QUARTERLY GROUNDWATER MONITORING REPORT

South Island Apartments Site

Starbuck Drive,

Town of Green Island, Albany County, New York

BCP Site # C401074

April 2020

Prepared for:
South Island Apartments, LLC
c/o Couch White, LLP
540 Broadway, 7th Floor
Albany, New York 12201-2222

Prepared by:

349 Northern Blvd. STE 3
Albany, NY 12205

Envirospec Engineering Project E17-1600

TABLE OF CONTENTS

TABLES

FIGURES

DRAWINGS

APPENDICES

1.0 INTRODUCTION

This Quarterly Groundwater Monitoring Report has been prepared by Envirospec Engineering, PLLC (Envirospec) on behalf of South Island Apartments, LLC (SIA) for the South Island Apartments (Site) located at Starbuck Drive in the Town of Green Island (and Village), Albany County, New York (see Figure 1).

SIA is submitting this Quarterly Groundwater Monitoring Report under the New York State Brownfield Cleanup Program (BCP) as a Volunteer in accordance with the requirements of the Interim Site Management Plan (SMP) for the site. The Site is being redeveloped as a mixed housing and commercial use consisting of apartments, retail, and recreation areas. The South Island Apartments site commenced work under the December 2019 Interim Site Management Plan (SMP) on January 7, 2020.

1.1 General Site Description

The site is located in Green Island, Albany County, New York and is identified as Section 33.09 Block 1 and Lots 3, 5, and 6 on the Village of Green Island 2019 Tax Map (see Appendix A). The site is an approximately 11.495-acre area and is bounded by the Troy/ Green Island Bridge to the north and the Hudson River to the south, east, and west (see Figure 1 – Site Layout Map). The boundaries of the site are more fully described in the Environmental Easement metes and bounds found in the Interim SMP.

2.0 SITE BACKGROUND AND REMEDIAL HISTORY

2.1 BACKGROUND

According to a 2008 Phase I Environmental Site Assessment (Shifrin 2008) conducted by Shifrin & Associates Inc. (Shifrin), the Site was operated as a petroleum terminal since 1918. Available historical maps show a terminal located on the property in 1925. Reportedly during its operation, the Site contained several aboveground storage tanks (ASTs), at least one (1) underground oil-water separator tanks, a truck loading rack, a barge dock, an office building, an electrical shed, storage sheds, earthen dikes, and internal roads. When in service, the terminal loaded and unloaded petroleum products that were transported to the Site by barge. Fuels stored at the former terminal included kerosene, diesel, gasoline, and No. 2 fuel oil. The terminal was not connected to a sewer line; wastewater was repeatedly discharged to a septic tank and leach field on-Site. According to the NYSDEC Spill Incidents Database, the Site has had thirteen (13) documented petroleum spills, with twelve (12) closed by the NYSDEC and one (1) spill (#8702376) remaining open.

According to the Supplemental Site Investigation in May 2016 conducted by SPEC Engineering (SPEC), the terminal was demolished sometime between 2008 and 2010 although the earthen dikes, at least one (1) underground oil-water separator, and a handful of small, vacant structures remained on the site. There were no other noted uses of this property.

Extensive investigation activities were undertaken at the Site during the Remedial Investigation (RI) in 2017 and 2018. Detailed results are available in the RI Report submitted to NYSDEC in November 2017 (Envirospec 2018a) and the RI Report Addendum submitted to NYSDEC in July 2018 (Envirospec 2018b).

2.2 INTERIM REMEDIAL MEASURES (IRM)

Based on the data obtained during the RI, it was determined that the following IRM activities would be completed at the site prior to initiating the activities addressed in the RAWP:

- Removal of underground oil-water separator;
- Excavation of SVOC-impacted soils that exceed Commercial Soil Cleanup Objectives (CSCOs) in shallow soils at SB-26 and SB-37;
- Excavation of LNAPL-impacted area in former loading rack and MW-5 areas.

The former loading rack area was excavated to an elevation of -3.5 to 3 feet, with sheet piling installed to elevation -25 ft along the western bank. The MW-5 area was benched back and excavated to elevation -3 to -3.5 ft. The depth of the bottom of the excavations were based on

historical observations of LNAPL in monitoring wells and visual observations in the field. The former loading rack excavation and MW-5 excavation remained open during oil extraction activities, which were completed from May 3, 2018 to June 25, 2018 and from May 14, 2018 to June 26, 2018, in the former loading rack and MW-5 areas, respectively.

A total of approximately 4,542 tons of non-hazardous soil were removed for off-site disposal during the IRM activities. A total of 77,717 gallons of oil/water mixture were extracted from the former loading rack and MW-5 areas, with approximately 39,170 gallons estimated to be oil. Further details on these activities can be found in the IRM Work Plan (Envirospec 2018) and the Construction Completion Report (Envirospec 2018c). The excavation of SB-37 was completed as a result of the RI Addendum completed in July 2018.

2.2 REMEDIAL ACTION WORKPLAN (RAWP)

The Remedial Action Work Plan (RAWP) was approved for the site in October 2018 (Envirospec 2018d) and is outlined in the Decision Document dated October 22, 2018 (NYSDEC 2018). The RAWP includes installation of an engineered cover system, consisting of building foundations, pavement, sidewalks, or 2' of clean soil in open areas, across the site. The cover system along the banks consists of rip-rap and a block wall along the eastern bank and rip-rap and retaining walls along the western bank. Two (2) temporary monitoring wells were installed on the site to monitor for potential presence of remaining LNAPL for quarterly groundwater sampling during interim site management. The site entered interim site management on January 7, 2020.

3.0 GROUNDWATER SAMPLING – JANUARY 2020

The 1st quarter 2020 groundwater sampling event was completed on January 16, 2020. Well locations are shown in Drawing D-1. Gauging of both wells was completed prior to sampling to determine the static water level. An oil-water interface probe was used to determine if oil was present and, if so, the thickness of the oil. A summary of depths to oil and groundwater, oil layer thickness, and groundwater elevations is included as Table 1.

Table 1. Well Gauging Results.

Monitoring Well ID	Depth to Oil (ft bgs)	Depth to Groundwater (ft bgs)	Groundwater Elevation (ft, AMSL)	Oil layer thickness (ft)
MW-32	25.9	26	+4.2	0.1
MW-33	25.8	26.2	+4.8	0.4

Wells were purged using a submersible pump, with water quality parameters (pH, dissolved oxygen, turbidity, ORP, conductivity, and temperature) monitored during purging. Field sheets are provided in Appendix B. It should be noted that issues with very high turbidity were encountered in MW-33, which did not resolve after several well volumes were removed. This is suspected to be due to the fine clay layer present at the water table. After purging, samples were collected using the submersible pump. A duplicate and MS/MSD samples were collected from MW-33 for laboratory and sampling quality assurance/ quality control purposes.

