Nitroaniline	ND		ug/kg	786	47.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
3-Nitroaniline	ND		ug/kg	786	78.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
4-Nitroaniline	ND		ug/kg	786	31.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
Nitrobenzene	ND		ug/kg	393	47.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
2-Nitrophenol	ND		ug/kg	786	43.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
4-Nitrophenol	ND		ug/kg	786	55.0	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
N-Nitroso-di-n-propylamine	ND		ug/kg	393	31.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
N-Nitrosodiphenylamine	ND		ug/kg	393	31.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
Pentachlorophenol	ND		ug/kg	786	102	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
Phenanthrene	ND		ug/kg	196	19.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
Phenol	ND		ug/kg	786	39.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
Pyrene	40.2J	J	ug/kg	196	19.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	393	27.5	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
2,3,4,6-Tetrachlorophenol	ND		ug/kg	786	47.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
2,4,5-Trichlorophenol	ND		ug/kg	786	47.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
2,4,6-Trichlorophenol	ND		ug/kg	786	47.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
2,4,6-Tribromophenol (S)	40.2		%	19 - 132		SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
2-Fluorobiphenyl (S)	28.3	1	%	40 - 110		SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
2-Fluorophenol (S)	82.5		%	26 - 116		SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
Nitrobenzene-d5 (S)	62.2		%	38 - 112		SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
Phenol-d5 (S)	81		%	35 - 111		SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	
Terphenyl-d14 (S)	35	2	%	45 - 126		SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:17	CGS	A	

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

 Lab ID: **2141551005** Date Collected: 5/4/2016 10:15 Matrix: Solid
 Sample ID: **Site 3-Composite 2** Date Received: 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
PCBs										
Aroclor-1016	ND		mg/kg	0.11	0.019	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:21	KJH A
Aroclor-1221	ND		mg/kg	0.11	0.0096	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:21	KJH A
Aroclor-1232	ND		mg/kg	0.11	0.019	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:21	KJH A
Aroclor-1242	ND		mg/kg	0.11	0.029	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:21	KJH A
Aroclor-1248	ND		mg/kg	0.11	0.019	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:21	KJH A
Aroclor-1254	0.039J	J	mg/kg	0.11	0.019	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:21	KJH A
Aroclor-1260	0.025J	J	mg/kg	0.11	0.019	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:21	KJH A
Aroclor-1262	ND		mg/kg	0.11	0.022	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:21	KJH A
Aroclor-1268	ND		mg/kg	0.11	0.029	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:21	KJH A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i> <i>Cntr</i>
Decachlorobiphenyls (S)	78.7		%	49 - 115		SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:21	KJH A
Tetrachloro-m-xylene (S)	88.1		%	27 - 137		SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:21	KJH A
PESTICIDES										
Aldrin	ND		ug/kg	27.2	8.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS A
alpha-BHC	ND		ug/kg	27.2	2.4	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS A
beta-BHC	ND		ug/kg	27.2	2.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS A
delta-BHC	ND		ug/kg	27.2	2.1	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS A
gamma-BHC	ND		ug/kg	27.2	2.2	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS A
alpha-Chlordane	ND		ug/kg	27.2	2.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS A
gamma-Chlordane	ND		ug/kg	27.2	4.6	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS A
4,4'-DDD	ND		ug/kg	52.9	4.3	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS A
4,4'-DDE	ND		ug/kg	52.9	7.2	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS A
4,4'-DDT	ND		ug/kg	52.9	6.1	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS A
Dieldrin	ND		ug/kg	52.9	6.1	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS A
Endosulfan I	ND		ug/kg	27.2	3.4	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS A
Endosulfan II	ND		ug/kg	52.9	11.1	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS A
Endosulfan Sulfate	ND		ug/kg	52.9	3.5	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS A
Endrin	ND		ug/kg	52.9	3.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS A
Endrin Aldehyde	ND		ug/kg	52.9	5.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS A
Endrin Ketone	ND		ug/kg	52.9	7.4	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS A
Heptachlor	ND		ug/kg	27.2	2.7	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS A
Heptachlor Epoxide	ND		ug/kg	27.2	2.7	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS A
Methoxychlor	ND		ug/kg	52.9	7.0	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS A
Toxaphene	ND		ug/kg	561	92.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i> <i>Cntr</i>
Decachlorobiphenyls (S)	87.7		%	30 - 135		SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS A

