Technical Memorandum
Environmental Sediment Sampling

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

Prepared By: Gannett Fleming Inc.
207 Senate Avenue
Camp Hill, PA 17011

Subject: Sediment Characterization
Milltown Reservoir
Chester County, PA

Date: May 27, 2016

INTRODUCTION

Gannett Fleming, Inc. (GF) prepared this Environmental Sediment Sampling Technical Memorandum for East Goshen Township in an effort to summarize findings of the sediment sampling conducted at the Milltown Reservoir in May 2016. This memo documents the sampling methods, laboratory analytical results, and provides a comparison of detections to their respective PADEP fill concentration limits. A Project Location Map is provided as **Figure 1**. A Sediment Sample Location Map is provided as **Figure 2**. The Reservoir Sedimentation Map is included as **Attachment A**. The Laboratory Analytical Report and Chain of Custody Forms have been included as **Attachment B**.

BACKGROUND INFORMATION

GF understands that the sediment within the Milltown Reservoir needs to be screened for potential contamination to assist East Goshen Township in its evaluation of future plans for the reservoir. The 10-acre Milltown Reservoir is located between Reservoir Road and Lochwood Lane in Chester County, PA. GF performed sampling to characterize the material in-place as part of project engineering and planning to determine if this material could present a human health or ecological concern that would need to be further addressed, or if this material would be considered "clean" and therefore used without restriction.

HEALTH AND SAFTEY PLAN

GF developed a Health and Safety Plan (HASP) for workers conducting the sediment sampling. The HASP is attached to this memo as **Attachment C**. The HASP included the recommended personal protective equipment that was anticipated to be used during the sediment sampling (modified Level D). All field personnel were required to have a minimum of OSHA 40-hour Hazardous Waste Operations training prior to conducting the fieldwork. The HASP also included directions to the nearest hospital for emergency care and listed phone numbers of emergency responders in the area, in addition to emergency contacts on the GF team.

FIELD METHODS AND ANALYSIS

On May 3-4, 2016, GF was onsite to collect sediment samples from three sites within the Milltown Reservoir. GF representatives, Corey Myers and Steve Wittig conducted the sediment sampling effort. The field effort was conducted in accordance with the attached health and safety plan. The sediment consisted of silt loams, silty clay loams, and organic matter.

Sampling Methods

Soil samples were collected in laboratory supplied bottleware and placed in a cooler with ice for shipment to the laboratory under chain-of-custody documentation. The samples were collected and analyzed according to the following:

- Semivolatile organic compounds (SVOCs) with library search using EPA method SW-846/ 8270C
- Inorganics (TAL Metals) using EPA method SW-846/6010B
- Polychlorinated Biphenyls (PCBs) using EPA Method SW846/8082
- Chlorinated Pesticides using EPA Method SW846/8081A
- Herbicides using EPA method SW846/8151A
- pH using EPA method 9045 (soil/water)

Sampling Equipment

- Stainless steel bowls
- Stainless steel spoons
- Laboratory supplied bottleware
- 2” Bucket auger
- 4” Bucket auger
- 3’ auger extensions (5)
- Nitrile gloves and safety glasses
- 10’ section of 6” PVC pipe (1)
- 2’ section of 6” PVC pipe (2)
- 6” PVC coupler (2)
- 10’ section of 3” PVC pipe
- Sledgehammer
- 24 oz. Stainless steel hammer
- Rubber Mallet
- Jon Boat

Analytical Laboratory

ALS Environmental (ALS) of Middletown, PA was contracted by GF to provide the bottleware and sediment analyses. Analyses were performed according to ALS’s NELAP-approved quality assurance program and Pennsylvania requirements. The test results met requirements of the current NELAP standards/state requirements, where applicable.

Decontamination Procedure

Sampling equipment consisted mostly of sealed tools that were certified clean when packaged and opened just prior to sampling. The use of dedicated tools reduces the risk of cross-contamination issues. Disposable gloves were used to maintain clean handling of the material and were disposed of as a residual waste. Decontamination fluid was generated to clean the bucket augers, extensions, stainless steel spoons, and stainless steels bowls since this equipment was not dedicated.

Decontamination procedures and investigation derived waste (IDW) were implemented and generated respectively. The decontamination procedure of the sediment sampling equipment hardware followed EPA Standard Operating Procedures and consisted of the following:

- Physical removal of soil and debris;
- Non-phosphate detergent wash;
- Tap water rinse;
- Distilled/deionized water rinse;
- 10% nitric acid rinse;
- Distilled/deionized water rinse;
- Solvent rinse (pesticide grade);
- Air dry; and
- Distilled/deionized water rinse

The decontamination fluid consisted of less than five gallons and was field filtered to remove suspended solids and then pumped under pressure through an enclosed vessel charged with granulated activated carbon. The treated water was discharged in uplands directly to the ground surface. Other IDW including disposable gloves were disposed of as residual waste.

Quality Assurance/ Quality Control

Quality assurance and quality control samples were collected to verify the field procedures and check the laboratory results in order to confirm the results of the field effort with confidence. GF collected one (1) equipment rinsate sample after cleaning the bucket augers, stainless steel bowls, and stainless steel spoons to verify the decontamination procedures. The analytical results indicated that the decontamination procedures in the field may be relied upon.

Field Sampling

The three sampling locations were selected based on the depth of sediment and location within the reservoir. The sample locations are depicted on **Figure 2**. It was GF's intention to take samples that represented the existing sediment profile across the entire reservoir. As shown on the Reservoir Sedimentation Map, enclosed as **Attachment A**, the sediment depth was most shallow at the northern end of the reservoir. Sediment depth increased moving toward the spillway in the southeast quadrant of the reservoir. The maximum sediment depth is 12', at a point located near the eastern shore the reservoir. A summary of the sample sites is provided in **Table 1**.

GF conducted the sampling effort at all three locations by collecting sediment samples from a jon boat using a bucket auger. The bucket auger was advanced into the sediment in 1' increments. Once positioned, a 3" diameter PVC pipe was lowered into the sediment to be used as guide for the auger. The PVC pipe was driven into the reservoir bottom using a sledgehammer. Extensions were added as the auger was advanced into the deeper sampling depths. After advancing auger approximately 1', the auger was removed and contents emptied into a stainless steel bowl. This process was repeated as many times as necessary to advance the auger 3-4' for each composite sample. A separate steel bowl was used for each composite. All equipment was decontaminated between each sampling location.

GF collected composite samples at each of the three sampling locations. A total of 6 composite samples were collected from three locations as indicated on Figure 2. Each composite consisted of sediments taken in 3-4' lifts. The sediment was assessed visually for evidence of contaminants. No visual evidence of contamination was observed. Each composite was collected using the bucket auger. Once onshore, the composite was mixed in a stainless steel bowl, transferred to laboratory supplied bottleware, and submitted for laboratory analyses. Standard laboratory turnaround times were requested. The sampling

plan followed the recommendations in the PA Management of Fill Policy to characterize material for beneficial re-use.

LABORATORY ANALYTICAL RESULTS

The full laboratory analytical report with the chain-of-custody is provided in **Attachment B**. Laboratory analytical results are summarized in **Table 1** and compared to the Pennsylvania Statewide Health Standards and the Pennsylvania Clean Fill Standards.

DISCUSSION OF RESULTS

Based on the analytical results, samples Site 3-Composite 2 and Site 3-Composite 3 returned with cobalt concentrations at 12.6 and 12.3 mg/kg, respectively. These concentrations exceed the existing 8.1 mg/kg clean fill standard for cobalt.

None of the other concentrations detected exceeded their respective clean fill concentration limits or their respective statewide health standards.

On May 27, 2016, GF contacted Mr. Scott Walters of PADEP to discuss the clean fill numeric values and background levels of naturally occurring metals like cobalt. Mr. Walters confirmed with the surrounding land use that background conditions would apply and that the material would qualify as clean fill. Please see **Attachment D** for DEP Coordination, including a phone memo documenting the conversation with Mr. Walters, PADEP Clean Fill Standards, and MSC Table 4a of the Pennsylvania State Wide Health Standards.

CONCLUSIONS

Based on the results of the sediment characterization effort, it was determined that samples Site 3-Composite 2 and Site 3-Composite 3 both exceed the existing clean fill standard for cobalt (8.1 mg/kg). Cobalt concentrations at Site 1 and Site 2 were detected at concentrations less than the existing clean fill standard.

As of December 2014, the Pennsylvania Department of Environmental Protection (PADEP) proposed updates to the existing clean fill standards under the Management of Fill Policy. These standards propose an increase in the clean fill concentration of cobalt from 8.1 mg/kg to 50 mg/kg. Cobalt in the Milltown Reservoir pond sediment was found in concentrations of 12.6 and 12.3 mg/kg. These concentrations are slightly above PADEP's recommended clean fill concentrations of 8.1 mg/kg.

Medium Specific Concentration (MSC) Table 4a, under the Pennsylvania State Wide Health Standards, includes a standard for cobalt. Under Pennsylvania law, the MSC for cobalt in residential soils (0-15 feet) is 66 mg/kg. Per the Pennsylvania standard, the concentrations of cobalt found in the pond sediment is below the thresholds set under the MSC for residential soils.

Land use surrounding the Milltown Reservoir is comprised entirely of residential properties. No industrial sources have been identified during review of the project area. The cobalt concentrations identified at Site 3 can be attributed to naturally occurring background levels of cobalt. The watershed was converted from agricultural use to urban development. Industrial processes and mining are not associated with the watershed of Milltown Reservoir. Metal detections in the lab results are associated with natural background conditions. Results of the sediment analyses does not indicate a need to handle or treat the material in any specialized way. This material is determined to be clean fill. The dredging of the pond sediment would follow an approved erosion and sediment control plan and regulatory permits for dredging and excavation in waters of the United States and Commonwealth.

Enclosures: Figure 1: Project Location Map
Figure 2: Sediment Sample Location Map
Table 1: Summary of Sediment Analytical Results
Attachment A: Reservoir Sedimentation Map
Attachment B: Laboratory Analytical Report & Chain of Custody
Attachment C: Health and Safety Plan
Attachment D: DEP Coordination

cc: File 060466

FIGURE 1
PROJECT LOCATION MAP

FIGURE 1
PROJECT LOCATION MAP

East Goshen Township

Milltown Reservoir Sediment Sampling

East Goshen Township, Chester County, Pennsylvania

Scale

Feet

2,000 1,000 0 2,000

N

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Source: USGS topographic basemapping provided by ESRI ArcGIS Online webservices.

GF Project No. 60466; Map Prepared: 05/11/2016

FIGURE 2
SEDIMENT SAMPLE LOCATION MAP

FIGURE 2
SEDIMENT SAMPLE LOCATION MAP

East Goshen Township

Milltown Reservoir Sediment Sampling

East Goshen Township, Chester County, Pennsylvania

Legend

Sediment Sample Sites

Scale

Feet

250 125 0 250

N

Gannett Fleming

Site locations as sampled on May 2-3, 2016 by Corey Myers and Steve Wittig of Gannett Fleming, Inc. Aerial imagery and transportation basemapping provided by ESRI ArcGIS Online webservices.

GF Project No. 60466; Map Prepared: 05/11/2016

TABLE 1
SUMMARY OF SEDIMENT ANALYTICAL RESULTS

Table 1
Summary of 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		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		Residential[1]		
Sampling Depth	0-3'		0-4'		4-7'		0-4'		4-8'		8-12'				
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
Arsenic, Total	**0.46**	-	<0.21	U	**0.27**	-	**0.9**	-	**7.2**	-	**7.9**	-	12	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
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
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)															
Chrysene	<0.151	U	**0.226**	-	<0.156	U	<0.234	U	<0.196	U	<0.176	U	570	230	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
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 the laboratory detection limit.

5. "-" Indicates a blank cell with no value.

6. NA - not analyzed.

7. DQ - detection qualifier.

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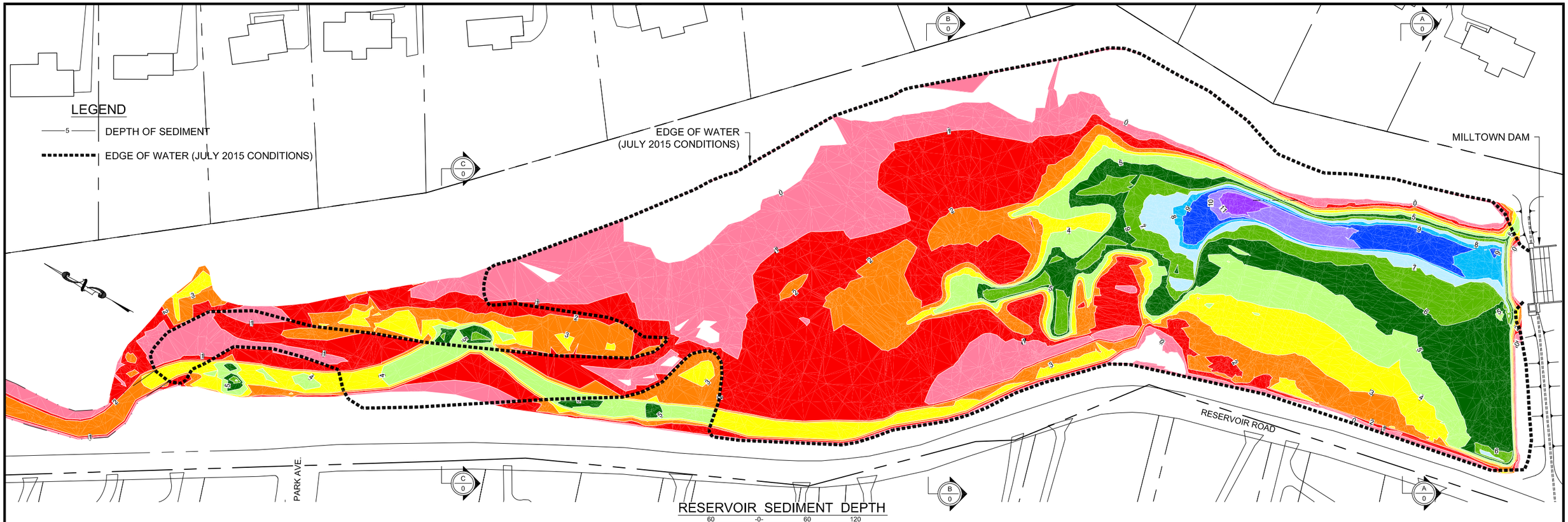
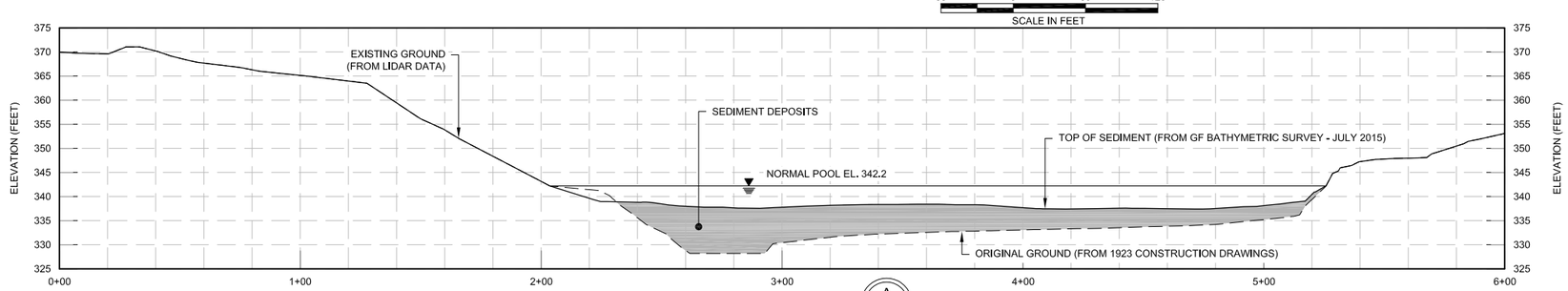
ATTACHMENT A
RESERVOIR SEDIMENTATION MAP