Purge water was collected and containerized in a 55-gallon drum and will be transported off-site for disposal at a regulated disposal facility.

Groundwater samples were placed in pre-cleaned laboratory provided sample bottles, cooled to 4°C in the field, and transported under chain-of-custody command to Pace Analytical Services in Greensburg, PA, which is a NYSDOH ELAP-certified lab. Samples were analyzed for the following:

- TCL SVOCs by EPA Method 8270
- Total TAL metals by EPA Method 6010 (EPA Method 7471 for mercury)
- Dissolved TAL metals by EPA Method 6010 (EPA Method 7471 for mercury)

4.0 GROUNDWATER QUALITY

A summary of the exceedances from this sampling round is included in Table 2 and in Appendix C. Full laboratory analytical results are included as Appendix D. Exceedances for iron, manganese, and sodium are not included in Table 2.

Table 2. Summary of Groundwater Exceedances.

Analyte	Part 703 Standard (ppb)	MW-32 (ppb)	MW-33 (ppb)	MW-33 DUP (ppb)
2,4-Dimethylphenol	1[a]	ND	ND	2.7
2,6-Dinitrotoluene	5	ND	ND	11.8
Nitrobenzene	0.4	1.3	ND	3.2

[a] = Standard is based on standard for total phenols
ND = Non-detect

Low-level exceedances were detected for nitrobenzene in MW-32 and in the duplicate sample for MW-33. Exceedances were also detected for 2,4-dimethylphenol and 2,6-dinitrotoluene in the duplicate sample for MW-33.

5.0 SUMMARY

No metals exceedances, with the exception of iron, sodium, and manganese, were observed in the wells. Only low-level exceedances of 2,4-dimethylphenol, 2,6-dinitrotoluene, and nitrobenzene were observed in the wells, though the results for the duplicate sample for MW-33 were not consistent with the parent sample. These parameters will continue to be monitored under the Interim SMP for the site on a quarterly basis, with the next sampling planned for Spring 2020.

6.0 REFERENCES

Envirospec. 2018. Interim Remedial Measures (IRM) Work Plan. South Island Apartments, BCP Site #C401074. March 2018.

Envirospec. 2018a. Remedial Investigation Report for South Island Apartments, BCP Site # C401074. August 2018.

Envirospec. 2018b. Remediation Investigation Report Addendum South Island Apartments Northern Parcel, BCP Site # C401074. August 2018.

Envirospec. 2018c. Interim Remedial Measures (IRM) Construction Completion Report (CCR) for South Island Apartments, BCP Site #C401074. October 2018.

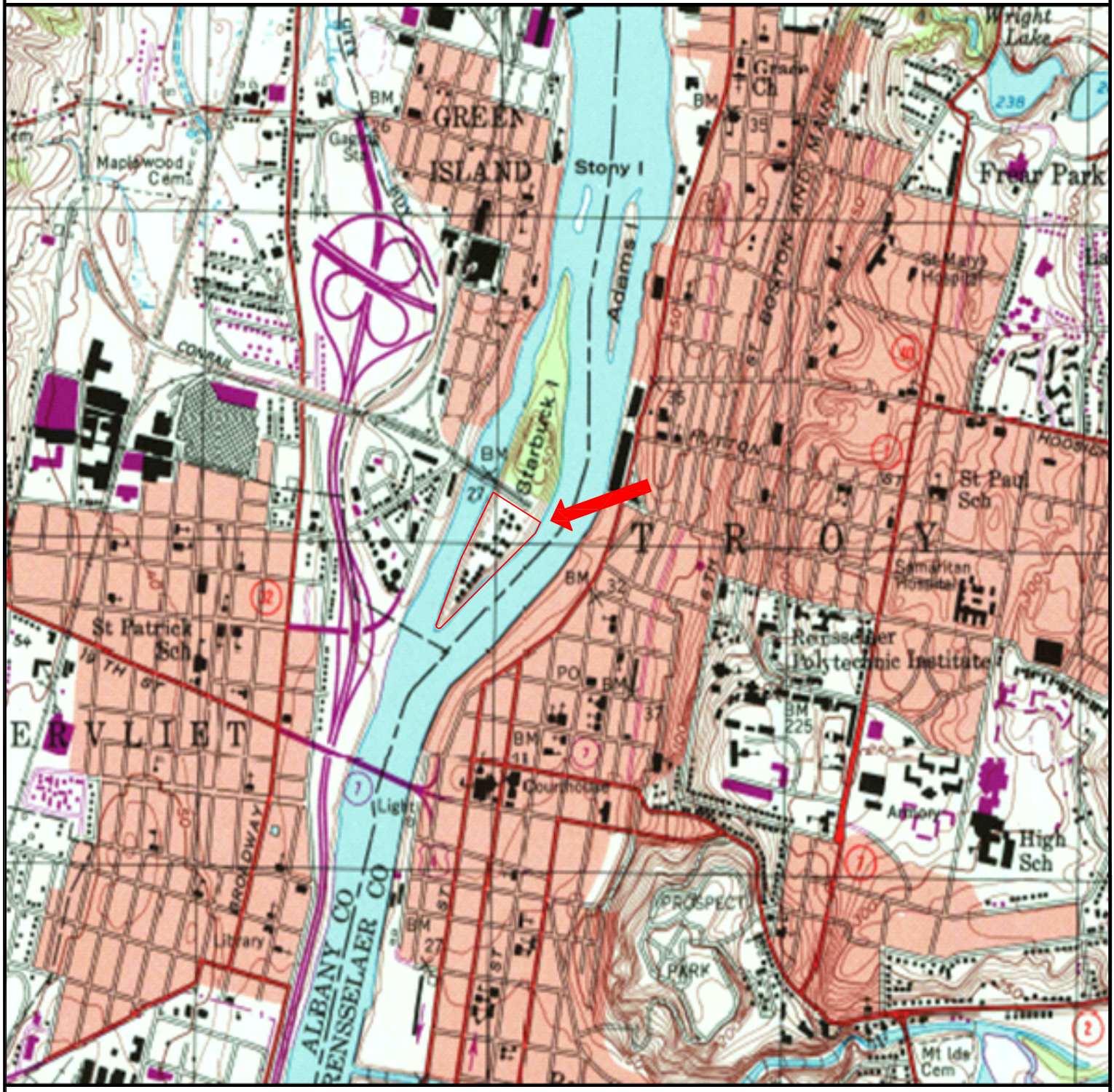
Envirospec. 2018d. Remedial Action Work Plan for South Island Apartments, BCP Site #C401074. October 2018.

NYSDEC. 2018. Decision Document. South Island Apartments, Brownfield Cleanup Program, Green Island, Albany County. Site No. C401074. October 2018.