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

Lab ID: **2141551005** Date Collected: 5/4/2016 10:15 Matrix: Solid
Sample ID: **Site 3-Composite 2** Date Received: 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Tetrachloro-m-xylene (S)	58.7		%	30 - 111		SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS A
HERBICIDES										
2,4-D	ND		ug/kg	146	56.6	SW846 8151A	5/9/16 06:20	VLM	5/11/16 17:10	KJH A
2,4-DB	ND		ug/kg	146	78.4	SW846 8151A	5/9/16 06:20	VLM	5/11/16 17:10	KJH A
Dalapon	ND		ug/kg	146	37.0	SW846 8151A	5/9/16 06:20	VLM	5/11/16 17:10	KJH A
Dicamba	ND		ug/kg	146	52.3	SW846 8151A	5/9/16 06:20	VLM	5/11/16 17:10	KJH A
Dichloroprop	ND		ug/kg	146	58.8	SW846 8151A	5/9/16 06:20	VLM	5/11/16 17:10	KJH A
Dinoseb	ND		ug/kg	364	74.1	SW846 8151A	5/9/16 06:20	VLM	5/11/16 17:10	KJH A
Pentachlorophenol	ND		ug/kg	146	82.8	SW846 8151A	5/9/16 06:20	VLM	5/11/16 17:10	KJH A
2,4,5-T	ND		ug/kg	146	61.0	SW846 8151A	5/9/16 06:20	VLM	5/11/16 17:10	KJH A
2,4,5-TP	ND		ug/kg	146	67.5	SW846 8151A	5/9/16 06:20	VLM	5/11/16 17:10	KJH A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i> <i>Cntr</i>
2,4-Dichlorophenylacetic acid (S)	71.9		%	36 - 113		SW846 8151A	5/9/16 06:20	VLM	5/11/16 17:10	KJH A
WET CHEMISTRY										
Moisture	54.5		%	0.1	0.01	S2540G-11			5/11/16 10:52	SLC A
pH	6.91	3	pH_Units		1	SW846 9045D			5/7/16 06:41	MSA A
Total Solids	45.5		%	0.1	0.01	S2540G-11			5/11/16 10:52	SLC A
METALS										
Aluminum, Total	47700		mg/kg	74.6	24.2	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO A1
Antimony, Total	ND		mg/kg	1.9	0.62	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO A1
Arsenic, Total	7.2		mg/kg	2.8	0.93	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO A1
Barium, Total	339		mg/kg	4.7	1.5	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO A1
Beryllium, Total	1.6		mg/kg	0.93	0.31	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO A1
Cadmium, Total	0.55J	J	mg/kg	0.93	0.31	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO A1
Calcium, Total	3850		mg/kg	93.2	30.8	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO A1
Chromium, Total	76.1		mg/kg	1.9	0.62	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO A1
Cobalt, Total	12.6		mg/kg	4.7	1.5	SW846 6020A	5/10/16 13:40	JPS	5/20/16 09:47	MO A1
Copper, Total	43.4		mg/kg	4.7	1.5	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO A1
Iron, Total	47200		mg/kg	46.6	14.9	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO A1
Lead, Total	76.6		mg/kg	1.9	0.62	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO A1
Magnesium, Total	7790		mg/kg	93.2	30.8	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO A1
Manganese, Total	702		mg/kg	4.7	1.5	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO A1
Mercury, Total	0.062J	J	mg/kg	0.10	0.033	SW846 7471B	5/16/16 10:30	MNP	5/16/16 13:24	MNP A2
Nickel, Total	40.9		mg/kg	4.7	1.5	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO A1
Potassium, Total	3620		mg/kg	93.2	30.8	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO A1
Selenium, Total	5.5		mg/kg	4.7	1.5	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO A1

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

Lab ID: **2141551005**
 Sample ID: **Site 3-Composite 2**

Date Collected: 5/4/2016 10:15 Matrix: Solid
 Date Received: 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Silver, Total	ND		mg/kg	1.9	0.62	SW846 6020A	5/10/16 13:40 JPS	5/20/16 09:47	MO	A1
Sodium, Total	274		mg/kg	93.2	30.8	SW846 6020A	5/10/16 13:40 JPS	5/19/16 17:05	MO	A1
Thallium, Total	ND		mg/kg	0.93	0.31	SW846 6020A	5/10/16 13:40 JPS	5/20/16 09:47	MO	A1
Vanadium, Total	90.4		mg/kg	1.9	0.62	SW846 6020A	5/10/16 13:40 JPS	5/19/16 17:05	MO	A1
Zinc, Total	165		mg/kg	4.7	1.5	SW846 6020A	5/10/16 13:40 JPS	5/19/16 17:05	MO	A1



Ms. Shannon Butler
 Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

Lab ID: **2141551006** Date Collected: 5/4/2016 11:00 Matrix: Solid
Sample ID: **Site 3-Composite 3** Date Received: 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
SEMIVOLATILES										
Acenaphthene	ND		ug/kg	176	21.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
Acenaphthylene	ND		ug/kg	176	24.7	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
Acetophenone	ND		ug/kg	353	28.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
Anthracene	ND		ug/kg	176	28.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
Atrazine	ND		ug/kg	353	38.8	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
Benzaldehyde	ND		ug/kg	706	60.0	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
Benzo(a)anthracene	46.8J	J	ug/kg	176	17.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
Benzo(a)pyrene	ND		ug/kg	176	14.1	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
Benzo(b)fluoranthene	ND		ug/kg	176	17.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
Benzo(g,h,i)perylene	50.0J	J	ug/kg	176	17.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
Benzo(k)fluoranthene	ND		ug/kg	176	17.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
Biphenyl	ND		ug/kg	353	24.7	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
4-Bromophenyl-phenylether	ND		ug/kg	353	31.8	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
Butylbenzylphthalate	ND		ug/kg	353	24.7	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
Caprolactam	ND		ug/kg	706	63.5	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
Carbazole	ND		ug/kg	353	24.7	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
4-Chloro-3-methylphenol	ND		ug/kg	706	35.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
4-Chloroaniline	ND		ug/kg	706	42.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
bis(2-Chloroethoxy)methane	ND		ug/kg	353	31.8	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
bis(2-Chloroethyl)ether	ND		ug/kg	353	45.9	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
bis(2-Chloroisopropyl)ether	ND		ug/kg	353	52.9	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
2-Chloronaphthalene	ND		ug/kg	353	21.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
2-Chlorophenol	ND		ug/kg	706	28.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
4-Chlorophenyl-phenylether	ND		ug/kg	353	28.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
Chrysene	89.6J	J	ug/kg	176	17.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
mp-Cresol	ND		ug/kg	706	28.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
o-Cresol	ND		ug/kg	706	38.8	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
Di-n-Butylphthalate	ND		ug/kg	353	28.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
Di-n-Octylphthalate	ND		ug/kg	353	24.7	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
Dibenzo(a,h)anthracene	ND		ug/kg	176	21.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
Dibenzofuran	ND		ug/kg	353	28.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
3,3-Dichlorobenzidine	ND		ug/kg	706	134	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
2,4-Dichlorophenol	ND		ug/kg	706	28.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
Diethylphthalate	ND		ug/kg	353	28.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
2,4-Dimethylphenol	ND		ug/kg	706	52.9	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
Dimethylphthalate	ND		ug/kg	353	24.7	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A
2,4-Dinitrophenol	ND		ug/kg	706	141	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A

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Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