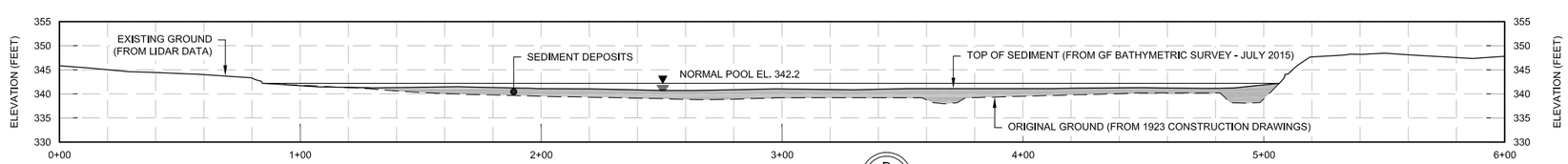


RESERVOIR SEDIMENT DEPTH

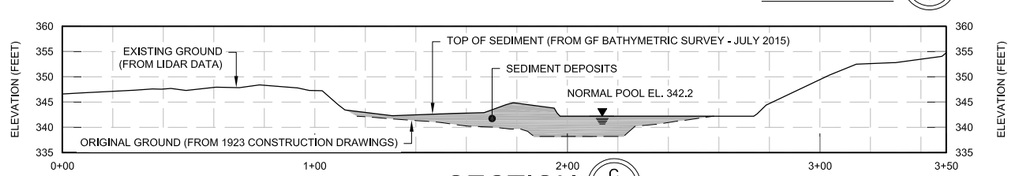
60 -0- 60 120
SCALE IN FEET



SECTION A 0



SECTION B 0



SECTION C 0

15 -0- 15 30
SCALE IN FEET

30 -0- 30 60
SCALE IN FEET

SEDIMENT DEPTH LEGEND		
MIN. DEPTH (FEET)	MAX. DEPTH (FEET)	COLOR
0	1.0	
1.0	2.0	
2.0	3.0	
3.0	4.00	
4.0	5.00	
5.00	6.0	
6.0	7.0	
7.0	8.0	
8.0	9.0	
9.0	10.0	
10.0	11.0	
11.0	12.0	

NOTES:

1. SEDIMENTATION DEPTH COMPARES THE CONTOURS SHOWN ON THE 1923 CONSTRUCTION DRAWINGS TO THE TOP OF SEDIMENT ELEVATION SURVEYED BY GANNETT FLEMING IN JULY 2015.
2. APPROXIMATELY 46,800 CY (29 ACRE-FEET) OF SEDIMENT IS ESTIMATED TO BE PRESENT WITHIN THE MILLTOWN DAM RESERVOIR.

EAST GOSHEN TOWNSHIP

MILLTOWN DAM
DEP ID NO. D15-146
EAST GOSHEN TOWNSHIP, CHESTER COUNTY, PA

RESERVOIR SEDIMENTATION MAP

GANNETT FLEMING, INC.
HARRISBURG, PENNSYLVANIA

DATE: FEB. 2016 | SCALE: AS SHOWN

FIGURE 4-9

ATTACHMENT B
LABORATORY ANALYTICAL REPORT & CHAIN OF CUSTODY

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

May 20, 2016

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

Certificate of Analysis

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.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

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

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

Shannon Butler

Ms. Shannon Butler
Project Coordinator

ALS Environmental
34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

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

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 preformed 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 incurbator 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

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

PROJECT SUMMARY

Workorder: 2141551 Millerstown Reservoir

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.

ALS Environmental
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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

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	Method	Prepared	By	Analyzed	By	*Cntr*
SEMIVOLATILES										
Acenaphthene	ND		ug/kg	151	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Acenaphthylene	ND		ug/kg	151	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Acetophenone	ND		ug/kg	301	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Anthracene	ND		ug/kg	151	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Atrazine	ND		ug/kg	301	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Benzaldehyde	ND		ug/kg	602	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Benzo(a)anthracene	ND		ug/kg	151	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Benzo(a)pyrene	ND		ug/kg	151	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Benzo(b)fluoranthene	ND		ug/kg	151	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Benzo(g,h,i)perylene	ND		ug/kg	151	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Benzo(k)fluoranthene	ND		ug/kg	151	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Biphenyl	ND		ug/kg	301	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
4-Bromophenyl-phenylether	ND		ug/kg	301	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Butylbenzylphthalate	ND		ug/kg	301	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Caprolactam	ND		ug/kg	602	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Carbazole	ND		ug/kg	301	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
4-Chloro-3-methylphenol	ND		ug/kg	602	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
4-Chloroaniline	ND		ug/kg	602	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
bis(2-Chloroethoxy)methane	ND		ug/kg	301	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
bis(2-Chloroethyl)ether	ND		ug/kg	301	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
bis(2-Chloroisopropyl)ether	ND		ug/kg	301	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
2-Chloronaphthalene	ND		ug/kg	301	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
2-Chlorophenol	ND		ug/kg	602	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
4-Chlorophenyl-phenylether	ND		ug/kg	301	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Chrysene	ND		ug/kg	151	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
mp-Cresol	ND		ug/kg	602	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
o-Cresol	ND		ug/kg	602	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Di-n-Butylphthalate	ND		ug/kg	301	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Di-n-Octylphthalate	ND		ug/kg	301	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Dibenzo(a,h)anthracene	ND		ug/kg	151	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Dibenzofuran	ND		ug/kg	301	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
3,3-Dichlorobenzidine	ND		ug/kg	602	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
2,4-Dichlorophenol	ND		ug/kg	602	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Diethylphthalate	ND		ug/kg	301	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
2,4-Dimethylphenol	ND		ug/kg	602	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Dimethylphthalate	ND		ug/kg	301	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
2,4-Dinitrophenol	ND		ug/kg	602	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

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	Method	Prepared	By	Analyzed	By	Cntr
2,4-Dinitrotoluene	ND		ug/kg	301	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
2,6-Dinitrotoluene	ND		ug/kg	301	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
1,4-Dioxane	ND		ug/kg	301	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
bis(2-Ethylhexyl)phthalate	ND		ug/kg	301	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Fluoranthene	158		ug/kg	151	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Fluorene	ND		ug/kg	151	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Hexachlorobenzene	ND		ug/kg	301	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Hexachlorobutadiene	ND		ug/kg	301	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Hexachlorocyclopentadiene	ND		ug/kg	602	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Hexachloroethane	ND		ug/kg	301	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Indeno(1,2,3-cd)pyrene	ND		ug/kg	151	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Isophorone	ND		ug/kg	301	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
2-Methyl-4,6-dinitrophenol	ND		ug/kg	602	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
2-Methylnaphthalene	ND		ug/kg	301	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Naphthalene	ND		ug/kg	151	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
2-Nitroaniline	ND		ug/kg	602	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
3-Nitroaniline	ND		ug/kg	602	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
4-Nitroaniline	ND		ug/kg	602	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Nitrobenzene	ND		ug/kg	301	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
2-Nitrophenol	ND		ug/kg	602	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
4-Nitrophenol	ND		ug/kg	602	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
N-Nitroso-di-n-propylamine	ND		ug/kg	301	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
N-Nitrosodiphenylamine	ND		ug/kg	301	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Pentachlorophenol	ND		ug/kg	602	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Phenanthrene	ND		ug/kg	151	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Phenol	ND		ug/kg	602	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
Pyrene	ND		ug/kg	151	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	301	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
2,3,4,6-Tetrachlorophenol	ND		ug/kg	602	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
2,4,5-Trichlorophenol	ND		ug/kg	602	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A
2,4,6-Trichlorophenol	ND		ug/kg	602	SW846 8270D	5/11/16 02:25	VLM	5/11/16 11:34	CGS	A

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
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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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

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	Method	Prepared	By	Analyzed	By	Cntr
PCBs										
Aroclor-1016	ND		mg/kg	0.078	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:35	KJH	A
Aroclor-1221	ND		mg/kg	0.078	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:35	KJH	A
Aroclor-1232	ND		mg/kg	0.078	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:35	KJH	A
Aroclor-1242	ND		mg/kg	0.078	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:35	KJH	A
Aroclor-1248	ND		mg/kg	0.078	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:35	KJH	A
Aroclor-1254	ND		mg/kg	0.078	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:35	KJH	A
Aroclor-1260	ND		mg/kg	0.078	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:35	KJH	A
Aroclor-1262	ND		mg/kg	0.078	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:35	KJH	A
Aroclor-1268	ND		mg/kg	0.078	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:35	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
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	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS	A
alpha-BHC	ND		ug/kg	20.0	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS	A
beta-BHC	ND		ug/kg	20.0	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS	A
delta-BHC	ND		ug/kg	20.0	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS	A
gamma-BHC	ND		ug/kg	20.0	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS	A
alpha-Chlordane	ND		ug/kg	20.0	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS	A
gamma-Chlordane	ND		ug/kg	20.0	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS	A
4,4'-DDD	ND		ug/kg	38.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS	A
4,4'-DDE	ND		ug/kg	38.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS	A
4,4'-DDT	ND		ug/kg	38.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS	A
Dieldrin	ND		ug/kg	38.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS	A
Endosulfan I	ND		ug/kg	20.0	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS	A
Endosulfan II	ND		ug/kg	38.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS	A
Endosulfan Sulfate	ND		ug/kg	38.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS	A
Endrin	ND		ug/kg	38.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS	A
Endrin Aldehyde	ND		ug/kg	38.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS	A
Endrin Ketone	ND		ug/kg	38.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS	A
Heptachlor	ND		ug/kg	20.0	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS	A
Heptachlor Epoxide	ND		ug/kg	20.0	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS	A
Methoxychlor	ND		ug/kg	38.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS	A
Toxaphene	ND		ug/kg	412	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	94.4		%	30 - 135	SW846 8081B	5/6/16 04:00	CMA	5/6/16 15:59	RWS	A

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	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	SW846 8151A	5/9/16 06:20	VLM	5/11/16 14:42	KJH	A
2,4-DB	ND		ug/kg	115	SW846 8151A	5/9/16 06:20	VLM	5/11/16 14:42	KJH	A
Dalapon	ND		ug/kg	115	SW846 8151A	5/9/16 06:20	VLM	5/11/16 14:42	KJH	A
Dicamba	ND		ug/kg	115	SW846 8151A	5/9/16 06:20	VLM	5/11/16 14:42	KJH	A
Dichloroprop	ND		ug/kg	115	SW846 8151A	5/9/16 06:20	VLM	5/11/16 14:42	KJH	A
Dinoseb	ND		ug/kg	286	SW846 8151A	5/9/16 06:20	VLM	5/11/16 14:42	KJH	A
Pentachlorophenol	ND		ug/kg	115	SW846 8151A	5/9/16 06:20	VLM	5/11/16 14:42	KJH	A
2,4,5-T	ND		ug/kg	115	SW846 8151A	5/9/16 06:20	VLM	5/11/16 14:42	KJH	A
2,4,5-TP	ND		ug/kg	115	SW846 8151A	5/9/16 06:20	VLM	5/11/16 14:42	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
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	S2540G-11			5/11/16 10:52	SLC	A
pH	6.97	1	pH_Units		SW846 9045D			5/7/16 06:25	MSA	A
Total Solids	57.9		%	0.1	S2540G-11			5/11/16 10:52	SLC	A
METALS										
Aluminum, Total	3300		mg/kg	4.2	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO	A1
Antimony, Total	ND		mg/kg	0.11	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO	A1
Arsenic, Total	0.46		mg/kg	0.16	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO	A1
Barium, Total	20.3		mg/kg	0.26	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO	A1
Beryllium, Total	0.095		mg/kg	0.053	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO	A1
Cadmium, Total	ND		mg/kg	0.053	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO	A1
Calcium, Total	314		mg/kg	5.3	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO	A1
Chromium, Total	4.8		mg/kg	0.11	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO	A1
Cobalt, Total	0.74		mg/kg	0.26	SW846 6020A	5/10/16 13:40	JPS	5/20/16 09:32	MO	A1
Copper, Total	2.2		mg/kg	0.26	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO	A1
Iron, Total	3050		mg/kg	2.6	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO	A1
Lead, Total	4.3		mg/kg	0.11	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO	A1
Magnesium, Total	498		mg/kg	5.3	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO	A1
Manganese, Total	35.8		mg/kg	0.26	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO	A1
Mercury, Total	ND		mg/kg	0.086	SW846 7471B	5/16/16 10:30	MNP	5/16/16 13:17	MNP	A2
Nickel, Total	2.4		mg/kg	0.26	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO	A1
Potassium, Total	265		mg/kg	5.3	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO	A1
Selenium, Total	0.52		mg/kg	0.26	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	Method	Prepared	By	Analyzed	By	*Cntr*
Silver, Total	ND		mg/kg	0.11	SW846 6020A	5/10/16 13:40	JPS	5/20/16 09:32	MO	A1
Sodium, Total	68.1		mg/kg	5.3	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO	A1
Thallium, Total	ND		mg/kg	0.053	SW846 6020A	5/10/16 13:40	JPS	5/20/16 09:32	MO	A1
Vanadium, Total	5.6		mg/kg	0.11	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO	A1
Zinc, Total	10.4		mg/kg	0.26	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:49	MO	A1

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

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	Method	Prepared	By	Analyzed	By	*Cntr*
SEMIVOLATILES										
Acenaphthene	ND		ug/kg	183	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Acenaphthylene	ND		ug/kg	183	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Acetophenone	ND		ug/kg	366	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Anthracene	ND		ug/kg	183	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Atrazine	ND		ug/kg	366	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Benzaldehyde	ND		ug/kg	732	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Benzo(a)anthracene	ND		ug/kg	183	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Benzo(a)pyrene	ND		ug/kg	183	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Benzo(b)fluoranthene	ND		ug/kg	183	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Benzo(g,h,i)perylene	ND		ug/kg	183	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Benzo(k)fluoranthene	ND		ug/kg	183	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Biphenyl	ND		ug/kg	366	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
4-Bromophenyl-phenylether	ND		ug/kg	366	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Butylbenzylphthalate	ND		ug/kg	366	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Caprolactam	ND		ug/kg	732	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Carbazole	ND		ug/kg	366	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
4-Chloro-3-methylphenol	ND		ug/kg	732	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
4-Chloroaniline	ND		ug/kg	732	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
bis(2-Chloroethoxy)methane	ND		ug/kg	366	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
bis(2-Chloroethyl)ether	ND		ug/kg	366	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
bis(2-Chloroisopropyl)ether	ND		ug/kg	366	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
2-Chloronaphthalene	ND		ug/kg	366	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
2-Chlorophenol	ND		ug/kg	732	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
4-Chlorophenyl-phenylether	ND		ug/kg	366	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Chrysene	226		ug/kg	183	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
mp-Cresol	ND		ug/kg	732	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
o-Cresol	ND		ug/kg	732	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Di-n-Butylphthalate	ND		ug/kg	366	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Di-n-Octylphthalate	ND		ug/kg	366	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Dibenzo(a,h)anthracene	ND		ug/kg	183	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Dibenzofuran	ND		ug/kg	366	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
3,3-Dichlorobenzidine	ND		ug/kg	732	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
2,4-Dichlorophenol	ND		ug/kg	732	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Diethylphthalate	ND		ug/kg	366	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
2,4-Dimethylphenol	ND		ug/kg	732	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Dimethylphthalate	ND		ug/kg	366	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
2,4-Dinitrophenol	ND		ug/kg	732	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	Method	Prepared	By	Analyzed	By	Cntr
2,4-Dinitrotoluene	ND		ug/kg	366	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
2,6-Dinitrotoluene	ND		ug/kg	366	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
1,4-Dioxane	ND		ug/kg	366	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
bis(2-Ethylhexyl)phthalate	ND		ug/kg	366	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Fluoranthene	194		ug/kg	183	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Fluorene	ND		ug/kg	183	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Hexachlorobenzene	ND		ug/kg	366	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Hexachlorobutadiene	ND		ug/kg	366	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Hexachlorocyclopentadiene	ND		ug/kg	732	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Hexachloroethane	ND		ug/kg	366	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Indeno(1,2,3-cd)pyrene	ND		ug/kg	183	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Isophorone	ND		ug/kg	366	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
2-Methyl-4,6-dinitrophenol	ND		ug/kg	732	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
2-Methylnaphthalene	ND		ug/kg	366	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Naphthalene	ND		ug/kg	183	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
2-Nitroaniline	ND		ug/kg	732	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
3-Nitroaniline	ND		ug/kg	732	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
4-Nitroaniline	ND		ug/kg	732	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Nitrobenzene	ND		ug/kg	366	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
2-Nitrophenol	ND		ug/kg	732	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
4-Nitrophenol	ND		ug/kg	732	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
N-Nitroso-di-n-propylamine	ND		ug/kg	366	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
N-Nitrosodiphenylamine	ND		ug/kg	366	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Pentachlorophenol	ND		ug/kg	732	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Phenanthrene	ND		ug/kg	183	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Phenol	ND		ug/kg	732	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
Pyrene	ND		ug/kg	183	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	366	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
2,3,4,6-Tetrachlorophenol	ND		ug/kg	732	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
2,4,5-Trichlorophenol	ND		ug/kg	732	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A
2,4,6-Trichlorophenol	ND		ug/kg	732	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:00	CGS	A