Shifrin & Associates, Inc. 2008. Phase I Environmental Site Assessment for 1 Osgood Avenue, Green Island, New York 12183. June 3, 2008.

FIGURES

Figure 1 Site Location Map



APPROXIMATE SITE BOUNDARY

Scale: 1:1,000 ft

TITLE: FIGURE 1 – SITE LOCATION MAP

LOCATION: 1 STARBUCK DRIVE
GREEN ISLAND, NEW YORK

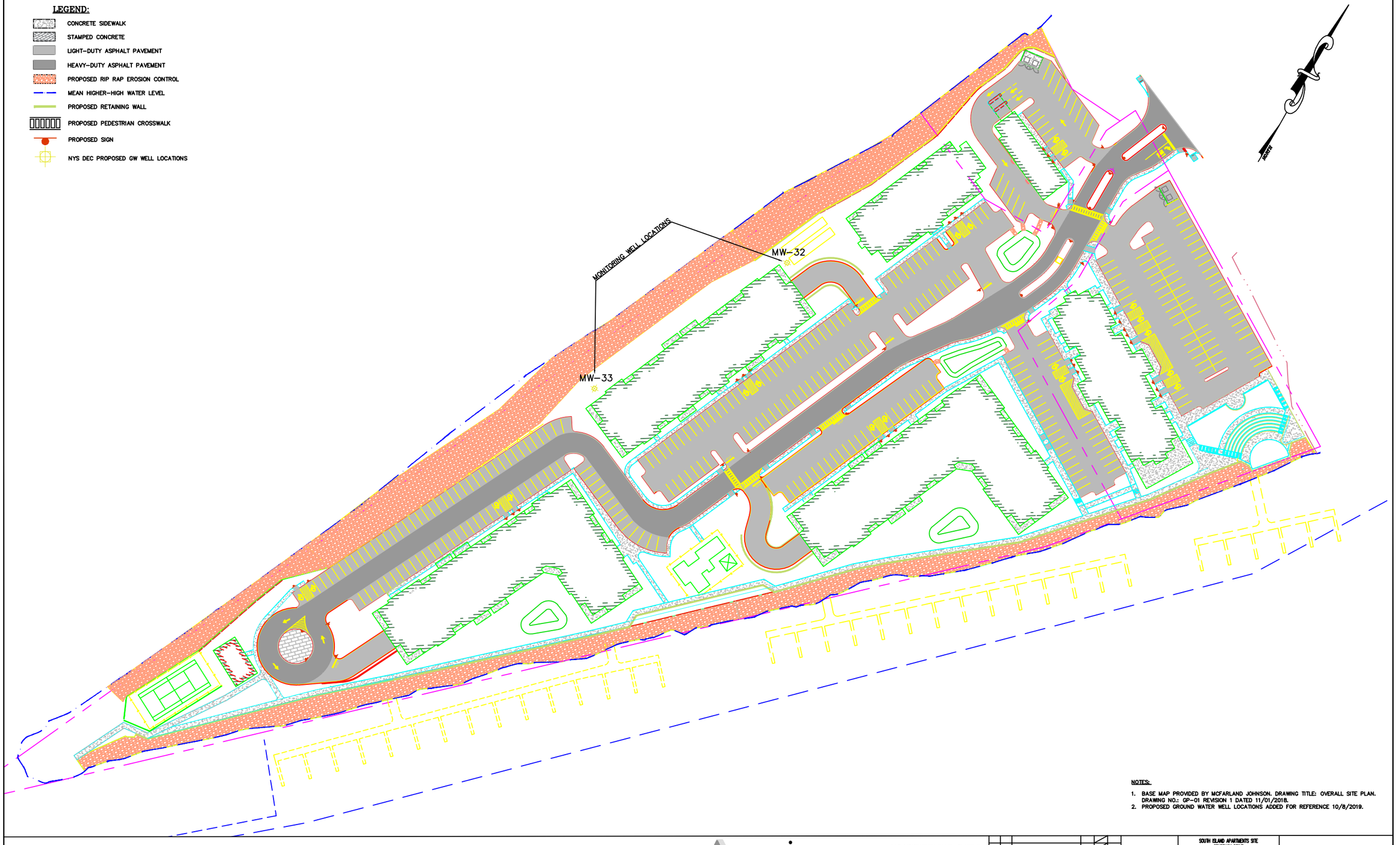
envirospec ENGINEERING, PLLC
348 Northern Blvd., Suite 3
Albany, NY 12204
Phone: 518.453.2203
Fax: 518.453.2204
www.envirospeceng.com

DRAWINGS

D-1 SITE PLAN

LEGEND:

- CONCRETE SIDEWALK
- STAMPED CONCRETE
- LIGHT-DUTY ASPHALT PAVEMENT
- HEAVY-DUTY ASPHALT PAVEMENT
- PROPOSED RIP RAP EROSION CONTROL
- MEAN HIGHER-HIGH WATER LEVEL
- PROPOSED RETAINING WALL
- PROPOSED PEDESTRIAN CROSSWALK
- PROPOSED SIGN
- NYS DEC PROPOSED GW WELL LOCATIONS



NOTES:

1. BASE MAP PROVIDED BY MCFARLAND JOHNSON. DRAWING TITLE: OVERALL SITE PLAN. DRAWING NO.: GP-01 REVISION 1 DATED 11/01/2018.
2. PROPOSED GROUND WATER WELL LOCATIONS ADDED FOR REFERENCE 10/8/2019.