Lab ID: **2141551006**
Sample ID: **Site 3-Composite 3**

Date Collected: 5/4/2016 11:00 Matrix: Solid
Date Received: 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr	
2,4-Dinitrotoluene	ND		ug/kg	353	31.8	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
2,6-Dinitrotoluene	ND		ug/kg	353	42.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
1,4-Dioxane	ND		ug/kg	353	173	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
bis(2-Ethylhexyl)phthalate	ND		ug/kg	353	24.7	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
Fluoranthene	93.8J	J	ug/kg	176	17.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
Fluorene	ND		ug/kg	176	21.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
Hexachlorobenzene	ND		ug/kg	353	38.8	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
Hexachlorobutadiene	ND		ug/kg	353	35.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
Hexachlorocyclopentadiene	ND		ug/kg	706	38.8	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
Hexachloroethane	ND		ug/kg	353	31.8	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
Indeno(1,2,3-cd)pyrene	ND		ug/kg	176	24.7	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
Isophorone	ND		ug/kg	353	21.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
2-Methyl-4,6-dinitrophenol	ND		ug/kg	706	91.8	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
2-Methylnaphthalene	ND		ug/kg	353	17.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
Naphthalene	ND		ug/kg	176	21.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
2-Nitroaniline	ND		ug/kg	706	42.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
3-Nitroaniline	ND		ug/kg	706	70.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
4-Nitroaniline	ND		ug/kg	706	28.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
Nitrobenzene	ND		ug/kg	353	42.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
2-Nitrophenol	ND		ug/kg	706	38.8	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
4-Nitrophenol	ND		ug/kg	706	49.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
N-Nitroso-di-n-propylamine	ND		ug/kg	353	28.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
N-Nitrosodiphenylamine	ND		ug/kg	353	28.2	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
Pentachlorophenol	ND		ug/kg	706	91.8	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
Phenanthrene	40.4J	J	ug/kg	176	17.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
Phenol	ND		ug/kg	706	35.3	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
Pyrene	76.2J	J	ug/kg	176	17.6	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	353	24.7	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
2,3,4,6-Tetrachlorophenol	ND		ug/kg	706	42.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
2,4,5-Trichlorophenol	ND		ug/kg	706	42.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
2,4,6-Trichlorophenol	ND		ug/kg	706	42.4	SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
2,4,6-Tribromophenol (S)	63.2		%	19 - 132		SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
2-Fluorobiphenyl (S)	55.8		%	40 - 110		SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
2-Fluorophenol (S)	84.8		%	26 - 116		SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
Nitrobenzene-d5 (S)	73.6		%	38 - 112		SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
Phenol-d5 (S)	83.5		%	35 - 111		SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	
Terphenyl-d14 (S)	54.2		%	45 - 126		SW846 8270D	5/11/16 02:25 VLM	5/11/16 13:43	CGS	A	

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

 Lab ID: **2141551006** Date Collected: 5/4/2016 11:00 Matrix: Solid
 Sample ID: **Site 3-Composite 3** Date Received: 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
PCBs										
Aroclor-1016	ND		mg/kg	0.13	0.024	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:32	KJH A
Aroclor-1221	ND		mg/kg	0.13	0.012	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:32	KJH A
Aroclor-1232	ND		mg/kg	0.13	0.024	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:32	KJH A
Aroclor-1242	ND		mg/kg	0.13	0.036	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:32	KJH A
Aroclor-1248	ND		mg/kg	0.13	0.024	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:32	KJH A
Aroclor-1254	ND		mg/kg	0.13	0.024	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:32	KJH A
Aroclor-1260	ND		mg/kg	0.13	0.024	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:32	KJH A
Aroclor-1262	ND		mg/kg	0.13	0.028	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:32	KJH A
Aroclor-1268	ND		mg/kg	0.13	0.036	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:32	KJH A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i> <i>Cntr</i>
Decachlorobiphenyls (S)	79.6		%	49 - 115		SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:32	KJH A
Tetrachloro-m-xylene (S)	87		%	27 - 137		SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:32	KJH A
PESTICIDES										
Aldrin	ND		ug/kg	33.8	10.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS A
alpha-BHC	ND		ug/kg	33.8	3.0	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS A
beta-BHC	ND		ug/kg	33.8	3.6	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS A
delta-BHC	ND		ug/kg	33.8	2.6	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS A
gamma-BHC	ND		ug/kg	33.8	2.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS A
alpha-Chlordane	ND		ug/kg	33.8	3.6	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS A
gamma-Chlordane	ND		ug/kg	33.8	5.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS A
4,4'-DDD	ND		ug/kg	65.6	5.4	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS A
4,4'-DDE	ND		ug/kg	65.6	8.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS A
4,4'-DDT	ND		ug/kg	65.6	7.6	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS A
Dieldrin	ND		ug/kg	65.6	7.6	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS A
Endosulfan I	ND		ug/kg	33.8	4.2	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS A
Endosulfan II	ND		ug/kg	65.6	13.7	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS A
Endosulfan Sulfate	ND		ug/kg	65.6	4.4	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS A
Endrin	ND		ug/kg	65.6	4.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS A
Endrin Aldehyde	ND		ug/kg	65.6	7.2	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS A
Endrin Ketone	ND		ug/kg	65.6	9.1	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS A
Heptachlor	ND		ug/kg	33.8	3.4	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS A
Heptachlor Epoxide	ND		ug/kg	33.8	3.4	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS A
Methoxychlor	ND		ug/kg	65.6	8.7	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS A
Toxaphene	ND		ug/kg	696	115	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i> <i>Cntr</i>
Decachlorobiphenyls (S)	76.2		%	30 - 135		SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS A