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
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	Method	Prepared	By	Analyzed	By	Cntr
PCBs										
Aroclor-1016	ND		mg/kg	0.15	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:46	KJH	A
Aroclor-1221	ND		mg/kg	0.15	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:46	KJH	A
Aroclor-1232	ND		mg/kg	0.15	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:46	KJH	A
Aroclor-1242	ND		mg/kg	0.15	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:46	KJH	A
Aroclor-1248	ND		mg/kg	0.15	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:46	KJH	A
Aroclor-1254	ND		mg/kg	0.15	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:46	KJH	A
Aroclor-1260	ND		mg/kg	0.15	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:46	KJH	A
Aroclor-1262	ND		mg/kg	0.15	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:46	KJH	A
Aroclor-1268	ND		mg/kg	0.15	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:46	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
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	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS	A
alpha-BHC	ND		ug/kg	38.6	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS	A
beta-BHC	ND		ug/kg	38.6	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS	A
delta-BHC	ND		ug/kg	38.6	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS	A
gamma-BHC	ND		ug/kg	38.6	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS	A
alpha-Chlordane	ND		ug/kg	38.6	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS	A
gamma-Chlordane	ND		ug/kg	38.6	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS	A
4,4'-DDD	ND		ug/kg	74.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS	A
4,4'-DDE	ND		ug/kg	74.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS	A
4,4'-DDT	ND		ug/kg	74.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS	A
Dieldrin	ND		ug/kg	74.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS	A
Endosulfan I	ND		ug/kg	38.6	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS	A
Endosulfan II	ND		ug/kg	74.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS	A
Endosulfan Sulfate	ND		ug/kg	74.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS	A
Endrin	ND		ug/kg	74.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS	A
Endrin Aldehyde	ND		ug/kg	74.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS	A
Endrin Ketone	ND		ug/kg	74.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS	A
Heptachlor	ND		ug/kg	38.6	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS	A
Heptachlor Epoxide	ND		ug/kg	38.6	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS	A
Methoxychlor	ND		ug/kg	74.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS	A
Toxaphene	ND		ug/kg	794	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:15	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
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** 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	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	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:19	KJH	A
2,4-DB	ND		ug/kg	148	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:19	KJH	A
Dalapon	ND		ug/kg	148	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:19	KJH	A
Dicamba	ND		ug/kg	148	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:19	KJH	A
Dichloroprop	ND		ug/kg	148	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:19	KJH	A
Dinoseb	ND		ug/kg	368	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:19	KJH	A
Pentachlorophenol	ND		ug/kg	148	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:19	KJH	A
2,4,5-T	ND		ug/kg	148	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:19	KJH	A
2,4,5-TP	ND		ug/kg	148	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:19	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
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	S2540G-11			5/11/16 10:52	SLC	A
pH	6.93	2	pH_Units		SW846 9045D			5/7/16 06:28	MSA	A
Total Solids	44.1		%	0.1	S2540G-11			5/11/16 10:52	SLC	A
METALS										
Aluminum, Total	1260		mg/kg	5.5	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO	A1
Antimony, Total	ND		mg/kg	0.14	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO	A1
Arsenic, Total	ND		mg/kg	0.21	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO	A1
Barium, Total	8.5		mg/kg	0.35	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO	A1
Beryllium, Total	ND		mg/kg	0.069	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO	A1
Cadmium, Total	ND		mg/kg	0.069	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO	A1
Calcium, Total	168		mg/kg	6.9	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO	A1
Chromium, Total	1.8		mg/kg	0.14	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO	A1
Cobalt, Total	ND		mg/kg	0.35	SW846 6020A	5/10/16 13:40	JPS	5/20/16 09:35	MO	A1
Copper, Total	1.1		mg/kg	0.35	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO	A1
Iron, Total	1290		mg/kg	3.5	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO	A1
Lead, Total	1.6		mg/kg	0.14	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO	A1
Magnesium, Total	234		mg/kg	6.9	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO	A1
Manganese, Total	17.0		mg/kg	0.35	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO	A1
Mercury, Total	ND		mg/kg	0.10	SW846 7471B	5/16/16 10:30	MNP	5/16/16 13:21	MNP	A2
Nickel, Total	1.0		mg/kg	0.35	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO	A1
Potassium, Total	102		mg/kg	6.9	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO	A1
Selenium, Total	ND		mg/kg	0.35	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: **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	Method	Prepared	By	Analyzed	By	*Cntr*
Silver, Total	ND		mg/kg	0.14	SW846 6020A	5/10/16 13:40	JPS	5/20/16 09:35	MO	A1
Sodium, Total	124		mg/kg	6.9	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO	A1
Thallium, Total	ND		mg/kg	0.069	SW846 6020A	5/10/16 13:40	JPS	5/20/16 09:35	MO	A1
Vanadium, Total	2.0		mg/kg	0.14	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO	A1
Zinc, Total	4.5		mg/kg	0.35	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:53	MO	A1

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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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	Method	Prepared	By	Analyzed	By	*Cntr*
SEMIVOLATILES										
Acenaphthene	ND		ug/kg	156	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Acenaphthylene	ND		ug/kg	156	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Acetophenone	ND		ug/kg	312	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Anthracene	ND		ug/kg	156	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Atrazine	ND		ug/kg	312	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Benzaldehyde	ND		ug/kg	624	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Benzo(a)anthracene	ND		ug/kg	156	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Benzo(a)pyrene	ND		ug/kg	156	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Benzo(b)fluoranthene	ND		ug/kg	156	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Benzo(g,h,i)perylene	ND		ug/kg	156	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Benzo(k)fluoranthene	ND		ug/kg	156	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Biphenyl	ND		ug/kg	312	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
4-Bromophenyl-phenylether	ND		ug/kg	312	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Butylbenzylphthalate	ND		ug/kg	312	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Caprolactam	ND		ug/kg	624	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Carbazole	ND		ug/kg	312	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
4-Chloro-3-methylphenol	ND		ug/kg	624	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
4-Chloroaniline	ND		ug/kg	624	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
bis(2-Chloroethoxy)methane	ND		ug/kg	312	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
bis(2-Chloroethyl)ether	ND		ug/kg	312	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
bis(2-Chloroisopropyl)ether	ND		ug/kg	312	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
2-Chloronaphthalene	ND		ug/kg	312	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
2-Chlorophenol	ND		ug/kg	624	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
4-Chlorophenyl-phenylether	ND		ug/kg	312	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Chrysene	ND		ug/kg	156	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
mp-Cresol	ND		ug/kg	624	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
o-Cresol	ND		ug/kg	624	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Di-n-Butylphthalate	ND		ug/kg	312	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Di-n-Octylphthalate	ND		ug/kg	312	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Dibenzo(a,h)anthracene	ND		ug/kg	156	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Dibenzofuran	ND		ug/kg	312	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
3,3-Dichlorobenzidine	ND		ug/kg	624	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
2,4-Dichlorophenol	ND		ug/kg	624	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Diethylphthalate	ND		ug/kg	312	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
2,4-Dimethylphenol	ND		ug/kg	624	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Dimethylphthalate	ND		ug/kg	312	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
2,4-Dinitrophenol	ND		ug/kg	624	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	Method	Prepared	By	Analyzed	By	Cntr
2,4-Dinitrotoluene	ND		ug/kg	312	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
2,6-Dinitrotoluene	ND		ug/kg	312	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
1,4-Dioxane	ND		ug/kg	312	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
bis(2-Ethylhexyl)phthalate	ND		ug/kg	312	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Fluoranthene	ND		ug/kg	156	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Fluorene	ND		ug/kg	156	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Hexachlorobenzene	ND		ug/kg	312	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Hexachlorobutadiene	ND		ug/kg	312	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Hexachlorocyclopentadiene	ND		ug/kg	624	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Hexachloroethane	ND		ug/kg	312	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	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Isophorone	ND		ug/kg	312	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
2-Methyl-4,6-dinitrophenol	ND		ug/kg	624	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
2-Methylnaphthalene	ND		ug/kg	312	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Naphthalene	ND		ug/kg	156	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
2-Nitroaniline	ND		ug/kg	624	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
3-Nitroaniline	ND		ug/kg	624	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
4-Nitroaniline	ND		ug/kg	624	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Nitrobenzene	ND		ug/kg	312	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
2-Nitrophenol	ND		ug/kg	624	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
4-Nitrophenol	ND		ug/kg	624	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
N-Nitroso-di-n-propylamine	ND		ug/kg	312	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
N-Nitrosodiphenylamine	ND		ug/kg	312	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Pentachlorophenol	ND		ug/kg	624	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Phenanthrene	ND		ug/kg	156	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Phenol	ND		ug/kg	624	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
Pyrene	ND		ug/kg	156	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	312	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
2,3,4,6-Tetrachlorophenol	ND		ug/kg	624	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
2,4,5-Trichlorophenol	ND		ug/kg	624	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A
2,4,6-Trichlorophenol	ND		ug/kg	624	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:26	CGS	A

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
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	Method	Prepared	By	Analyzed	By	Cntr
PCBs										
Aroclor-1016	ND		mg/kg	0.11	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:58	KJH	A
Aroclor-1221	ND		mg/kg	0.11	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:58	KJH	A
Aroclor-1232	ND		mg/kg	0.11	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:58	KJH	A
Aroclor-1242	ND		mg/kg	0.11	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:58	KJH	A
Aroclor-1248	ND		mg/kg	0.11	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:58	KJH	A
Aroclor-1254	ND		mg/kg	0.11	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:58	KJH	A
Aroclor-1260	ND		mg/kg	0.11	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:58	KJH	A
Aroclor-1262	ND		mg/kg	0.11	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:58	KJH	A
Aroclor-1268	ND		mg/kg	0.11	SW846 8082A	5/6/16 04:00	CMA	5/6/16 14:58	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
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	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS	A
alpha-BHC	ND		ug/kg	28.4	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS	A
beta-BHC	ND		ug/kg	28.4	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS	A
delta-BHC	ND		ug/kg	28.4	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS	A
gamma-BHC	ND		ug/kg	28.4	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS	A
alpha-Chlordane	ND		ug/kg	28.4	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS	A
gamma-Chlordane	ND		ug/kg	28.4	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS	A
4,4'-DDD	ND		ug/kg	55.1	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS	A
4,4'-DDE	ND		ug/kg	55.1	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS	A
4,4'-DDT	ND		ug/kg	55.1	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS	A
Dieldrin	ND		ug/kg	55.1	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS	A
Endosulfan I	ND		ug/kg	28.4	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS	A
Endosulfan II	ND		ug/kg	55.1	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS	A
Endosulfan Sulfate	ND		ug/kg	55.1	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS	A
Endrin	ND		ug/kg	55.1	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS	A
Endrin Aldehyde	ND		ug/kg	55.1	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS	A
Endrin Ketone	ND		ug/kg	55.1	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS	A
Heptachlor	ND		ug/kg	28.4	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS	A
Heptachlor Epoxide	ND		ug/kg	28.4	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS	A
Methoxychlor	ND		ug/kg	55.1	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS	A
Toxaphene	ND		ug/kg	585	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:31	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
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	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	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:56	KJH	A
2,4-DB	ND		ug/kg	125	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:56	KJH	A
Dalapon	ND		ug/kg	125	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:56	KJH	A
Dicamba	ND		ug/kg	125	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:56	KJH	A
Dichloroprop	ND		ug/kg	125	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:56	KJH	A
Dinoseb	ND		ug/kg	312	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:56	KJH	A
Pentachlorophenol	ND		ug/kg	125	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:56	KJH	A
2,4,5-T	ND		ug/kg	125	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:56	KJH	A
2,4,5-TP	ND		ug/kg	125	SW846 8151A	5/9/16 06:20	VLM	5/11/16 15:56	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
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	S2540G-11			5/11/16 10:52	SLC	A
pH	6.91	3	pH_Units		SW846 9045D			5/7/16 06:34	MSA	A
Total Solids	52.8		%	0.1	S2540G-11			5/11/16 10:52	SLC	A
METALS										
Aluminum, Total	1530		mg/kg	4.7	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO	A1
Antimony, Total	ND		mg/kg	0.12	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO	A1
Arsenic, Total	0.27		mg/kg	0.18	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO	A1
Barium, Total	9.7		mg/kg	0.29	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO	A1
Beryllium, Total	ND		mg/kg	0.059	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO	A1
Cadmium, Total	ND		mg/kg	0.059	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO	A1
Calcium, Total	86.2		mg/kg	5.9	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO	A1
Chromium, Total	2.0		mg/kg	0.12	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO	A1
Cobalt, Total	0.38		mg/kg	0.29	SW846 6020A	5/10/16 13:40	JPS	5/20/16 09:39	MO	A1
Copper, Total	1.6		mg/kg	0.29	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO	A1
Iron, Total	1450		mg/kg	2.9	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO	A1
Lead, Total	1.4		mg/kg	0.12	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO	A1
Magnesium, Total	194		mg/kg	5.9	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO	A1
Manganese, Total	21.6		mg/kg	0.29	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO	A1
Mercury, Total	ND		mg/kg	0.082	SW846 7471B	5/16/16 10:30	MNP	5/16/16 13:22	MNP	A2
Nickel, Total	1.2		mg/kg	0.29	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO	A1
Potassium, Total	102		mg/kg	5.9	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO	A1
Selenium, Total	ND		mg/kg	0.29	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: **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	Method	Prepared	By	Analyzed	By	*Cntr*
Silver, Total	ND		mg/kg	0.12	SW846 6020A	5/10/16 13:40	JPS	5/20/16 09:39	MO	A1
Sodium, Total	36.8		mg/kg	5.9	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO	A1
Thallium, Total	ND		mg/kg	0.059	SW846 6020A	5/10/16 13:40	JPS	5/20/16 09:39	MO	A1
Vanadium, Total	2.4		mg/kg	0.12	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO	A1
Zinc, Total	3.8		mg/kg	0.29	SW846 6020A	5/10/16 13:40	JPS	5/19/16 16:57	MO	A1