ENVIROSPEC PROJECT #E17-1600

envirospec ENGINEERING, PLLC

349 NORTHERN BLVD. SUITE 3
ALBANY, NY 12204-1032
P:518.453.2203
F:518.453.2204

W.O. No.	REVISION	DATE	APR.
1	WELL LABELS ADDED	11/18	RF

DRAWING STATUS: FOR REFERENCE ONLY

SOUTH ISLAND APARTMENTS SITE
STARBUCK DRIVE
TOWN OF GREEN ISLAND, ALBANY COUNTY, NEW YORK

Well Locations

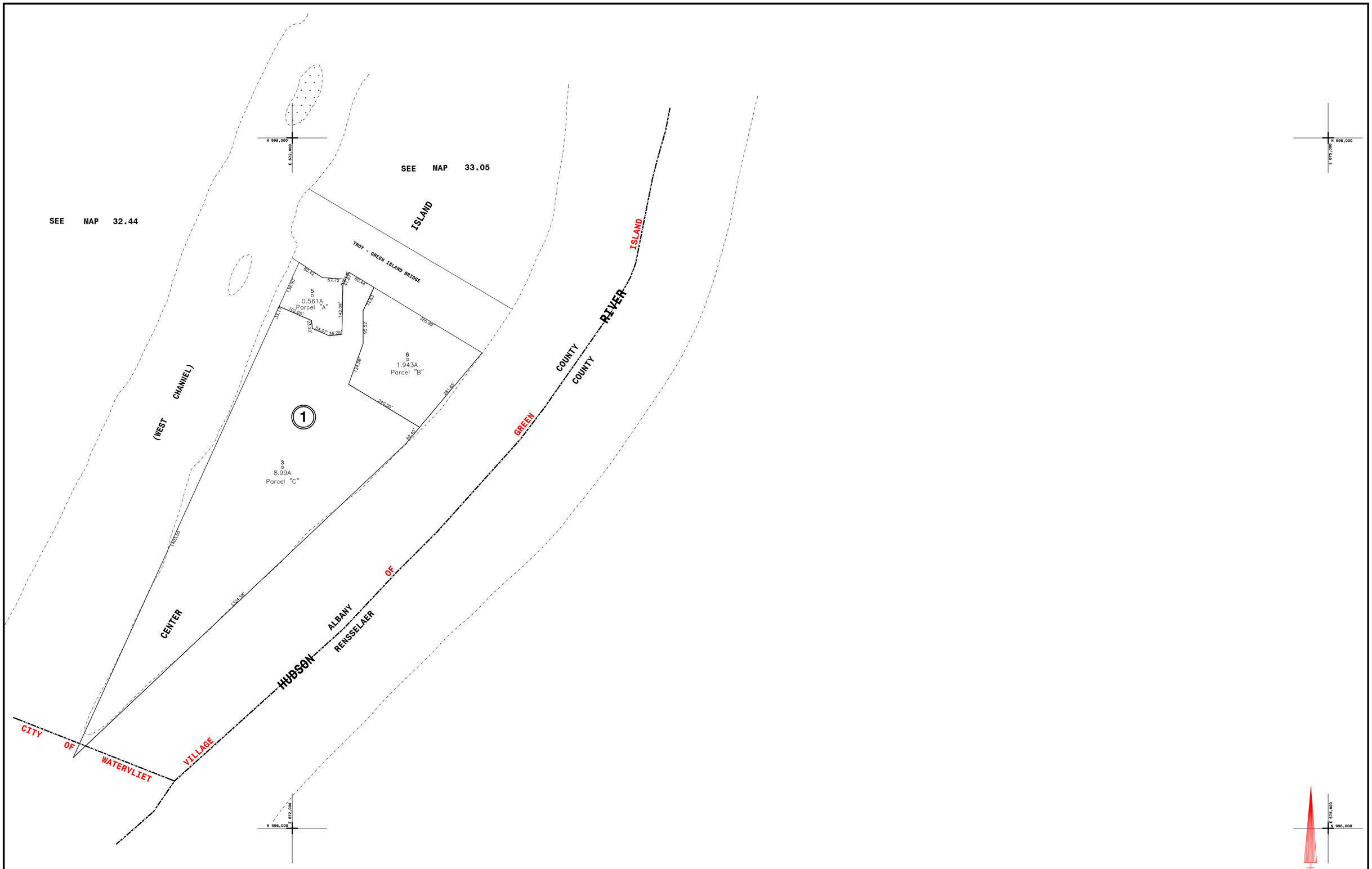
SCALE: NTS | DRAWING NO.: D-1 | SHEET: 1 | NO. OF SHEETS: 1

APPENDIX A
TAX MAP

envirospec ENGINEERING, PLLC

349 Northern Boulevard Suite 3▪ Albany, NY 12204 ▪ Phone: 518.453.2203 ▪ Fax: 518.453.2204

A Woman Owned Business Enterprise (WBE)



THIS MAP PREPARED FOR ASSESSMENT PURPOSES ONLY AND
NOT TO BE USED FOR THE CONVEYANCE OF PROPERTY

NYS PLANE COORDINATE SYSTEM NAD27

PREPARED BY
SMITH & MAHONEY, ENGINEERS & SURVEYORS
ALBANY, NEW YORK
PREPARED FOR
REAL PROPERTY TAX SERVICE AGENCY
ALBANY COUNTY, NEW YORK

DIGITAL CONVERSION BY:
THE SANBORN MAP COMPANY INC.
PELHAM, NEW YORK

REVISION TABLE

DATE	BY	CHANGES OR ADDITIONS	DATE	BY	CHANGES OR ADDITIONS
11-21-06	JKD	SUBD 1-2 INTO 21 & 22 PER LIBER 2362-807,2863-113			
4/22/19	JKD	CREATED PARCEL 1-5 PER R2019-4897 & PARCEL 1-6 PER R2019-4898; REVISED PARCEL 1-3 PER R2019-4899; DELETED PARCELS 1-1, 21,2,2 & 4 PER THE AFOREMENTIONED DEEDS & R2019-4895. NO MAP FILED AS OF APRIL 19, 2019.			

SPECIAL DISTRICTS

TYPE	SYMBOL	DISTRICT NAME	TYPE	SYMBOL	DISTRICT NAME
Fire	—f—		Water	—w—	

LEGEND

PROPERTY LINE
ORIGINAL LOT LINE
RAIL ROAD
STREAM OR DITCH
ROAD OR RAIL ROAD BNDY.
STREET CENTERLINE
COUNTY LINE
CITY LINE
VILLAGE LINE
TOWN LINE
BLOCK LIMIT
GREAT LOT LINE
EASEMENT LINE — E —
WATER DISTRICT LINE — W —
TAX DISTRICT LINE
FIRE DISTRICT LINE — f —
DENOTES COMMON OWNER
TAX MAP BLOCK NO. (3)
TAX MAP PARCEL NO. 74.12-1-10
STREET NUMBER 14
FILED PLAN LOT NO. 17
GREAT LOT NO. (5)
CALCULATED ACREAGE 7.1 A (C)
DEED ACREAGE 11.2 A
SCALED DIMENSION 725'(S)
DEED DIMENSION 53.67'
VISUAL CENTER OF PARCEL O

32.36	33.05	
32.44		

SHEET INDEX

TAX MAP
VILLAGE OF GREEN ISLAND
TOWN OF GREEN ISLAND
ALBANY COUNTY, NEW YORK

33.09

0 100 200
SCALE: 1" = 100'

TAXABLE STATUS DATE: 3/1/2020

ISSUED BY RPTSA ON MONDAY, JUNE 3, 2019

APPENDIX B
GROUNDWATER SAMPLING LOGS

349 Northern Boulevard Suite 3▪ Albany, NY 12204 ▪ Phone: 518.453.2203 ▪ Fax: 518.453.2204
A Woman Owned Business Enterprise (WBE)

349 Northern Blvd
Albany, NY 12204
Phone: 518.453.2203
Fax: 518.689.4800

Well Sampling Field Record

Well No:	MW-33		
Date(s):	1/16/2020		
Weather	Temperature		
Overcast	High:	42°F	
	Low:	26°F	