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

Lab ID: **2141551006**
Sample ID: **Site 3-Composite 3**

Date Collected: 5/4/2016 11:00 Matrix: Solid
Date Received: 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Tetrachloro-m-xylene (S)	69.5		%	30 - 111		SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS A
HERBICIDES										
2,4-D	ND		ug/kg	137	53.0	SW846 8151A	5/9/16 06:20	VLM	5/12/16 07:47	KJH A
2,4-DB	ND		ug/kg	137	73.4	SW846 8151A	5/9/16 06:20	VLM	5/12/16 07:47	KJH A
Dalapon	ND		ug/kg	137	34.7	SW846 8151A	5/9/16 06:20	VLM	5/12/16 07:47	KJH A
Dicamba	ND		ug/kg	137	49.0	SW846 8151A	5/9/16 06:20	VLM	5/12/16 07:47	KJH A
Dichloroprop	ND		ug/kg	137	55.1	SW846 8151A	5/9/16 06:20	VLM	5/12/16 07:47	KJH A
Dinoseb	ND		ug/kg	341	69.4	SW846 8151A	5/9/16 06:20	VLM	5/12/16 07:47	KJH A
Pentachlorophenol	ND		ug/kg	137	77.5	SW846 8151A	5/9/16 06:20	VLM	5/12/16 07:47	KJH A
2,4,5-T	ND		ug/kg	137	57.1	SW846 8151A	5/9/16 06:20	VLM	5/12/16 07:47	KJH A
2,4,5-TP	ND		ug/kg	137	63.2	SW846 8151A	5/9/16 06:20	VLM	5/12/16 07:47	KJH A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i> <i>Cntr</i>
2,4-Dichlorophenylacetic acid (S)	69.3		%	36 - 113		SW846 8151A	5/9/16 06:20	VLM	5/12/16 07:47	KJH A
WET CHEMISTRY										
Moisture	52.2		%	0.1	0.01	S2540G-11			5/11/16 10:52	SLC A
pH	6.85	1	pH_Units		1	SW846 9045D			5/7/16 06:45	MSA A
Total Solids	47.8		%	0.1	0.01	S2540G-11			5/11/16 10:52	SLC A
METALS										
Aluminum, Total	46300		mg/kg	76.2	24.7	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO A1
Antimony, Total	ND		mg/kg	1.9	0.63	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO A1
Arsenic, Total	7.9		mg/kg	2.9	0.95	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO A1
Barium, Total	312		mg/kg	4.8	1.5	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO A1
Beryllium, Total	1.6		mg/kg	0.95	0.31	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO A1
Cadmium, Total	0.42J	J	mg/kg	0.95	0.31	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO A1
Calcium, Total	2690		mg/kg	95.2	31.4	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO A1
Chromium, Total	68.5		mg/kg	1.9	0.63	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO A1
Cobalt, Total	12.3		mg/kg	4.8	1.5	SW846 6020A	5/10/16 13:40	JPS	5/20/16 09:51	MO A1
Copper, Total	45.2		mg/kg	4.8	1.5	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO A1
Iron, Total	47900		mg/kg	47.6	15.2	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO A1
Lead, Total	48.7		mg/kg	1.9	0.63	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO A1
Magnesium, Total	6500		mg/kg	95.2	31.4	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO A1
Manganese, Total	741		mg/kg	4.8	1.5	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO A1
Mercury, Total	0.067J	J	mg/kg	0.10	0.034	SW846 7471B	5/16/16 10:30	MNP	5/16/16 13:25	MNP A2
Nickel, Total	41.3		mg/kg	4.8	1.5	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO A1
Potassium, Total	3060		mg/kg	95.2	31.4	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO A1
Selenium, Total	7.6		mg/kg	4.8	1.5	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO A1

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

Lab ID: **2141551006** Date Collected: 5/4/2016 11:00 Matrix: Solid
Sample ID: **Site 3-Composite 3** Date Received: 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Silver, Total	ND		mg/kg	1.9	0.63	SW846 6020A	5/10/16 13:40 JPS	5/20/16 09:51	MO	A1
Sodium, Total	164		mg/kg	95.2	31.4	SW846 6020A	5/10/16 13:40 JPS	5/19/16 17:09	MO	A1
Thallium, Total	ND		mg/kg	0.95	0.31	SW846 6020A	5/10/16 13:40 JPS	5/20/16 09:51	MO	A1
Vanadium, Total	82.9		mg/kg	1.9	0.63	SW846 6020A	5/10/16 13:40 JPS	5/19/16 17:09	MO	A1
Zinc, Total	141		mg/kg	4.8	1.5	SW846 6020A	5/10/16 13:40 JPS	5/19/16 17:09	MO	A1



Ms. Shannon Butler
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

Lab ID: **2141551007**
Sample ID: **Equipment Blank**

Date Collected: 5/3/2016 14:00 Matrix: Water
Date Received: 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
SEMIVOLATILES										
Acenaphthene	ND		ug/L	1.6	0.16	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
Acenaphthylene	ND		ug/L	1.6	0.21	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
Acetophenone	ND		ug/L	3.3	0.26	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
Anthracene	ND		ug/L	1.6	0.16	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
Atrazine	ND		ug/L	3.3	0.26	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
Benzaldehyde	ND		ug/L	3.3	0.28	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
Benzo(a)anthracene	ND		ug/L	1.6	0.14	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
Benzo(a)pyrene	ND		ug/L	1.6	0.24	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
Benzo(b)fluoranthene	ND		ug/L	1.6	0.12	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
Benzo(g,h,i)perylene	ND		ug/L	1.6	0.24	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
Benzo(k)fluoranthene	ND		ug/L	1.6	0.21	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
Biphenyl	ND		ug/L	3.3	0.18	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
4-Bromophenyl-phenylether	ND		ug/L	3.3	0.18	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
Butylbenzylphthalate	ND		ug/L	3.3	0.12	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
Caprolactam	ND		ug/L	3.3	0.30	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
Carbazole	ND		ug/L	3.3	0.13	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
4-Chloro-3-methylphenol	ND		ug/L	3.3	0.21	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
4-Chloroaniline	ND		ug/L	3.3	0.23	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
bis(2-Chloroethoxy)methane	ND		ug/L	3.3	0.23	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
bis(2-Chloroethyl)ether	ND		ug/L	3.3	0.18	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
bis(2-Chloroisopropyl)ether	ND		ug/L	3.3	0.30	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
2-Chloronaphthalene	ND		ug/L	3.3	0.20	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
2-Chlorophenol	ND		ug/L	3.3	0.36	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
4-Chlorophenyl-phenylether	ND		ug/L	3.3	0.15	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
Chrysene	ND		ug/L	1.6	0.13	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
mp-Cresol	ND		ug/L	3.3	0.16	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
o-Cresol	ND		ug/L	3.3	0.27	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
Di-n-Butylphthalate	ND		ug/L	3.3	0.15	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
Di-n-Octylphthalate	ND		ug/L	3.3	0.11	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
Dibenzo(a,h)anthracene	ND		ug/L	1.6	0.23	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
Dibenzofuran	ND		ug/L	3.3	0.12	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
3,3-Dichlorobenzidine	ND		ug/L	3.3	0.52	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
2,4-Dichlorophenol	ND		ug/L	3.3	0.35	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
Diethylphthalate	ND		ug/L	3.3	0.20	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
2,4-Dimethylphenol	ND		ug/L	3.3	0.23	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
Dimethylphthalate	ND		ug/L	3.3	0.15	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A
2,4-Dinitrophenol	ND		ug/L	6.5	2.0	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