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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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	Method	Prepared	By	Analyzed	By	*Cntr*
SEMIVOLATILES										
Acenaphthene	ND		ug/kg	234	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Acenaphthylene	ND		ug/kg	234	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Acetophenone	ND		ug/kg	469	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Anthracene	ND		ug/kg	234	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Atrazine	ND		ug/kg	469	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Benzaldehyde	ND		ug/kg	938	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Benzo(a)anthracene	ND		ug/kg	234	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Benzo(a)pyrene	ND		ug/kg	234	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Benzo(b)fluoranthene	ND		ug/kg	234	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Benzo(g,h,i)perylene	ND		ug/kg	234	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Benzo(k)fluoranthene	ND		ug/kg	234	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Biphenyl	ND		ug/kg	469	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
4-Bromophenyl-phenylether	ND		ug/kg	469	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Butylbenzylphthalate	ND		ug/kg	469	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Caprolactam	ND		ug/kg	938	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Carbazole	ND		ug/kg	469	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
4-Chloro-3-methylphenol	ND		ug/kg	938	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
4-Chloroaniline	ND		ug/kg	938	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
bis(2-Chloroethoxy)methane	ND		ug/kg	469	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
bis(2-Chloroethyl)ether	ND		ug/kg	469	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
bis(2-Chloroisopropyl)ether	ND		ug/kg	469	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
2-Chloronaphthalene	ND		ug/kg	469	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
2-Chlorophenol	ND		ug/kg	938	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
4-Chlorophenyl-phenylether	ND		ug/kg	469	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Chrysene	ND		ug/kg	234	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
mp-Cresol	ND		ug/kg	938	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
o-Cresol	ND		ug/kg	938	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Di-n-Butylphthalate	ND		ug/kg	469	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Di-n-Octylphthalate	ND		ug/kg	469	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Dibenzo(a,h)anthracene	ND		ug/kg	234	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Dibenzofuran	ND		ug/kg	469	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
3,3-Dichlorobenzidine	ND		ug/kg	938	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
2,4-Dichlorophenol	ND		ug/kg	938	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Diethylphthalate	ND		ug/kg	469	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
2,4-Dimethylphenol	ND		ug/kg	938	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Dimethylphthalate	ND		ug/kg	469	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
2,4-Dinitrophenol	ND		ug/kg	938	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	Method	Prepared	By	Analyzed	By	*Cntr*
2,4-Dinitrotoluene	ND		ug/kg	469	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
2,6-Dinitrotoluene	ND		ug/kg	469	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
1,4-Dioxane	ND		ug/kg	469	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
bis(2-Ethylhexyl)phthalate	ND		ug/kg	469	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Fluoranthene	ND		ug/kg	234	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Fluorene	ND		ug/kg	234	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Hexachlorobenzene	ND		ug/kg	469	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Hexachlorobutadiene	ND		ug/kg	469	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Hexachlorocyclopentadiene	ND		ug/kg	938	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Hexachloroethane	ND		ug/kg	469	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Indeno(1,2,3-cd)pyrene	ND		ug/kg	234	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Isophorone	ND		ug/kg	469	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
2-Methyl-4,6-dinitrophenol	ND		ug/kg	938	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
2-Methylnaphthalene	ND		ug/kg	469	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Naphthalene	ND		ug/kg	234	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
2-Nitroaniline	ND		ug/kg	938	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
3-Nitroaniline	ND		ug/kg	938	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
4-Nitroaniline	ND		ug/kg	938	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Nitrobenzene	ND		ug/kg	469	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
2-Nitrophenol	ND		ug/kg	938	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
4-Nitrophenol	ND		ug/kg	938	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
N-Nitroso-di-n-propylamine	ND		ug/kg	469	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
N-Nitrosodiphenylamine	ND		ug/kg	469	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Pentachlorophenol	ND		ug/kg	938	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Phenanthrene	ND		ug/kg	234	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Phenol	ND		ug/kg	938	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
Pyrene	ND		ug/kg	234	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	469	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
2,3,4,6-Tetrachlorophenol	ND		ug/kg	938	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
2,4,5-Trichlorophenol	ND		ug/kg	938	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A
2,4,6-Trichlorophenol	ND		ug/kg	938	SW846 8270D	5/11/16 02:25	VLM	5/11/16 12:51	CGS	A

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
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	Method	Prepared	By	Analyzed	By	Cntr
PCBs										
Aroclor-1016	ND		mg/kg	0.15	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:09	KJH	A
Aroclor-1221	ND		mg/kg	0.15	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:09	KJH	A
Aroclor-1232	ND		mg/kg	0.15	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:09	KJH	A
Aroclor-1242	ND		mg/kg	0.15	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:09	KJH	A
Aroclor-1248	ND		mg/kg	0.15	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:09	KJH	A
Aroclor-1254	ND		mg/kg	0.15	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:09	KJH	A
Aroclor-1260	ND		mg/kg	0.15	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:09	KJH	A
Aroclor-1262	ND		mg/kg	0.15	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:09	KJH	A
Aroclor-1268	ND		mg/kg	0.15	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:09	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
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	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS	A
alpha-BHC	ND		ug/kg	38.0	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS	A
beta-BHC	ND		ug/kg	38.0	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS	A
delta-BHC	ND		ug/kg	38.0	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS	A
gamma-BHC	ND		ug/kg	38.0	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS	A
alpha-Chlordane	ND		ug/kg	38.0	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS	A
gamma-Chlordane	ND		ug/kg	38.0	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS	A
4,4'-DDD	ND		ug/kg	73.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS	A
4,4'-DDE	ND		ug/kg	73.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS	A
4,4'-DDT	ND		ug/kg	73.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS	A
Dieldrin	ND		ug/kg	73.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS	A
Endosulfan I	ND		ug/kg	38.0	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS	A
Endosulfan II	ND		ug/kg	73.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS	A
Endosulfan Sulfate	ND		ug/kg	73.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS	A
Endrin	ND		ug/kg	73.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS	A
Endrin Aldehyde	ND		ug/kg	73.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS	A
Endrin Ketone	ND		ug/kg	73.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS	A
Heptachlor	ND		ug/kg	38.0	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS	A
Heptachlor Epoxide	ND		ug/kg	38.0	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS	A
Methoxychlor	ND		ug/kg	73.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS	A
Toxaphene	ND		ug/kg	783	SW846 8081B	5/6/16 04:00	CMA	5/6/16 16:46	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
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	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	SW846 8151A	5/9/16 06:20	VLM	5/11/16 16:33	KJH	A
2,4-DB	ND		ug/kg	169	SW846 8151A	5/9/16 06:20	VLM	5/11/16 16:33	KJH	A
Dalapon	ND		ug/kg	169	SW846 8151A	5/9/16 06:20	VLM	5/11/16 16:33	KJH	A
Dicamba	ND		ug/kg	169	SW846 8151A	5/9/16 06:20	VLM	5/11/16 16:33	KJH	A
Dichloroprop	ND		ug/kg	169	SW846 8151A	5/9/16 06:20	VLM	5/11/16 16:33	KJH	A
Dinoseb	ND		ug/kg	421	SW846 8151A	5/9/16 06:20	VLM	5/11/16 16:33	KJH	A
Pentachlorophenol	ND		ug/kg	169	SW846 8151A	5/9/16 06:20	VLM	5/11/16 16:33	KJH	A
2,4,5-T	ND		ug/kg	169	SW846 8151A	5/9/16 06:20	VLM	5/11/16 16:33	KJH	A
2,4,5-TP	ND		ug/kg	169	SW846 8151A	5/9/16 06:20	VLM	5/11/16 16:33	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
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	S2540G-11			5/11/16 10:52	SLC	A
pH	6.87	4	pH_Units		SW846 9045D			5/7/16 06:38	MSA	A
Total Solids	38.5		%	0.1	S2540G-11			5/11/16 10:52	SLC	A
METALS										
Aluminum, Total	5360		mg/kg	6.4	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO	A1
Antimony, Total	ND		mg/kg	0.16	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO	A1
Arsenic, Total	0.90		mg/kg	0.24	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO	A1
Barium, Total	48.6		mg/kg	0.40	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO	A1
Beryllium, Total	0.19		mg/kg	0.080	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO	A1
Cadmium, Total	0.096		mg/kg	0.080	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO	A1
Calcium, Total	694		mg/kg	8.0	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO	A1
Chromium, Total	10.1		mg/kg	0.16	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO	A1
Cobalt, Total	1.5		mg/kg	0.40	SW846 6020A	5/10/16 13:40	JPS	5/20/16 09:43	MO	A1
Copper, Total	5.3		mg/kg	0.40	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO	A1
Iron, Total	6070		mg/kg	4.0	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO	A1
Lead, Total	8.9		mg/kg	0.16	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO	A1
Magnesium, Total	1020		mg/kg	8.0	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO	A1
Manganese, Total	77.2		mg/kg	0.40	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO	A1
Mercury, Total	ND		mg/kg	0.12	SW846 7471B	5/16/16 10:30	MNP	5/16/16 13:23	MNP	A2
Nickel, Total	5.3		mg/kg	0.40	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO	A1
Potassium, Total	398		mg/kg	8.0	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO	A1
Selenium, Total	0.74		mg/kg	0.40	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO	A1

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

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	Method	Prepared	By	Analyzed	By	*Cntr*
Silver, Total	ND		mg/kg	0.16	SW846 6020A	5/10/16 13:40	JPS	5/20/16 09:43	MO	A1
Sodium, Total	132		mg/kg	8.0	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO	A1
Thallium, Total	ND		mg/kg	0.080	SW846 6020A	5/10/16 13:40	JPS	5/20/16 09:43	MO	A1
Vanadium, Total	11.0		mg/kg	0.16	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO	A1
Zinc, Total	25.6		mg/kg	0.40	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:01	MO	A1

Shannon Butler

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	Method	Prepared	By	Analyzed	By	*Cntr*
SEMIVOLATILES										
Acenaphthene	ND		ug/kg	196	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Acenaphthylene	ND		ug/kg	196	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Acetophenone	ND		ug/kg	393	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Anthracene	ND		ug/kg	196	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Atrazine	ND		ug/kg	393	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Benzaldehyde	ND		ug/kg	786	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Benzo(a)anthracene	ND		ug/kg	196	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Benzo(a)pyrene	ND		ug/kg	196	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Benzo(b)fluoranthene	ND		ug/kg	196	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Benzo(g,h,i)perylene	ND		ug/kg	196	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Benzo(k)fluoranthene	ND		ug/kg	196	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Biphenyl	ND		ug/kg	393	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
4-Bromophenyl-phenylether	ND		ug/kg	393	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Butylbenzylphthalate	ND		ug/kg	393	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Caprolactam	ND		ug/kg	786	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Carbazole	ND		ug/kg	393	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
4-Chloro-3-methylphenol	ND		ug/kg	786	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
4-Chloroaniline	ND		ug/kg	786	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
bis(2-Chloroethoxy)methane	ND		ug/kg	393	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
bis(2-Chloroethyl)ether	ND		ug/kg	393	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
bis(2-Chloroisopropyl)ether	ND		ug/kg	393	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
2-Chloronaphthalene	ND		ug/kg	393	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
2-Chlorophenol	ND		ug/kg	786	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
4-Chlorophenyl-phenylether	ND		ug/kg	393	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Chrysene	ND		ug/kg	196	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
mp-Cresol	ND		ug/kg	786	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
o-Cresol	ND		ug/kg	786	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Di-n-Butylphthalate	ND		ug/kg	393	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Di-n-Octylphthalate	ND		ug/kg	393	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Dibenzo(a,h)anthracene	ND		ug/kg	196	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Dibenzofuran	ND		ug/kg	393	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
3,3-Dichlorobenzidine	ND		ug/kg	786	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
2,4-Dichlorophenol	ND		ug/kg	786	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Diethylphthalate	ND		ug/kg	393	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
2,4-Dimethylphenol	ND		ug/kg	786	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Dimethylphthalate	ND		ug/kg	393	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
2,4-Dinitrophenol	ND		ug/kg	786	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	Method	Prepared	By	Analyzed	By	*Cntr*
2,4-Dinitrotoluene	ND		ug/kg	393	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
2,6-Dinitrotoluene	ND		ug/kg	393	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
1,4-Dioxane	ND		ug/kg	393	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
bis(2-Ethylhexyl)phthalate	ND		ug/kg	393	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Fluoranthene	ND		ug/kg	196	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Fluorene	ND		ug/kg	196	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Hexachlorobenzene	ND		ug/kg	393	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Hexachlorobutadiene	ND		ug/kg	393	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Hexachlorocyclopentadiene	ND		ug/kg	786	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Hexachloroethane	ND		ug/kg	393	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	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Isophorone	ND		ug/kg	393	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
2-Methyl-4,6-dinitrophenol	ND		ug/kg	786	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
2-Methylnaphthalene	ND		ug/kg	393	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Naphthalene	ND		ug/kg	196	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
2-Nitroaniline	ND		ug/kg	786	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
3-Nitroaniline	ND		ug/kg	786	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
4-Nitroaniline	ND		ug/kg	786	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Nitrobenzene	ND		ug/kg	393	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
2-Nitrophenol	ND		ug/kg	786	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
4-Nitrophenol	ND		ug/kg	786	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
N-Nitroso-di-n-propylamine	ND		ug/kg	393	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
N-Nitrosodiphenylamine	ND		ug/kg	393	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Pentachlorophenol	ND		ug/kg	786	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Phenanthrene	ND		ug/kg	196	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Phenol	ND		ug/kg	786	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
Pyrene	ND		ug/kg	196	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	393	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
2,3,4,6-Tetrachlorophenol	ND		ug/kg	786	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
2,4,5-Trichlorophenol	ND		ug/kg	786	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A
2,4,6-Trichlorophenol	ND		ug/kg	786	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:17	CGS	A

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
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	Method	Prepared	By	Analyzed	By	Cntr
PCBs										
Aroclor-1016	ND		mg/kg	0.11	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:21	KJH	A
Aroclor-1221	ND		mg/kg	0.11	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:21	KJH	A
Aroclor-1232	ND		mg/kg	0.11	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:21	KJH	A
Aroclor-1242	ND		mg/kg	0.11	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:21	KJH	A
Aroclor-1248	ND		mg/kg	0.11	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:21	KJH	A
Aroclor-1254	ND		mg/kg	0.11	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:21	KJH	A
Aroclor-1260	ND		mg/kg	0.11	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:21	KJH	A
Aroclor-1262	ND		mg/kg	0.11	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:21	KJH	A
Aroclor-1268	ND		mg/kg	0.11	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:21	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
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	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS	A
alpha-BHC	ND		ug/kg	27.2	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS	A
beta-BHC	ND		ug/kg	27.2	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS	A
delta-BHC	ND		ug/kg	27.2	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS	A
gamma-BHC	ND		ug/kg	27.2	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS	A
alpha-Chlordane	ND		ug/kg	27.2	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS	A
gamma-Chlordane	ND		ug/kg	27.2	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS	A
4,4'-DDD	ND		ug/kg	52.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS	A
4,4'-DDE	ND		ug/kg	52.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS	A
4,4'-DDT	ND		ug/kg	52.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS	A
Dieldrin	ND		ug/kg	52.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS	A
Endosulfan I	ND		ug/kg	27.2	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS	A
Endosulfan II	ND		ug/kg	52.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS	A
Endosulfan Sulfate	ND		ug/kg	52.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS	A
Endrin	ND		ug/kg	52.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS	A
Endrin Aldehyde	ND		ug/kg	52.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS	A
Endrin Ketone	ND		ug/kg	52.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS	A
Heptachlor	ND		ug/kg	27.2	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS	A
Heptachlor Epoxide	ND		ug/kg	27.2	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS	A
Methoxychlor	ND		ug/kg	52.9	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS	A
Toxaphene	ND		ug/kg	561	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:02	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
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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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