Project:	South Island Apartments	Project No.	E17-1600
Location:	Starbuck Drive, Green Island, NY		

Well Info

Well #:	MW-33	Well Location:	South of Building 25		
Well Diameter (in):	2	Well Condition:			
A. Total Well Depth (ft bgs):	36.5	Depth to Bedrock (ft):			
B. TOC to Grade (ft):	0	TOC Elevation (ft):			
C. Depth to Water TOC (ft):	26.2	G. Well Volume Factors:	1" = 0.041	5" = 1.02	9" = 3.31
D. Water Column Height (ft):	10.3	= (A + B) - C	2" = 0.163	6" = 1.47	10" = 4.08
E. Total Well Volume (gal):	1.68	= D*G	3" = 0.367	7" = 1.99	11" = 4.93
F. Purge (3 volumes) (gal):	5.00	= E*3	4" = 0.653	8" = 2.61	12" = 5.88

Purge

Purge Date:	1/16/2020	Pump/Method:	Grundfos
Purge Start Time:	8:40	Approx Flow Rate:	~2 gpm
Purge Stop Time:	9:01	Approx Volume Removed:	17 gallons
Did well dry out?	No		

Sampling

			(2 Gal.) I	(7 Gal.) II	(13 Gal.) III	(17 Gal.) IV
Date:	1/16/2020	pH:	8	7.36	7.06	7.01
Time:	9:01	Temp (ºC):	13.61	13.52	13.72	13.79
Sample ID:	MW-33	Conductivity (mS/cm):	1.7	1.84	1.79	1.76
Sample Method:		TDS (g/L):				
		ORP (mV):	-156	-120	-119	-102
		Tubidity (NTU):	ERROR	989	597	491
		DO (mg/L):	1.82	2.09	1.96	1.62

Appearance

Oil measurement: 0.4"

Comments

Duplicate and MS and MSD collected here.

envirospec ENGINEERING, PLLC
349 Northern Blvd
Albany, NY 12204
Phone: 518.453.2203
Fax: 518.689.4800

Well Sampling Field Record

Well No:	MW-32		
Date(s):	1/16/2020		
Weather	Temperature		
Overcast	High:	42°F	
	Low:	26°F	

Project:	South Island Apartments	Project No.	E17-1600
Location:	Starbuck Drive, Green Island, NY		

Well Info

Well #:	MW-32	Well Location:	North of Building 25		
Well Diameter (in):	2	Well Condition:			
A. Total Well Depth (ft bgs):	35.7	Depth to Bedrock (ft):			
B. TOC to Grade (ft):	0..2	TOC Elevation (ft):			
C. Depth to Water TOC (ft):	26	G. Well Volume Factors:	1" = 0.041	5" = 1.02	9" = 3.31
D. Water Column Height (ft):	9.7	= (A + B) - C	2" = 0.163	6" = 1.47	10" = 4.08
E. Total Well Volume (gal):	1.58	= D*G	3" = 0.367	7" = 1.99	11" = 4.93
F. Purge (3 volumes) (gal):	4.74	= E*3	4" = 0.653	8" = 2.61	12" = 5.88

Purge

Purge Date:	1/16/2020	Pump/Method:	Grundfos Pump
Purge Start Time:	9:50	Approx Flow Rate:	~2 gpm
Purge Stop Time:	9:58	Approx Volume Removed:	15 gal.
Did well dry out?	No		

Sampling

			(2.5 gal.) I	(6.5 gal.) II	III
Date:	1/16/2020	pH:	7.39	7.2	7.13
Time:	10:00	Temp (ºC):	11.03	12.05	12.47
Sample ID:	MW-32	Conductivity (mS/cm):	1.06	1.04	1.03
Sample Method:		TDS (g/L):			
		ORP (mV):	-91	-93	-90
		Tubidity (NTU):	ERROR	ERROR	107
		DO (mg/L):	2.61	2.88	1.69

Appearance

Oil Measurement: 0.1'

Comments

Turbidity meter was not working, but the purge water appeared clear.

APPENDIX C
TABLE OF SAMPLE RESULTS

envirospec ENGINEERING, PLLC

349 Northern Boulevard Suite 3▪ Albany, NY 12204 ▪ Phone: 518.453.2203 ▪ Fax: 518.453.2204

A Woman Owned Business Enterprise (WBE)

TABLE 3. Groundwater Analytical Results

Analyte	Part 703 Groundwater A Standard	MW-32 1/16/20	MW-33 1/16/20	MW-33 DUP 1/16/20
Total Metals				
Aluminum		3360	5980	5290
Antimony	3	ND	ND	ND
Arsenic	25	ND	7.4	ND
Barium	1000	315	269	269
Beryllium		ND	ND	ND
Boron		602	464	466
Cadmium	5	ND	ND	ND
Calcium		230000	167000	231000
Chromium	50	7	9.5	9
Cobalt		ND	ND	ND
Copper	200	11.5	16.1	16.1
Iron	300	28500	24500	23300
Lead	25	11.3	19.8	16.9
Magnesium		25400	27400	27300
Manganese	300	4810	2140	2150
Molybdenum		ND	ND	ND
Mercury	0.7	ND	ND	ND
Nickel	100	ND	ND	ND
Potassium		10400	28700	28900
Selenium	10	ND	ND	ND
Silver	50	ND	ND	ND
Sodium	20000	21800	152000	153000
Thallium		ND	ND	ND
Vanadium		ND	9.8	9
Zinc		24.3	32.1	27.8
Dissolved Metals				
Aluminum, Dissolved		ND	ND	ND
Antimony, Dissolved	3	ND	ND	ND
Arsenic, Dissolved	25	ND	ND	ND
Barium, Dissolved	1000	215	148	156
Beryllium, Dissolved		ND	ND	ND
Boron, Dissolved		609	472	472
Cadmium, Dissolved	5	ND	ND	ND
Calcium, Dissolved		165000	229000	233000
Chromium, Dissolved	50	ND	ND	ND
Cobalt, Dissolved		ND	ND	ND
Copper, Dissolved	200	ND	ND	ND
Iron, Dissolved	300	546	321	ND
Lead, Dissolved	25	ND	ND	ND
Magnesium, Dissolved		24600	25700	26000
Manganese, Dissolved	300	4800	1780	2010
Molybdenum, Dissolved		ND	ND	ND
Mercury, Dissolved	0.7	ND	ND	ND
Nickel, Dissolved	100	ND	ND	ND
Potassium, Dissolved		9780	28300	28800
Selenium, Dissolved	10	ND	ND	ND
Silver, Dissolved	50	ND	ND	ND
Sodium, Dissolved	20000	21900	156000	157000
Thallium, Dissolved		ND	ND	ND
Vanadium, Dissolved		ND	ND	ND
Zinc, Dissolved		ND	ND	ND
SVOCs				
1,2,4-Trichlorobenzene		ND	ND	ND
1,2-Dichlorobenzene		ND	ND	ND
1,3-Dichlorobenzene		ND	ND	ND
1,4-Dichlorobenzene		ND	ND	ND
1-Methylnaphthalene		8.2	ND	1.1
2,4,5-Trichlorophenol		ND	ND	4.6
2,4,6-Trichlorophenol		ND	ND	ND
2,4-Dichlorophenol **(1)**	1	ND	ND	ND
2,4-Dimethylphenol **(1)**	1	ND	ND	2.7
2,4-Dinitrophenol **(1)**	1	ND	ND	ND
2,4-Dinitrotoluene	5	2.3	1.7	ND
2,6-Dinitrotoluene	5	ND	ND	11.8
2-Chloronaphthalene		ND	ND	ND
2-Chlorophenol		ND	ND	ND
2-Methylnaphthalene		ND	ND	ND
2-Methylphenol(o-Cresol)		ND	ND	ND
2-Nitroaniline	5	ND	ND	ND
2-Nitrophenol		ND	ND	ND
3&4-Methylphenol(m&p Cresol)		ND	ND	ND
3,3'-Dichlorobenzidine	5	ND	ND	ND
3-Nitroaniline	5	ND	ND	ND
4,6-Dinitro-2-methylphenol		ND	ND	ND
4-Bromophenylphenyl ether		ND	ND	ND
4-Chloro-3-methylphenol		ND	ND	2.2
4-Chloroaniline	5	ND	ND	1.9
4-Chlorophenylphenyl ether		ND	ND	ND
4-Nitroaniline	5	ND	ND	ND
4-Nitrophenol		ND	ND	ND
Acenaphthene		2.6	2.7	ND
Acenaphthylene		ND	ND	12.7
Anthracene		1.4	ND	12.8
Azobenzene		ND	ND	ND
Benzo(a)anthracene		ND	ND	ND