Lab ID: **2141551007** Date Collected: 5/3/2016 14:00 Matrix: Water
Sample ID: **Equipment Blank** Date Received: 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr	
2,4-Dinitrotoluene	ND		ug/L	3.3	0.13	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
2,6-Dinitrotoluene	ND		ug/L	3.3	0.23	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
1,4-Dioxane	ND		ug/L	3.3	0.75	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
bis(2-Ethylhexyl)phthalate	ND		ug/L	3.3	0.24	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
Fluoranthene	ND		ug/L	1.6	0.18	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
Fluorene	ND		ug/L	1.6	0.22	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
Hexachlorobenzene	ND		ug/L	3.3	0.25	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
Hexachlorobutadiene	ND		ug/L	3.3	0.21	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
Hexachlorocyclopentadiene	ND		ug/L	3.3	0.18	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
Hexachloroethane	ND		ug/L	3.3	0.33	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
Indeno(1,2,3-cd)pyrene	ND		ug/L	1.6	0.11	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
Isophorone	ND		ug/L	3.3	0.16	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
2-Methyl-4,6-dinitrophenol	ND		ug/L	6.5	0.36	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
2-Methylnaphthalene	ND		ug/L	1.6	0.17	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
Naphthalene	ND		ug/L	1.6	0.13	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
2-Nitroaniline	ND		ug/L	3.3	0.22	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
3-Nitroaniline	ND		ug/L	3.3	0.20	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
4-Nitroaniline	ND		ug/L	3.3	0.45	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
Nitrobenzene	ND		ug/L	3.3	0.30	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
2-Nitrophenol	ND		ug/L	3.3	0.49	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
4-Nitrophenol	ND		ug/L	3.3	1.1	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
N-Nitroso-di-n-propylamine	ND		ug/L	3.3	0.26	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
N-Nitrosodiphenylamine	ND		ug/L	3.3	0.20	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
Pentachlorophenol	ND		ug/L	6.5	1.2	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
Phenanthrene	ND		ug/L	1.6	0.14	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
Phenol	ND		ug/L	8.7	0.25	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
Pyrene	ND		ug/L	1.6	0.17	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
1,2,4,5-Tetrachlorobenzene	ND		ug/L	3.3	0.21	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
2,3,4,6-Tetrachlorophenol	ND		ug/L	3.3	0.52	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
2,4,5-Trichlorophenol	ND		ug/L	3.3	0.60	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
2,4,6-Trichlorophenol	ND		ug/L	3.3	0.62	SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
2,4,6-Tribromophenol (S)	86.7		%	47 - 128		SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
2-Fluorobiphenyl (S)	76.8		%	52 - 118		SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
2-Fluorophenol (S)	55.9		%	20 - 87		SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
Nitrobenzene-d5 (S)	79.5		%	27 - 139		SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
Phenol-d5 (S)	33.3		%	10 - 81		SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	
Terphenyl-d14 (S)	85.9		%	46 - 133		SW846 8270D	5/10/16 13:50 JSR	5/11/16 14:05	CGS	A	