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	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	SW846 8151A	5/9/16 06:20	VLM	5/11/16 17:10	KJH	A
2,4-DB	ND		ug/kg	146	SW846 8151A	5/9/16 06:20	VLM	5/11/16 17:10	KJH	A
Dalapon	ND		ug/kg	146	SW846 8151A	5/9/16 06:20	VLM	5/11/16 17:10	KJH	A
Dicamba	ND		ug/kg	146	SW846 8151A	5/9/16 06:20	VLM	5/11/16 17:10	KJH	A
Dichloroprop	ND		ug/kg	146	SW846 8151A	5/9/16 06:20	VLM	5/11/16 17:10	KJH	A
Dinoseb	ND		ug/kg	364	SW846 8151A	5/9/16 06:20	VLM	5/11/16 17:10	KJH	A
Pentachlorophenol	ND		ug/kg	146	SW846 8151A	5/9/16 06:20	VLM	5/11/16 17:10	KJH	A
2,4,5-T	ND		ug/kg	146	SW846 8151A	5/9/16 06:20	VLM	5/11/16 17:10	KJH	A
2,4,5-TP	ND		ug/kg	146	SW846 8151A	5/9/16 06:20	VLM	5/11/16 17:10	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
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	S2540G-11			5/11/16 10:52	SLC	A
pH	6.91	3	pH_Units		SW846 9045D			5/7/16 06:41	MSA	A
Total Solids	45.5		%	0.1	S2540G-11			5/11/16 10:52	SLC	A
METALS										
Aluminum, Total	47700		mg/kg	74.6	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO	A1
Antimony, Total	ND		mg/kg	1.9	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO	A1
Arsenic, Total	7.2		mg/kg	2.8	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO	A1
Barium, Total	339		mg/kg	4.7	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO	A1
Beryllium, Total	1.6		mg/kg	0.93	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO	A1
Cadmium, Total	ND		mg/kg	0.93	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO	A1
Calcium, Total	3850		mg/kg	93.2	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO	A1
Chromium, Total	76.1		mg/kg	1.9	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO	A1
Cobalt, Total	12.6		mg/kg	4.7	SW846 6020A	5/10/16 13:40	JPS	5/20/16 09:47	MO	A1
Copper, Total	43.4		mg/kg	4.7	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO	A1
Iron, Total	47200		mg/kg	46.6	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO	A1
Lead, Total	76.6		mg/kg	1.9	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO	A1
Magnesium, Total	7790		mg/kg	93.2	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO	A1
Manganese, Total	702		mg/kg	4.7	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO	A1
Mercury, Total	ND		mg/kg	0.10	SW846 7471B	5/16/16 10:30	MNP	5/16/16 13:24	MNP	A2
Nickel, Total	40.9		mg/kg	4.7	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO	A1
Potassium, Total	3620		mg/kg	93.2	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO	A1
Selenium, Total	5.5		mg/kg	4.7	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** 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	Method	Prepared	By	Analyzed	By	*Cntr*
Silver, Total	ND		mg/kg	1.9	SW846 6020A	5/10/16 13:40	JPS	5/20/16 09:47	MO	A1
Sodium, Total	274		mg/kg	93.2	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO	A1
Thallium, Total	ND		mg/kg	0.93	SW846 6020A	5/10/16 13:40	JPS	5/20/16 09:47	MO	A1
Vanadium, Total	90.4		mg/kg	1.9	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO	A1
Zinc, Total	165		mg/kg	4.7	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:05	MO	A1

Shannon Butler

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	Method	Prepared	By	Analyzed	By	*Cntr*
SEMIVOLATILES										
Acenaphthene	ND		ug/kg	176	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Acenaphthylene	ND		ug/kg	176	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Acetophenone	ND		ug/kg	353	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Anthracene	ND		ug/kg	176	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Atrazine	ND		ug/kg	353	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Benzaldehyde	ND		ug/kg	706	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Benzo(a)anthracene	ND		ug/kg	176	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Benzo(a)pyrene	ND		ug/kg	176	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Benzo(b)fluoranthene	ND		ug/kg	176	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Benzo(g,h,i)perylene	ND		ug/kg	176	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Benzo(k)fluoranthene	ND		ug/kg	176	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Biphenyl	ND		ug/kg	353	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
4-Bromophenyl-phenylether	ND		ug/kg	353	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Butylbenzylphthalate	ND		ug/kg	353	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Caprolactam	ND		ug/kg	706	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Carbazole	ND		ug/kg	353	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
4-Chloro-3-methylphenol	ND		ug/kg	706	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
4-Chloroaniline	ND		ug/kg	706	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
bis(2-Chloroethoxy)methane	ND		ug/kg	353	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
bis(2-Chloroethyl)ether	ND		ug/kg	353	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
bis(2-Chloroisopropyl)ether	ND		ug/kg	353	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
2-Chloronaphthalene	ND		ug/kg	353	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
2-Chlorophenol	ND		ug/kg	706	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
4-Chlorophenyl-phenylether	ND		ug/kg	353	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Chrysene	ND		ug/kg	176	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
mp-Cresol	ND		ug/kg	706	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
o-Cresol	ND		ug/kg	706	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Di-n-Butylphthalate	ND		ug/kg	353	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Di-n-Octylphthalate	ND		ug/kg	353	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Dibenzo(a,h)anthracene	ND		ug/kg	176	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Dibenzofuran	ND		ug/kg	353	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
3,3-Dichlorobenzidine	ND		ug/kg	706	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
2,4-Dichlorophenol	ND		ug/kg	706	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Diethylphthalate	ND		ug/kg	353	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
2,4-Dimethylphenol	ND		ug/kg	706	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Dimethylphthalate	ND		ug/kg	353	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
2,4-Dinitrophenol	ND		ug/kg	706	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

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	Method	Prepared	By	Analyzed	By	Cntr
2,4-Dinitrotoluene	ND		ug/kg	353	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
2,6-Dinitrotoluene	ND		ug/kg	353	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
1,4-Dioxane	ND		ug/kg	353	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
bis(2-Ethylhexyl)phthalate	ND		ug/kg	353	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Fluoranthene	ND		ug/kg	176	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Fluorene	ND		ug/kg	176	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Hexachlorobenzene	ND		ug/kg	353	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Hexachlorobutadiene	ND		ug/kg	353	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Hexachlorocyclopentadiene	ND		ug/kg	706	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Hexachloroethane	ND		ug/kg	353	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	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Isophorone	ND		ug/kg	353	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
2-Methyl-4,6-dinitrophenol	ND		ug/kg	706	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
2-Methylnaphthalene	ND		ug/kg	353	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Naphthalene	ND		ug/kg	176	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
2-Nitroaniline	ND		ug/kg	706	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
3-Nitroaniline	ND		ug/kg	706	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
4-Nitroaniline	ND		ug/kg	706	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Nitrobenzene	ND		ug/kg	353	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
2-Nitrophenol	ND		ug/kg	706	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
4-Nitrophenol	ND		ug/kg	706	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
N-Nitroso-di-n-propylamine	ND		ug/kg	353	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
N-Nitrosodiphenylamine	ND		ug/kg	353	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Pentachlorophenol	ND		ug/kg	706	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Phenanthrene	ND		ug/kg	176	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Phenol	ND		ug/kg	706	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
Pyrene	ND		ug/kg	176	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	353	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
2,3,4,6-Tetrachlorophenol	ND		ug/kg	706	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
2,4,5-Trichlorophenol	ND		ug/kg	706	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A
2,4,6-Trichlorophenol	ND		ug/kg	706	SW846 8270D	5/11/16 02:25	VLM	5/11/16 13:43	CGS	A

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
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

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	Method	Prepared	By	Analyzed	By	Cntr
PCBs										
Aroclor-1016	ND		mg/kg	0.13	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:32	KJH	A
Aroclor-1221	ND		mg/kg	0.13	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:32	KJH	A
Aroclor-1232	ND		mg/kg	0.13	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:32	KJH	A
Aroclor-1242	ND		mg/kg	0.13	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:32	KJH	A
Aroclor-1248	ND		mg/kg	0.13	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:32	KJH	A
Aroclor-1254	ND		mg/kg	0.13	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:32	KJH	A
Aroclor-1260	ND		mg/kg	0.13	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:32	KJH	A
Aroclor-1262	ND		mg/kg	0.13	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:32	KJH	A
Aroclor-1268	ND		mg/kg	0.13	SW846 8082A	5/6/16 04:00	CMA	5/6/16 15:32	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
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	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS	A
alpha-BHC	ND		ug/kg	33.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS	A
beta-BHC	ND		ug/kg	33.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS	A
delta-BHC	ND		ug/kg	33.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS	A
gamma-BHC	ND		ug/kg	33.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS	A
alpha-Chlordane	ND		ug/kg	33.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS	A
gamma-Chlordane	ND		ug/kg	33.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS	A
4,4'-DDD	ND		ug/kg	65.6	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS	A
4,4'-DDE	ND		ug/kg	65.6	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS	A
4,4'-DDT	ND		ug/kg	65.6	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS	A
Dieldrin	ND		ug/kg	65.6	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS	A
Endosulfan I	ND		ug/kg	33.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS	A
Endosulfan II	ND		ug/kg	65.6	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS	A
Endosulfan Sulfate	ND		ug/kg	65.6	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS	A
Endrin	ND		ug/kg	65.6	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS	A
Endrin Aldehyde	ND		ug/kg	65.6	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS	A
Endrin Ketone	ND		ug/kg	65.6	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS	A
Heptachlor	ND		ug/kg	33.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS	A
Heptachlor Epoxide	ND		ug/kg	33.8	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS	A
Methoxychlor	ND		ug/kg	65.6	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS	A
Toxaphene	ND		ug/kg	696	SW846 8081B	5/6/16 04:00	CMA	5/6/16 17:17	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
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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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

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	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	SW846 8151A	5/9/16 06:20	VLM	5/12/16 07:47	KJH	A
2,4-DB	ND		ug/kg	137	SW846 8151A	5/9/16 06:20	VLM	5/12/16 07:47	KJH	A
Dalapon	ND		ug/kg	137	SW846 8151A	5/9/16 06:20	VLM	5/12/16 07:47	KJH	A
Dicamba	ND		ug/kg	137	SW846 8151A	5/9/16 06:20	VLM	5/12/16 07:47	KJH	A
Dichloroprop	ND		ug/kg	137	SW846 8151A	5/9/16 06:20	VLM	5/12/16 07:47	KJH	A
Dinoseb	ND		ug/kg	341	SW846 8151A	5/9/16 06:20	VLM	5/12/16 07:47	KJH	A
Pentachlorophenol	ND		ug/kg	137	SW846 8151A	5/9/16 06:20	VLM	5/12/16 07:47	KJH	A
2,4,5-T	ND		ug/kg	137	SW846 8151A	5/9/16 06:20	VLM	5/12/16 07:47	KJH	A
2,4,5-TP	ND		ug/kg	137	SW846 8151A	5/9/16 06:20	VLM	5/12/16 07:47	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
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	S2540G-11			5/11/16 10:52	SLC	A
pH	6.85	1	pH_Units		SW846 9045D			5/7/16 06:45	MSA	A
Total Solids	47.8		%	0.1	S2540G-11			5/11/16 10:52	SLC	A
METALS										
Aluminum, Total	46300		mg/kg	76.2	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO	A1
Antimony, Total	ND		mg/kg	1.9	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO	A1
Arsenic, Total	7.9		mg/kg	2.9	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO	A1
Barium, Total	312		mg/kg	4.8	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO	A1
Beryllium, Total	1.6		mg/kg	0.95	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO	A1
Cadmium, Total	ND		mg/kg	0.95	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO	A1
Calcium, Total	2690		mg/kg	95.2	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO	A1
Chromium, Total	68.5		mg/kg	1.9	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO	A1
Cobalt, Total	12.3		mg/kg	4.8	SW846 6020A	5/10/16 13:40	JPS	5/20/16 09:51	MO	A1
Copper, Total	45.2		mg/kg	4.8	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO	A1
Iron, Total	47900		mg/kg	47.6	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO	A1
Lead, Total	48.7		mg/kg	1.9	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO	A1
Magnesium, Total	6500		mg/kg	95.2	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO	A1
Manganese, Total	741		mg/kg	4.8	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO	A1
Mercury, Total	ND		mg/kg	0.10	SW846 7471B	5/16/16 10:30	MNP	5/16/16 13:25	MNP	A2
Nickel, Total	41.3		mg/kg	4.8	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO	A1
Potassium, Total	3060		mg/kg	95.2	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO	A1
Selenium, Total	7.6		mg/kg	4.8	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	Method	Prepared	By	Analyzed	By	*Cntr*
Silver, Total	ND		mg/kg	1.9	SW846 6020A	5/10/16 13:40	JPS	5/20/16 09:51	MO	A1
Sodium, Total	164		mg/kg	95.2	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO	A1
Thallium, Total	ND		mg/kg	0.95	SW846 6020A	5/10/16 13:40	JPS	5/20/16 09:51	MO	A1
Vanadium, Total	82.9		mg/kg	1.9	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO	A1
Zinc, Total	141		mg/kg	4.8	SW846 6020A	5/10/16 13:40	JPS	5/19/16 17:09	MO	A1

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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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	Method	Prepared	By	Analyzed	By	*Cntr*
SEMIVOLATILES										
Acenaphthene	ND		ug/L	1.6	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Acenaphthylene	ND		ug/L	1.6	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Acetophenone	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Anthracene	ND		ug/L	1.6	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Atrazine	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Benzaldehyde	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Benzo(a)anthracene	ND		ug/L	1.6	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Benzo(a)pyrene	ND		ug/L	1.6	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Benzo(b)fluoranthene	ND		ug/L	1.6	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	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Benzo(k)fluoranthene	ND		ug/L	1.6	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Biphenyl	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
4-Bromophenyl-phenylether	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Butylbenzylphthalate	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Caprolactam	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Carbazole	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
4-Chloro-3-methylphenol	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
4-Chloroaniline	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
bis(2-Chloroethoxy)methane	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
bis(2-Chloroethyl)ether	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
bis(2-Chloroisopropyl)ether	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
2-Chloronaphthalene	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
2-Chlorophenol	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
4-Chlorophenyl-phenylether	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Chrysene	ND		ug/L	1.6	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
mp-Cresol	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
o-Cresol	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Di-n-Butylphthalate	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Di-n-Octylphthalate	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Dibenzo(a,h)anthracene	ND		ug/L	1.6	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Dibenzofuran	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
3,3-Dichlorobenzidine	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
2,4-Dichlorophenol	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Diethylphthalate	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
2,4-Dimethylphenol	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Dimethylphthalate	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
2,4-Dinitrophenol	ND		ug/L	6.5	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	Method	Prepared	By	Analyzed	By	Cntr
2,4-Dinitrotoluene	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
2,6-Dinitrotoluene	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
1,4-Dioxane	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
bis(2-Ethylhexyl)phthalate	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Fluoranthene	ND		ug/L	1.6	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Fluorene	ND		ug/L	1.6	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Hexachlorobenzene	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Hexachlorobutadiene	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Hexachlorocyclopentadiene	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Hexachloroethane	ND		ug/L	3.3	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	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Isophorone	ND		ug/L	3.3	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	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
2-Methylnaphthalene	ND		ug/L	1.6	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Naphthalene	ND		ug/L	1.6	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
2-Nitroaniline	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
3-Nitroaniline	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
4-Nitroaniline	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Nitrobenzene	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
2-Nitrophenol	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
4-Nitrophenol	ND		ug/L	3.3	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	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
N-Nitrosodiphenylamine	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Pentachlorophenol	ND		ug/L	6.5	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Phenanthrene	ND		ug/L	1.6	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Phenol	ND		ug/L	8.7	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
Pyrene	ND		ug/L	1.6	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	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	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
2,4,5-Trichlorophenol	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A
2,4,6-Trichlorophenol	ND		ug/L	3.3	SW846 8270D	5/10/16 13:50	JSR	5/11/16 14:05	CGS	A