TABLE 3. Groundwater Analytical Results

Analyte	Part 703 Groundwater A Standard	MW-32 1/16/20	MW-33 1/16/20	MW-33 DUP 1/16/20
Benzo(a)pyrene	ND	ND	ND	ND
Benzo(b)fluoranthene		ND	ND	ND
Benzo(g,h,i)perylene		ND	ND	ND
Benzo(k)fluoranthene		ND	ND	ND
Benzoic acid		ND	ND	ND
Benzyl alcohol		ND	ND	ND
bis(2-Chloroethoxy)methane	5	ND	ND	ND
bis(2-Chloroethyl) ether	1	ND	ND	ND
bis(2-Chloroisopropyl) ether	5	ND	ND	ND
bis(2-Ethylhexyl)phthalate	5	1.1	2.4	1.9
Butylbenzylphthalate		ND	ND	ND
Carbazole		ND	ND	ND
Chrysene		ND	ND	1.7
Dibenz(a,h)anthracene	50	ND	ND	ND
Dibenzofuran		1.2	2.0	7.6
Diethylphthalate		ND	ND	ND
Dimethylphthalate		ND	ND	ND
Di-n-butylphthalate	50	ND	ND	ND
Di-n-octylphthalate		ND	ND	ND
Fluoranthene		ND	ND	1.9
Fluorene		4.1	4.2	5.5
Hexachloro-1,3-butadiene		ND	ND	ND
Hexachlorobenzene	0.04	ND	ND	ND
Hexachlorocyclopentadiene	5	ND	ND	ND
Hexachloroethane	5	ND	ND	ND
Indeno(1,2,3-cd)pyrene		ND	ND	ND
Isophorone		ND	ND	ND
Naphthalene		ND	ND	1.7
Nitrobenzene	0.4	1.3	ND	3.2
N-Nitrosodimethylamine		ND	ND	ND
N-Nitroso-di-n-propylamine		ND	ND	ND
N-Nitrosodiphenylamine		3.7	2.1	4.6
Pentachlorophenol **(1)**	1	ND	ND	ND
Phenanthrene		3.6	3.6	ND
Phenol **(1)**	1	ND	ND	ND
Pyrene		ND	ND	3.9

(1) Based on total phenols standard
(2) All results in ppb.
(3) Exceedances of Part 703 Groundwater A Standard in RED

APPENDIX D
LABORATORY ANALYTICAL RESULTS

349 Northern Boulevard Suite 3▪ Albany, NY 12204 ▪ Phone: 518.453.2203 ▪ Fax: 518.453.2204
A Woman Owned Business Enterprise (WBE)

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

January 28, 2020

Ms. Rachel Farnum
Envirospec Engineering
349 Northern Blvd #3
Albany, NY 12204

RE: Project: MW-33
Pace Project No.: 30345680

Dear Ms. Farnum:
Enclosed are the analytical results for sample(s) received by the laboratory on January 17, 2020. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Samantha Bayura

Samantha Bayura
samantha.bayura@pacelabs.com
(724)850-5622
Project Manager

Enclosures

cc: Ms. Sheri Roberts, Couch White
Mr. Adam Schultz, Couch White

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: MW-33
Pace Project No.: 30345680

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: MW-33
Pace Project No.: 30345680

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30345680001	**MW-33**	Water	01/16/20 09:01	01/17/20 10:30
30345680004	**DUP**	Water	01/16/20 09:01	01/17/20 10:30
30345680005	**MW-32**	Water	01/16/20 10:00	01/17/20 10:30

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: MW-33
Pace Project No.: 30345680

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30345680001	**MW-33**	EPA 6010C	CTS	24	PASI-PA
		EPA 6010C	CTS	24	PASI-PA
		EPA 7470A	KAS	1	PASI-PA
		EPA 7470A	KAS	1	PASI-PA
		EPA 8270D	EAC	75	PASI-PA
30345680004	**DUP**	EPA 6010C	CTS	24	PASI-PA
		EPA 6010C	CTS	24	PASI-PA
		EPA 7470A	KAS	1	PASI-PA
		EPA 7470A	KAS	1	PASI-PA
		EPA 8270D	EAC	75	PASI-PA
30345680005	**MW-32**	EPA 6010C	CTS	24	PASI-PA
		EPA 6010C	CTS	24	PASI-PA
		EPA 7470A	KAS	1	PASI-PA
		EPA 7470A	KAS	1	PASI-PA
		EPA 8270D	EAC	75	PASI-PA

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: MW-33
Pace Project No.: 30345680

Method: **EPA 6010C**
Description: 6010C MET ICP
Client: Envirospec Engineering
Date: January 28, 2020

General Information:
3 samples were analyzed for EPA 6010C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3005A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 380502

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30345680001

MH: Matrix spike recovery and/or matrix spike duplicate recovery was above laboratory control limits. Result may be biased high.