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

Lab ID: **2141551007** Date Collected: 5/3/2016 14:00 Matrix: Water
Sample ID: **Equipment Blank** Date Received: 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
PCBs										
Total Polychlorinated Biphenyl	ND		ug/L	0.47	0.47	SW846 8082A	5/6/16 12:25 LEH	5/9/16 15:31	KJH	D
Aroclor-1016	ND		ug/L	0.47	0.057	SW846 8082A	5/6/16 12:25 LEH	5/9/16 15:31	KJH	D
Aroclor-1221	ND		ug/L	0.47	0.066	SW846 8082A	5/6/16 12:25 LEH	5/9/16 15:31	KJH	D
Aroclor-1232	ND		ug/L	0.47	0.18	SW846 8082A	5/6/16 12:25 LEH	5/9/16 15:31	KJH	D
Aroclor-1242	ND		ug/L	0.47	0.23	SW846 8082A	5/6/16 12:25 LEH	5/9/16 15:31	KJH	D
Aroclor-1248	ND		ug/L	0.47	0.13	SW846 8082A	5/6/16 12:25 LEH	5/9/16 15:31	KJH	D
Aroclor-1254	ND		ug/L	0.47	0.094	SW846 8082A	5/6/16 12:25 LEH	5/9/16 15:31	KJH	D
Aroclor-1260	ND		ug/L	0.47	0.066	SW846 8082A	5/6/16 12:25 LEH	5/9/16 15:31	KJH	D
Aroclor-1262	ND		ug/L	0.47	0.094	SW846 8082A	5/6/16 12:25 LEH	5/9/16 15:31	KJH	D
Aroclor-1268	ND		ug/L	0.47	0.16	SW846 8082A	5/6/16 12:25 LEH	5/9/16 15:31	KJH	D
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i> <i>Cntr</i>
Decachlorobiphenyls (S)	60.7		%	30 - 150		SW846 8082A	5/6/16 12:25 LEH	5/9/16 15:31	KJH	D
Tetrachloro-m-xylene (S)	55		%	36 - 112		SW846 8082A	5/6/16 12:25 LEH	5/9/16 15:31	KJH	D
PESTICIDES										
Aldrin	ND		ug/L	0.019	0.0048	SW846 8081B	5/9/16 07:55 LEH	5/9/16 20:02	RWS	C
alpha-BHC	ND		ug/L	0.019	0.0019	SW846 8081B	5/9/16 07:55 LEH	5/9/16 20:02	RWS	C
beta-BHC	ND		ug/L	0.019	0.0076	SW846 8081B	5/9/16 07:55 LEH	5/9/16 20:02	RWS	C
delta-BHC	ND		ug/L	0.019	0.0029	SW846 8081B	5/9/16 07:55 LEH	5/9/16 20:02	RWS	C
gamma-BHC	ND		ug/L	0.019	0.0029	SW846 8081B	5/9/16 07:55 LEH	5/9/16 20:02	RWS	C
alpha-Chlordane	ND		ug/L	0.019	0.0029	SW846 8081B	5/9/16 07:55 LEH	5/9/16 20:02	RWS	C
gamma-Chlordane	ND		ug/L	0.019	0.0029	SW846 8081B	5/9/16 07:55 LEH	5/9/16 20:02	RWS	C
4,4'-DDD	ND		ug/L	0.019	0.0067	SW846 8081B	5/9/16 07:55 LEH	5/9/16 20:02	RWS	C
4,4'-DDE	ND		ug/L	0.019	0.0067	SW846 8081B	5/9/16 07:55 LEH	5/9/16 20:02	RWS	C
4,4'-DDT	ND		ug/L	0.019	0.0057	SW846 8081B	5/9/16 07:55 LEH	5/9/16 20:02	RWS	C
Dieldrin	ND		ug/L	0.019	0.0029	SW846 8081B	5/9/16 07:55 LEH	5/9/16 20:02	RWS	C
Endosulfan I	ND		ug/L	0.019	0.0029	SW846 8081B	5/9/16 07:55 LEH	5/9/16 20:02	RWS	C
Endosulfan II	ND		ug/L	0.019	0.0057	SW846 8081B	5/9/16 07:55 LEH	5/9/16 20:02	RWS	C
Endosulfan Sulfate	ND		ug/L	0.019	0.0038	SW846 8081B	5/9/16 07:55 LEH	5/9/16 20:02	RWS	C
Endrin	ND		ug/L	0.019	0.0076	SW846 8081B	5/9/16 07:55 LEH	5/9/16 20:02	RWS	C
Endrin Aldehyde	ND		ug/L	0.019	0.0095	SW846 8081B	5/9/16 07:55 LEH	5/9/16 20:02	RWS	C
Endrin Ketone	ND		ug/L	0.019	0.0038	SW846 8081B	5/9/16 07:55 LEH	5/9/16 20:02	RWS	C
Heptachlor	ND		ug/L	0.019	0.0029	SW846 8081B	5/9/16 07:55 LEH	5/9/16 20:02	RWS	C
Heptachlor Epoxide	ND		ug/L	0.019	0.0038	SW846 8081B	5/9/16 07:55 LEH	5/9/16 20:02	RWS	C
Methoxychlor	ND		ug/L	0.019	0.0086	SW846 8081B	5/9/16 07:55 LEH	5/9/16 20:02	RWS	C
Toxaphene	ND		ug/L	0.95	0.18	SW846 8081B	5/9/16 07:55 LEH	5/9/16 20:02	RWS	C

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

Lab ID: **2141551007**
Sample ID: **Equipment Blank**

Date Collected: 5/3/2016 14:00 Matrix: Water
Date Received: 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Surrogate Recoveries										
Decachlorobiphenyls (S)	72.4		%	30 - 140		SW846 8081B	5/9/16 07:55	LEH	5/9/16 20:02	RWS C
Tetrachloro-m-xylene (S)	54.1		%	30 - 123		SW846 8081B	5/9/16 07:55	LEH	5/9/16 20:02	RWS C
HERBICIDES										
2,4-D	ND		ug/L	0.19	0.024	SW846 8151A	5/9/16 17:00	VLM	5/10/16 09:44	KJH F
2,4-DB	ND		ug/L	0.29	0.044	SW846 8151A	5/9/16 17:00	VLM	5/10/16 09:44	KJH F
Dalapon	ND		ug/L	0.95	0.034	SW846 8151A	5/9/16 17:00	VLM	5/10/16 09:44	KJH F
Dicamba	ND		ug/L	0.19	0.044	SW846 8151A	5/9/16 17:00	VLM	5/10/16 09:44	KJH F
Dichloroprop	ND		ug/L	0.48	0.052	SW846 8151A	5/9/16 17:00	VLM	5/10/16 09:44	KJH F
Dinoseb	ND		ug/L	4.8	0.13	SW846 8151A	5/9/16 17:00	VLM	5/10/16 09:44	KJH F
MCPA	ND		ug/L	38.1	7.3	SW846 8151A	5/9/16 17:00	VLM	5/10/16 09:44	KJH F
MCPP	ND		ug/L	38.1	7.0	SW846 8151A	5/9/16 17:00	VLM	5/10/16 09:44	KJH F
Pentachlorophenol	ND		ug/L	0.19	0.019	SW846 8151A	5/9/16 17:00	VLM	5/10/16 09:44	KJH F
2,4,5-T	ND		ug/L	0.19	0.037	SW846 8151A	5/9/16 17:00	VLM	5/10/16 09:44	KJH F
2,4,5-TP	ND		ug/L	0.29	0.022	SW846 8151A	5/9/16 17:00	VLM	5/10/16 09:44	KJH F
Surrogate Recoveries										
2,4-Dichlorophenylacetic acid (S)	112		%	14 - 172		SW846 8151A	5/9/16 17:00	VLM	5/10/16 09:44	KJH F
WET CHEMISTRY										
pH	6.92	1	pH_Units		1	SW846 9040C			5/6/16 14:32	MSA E
METALS										
Aluminum, Total	ND		mg/L	0.089	0.030	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO H1
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO H1
Arsenic, Total	ND		mg/L	0.0030	0.0010	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO H1
Barium, Total	0.0064		mg/L	0.0056	0.0019	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO H1
Beryllium, Total	ND		mg/L	0.0010	0.00030	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO H1
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO H1
Calcium, Total	0.22		mg/L	0.11	0.037	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO H1
Chromium, Total	0.0012J	J	mg/L	0.0022	0.00074	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO H1
Cobalt, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO H1
Copper, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO H1
Iron, Total	0.053J	J	mg/L	0.056	0.019	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO H1
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO H1
Magnesium, Total	ND		mg/L	0.11	0.037	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO H1
Manganese, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO H1
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	5/17/16 01:00	MNP	5/17/16 13:10	MNP H2