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
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	Method	Prepared	By	Analyzed	By	Cntr
PCBs										
Total Polychlorinated Biphenyl	ND		ug/L	0.47	SW846 8082A	5/6/16 12:25	LEH	5/9/16 15:31	KJH	D
Aroclor-1016	ND		ug/L	0.47	SW846 8082A	5/6/16 12:25	LEH	5/9/16 15:31	KJH	D
Aroclor-1221	ND		ug/L	0.47	SW846 8082A	5/6/16 12:25	LEH	5/9/16 15:31	KJH	D
Aroclor-1232	ND		ug/L	0.47	SW846 8082A	5/6/16 12:25	LEH	5/9/16 15:31	KJH	D
Aroclor-1242	ND		ug/L	0.47	SW846 8082A	5/6/16 12:25	LEH	5/9/16 15:31	KJH	D
Aroclor-1248	ND		ug/L	0.47	SW846 8082A	5/6/16 12:25	LEH	5/9/16 15:31	KJH	D
Aroclor-1254	ND		ug/L	0.47	SW846 8082A	5/6/16 12:25	LEH	5/9/16 15:31	KJH	D
Aroclor-1260	ND		ug/L	0.47	SW846 8082A	5/6/16 12:25	LEH	5/9/16 15:31	KJH	D
Aroclor-1262	ND		ug/L	0.47	SW846 8082A	5/6/16 12:25	LEH	5/9/16 15:31	KJH	D
Aroclor-1268	ND		ug/L	0.47	SW846 8082A	5/6/16 12:25	LEH	5/9/16 15:31	KJH	D
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
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	SW846 8081B	5/9/16 07:55	LEH	5/9/16 20:02	RWS	C
alpha-BHC	ND		ug/L	0.019	SW846 8081B	5/9/16 07:55	LEH	5/9/16 20:02	RWS	C
beta-BHC	ND		ug/L	0.019	SW846 8081B	5/9/16 07:55	LEH	5/9/16 20:02	RWS	C
delta-BHC	ND		ug/L	0.019	SW846 8081B	5/9/16 07:55	LEH	5/9/16 20:02	RWS	C
gamma-BHC	ND		ug/L	0.019	SW846 8081B	5/9/16 07:55	LEH	5/9/16 20:02	RWS	C
alpha-Chlordane	ND		ug/L	0.019	SW846 8081B	5/9/16 07:55	LEH	5/9/16 20:02	RWS	C
gamma-Chlordane	ND		ug/L	0.019	SW846 8081B	5/9/16 07:55	LEH	5/9/16 20:02	RWS	C
4,4'-DDD	ND		ug/L	0.019	SW846 8081B	5/9/16 07:55	LEH	5/9/16 20:02	RWS	C
4,4'-DDE	ND		ug/L	0.019	SW846 8081B	5/9/16 07:55	LEH	5/9/16 20:02	RWS	C
4,4'-DDT	ND		ug/L	0.019	SW846 8081B	5/9/16 07:55	LEH	5/9/16 20:02	RWS	C
Dieldrin	ND		ug/L	0.019	SW846 8081B	5/9/16 07:55	LEH	5/9/16 20:02	RWS	C
Endosulfan I	ND		ug/L	0.019	SW846 8081B	5/9/16 07:55	LEH	5/9/16 20:02	RWS	C
Endosulfan II	ND		ug/L	0.019	SW846 8081B	5/9/16 07:55	LEH	5/9/16 20:02	RWS	C
Endosulfan Sulfate	ND		ug/L	0.019	SW846 8081B	5/9/16 07:55	LEH	5/9/16 20:02	RWS	C
Endrin	ND		ug/L	0.019	SW846 8081B	5/9/16 07:55	LEH	5/9/16 20:02	RWS	C
Endrin Aldehyde	ND		ug/L	0.019	SW846 8081B	5/9/16 07:55	LEH	5/9/16 20:02	RWS	C
Endrin Ketone	ND		ug/L	0.019	SW846 8081B	5/9/16 07:55	LEH	5/9/16 20:02	RWS	C
Heptachlor	ND		ug/L	0.019	SW846 8081B	5/9/16 07:55	LEH	5/9/16 20:02	RWS	C
Heptachlor Epoxide	ND		ug/L	0.019	SW846 8081B	5/9/16 07:55	LEH	5/9/16 20:02	RWS	C
Methoxychlor	ND		ug/L	0.019	SW846 8081B	5/9/16 07:55	LEH	5/9/16 20:02	RWS	C
Toxaphene	ND		ug/L	0.95	SW846 8081B	5/9/16 07:55	LEH	5/9/16 20:02	RWS	C

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

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	Method	Prepared	By	Analyzed	By	Cntr
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
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	SW846 8151A	5/9/16 17:00	VLM	5/10/16 09:44	KJH	F
2,4-DB	ND		ug/L	0.29	SW846 8151A	5/9/16 17:00	VLM	5/10/16 09:44	KJH	F
Dalapon	ND		ug/L	0.95	SW846 8151A	5/9/16 17:00	VLM	5/10/16 09:44	KJH	F
Dicamba	ND		ug/L	0.19	SW846 8151A	5/9/16 17:00	VLM	5/10/16 09:44	KJH	F
Dichloroprop	ND		ug/L	0.48	SW846 8151A	5/9/16 17:00	VLM	5/10/16 09:44	KJH	F
Dinoseb	ND		ug/L	4.8	SW846 8151A	5/9/16 17:00	VLM	5/10/16 09:44	KJH	F
MCPA	ND		ug/L	38.1	SW846 8151A	5/9/16 17:00	VLM	5/10/16 09:44	KJH	F
MCPP	ND		ug/L	38.1	SW846 8151A	5/9/16 17:00	VLM	5/10/16 09:44	KJH	F
Pentachlorophenol	ND		ug/L	0.19	SW846 8151A	5/9/16 17:00	VLM	5/10/16 09:44	KJH	F
2,4,5-T	ND		ug/L	0.19	SW846 8151A	5/9/16 17:00	VLM	5/10/16 09:44	KJH	F
2,4,5-TP	ND		ug/L	0.29	SW846 8151A	5/9/16 17:00	VLM	5/10/16 09:44	KJH	F
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
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		pH_Units		SW846 9040C			5/6/16 14:32	MSA	E
METALS										
Aluminum, Total	ND		mg/L	0.089	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO	H1
Antimony, Total	ND		mg/L	0.0022	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO	H1
Arsenic, Total	ND		mg/L	0.0030	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO	H1
Barium, Total	0.0064		mg/L	0.0056	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO	H1
Beryllium, Total	ND		mg/L	0.0010	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO	H1
Cadmium, Total	ND		mg/L	0.0011	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO	H1
Calcium, Total	0.22		mg/L	0.11	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO	H1
Chromium, Total	ND		mg/L	0.0022	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO	H1
Cobalt, Total	ND		mg/L	0.0056	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO	H1
Copper, Total	ND		mg/L	0.0056	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO	H1
Iron, Total	ND		mg/L	0.056	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO	H1
Lead, Total	ND		mg/L	0.0022	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO	H1
Magnesium, Total	ND		mg/L	0.11	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO	H1
Manganese, Total	ND		mg/L	0.0056	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO	H1
Mercury, Total	ND		mg/L	0.00050	SW846 7470A	5/17/16 01:00	MNP	5/17/16 13:10	MNP	H2

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

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	Method	Prepared	By	Analyzed	By	*Cntr*
Nickel, Total	ND		mg/L	0.0056	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO	H1
Potassium, Total	ND		mg/L	0.11	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO	H1
Selenium, Total	ND		mg/L	0.0056	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO	H1
Silver, Total	ND		mg/L	0.0022	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO	H1
Sodium, Total	0.19		mg/L	0.11	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO	H1
Thallium, Total	ND		mg/L	0.0010	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO	H1
Vanadium, Total	ND		mg/L	0.0022	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO	H1
Zinc, Total	ND		mg/L	0.0056	SW846 6020A	5/8/16 14:20	JPS	5/17/16 17:17	MO	H1

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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.				

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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

Courier:
Tracking #:

2141551

Co. Name: Gannett Fleming, Inc.
Contact (Report to): David Graff
Phone: 717-763-7211
Address: 207 Senate Avenue
Camp Hill, PA 17011

Bill to (if different than Report to):
PO#: 0604166

Project Name/#: Milltown Reservoir
ALS Quote #: 536285

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.
Date Required:
Approved By:

Email? [X] Y dgraff@gfnet.com dgraff@gfnet.com
Fax? [ ] Y No.:

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	SVOCs - SW846/8270C	Inorganics (TAL Metals) - SW846/6010B	PCBs - SW846/8082	Chlorinated Pesticides SW846/8081A	Herbicides - SW846/8151A	pH	Equipment Blank - SVOCs	Equipment Blank - pH	Equipment Blank - PCB/Pesticides	Equipment Blank - Herbicides
***Container Type						CG	CG	CG	CG	CG	CG	AG	PL		
***Container Size						32	32	32	32	32	32	1L	250mL	1L	1L
*** Preservative						–	–	–	–	–	–	–	–	–	–
1 Site 1 - Composite 1		5/3/16	10:30	C		2	2	2	2	2	2				
2 Site 2 - Composite 1		5/3/16	11:50	C		2	2	2	2	2	2				
3 Site 2 - Composite 2		5/3/16	12:30	C		2	2	2	2	2	2				
4 Site 3 - Composite 1		5/4/16	9:30	C		2	2	2	2	2	2				
5 Site 3 - Composite 2		5/4/16	10:15	C		2	2	2	2	2	2				
6 Site 3 - Composite 3		5/4/16	11:00	C		2	2	2	2	2	2				
7 Equipment Blank		5/3/16	14:00	C								2	1	2	2
8	5/6/16 DKZ														

Enter Number of Containers Per Analysis

(completed by Sample Receiving)
Performed by: BKS
Cooler Temp: 4°C
Therm. ID: TH-352
No. of Coolers:
Notes:

Circle appropriate Y or N.	
Correct containers?	Y
Correct sample volume?	Y
Correct preservation?	Y
Headspace/Volatiles?	N
Custody seals Present?	Y
(if present) Seals intact?	Y
Received on ice?	Y
COC/Labels complete/accurate?	Y
Container in good condition?	Y

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

Project Comments: SB 5/10

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 Corey Myers	5/5/16	10:40	2 B. Schaeffer 5/5/16		10:39
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] new
EDDs Required? [ ] If yes, format type:
SDWA Forms? ⇒ yes [ ] yes [ ] yes [ ] yes [ ]
State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]
Other
DOD Criteria Required?

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite
**Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=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.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

Rev 01-2013

ALS Environmental

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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.

Courier:
Tracking #:
COC # 2141551

Co. Name: Gannett Fleming, Inc.
Contact (Report to): David Graff
Phone: 717-763-7211
Address: 207 Senate Avenue
Camp Hill, PA 17011

Bill to (if different than Report to):
PO#: 0604660

Project Name/#: Milltown Reservoir
ALS Quote #: 536285

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.
Date Required:
Approved By:

Email? [X] -Y dgraff@gfnet.com
Fax? [ ] -Y No.:

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	Equipment Blank - metals									
						Enter Number of Containers Per Analysis									
1 Equipment Blank		5/3/16	14:00	C		1									
2															
3															
4															
5															
6															
7															
8	5/6/16 0052														

***Container Type: PL
***Container Size: 500ml
***Preservative: HNO3

ANALYSES/METHOD REQUESTED

Receipt Information (completed in Sample Receipt)
Performed by: BYS
Cooler Temp: 4°C
Therm. ID: TH-352
No. of Coolers:
Notes:

Circle appropriate Y or N.	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?
	Y N	Y N	Y N	Y N

Circle appropriate Y or N.	Custody seals Present?	(if present) Seals Intact?	Received on ice?	COC/Labels complete/accurate?
	Y	Y	Y	Y
Container in good condition?	Y	Y	Y	Y

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

Project Comments: SB 5/10

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 Corey Myers	5/5/16	10:40	2 B. Schaeffer	5/5/16	10:37
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] new
EDDs Required? [ ] If yes, format type:
SDWA Forms? ⇒ yes [ ] yes [ ] yes [ ] yes [ ]
State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]
Other
DOD Criteria Required?

ALS FIELD SERVICES
[ ] Pickup
[ ] Labor
[ ] Composite Sampling
[ ] Rental Equipment
[ ] Other:

* G=Grab; C=Composite
**Matrix: Al=Air; DW=Drinking Water; GW=Groundwater; Oil=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY
***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.
Rev 01-2013

ATTACHMENT C
HEALTH AND SAFETY PLAN

GANNETT FLEMING, INC (GF)

SHORT-FORM HEALTH AND SAFETY PLAN

This short form Health and Safety Plan (HASP) is intended for use only on small-scale, short duration projects. (e.g. 1-2 days with limited work tasks and site contamination) Gannett Fleming, Inc. (GF) developed this HASP for use only by GF employees. The HASP has been developed to conform to federal, state and local guidelines and regulations and GF policies and procedures.

Compliance with this HASP will help reduce but cannot guarantee total elimination of injuries or incidents in the project area. This HASP was prepared specifically for this project and should not be used for any other project or site. Gannett Fleming, Inc. cannot guarantee the health and safety of any person in this project area.

Site Name	Milltown Reservoir Sediment Characterization
Project Number	060466
Location	10-acre reservoir located on the east side of Reservoir Road in East Goshen Township, Chester County, PA.
Document Date	April 21, 2016

Signatures	Printed Name	Signature	Date
HASP Prepared by	Corey Myers		04/21/2016
Reviewed by (Corporate Safety Representative)	Samantha Badaczewski	Samantha Badaczewski	04/22/2016
GF Project Manager	David H. Graff		

1.0 ON-SITE ORGANIZATION AND COORDINATION

The following GF personnel are designated to carry out the stated job functions on-site and have received the appropriate training to perform their site duties in accordance with applicable regulations, including 29 CFR 1910.120.

Job Function	Name	Phone Number Office/Cell
GF Project Manager:	David Graff	Phone Numbers Removed for Posting in Technical Memorandum
GF Corporate Safety Manager:	Paula Loht, C.I.H., CSP	
Site Safety & Health Supervisor (SSHS):	Steve Wittig/Corey Myers	
Field Operations Leader (FOL):	Corey Myers	
Field Team Members:	Corey Myers	
	Steve Wittig	
	Name and Affiliation	
Contractor Representative:	N/A	

2.0 SITE SETTING AND DESCRIPTION (Insert a short description of the site including its location, approximate size, site topography, accessibility, site history, past and current use, known or suspected contaminant information, etc.).