- MS (Lab ID: 1844692)
  - Aluminum
- MSD (Lab ID: 1844693)
  - Aluminum
  - Iron
  - Potassium

ML: Matrix spike recovery and/or matrix spike duplicate recovery was below laboratory control limits. Result may be biased low.

- MS (Lab ID: 1844692)
  - Calcium
  - Iron
  - Sodium

R1: RPD value was outside control limits.

- MSD (Lab ID: 1844693)
  - Aluminum

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: MW-33
Pace Project No.: 30345680

Method: **EPA 6010C**
Description: 6010C MET ICP
Client: Envirospec Engineering
Date: January 28, 2020

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 380502

3c: The PDS recovery was outside of the laboratory control limits. Result may be biased low.

- MW-33 (Lab ID: 30345680001)
  - Calcium
  - Sodium

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: MW-33
Pace Project No.: 30345680

Method: **EPA 6010C**
Description: 6010C MET ICP, Lab Filtered
Client: Envirospec Engineering
Date: January 28, 2020

General Information:
3 samples were analyzed for EPA 6010C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3005A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 380667

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30345680001

MH: Matrix spike recovery and/or matrix spike duplicate recovery was above laboratory control limits. Result may be biased high.

- MS (Lab ID: 1845392)
  - Calcium, Dissolved
- MSD (Lab ID: 1845393)
  - Calcium, Dissolved

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 380667

2c: The PDS recovery was outside of the laboratory control limits. Result may be biased high.

- MW-33 (Lab ID: 30345680001)
  - Calcium, Dissolved
  - Sodium, Dissolved

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: MW-33
Pace Project No.: 30345680

Method: **EPA 7470A**
Description: 7470 Mercury
Client: Envirospec Engineering
Date: January 28, 2020

General Information:
3 samples were analyzed for EPA 7470A. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 380357

1c: The PDS recovery was outside of the laboratory control limits. Result may be biased high
- MW-33 (Lab ID: 30345680001)
  - Mercury

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: MW-33
Pace Project No.: 30345680

Method: **EPA 7470A**
Description: 7470 Mercury, Lab Filtered
Client: Envirospec Engineering
Date: January 28, 2020

General Information:
3 samples were analyzed for EPA 7470A. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 380767

1c: The PDS recovery was outside of the laboratory control limits. Result may be biased high
- MW-33 (Lab ID: 30345680001)
  - Mercury, Dissolved

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: MW-33
Pace Project No.: 30345680

Method: **EPA 8270D**
Description: 8270D MSSV Organics
Client: Envirospec Engineering
Date: January 28, 2020

General Information:
3 samples were analyzed for EPA 8270D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3510C with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

QC Batch: 380371

IS: The internal standard response is below criteria. Results may be biased high.

- DUP (Lab ID: 30345680004)
  - 2,4,5-Trichlorophenol
  - 2,4,6-Trichlorophenol
  - 2,4-Dinitrophenol
  - 2,6-Dinitrotoluene
  - 2-Chloronaphthalene
  - 2-Fluorobiphenyl (S)
  - 2-Nitroaniline
  - 3-Nitroaniline
  - 4-Chlorophenylphenyl ether
  - 4-Nitroaniline
  - 4-Nitrophenol
  - Acenaphthene
  - Acenaphthylene
  - Dibenzofuran
  - Diethylphthalate
  - Dimethylphthalate
  - Fluorene
  - Hexachlorocyclopentadiene

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: MW-33
Pace Project No.: 30345680

Method: **EPA 8270D**
Description: 8270D MSSV Organics
Client: Envirospec Engineering
Date: January 28, 2020

QC Batch: 380371

S0: Surrogate recovery outside laboratory control limits.
- DUP (Lab ID: 30345680004)
  - 2-Fluorobiphenyl (S)
  - Nitrobenzene-d5 (S)
- MW-32 (Lab ID: 30345680005)
  - 2-Fluorobiphenyl (S)

ST: Surrogate recovery was above laboratory control limits. Results may be biased high.
- DUP (Lab ID: 30345680004)
  - 2-Fluorobiphenyl (S)
  - Nitrobenzene-d5 (S)
- MS (Lab ID: 1844077)
  - Nitrobenzene-d5 (S)
- MSD (Lab ID: 1844078)
  - Nitrobenzene-d5 (S)
- MW-32 (Lab ID: 30345680005)
  - 2-Fluorobiphenyl (S)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

QC Batch: 380371

B: Analyte was detected in the associated method blank.
- BLANK for HBN 380371 [OEXT/402 (Lab ID: 1844075)
  - bis(2-Ethylhexyl)phthalate

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 380371

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30345680001

MH: Matrix spike recovery and/or matrix spike duplicate recovery was above laboratory control limits. Result may be biased high.
- MS (Lab ID: 1844077)
  - 2,4,6-Trichlorophenol
  - 2,4-Dimethylphenol
  - 2,4-Dinitrotoluene
  - 4-Nitrophenol
  - Anthracene
  - Fluoranthene
  - Fluorene
  - N-Nitrosodiphenylamine
  - Naphthalene

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: MW-33
Pace Project No.: 30345680

Method: **EPA 8270D**
Description: 8270D MSSV Organics
Client: Envirospec Engineering
Date: January 28, 2020

QC Batch: 380371

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30345680001

MH: Matrix spike recovery and/or matrix spike duplicate recovery was above laboratory control limits. Result may be biased high.

- Phenanthrene
- MSD (Lab ID: 1844078)
  - 2,4-Dimethylphenol
  - Acenaphthene
  - Anthracene
  - Fluoranthene
  - N-Nitrosodiphenylamine
  - Naphthalene

ML: Matrix spike recovery and/or matrix spike duplicate recovery was below laboratory control limits. Result may be biased low.

- MS (Lab ID: 1844077)
  - 3,3'-Dichlorobenzidine
  - 4-Chloroaniline
- MSD (Lab ID: 1844078)
  - 3,3'-Dichlorobenzidine

R1: RPD value was outside control limits.