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ANALYTICAL RESULTS

Workorder: 2141551 Millerstown Reservoir

Lab ID: **2141551007**
Sample ID: **Equipment Blank**

Date Collected: 5/3/2016 14:00 Matrix: Water
Date Received: 5/5/2016 10:39

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Nickel, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	5/8/16 14:20	JPS 5/17/16 17:17	MO	H1
Potassium, Total	ND		mg/L	0.11	0.037	SW846 6020A	5/8/16 14:20	JPS 5/17/16 17:17	MO	H1
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	5/8/16 14:20	JPS 5/17/16 17:17	MO	H1
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	5/8/16 14:20	JPS 5/17/16 17:17	MO	H1
Sodium, Total	0.19		mg/L	0.11	0.037	SW846 6020A	5/8/16 14:20	JPS 5/17/16 17:17	MO	H1
Thallium, Total	ND		mg/L	0.0010	0.00030	SW846 6020A	5/8/16 14:20	JPS 5/17/16 17:17	MO	H1
Vanadium, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	5/8/16 14:20	JPS 5/17/16 17:17	MO	H1
Zinc, Total	0.0032J	J	mg/L	0.0056	0.0019	SW846 6020A	5/8/16 14:20	JPS 5/17/16 17:17	MO	H1



Ms. Shannon Butler
Project Coordinator

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Vancouver Waterloo · Winnipeg · Yellowknife United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York Mexico: Monterrey

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2141551001	1	Site 1-Composite 1	SW846 9045D	pH
The solid pH measured in water was 6.973 at 19.1 degrees C.				
2141551002	1	Site 2-Composite 1	SW846 8270D	Terphenyl-d14
The surrogate Terphenyl-d14 for method SW846 8270D was outside of control limits. The % Recovery was reported as 41 and the control limits were 45 to 126. This result was reported at a dilution of 1.				
2141551002	2	Site 2-Composite 1	SW846 9045D	pH
The solid pH measured in water was 6.931 at 19.2 degrees C.				
2141551003	1	Site 2-Composite 2	SW846 8270D	2-Fluorobiphenyl
The surrogate 2-Fluorobiphenyl for method SW846 8270D was outside of control limits. The % Recovery was reported as 36.5 and the control limits were 40 to 110. This result was reported at a dilution of 1.				
2141551003	2	Site 2-Composite 2	SW846 8270D	Terphenyl-d14
The surrogate Terphenyl-d14 for method SW846 8270D was outside of control limits. The % Recovery was reported as 37.8 and the control limits were 45 to 126. This result was reported at a dilution of 1.				
2141551003	3	Site 2-Composite 2	SW846 9045D	pH
The solid pH measured in water was 6.908 at 19.3 degrees C.				
2141551004	1	Site 3-Composite 1	SW846 8270D	2-Fluorobiphenyl
The surrogate 2-Fluorobiphenyl for method SW846 8270D was outside of control limits. The % Recovery was reported as 31 and the control limits were 40 to 110. This result was reported at a dilution of 1.				
2141551004	2	Site 3-Composite 1	SW846 8270D	Terphenyl-d14
The surrogate Terphenyl-d14 for method SW846 8270D was outside of control limits. The % Recovery was reported as 34.7 and the control limits were 45 to 126. This result was reported at a dilution of 1.				
2141551004	3	Site 3-Composite 1	SW846 8081B	Tetrachloro-m-xylene
The surrogate Tetrachloro-m-xylene for method SW846 8081B was outside of control limits. The % Recovery was reported as 121 and the control limits were 30 to 111. This result was reported at a dilution of 5.				
2141551004	4	Site 3-Composite 1	SW846 9045D	pH
The solid pH measured in water was 6.874 at 19.4 degrees C.				
2141551005	1	Site 3-Composite 2	SW846 8270D	2-Fluorobiphenyl
The surrogate 2-Fluorobiphenyl for method SW846 8270D was outside of control limits. The % Recovery was reported as 28.3 and the control limits were 40 to 110. This result was reported at a dilution of 1.				
2141551005	2	Site 3-Composite 2	SW846 8270D	Terphenyl-d14
The surrogate Terphenyl-d14 for method SW846 8270D was outside of control limits. The % Recovery was reported as 35 and the control limits were 45 to 126. This result was reported at a dilution of 1.				
2141551005	3	Site 3-Composite 2	SW846 9045D	pH
The solid pH measured in water was 6.910 at 19.7 degrees C.				
2141551006	1	Site 3-Composite 3	SW846 9045D	pH
The solid pH measured in water was 6.852 at 19.6 degrees C.				
2141551007	1	Equipment Blank	SW846 9040C	pH
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				

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34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT/
SAMPLER. INSTRUCTIONS ON THE BACK.

Environmental

Co. Name: Gannett Fleming, Inc.
Contact (Report to): David Graff
Address: 207 Seneca Avenue
Camp Hill, PA 17011

Phone: 717-763-7211

Bill to (if different than Report to):

PO#: 060166

Project Name#: Milltown Reservoir ALS Quote #: 536285

TAT: Normal-Standard TAT is 10-12 business days.
 Rush-Subject to ALS approval and surcharges.

Date Required:
Approved By:

Email? Y N
Fax? Y N
No. dgaff@gannett.com dgaff@egfi.com

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time
1 Site 1 - Composite 1		5/3/16	10:30
2 Site 2 - Composite 1		5/3/16	11:50
3 Site 2 - Composite 2		5/3/16	12:30
4 Site 3 - Composite 1		5/4/16	9:30
5 Site 3 - Composite 2		5/4/16	10:15
6 Site 3 - Composite 3		5/4/16	11:00
7 Equipment Blank		5/3/16	14:00
8			

Project Comments:

SAMPLED BY (Please Print):

Carey Myers/Steve Witing

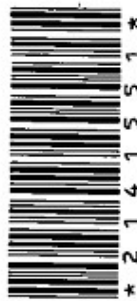
Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
<u>Carey Myers</u>	<u>5/5/16</u>	<u>10:40</u>	<u>SB</u>	<u>5/16</u>	<u>10:39</u>
			<u>SB</u>	<u>5/16</u>	<u>10:39</u>