CHARACTERIZATION OF POND SEDIMENTS FOR DREDGING & DISPOSAL

Gannett Fleming, Inc. (GF) understands that the sediment within the Milltown Reservoir needs to be screened for potential contamination to assist East Goshen Township evaluate future plans for the reservoir. The 10-acre Milltown Reservoir is located between Reservoir Road and Lochwood Lane in Chester County, PA. GF proposes to characterize the material in-place as part of project engineering and planning to determine if this material could present a human health or ecological concern that would need to be further addressed or if this material would be considered "clean" and therefore used without restriction.

Sediment Characterization

GF proposes to follow the Pennsylvania Management of Fill Policy Document No. 258-2182-773, dated August 7, 2010. Up to six (6) composite sediment samples will be collected, consisting of 4 grab samples each. Samples will be placed into laboratory supplied bottleware and submitted to a PA accredited laboratory under chain of custody documentation. The following analyses would be requested to characterize the pond sediments:

- Semivolatile organic compounds (SVOCs) with library search using EPA method SW-846/ 8270C
- Inorganics (TAL Metals) using EPA method SW-846/6010B
- Polychlorinated Biphenyls (PCBs) using EPA Method SW846/8082
- Chlorinated Pesticides using EPA Method SW846/8081A
- Herbicides using EPA method SW846/8151A
- pH using EPA method 9045 (soil/water).

Assumptions

1. Sediment thickness is estimated at 12 feet.
2. Pond water depths are estimated at 4-6 ft under normal flow conditions.
3. GF assumes that the dredge material would be characterized as clean fill or regulated fill and not hazardous waste.
4. Fieldwork would be conducted during seasonal conditions suitable for pond access.

Attached Site Maps

Figure 1 – USGS Topographic Location Map
Figure 2 – Aerial Location Map

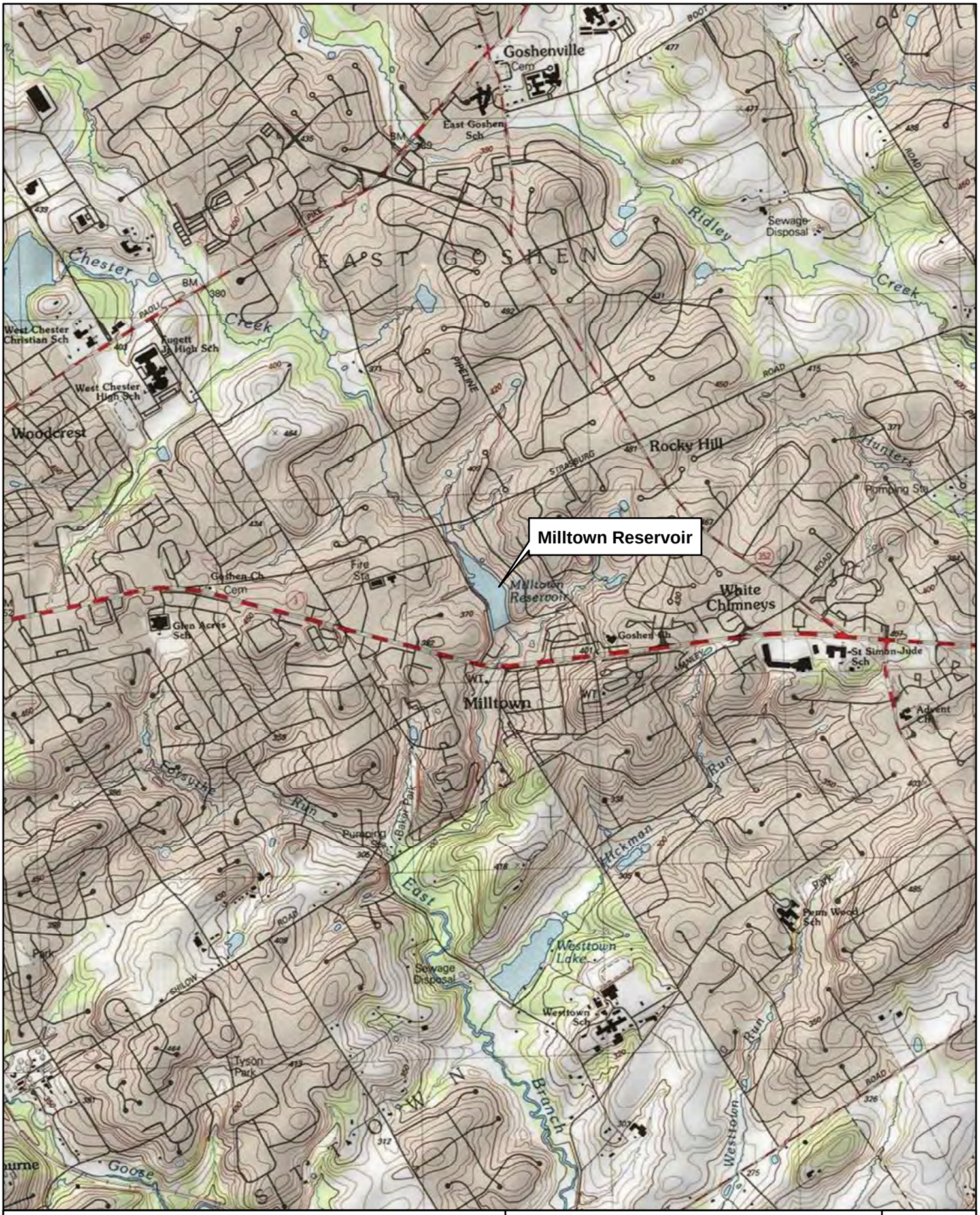


FIGURE 1
USGS TOPOGRAPHIC LOCATION MAP

Milltown Reservoir Sediment Sampling
East Goshen Township, Chester County, Pennsylvania

Feet
2,000 1,000 0 2,000

N

Gannett Fleming

Source: USGS topographic basemapping provided by ESRI ArcGIS Online webservices.

Map Prepared: 04/20/2016

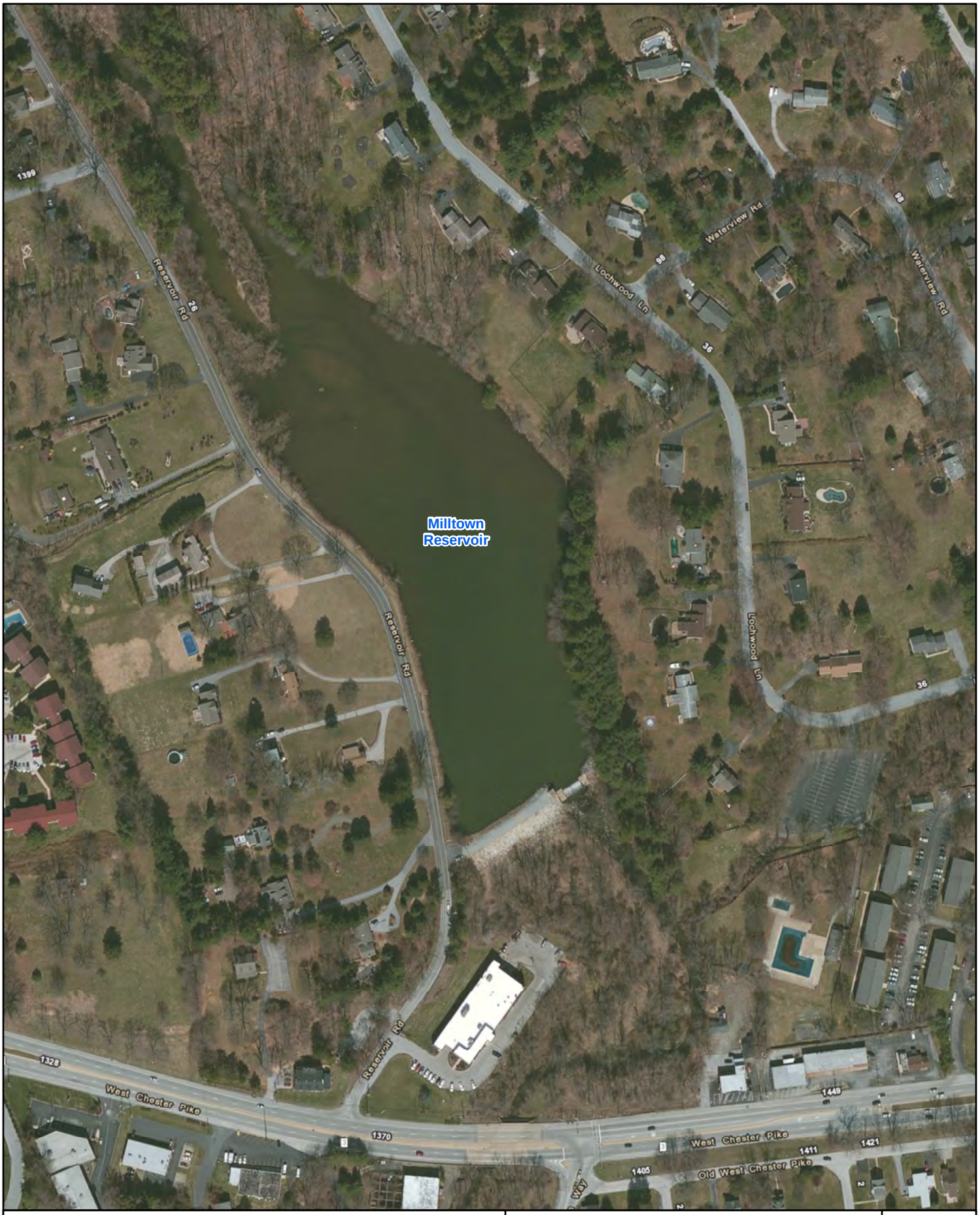


FIGURE 2
PROJECT LOCATION MAP

Milltown Reservoir Sediment Sampling
East Goshen Township, Chester County, Pennsylvania

Feet
250 125 0 250

N

Gannett Fleming

Source: Aerial imagery and transportation basemapping provided by ESRI ArcGIS Online webservices.

Map Prepared: 04/20/2016

SITE TYPE		
Select One		
☐ Active	☒ Inactive	
Select One		
☐ Secure	☒ Unsecure	
Select All That Apply		
☐ Agricultural	☐ Military	☒ Residential - Urban
☐ Commercial	☒ Natural Area	☐ Unknown
☐ Industrial	☐ Recreational	☐ Other (specify)_____
☐ Landfill	☐ Residential - Rural	

SURROUNDING POPULATION	
☐ Industrial	☒ Residential
☐ Urban	☐ Rural
	☐ Other

3.0 ON-SITE ACTIVITIES

Anticipated Dates of Field Activities: May 3 - 4, 2016

DESCRIPTION OF PROJECT	
☒ Preliminary Assessment – Sediment Investigation	☐ UST Removal
☐ Site Inspection	☐ Wetland Identification
☒ Remedial Investigation	☐ Feasibility Study
☐ Remedial Action (Limited)	☐ Sewer Inspection/Cleaning
☐ Bridge/Roadway Activities	

SPECIFIC WORK TASKS	
☐ Soil Sampling	☐ Soil Gas Sampling
☐ Drilling/Subsurface	☐ Excavation
☐ Surface Water Sampling	☐ Ground Water Monitoring
☐ XRF Soil Screening	☐ Operations & Maintenance
☒ Sediment Sampling	☐ Other (describe) _____

If more than two Work Tasks have been selected, STOP. A Long Form HASP is required.

4.0 HAZARD ASSESSMENT

What potential hazards may personnel be exposed to: (Check all that apply)	
☐ Air Pressure	☐ Mobile Heavy Equipment (Excavators, Loaders, etc.)
☐ Biological - Infectious Waste, Blood, etc.	☐ Metal Items (Plates, Wire, Particles, etc.)
☒ Biological - Animals, Reptiles, Rodents, Insects, etc.	☐ Power Transmission Equip. (Shafts, Pulleys, Gears)
☐ Boilers, Pressure Vessels, Cylinders, etc.	☐ Noise
☐ Boxes, Barrels, Containers, Packages, etc.	☐ Plants, Trees, Vegetation, etc.
☒ Chemicals (Flammable, Health, Reactive)	☐ Plastic Items (Powders, Sheets, Particles, etc.)
☐ Cold – Atmospheric Temperature	☒ Pumps and Prime Movers
☐ Cold Temperature Sources (Cryogenic Products – LN2)	☐ Radiological - Ionizing (α, β, γ, x-ray, neutron, etc.)
☐ Confined Spaces (Hazardous Atmospheres)	☐ Radiological - Non-Ionizing (UV, IR, laser, etc.)
☐ Conveyors	☐ Scrap, Debris, Waste Materials
☐ Electrical Equipment/Systems	☐ Steam
☐ Excavations	☒ Uneven Walking/Working Surfaces
☒ Glass Items	☐ Vehicles - Passenger
☒ Hand Tools - Non-Powered	☐ Welding, Cutting, Brazing
☐ Hand Tools - Powered	☐ Wood Items (Logs, Lumber, Particles, etc.)
☒ Heat – Atmospheric Temperature	☒ Other (specify): Work over water, from jon boat
☐ Heat Temperature Sources (Furnaces, Heaters, Open Flame, etc.)	☐ Other (specify):
☐ Hoisting Equip. (Cranes, Forklifts, etc.)	☐ Other (specify):
☐ Ladders, Scaffolds, Aerial Lift Platforms	
☐ Machinery (Drilling, Presses, Mixers, etc.)	

4.1 The following substance(s) are known or suspected to be on-site. The primary hazards of each are identified.

Substances	Impacted Media	Concentrations	Exposure Limits	Primary Hazards
HCl	Container/sample preservative		7mg/m^3	inhalation, ingestion (solution), skin and/or eye contact
Nitric acid	Container/sample preservative		5 mg/m^3	inhalation, ingestion, skin and/or eye contact
Petroleum hydrocarbons	Sediments	Potential unknown	5 ug/L 0.5 mg/m^3	inhalation, skin absorption, ingestion, skin

PCBs				and/or eye contact

Hazard Substances information is provided in the attached NIOSH POCKET GUIDE SHEETS

5.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)

The minimum PPE required for personnel when on sites is: safety glasses. Maximum level of PPE on this project is Level D. Work requiring upgrade to Level C is not permitted unless authorized by the Corporate Safety Representative.

Hazard Controls and Personal Protective Equipment (PPE) (Check all that apply)
HAZARD AWARENESS *Personnel are to eliminate or minimize their exposure to potentially hazardous conditions, unless all appropriate hazard controls are in place.*
Head Protection ☐ Hard Hat ☐ High Visibility Cap ☐ Other (specify):
Eye Protection ☒ Safety Glasses ☐ Chemical Goggles ☐ Face Shield ☐ Other:
Foot Protection ☐ Leather/Safety Toe Boots ☐ Rubber/Safety Toe Boots ☐ Other (specify):
Body Protection ☒ Long Pants ☒ Shirt with 4" sleeves (minimum) ☐ High Visibility Vest ☐ Cotton Coveralls ☐ Rain Suit ☐ Cold Weather Clothing ☐ Other:
Hand Protection ☐ Leather ☐ Cut Resistant (Kevlar) ☒ Chemical (Specify: nitrile) ☐ Other:
Hearing Protection ☐ Ear Plugs ☐ Ear Muffs ☐ Other:
Other PPE or Equipment: ☒ First Aid Kit ☒ Mobile Phone ☐ 2-Way Radios ☐ Flashlight ☒ Fluids/Drinking Water/Ice ☒ Towels/Towelettes ☒ Hand Cleaner/Disinfectant ☐ Hand/Foot Warmers ☒ Eyewash bottle ☒ Fire extinguisher ☐ Other:
Additional Controls/Remarks: Personal Flotation Devices (PFDs)

6.0 COMMUNICATION AND TRAINING

A tailgate safety meeting must be conducted and documented for all personnel covered by this plan. (See page 7)

SITE CONTROL AND COMMUNICATIONS	
Traffic Control Plans	No work will be performed on roadways.
Standard Operating Procedures (SOPs)	The following applicable SOPs are attached: **SOP #4 Vehicle Fleet Program** **SOP #7 PPE** **SOP #14 Hand Tools** **SOP #15 HAZWOPER** **SOP #16 First Aid**

7.0 DECONTAMINATION PROCEDURES

Limited decontamination will be required for projects where this short-form HASP is applicable.