* G-Grab; C-Composite

**Matrix: A=Air; D=W-Drinking Water; GW=Groundwater; O=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

***Container Type: AG=Amber Glass; CG=Clear Glass; PL=Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Page 1 of 2
Courier:
Tracking #:



* 2 1 4 1 5 5 1 *

Container Type	CG	CG	CG	CG	CG	CG	CG	CG	CG	AG	PL	IL	IL
Container Size	32	32	32	32	32	32	32	32	32	32	32	32	32
Preservative	-	-	-	-	-	-	-	-	-	-	-	-	-
ANALYSES/METHOD REQUESTED													
SUC = - SW846/8270C	Inorganics (TAL MATR)	SW846/6101B	PCBs - SW846/8082	Chlorinated Pesticides	SW846/8081A	Herbicides - SW846/8151A	PH	Equipment Blank - SUCs	Equipment Blank - PH	Equipment Blank - PCB/Acids	Equipment Blank - Herbicides		
Enter Number of Containers Per Analysis													
2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2

ALS FIELD SERVICES	
<input type="checkbox"/> Pickup	<input type="checkbox"/> Stain Samples Collected In? MD <input type="checkbox"/> NJ <input type="checkbox"/> NY <input type="checkbox"/> PA
<input type="checkbox"/> Labor	SUWA Form? <input type="checkbox"/> Standard <input type="checkbox"/> CL-File <input type="checkbox"/> NJ-Reduced <input type="checkbox"/> NJ-Full
<input type="checkbox"/> Composite Sampling	<input type="checkbox"/> Data Deliverables Required? <input type="checkbox"/> If yes, format type: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> Rental Equipment	<input type="checkbox"/> EDS <input type="checkbox"/> DOD Clients Required?
<input type="checkbox"/> Other	<input type="checkbox"/> Other

Notes:	
Correct containers?	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
(If Present) Seals Intact?	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
Received on Ice?	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
CO Labels complete/accurate?	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
Headspace/Volatiles?	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
Container in good condition?	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
Circle appropriate Y or N.	

Therm. ID: 17-392
Cooler Temp: 4°C
No. of Coolers:
Notes:



34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT/
SAMPLER. INSTRUCTIONS ON THE BACK.

Page 2 of 2
Counter: _____
Tracking #: _____

Co. Name: Gannett Fleming, Inc.
Contact (report to): David Graff
Address: 207 Seneca Avenue
Camp Hill, PA 17011

Phone: 717-763-7211

Bill to (if different than Report to):
PO#: 060466

Project Name#: Milltown Reservoir ALS Quote #: 536285

TAT: Normal-Standard TAT is 10-12 business days.
 Rush-Subject to ALS approval and surcharges.

Email? dgcaff@gfnet.com
Fax? No.

Sample Description/Location <small>(as it will appear on the lab report)</small>	COC Comments	Sample Date	Sample Time
1 <u>Equipment Blank</u>		<u>5/3/16</u>	<u>14:00</u>
2			
3			
4			
5			
6			
7			
8			

SAMPLED BY (Please Print):
Corey Myers / Steve Witting

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
<u>Corey Myers</u>	<u>5/5/16</u>	<u>10:40</u>	<u>Bob Schaeffer</u>	<u>5/5/16</u>	<u>10:30</u>

Container Type <u>PL</u>	Container Size <u>500ml</u>	Preservative <u>HNO3</u>	Receipt Information (Completed by Sampler Only) Performed by: <u>BJS</u> Cooler Temp: <u>400</u> Therm. ID: <u>TH032</u>															
ANALYSES/METHOD REQUESTED																		
Enter Number of Containers Per Analysis																		
Equipment Blank - Metals																		
Matrix																		
<table border="1"> <tr> <td>Correct containers?</td> <td>Y</td> <td>N</td> </tr> <tr> <td>(if present) Seals Intact?</td> <td>Y</td> <td>N</td> </tr> <tr> <td>Received on Ice?</td> <td>Y</td> <td>N</td> </tr> <tr> <td>COC/Labels completed/accurate?</td> <td>Y</td> <td>N</td> </tr> <tr> <td>Container in good condition?</td> <td>Y</td> <td>N</td> </tr> </table>				Correct containers?	Y	N	(if present) Seals Intact?	Y	N	Received on Ice?	Y	N	COC/Labels completed/accurate?	Y	N	Container in good condition?	Y	N
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(if present) Seals Intact?	Y	N																
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COC/Labels completed/accurate?	Y	N																
Container in good condition?	Y	N																
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<table border="1"> <tr> <td>ALS FIELD SERVICES</td> <td> <input type="checkbox"/> Pickup <input type="checkbox"/> Labor <input type="checkbox"/> Composite Sampling <input type="checkbox"/> Rental Equipment <input type="checkbox"/> Other </td> </tr> <tr> <td>SIWA</td> <td> <input type="checkbox"/> Standard <input type="checkbox"/> CLP-like <input type="checkbox"/> NU-Reduced <input type="checkbox"/> NU-Full <input type="checkbox"/> If yes, format type: </td> </tr> <tr> <td>State Samples Collected In?</td> <td> <input type="checkbox"/> MD <input type="checkbox"/> NJ <input type="checkbox"/> NY <input type="checkbox"/> PA <input type="checkbox"/> Other </td> </tr> <tr> <td>DOD Criteria Required?</td> <td> <input type="checkbox"/> Yes <input type="checkbox"/> No </td> </tr> </table>				ALS FIELD SERVICES	<input type="checkbox"/> Pickup <input type="checkbox"/> Labor <input type="checkbox"/> Composite Sampling <input type="checkbox"/> Rental Equipment <input type="checkbox"/> Other	SIWA	<input type="checkbox"/> Standard <input type="checkbox"/> CLP-like <input type="checkbox"/> NU-Reduced <input type="checkbox"/> NU-Full <input type="checkbox"/> If yes, format type:	State Samples Collected In?	<input type="checkbox"/> MD <input type="checkbox"/> NJ <input type="checkbox"/> NY <input type="checkbox"/> PA <input type="checkbox"/> Other	DOD Criteria Required?	<input type="checkbox"/> Yes <input type="checkbox"/> No							
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