DECONTAMINATION PROCEDURES		
Type	**Procedure**	**Equipment**
Personnel	Hand/Face Washing	Soap/Water
Sampling/Small Equipment	Follow Project-Specific Sampling Plan	☒ Buckets ☒ Brushes ☐ Water Hoses ☐ Tubs ☐ Disposal Drums ☒ Cleaning Solution (Alconox, etc.)
Heavy Equipment	Follow Project-Specific Work Plan	☐ Decontamination Pad ☐ Steam Cleaner

8.0 AIR MONITORING ☒ Check box if Air Monitoring Not Required

Monitoring Instrument	Action Level
Oxygen Meter	*<19.5% or >23%*
Combustible Gas Indicator/LEL Meter	*10% LEL*
Carbon Monoxide Meter	*35 ppm*
Hydrogen Sulfide	*10 ppm*
Organic Vapor Monitor (PID)	5-10ppm
Colorimetric Detector Tubes	*Project-Specific*
Dust Monitor	*Project-Specific*

For project-specific action levels, contact Corporate Safety Representative. If action levels (above) are exceeded, contact Project Manager and Corporate Safety Representative.

9.0 EMERGENCY INFORMATION

Emergency Information	
Phone Numbers:	**Emergency Contacts:** Phone Numbers Removed for Posting in Technical Memorandum
Local Police: 911	Project Mgr: David H. Graff
Local Ambulance: 911	Corporate Safety Mgr: Paula Loht
Local Fire Department: 911	Insurance Mgr: Suzanne White
Local Hospital: 911 *(Attach Route Map)*	Client Contact:
First Aid Trained Individual On-Site:	Steve Wittig – Environmental Scientist

10.0 HASP TRAINING LOG

By signing the log below, the individual certifies that the contents of this Health and Safety Plan (HASP) have been explained to them, they have had the opportunity to read and review the HASP, they understand the information and hazards presented, and will abide by the HASP.

Printed Name	Organization	Signature	Date
Steve Wittig	Gannett Fleming, Inc.		
Corey Myers	Gannett Fleming, Inc.		

Daily Safety Briefing (Tailgate Safety Meeting) Check List

All Topics Must Be Discussed Every Day of Every Project Even If The Same Field Staff Are

A. "Administrative" Topics

1. Introduce all persons present.
2. Identify Roles & Responsibilities/Chain of Command [e.g., Client Project Manager (PM), Gannett Fleming (GF) and Subcontractor PM/Supervisors, GF and Subcontractor H&S Officers, Field Operations Leader (FOL), etc.].
3. Emphasize the Gannett Fleming Stop Work Authority Policies: **Anyone has the authority and right to Stop Work because of Unsafe Conditions.**
4. Identify and discuss the role of visitors (e.g., client representatives, regulatory representatives, citizens, GF staff).
5. Identify persons who require an initial site briefing and provide the necessary information.

B. General Health and Safety Topics

1. Emphasize that the Health and Safety of Workers, Residents, and Visitors Must Always be Considered First.
2. Weather forecast for the day.
3. Buddy system.
4. Physical, chemical and/or biological hazards anticipated.
5. PPE required.
6. Air monitoring requirements.
7. Site control requirements.
8. Communication requirements.
9. Decontamination requirements (Personal hygiene/decon and sanitary facilities available, not just equipment decon).
10. Material handling requirements (place emphasis on proper lifting techniques).
11. Fire and/or explosion hazards.
12. Emergency procedures including routes to hospital and escape, emergency medical treatment, medical evacuation from the site, and assembly/rally location for site workers to meet.
13. Emergency shut off for all equipment. Drill rig, Air Knife, Geoprobe - all members of a field team must know the location of the kill switches and how to operate them.

C. Specific Work To Be Conducted, and Related Health and Safety Issues and Hazards

1 Other Health and Safety Issues that others need to be aware of shall be discussed.
2. Less all-encompassing health and safety issues shall be addressed during task SPSAs.

D. Closing Activities

1. Set Mid-Day (e.g., Lunchtime) Safety Briefing.
2. Ensure all persons have signed the Initial HASP Training Log and the Initial Site Entry Briefing Log.
3. Document this Tailgate Safety Briefing in a Site Log Book. Include names and affiliations of all persons on-site.

Map & Directions | Map Only | Directions Only | Print

Chester County Hospital www.cchosp.com Excellence In Diagnosis, Treatment & Prevention of Heart Disease. PA. Ad

YAHOO! MAPS

A 8 Reservoir Rd, West Chester, PA 19380-6218

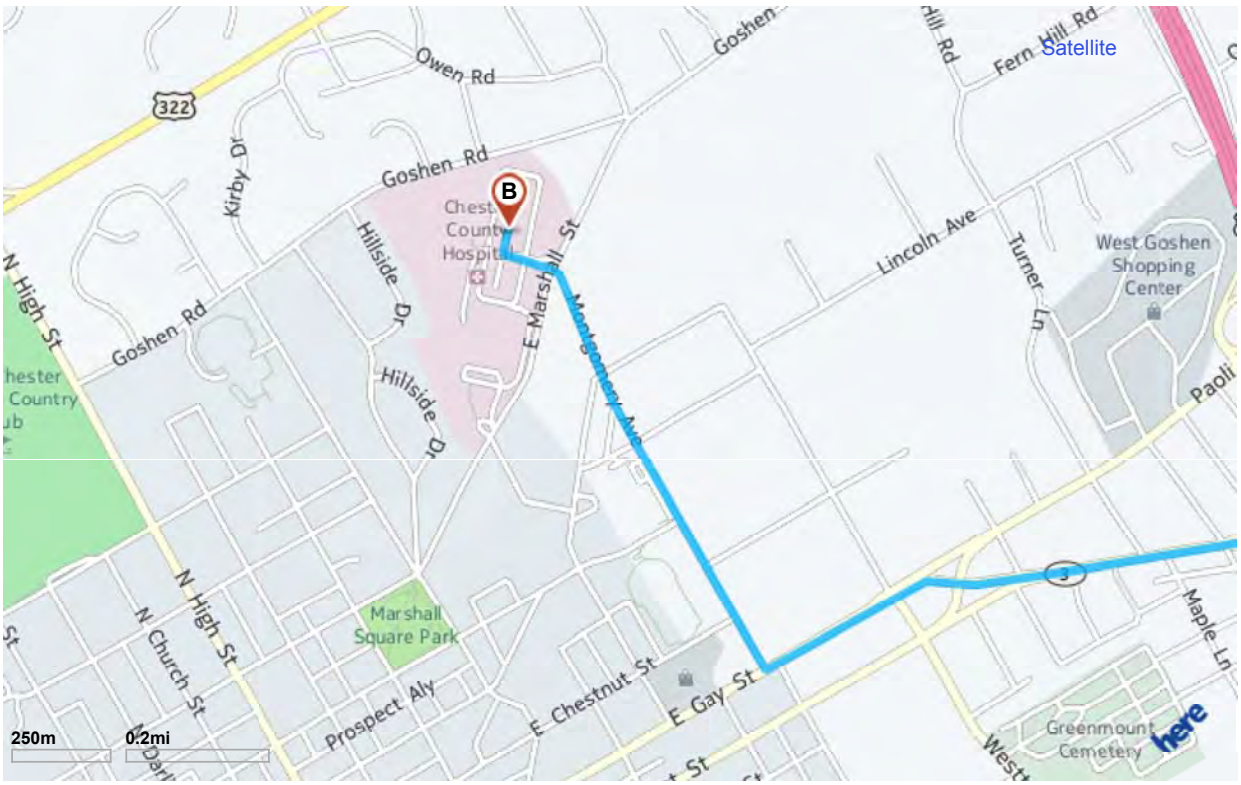
B The Chester County Hospital, 701 E Marshall St, West Chester, PA 19380

Enter notes here

255

Total Distance: 3.54 mi— Total Time: 10 mins

Map Layout



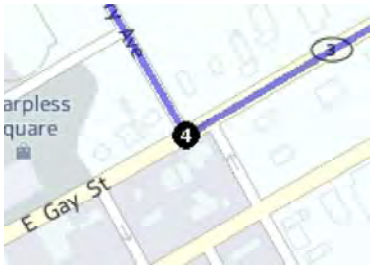
A 8 Reservoir Rd, West Chester, PA 19380-6218 Collapse All

Head toward West Chester Pike on Reservoir Rd Go for 0.1 mi Hide

Turn right onto West Chester Pike (PA-3) Go for 2.3 mi Hide

Continue on E Gay St (PA-3) Go for 0.4 mi Hide

Turn right onto Montgomery Ave Go for 0.6 mi Hide



Continue straight ahead Go for 364 ft Hide

Turn right Go for 154 ft Hide

Arrive at your destination on the right. Hide

B The Chester County Hospital, 701 E Marshall St, West Chester, PA 19380 Collapse All

When using any driving directions or map, it is a good idea to double check and make sure the road still exists, watch out for construction, and follow all traffic safety precautions. This is only to be used as an aid in planning

ATTACHMENT D
DEP COORDINATION

Phone Conversation Record
Environmental Sediment Sampling Results – Clean Fill

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

Prepared By: Gannett Fleming Inc.
207 Senate Avenue
Camp Hill, PA 17011

Subject: Sediment Characterization
Milltown Reservoir
Chester County, PA

Date: May 27, 2016

On May 27, 2016 at 0930 hours, David Graff of Gannett Fleming contacted Mr. Scott Walters of PADEP (717) 787-2693, to discuss the clean fill numeric values and background levels of naturally occurring metals, specifically cobalt. Mr. Graff presented the circumstance that sediment sample results indicated a cobalt concentration above the 2010 Management of Fill Policy numeric value of 8.1 mg/kg for inorganic substances. Mr. Graff also explained that in 2014 PADEP proposed a revised cobalt value of 50 mg/kg which increased the numeric values of cobalt instead of making them more restrictive. Mr. Walters confirmed that the 2010 values are still applicable and that the 2014 values were not finalized, however acknowledged that for cobalt the decision to increase the value was still proposed. Mr. Graff and Mr. Walters agreed that the Pennsylvania Statewide Health Standards show cobalt concentrations below 66 mg/kg as an acceptable residential direct contact value between 0 and 15 below the surface. Mr. Graff and Mr. Walters also acknowledged that cobalt is a naturally occurring metal and its presence in a watershed that does not have industrial discharges, mining, or other smelting type of industry would suggest that cobalt is naturally occurring and not suggesting a contaminant of concern that was released into the environment.

Mr. Walters confirmed that Gannett Fleming's assessment of the surrounding land use and watershed history that the background conditions would apply and that the presence of cobalt would not influence the clean fill characterization decision since this metal is considered naturally occurring. Mr. Graff explained that all other constituents were below the Clean Fill numeric values except for cobalt and that the clean fill decision was being made on the material. The conversation ended at 0945 hours.

Attached: PADEP Management of Fill Policy, 2010 Numeric Values
PADEP Management of Fill Policy, 2014 Proposed Numeric Values
Pennsylvania Land Recycling Program, Medium Specific Concentrations (MSCs) Statewide Health Standards, Residential Values 0-15 feet Direct Contact Values

Appendix B

Table FP-1b
Chemical Concentration Limits For Metals and Inorganics

PARAMETER	Chemical Abstract Services Registry Number	Existing Clean Fill Total Analysis (mg/kg)	*Proposed Clean Fill Total Analysis (mg/kg)
ANTIMONY	7440-36-0	27	27
ARSENIC	7440-38-2	12	12
BARIUM AND COMPOUNDS	7440-39-3	8,200	8200
BERYLLIUM	7440-41-7	320	320
BORON AND COMPOUNDS	7440-42-8	6.7	*1900*
CADMIUM	7440-43-9	38	38
CHLORIDES		NA	NA
CHROMIUM III	16065-83-1	190,000	190000
CHROMIUM VI	18540-29-9	94	*190*
COBALT	7440-48-4	8.1	*50*
COPPER	7440-50-8	8,200	**8100**
CYANIDE FREE	57-12-5	200	200
LEAD	7439-92-1	450	450
MANGANESE	7439-96-5	31,000	**2000**
MERCURY	7439-97-6	10	10
NICKEL	7440-02-0	650	650
NITRATE NITROGEN		na	NA
NITRITE NITROGEN		na	NA
SELENIUM	7782-49-2	26	26
SILVER	7440-22-4	84	84
SULFATE		na	NA
THALLIUM	7440-28-0	14	14
TIN	7440-31-5	240	*130000*
VANADIUM	7440-62-2	1,500	1500
ZINC	7440-66-6	12,000	12000

***** Based on the current Chapter 250 standards.

APPENDIX A
Table 4 - Medium-Specific Concentrations (MSCs) for Inorganic Regulated Substances in Soil
A. Direct Contact Numeric Values

REGULATED SUBSTANCE	CASRN	Residential MSC 0-15 feet		Nonresidential MSCs Surface Soil 0-2 feet		Nonresidential MSCs Subsurface Soil 2-15 feet	
ALUMINUM	7429-90-5	190,000	C	190,000	C	190,000	C
ANTIMONY	7440-36-0	88	G	1,100	G	190,000	C
ARSENIC	7440-38-2	12	G	53	G	190,000	C
BARIUM AND COMPOUNDS	7440-39-3	44,000	G	190,000	C	190,000	C
BERYLLIUM	7440-41-7	440	G	5,600	G	190,000	C
BORON AND COMPOUNDS	7440-42-8	44,000	G	190,000	C	190,000	C
CADMIUM	7440-43-9	110	G	1,400	G	190,000	C
CHROMIUM III	16065-83-1	190,000	C	190,000	C	190,000	C
CHROMIUM VI	18540-29-9	660	G	8,400	G	20,000	N
COBALT	7440-48-4	66	G	840	G	190,000	N
COPPER	7440-50-8	8,100	G	100,000	G	190,000	C
CYANIDE, FREE	57-12-5	4,400	G	56,000	G	190,000	C
FLUORIDE	16984-48-8	8,800	G	110,000	G	190,000	C
IRON	7439-89-6	150,000	G	190,000	C	190,000	C
LEAD	7439-92-1	500	U	1,000	S	190,000	C
LITHIUM	7439-93-2	440	G	5,600	G	190,000	C
MANGANESE	7439-96-5	10,000	G	130,000	G	190,000	C
MERCURY	7439-97-6	35	G	450	G	190,000	C
MOLYBDENUM	7439-98-7	1,100	G	14,000	G	190,000	C
NICKEL	7440-02-0	4,400	G	56,000	G	190,000	C
PERCHLORATE	7790-98-9	150	G	2,000	G	190,000	C
SELENIUM	7782-49-2	1,100	G	14,000	G	190,000	C
SILVER	7440-22-4	1,100	G	14,000	G	190,000	C
THALLIUM	7440-28-0	15	G	200	G	190,000	C
TIN	7440-31-5	130,000	G	190,000	C	190,000	C
VANADIUM	7440-62-2	1,500	G	20,000	G	190,000	C
ZINC	7440-66-6	66,000	G	190,000	C	190,000	C

All concentrations in mg/kg
R - Residential
NR - Non-Residential
G - Ingestion
H - Inhalation
C - Cap
U - UBK Model
S - SEGH Model