- MSD (Lab ID: 1844078)
  - 2-Nitroaniline
  - 4-Chloroaniline
  - 4-Nitrophenol
  - Phenanthrene

Additional Comments:

Analyte Comments:

QC Batch: 380371

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- DUP (Lab ID: 30345680004)
  - 2,4-Dinitrotoluene

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- DUP (Lab ID: 30345680004)
  - 2-Fluorobiphenyl (S)

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: MW-33
Pace Project No.: 30345680

Sample: MW-33 **Lab ID: 30345680001** Collected: 01/16/20 09:01 Received: 01/17/20 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Aluminum	**5980**	ug/L	50.0	20.3	1	01/22/20 10:02	01/23/20 13:02	7429-90-5	MH,R1
Antimony	ND	ug/L	6.0	3.3	1	01/22/20 10:02	01/23/20 13:02	7440-36-0	
Arsenic	ND	ug/L	5.0	2.0	1	01/22/20 10:02	01/23/20 15:02	7440-38-2	
Barium	**268**	ug/L	10.0	0.68	1	01/22/20 10:02	01/23/20 13:02	7440-39-3	
Beryllium	ND	ug/L	1.0	0.17	1	01/22/20 10:02	01/23/20 13:02	7440-41-7	
Boron	**464**	ug/L	50.0	2.3	1	01/22/20 10:02	01/23/20 13:02	7440-42-8	
Cadmium	ND	ug/L	3.0	0.34	1	01/22/20 10:02	01/23/20 13:02	7440-43-9	
Calcium	**230000**	ug/L	1000	99.9	1	01/22/20 10:02	01/23/20 13:02	7440-70-2	3c,ML
Chromium	**9.5**	ug/L	5.0	0.35	1	01/22/20 10:02	01/23/20 13:02	7440-47-3	
Cobalt	ND	ug/L	5.0	0.53	1	01/22/20 10:02	01/23/20 13:02	7440-48-4	
Copper	**16.1**	ug/L	5.0	2.7	1	01/22/20 10:02	01/23/20 13:02	7440-50-8	
Iron	**24500**	ug/L	70.0	40.9	1	01/22/20 10:02	01/23/20 13:02	7439-89-6	MH,ML
Lead	**19.8**	ug/L	5.0	4.9	1	01/22/20 10:02	01/23/20 13:02	7439-92-1	
Magnesium	**27400**	ug/L	200	28.4	1	01/22/20 10:02	01/23/20 13:02	7439-95-4	
Manganese	**2140**	ug/L	5.0	1.2	1	01/22/20 10:02	01/23/20 13:02	7439-96-5	
Molybdenum	ND	ug/L	20.0	0.85	1	01/22/20 10:02	01/23/20 13:02	7439-98-7	
Nickel	ND	ug/L	10.0	1.5	1	01/22/20 10:02	01/23/20 13:02	7440-02-0	
Potassium	**28700**	ug/L	500	72.4	1	01/22/20 10:02	01/23/20 13:02	7440-09-7	MH
Selenium	ND	ug/L	8.0	5.5	1	01/22/20 10:02	01/23/20 13:02	7782-49-2	
Silver	ND	ug/L	6.0	1.4	1	01/22/20 10:02	01/23/20 13:02	7440-22-4	
Sodium	**152000**	ug/L	1000	423	1	01/22/20 10:02	01/23/20 13:02	7440-23-5	3c,ML
Thallium	ND	ug/L	10.0	4.0	1	01/22/20 10:02	01/23/20 13:02	7440-28-0	
Vanadium	**9.8**	ug/L	5.0	0.57	1	01/22/20 10:02	01/23/20 13:02	7440-62-2	
Zinc	**32.1**	ug/L	10.0	2.4	1	01/22/20 10:02	01/23/20 13:02	7440-66-6	
6010C MET ICP, Lab Filtered	Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Aluminum, Dissolved	ND	ug/L	50.0	20.3	1	01/22/20 19:10	01/23/20 12:35	7429-90-5	
Antimony, Dissolved	ND	ug/L	6.0	3.3	1	01/22/20 19:10	01/23/20 12:35	7440-36-0	
Arsenic, Dissolved	ND	ug/L	5.0	2.0	1	01/22/20 19:10	01/23/20 14:36	7440-38-2	
Barium, Dissolved	**148**	ug/L	10.0	0.68	1	01/22/20 19:10	01/23/20 12:35	7440-39-3	
Beryllium, Dissolved	ND	ug/L	1.0	0.17	1	01/22/20 19:10	01/23/20 12:35	7440-41-7	
Boron, Dissolved	**472**	ug/L	50.0	2.3	1	01/22/20 19:10	01/23/20 12:35	7440-42-8	
Cadmium, Dissolved	ND	ug/L	3.0	0.34	1	01/22/20 19:10	01/23/20 12:35	7440-43-9	
Calcium, Dissolved	**229000**	ug/L	1000	99.9	1	01/22/20 19:10	01/23/20 12:35	7440-70-2	2c,MH
Chromium, Dissolved	ND	ug/L	5.0	0.35	1	01/22/20 19:10	01/23/20 12:35	7440-47-3	
Cobalt, Dissolved	ND	ug/L	5.0	0.53	1	01/22/20 19:10	01/23/20 12:35	7440-48-4	
Copper, Dissolved	ND	ug/L	5.0	2.7	1	01/22/20 19:10	01/23/20 12:35	7440-50-8	
Iron, Dissolved	**321**	ug/L	70.0	40.9	1	01/22/20 19:10	01/23/20 12:35	7439-89-6	
Lead, Dissolved	ND	ug/L	5.0	4.9	1	01/22/20 19:10	01/23/20 12:35	7439-92-1	
Magnesium, Dissolved	**25700**	ug/L	200	28.4	1	01/22/20 19:10	01/23/20 12:35	7439-95-4	
Manganese, Dissolved	**1780**	ug/L	5.0	1.2	1	01/22/20 19:10	01/23/20 12:35	7439-96-5	
Molybdenum, Dissolved	ND	ug/L	20.0	0.85	1	01/22/20 19:10	01/23/20 12:35	7439-98-7	
Nickel, Dissolved	ND	ug/L	10.0	1.5	1	01/22/20 19:10	01/23/20 12:35	7440-02-0	
Potassium, Dissolved	**28300**	ug/L	500	72.4	1	01/22/20 19:10	01/23/20 12:35	7440-09-7	
Selenium, Dissolved	ND	ug/L	8.0	5.5	1	01/22/20 19:10	01/23/20 12:35	7782-49-2	
Silver, Dissolved	ND	ug/L	6.0	1.4	1	01/22/20 19:10	01/23/20 12:35	7440-22-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: MW-33
Pace Project No.: 30345680

Sample: MW-33 **Lab ID: 30345680001** Collected: 01/16/20 09:01 Received: 01/17/20 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Lab Filtered	Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Sodium, Dissolved	**156000**	ug/L	1000	423	1	01/22/20 19:10	01/23/20 12:35	7440-23-5	2c
Thallium, Dissolved	ND	ug/L	10.0	4.0	1	01/22/20 19:10	01/23/20 12:35	7440-28-0	
Vanadium, Dissolved	ND	ug/L	5.0	0.57	1	01/22/20 19:10	01/23/20 12:35	7440-62-2	
Zinc, Dissolved	ND	ug/L	10.0	2.4	1	01/22/20 19:10	01/23/20 12:35	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	ug/L	0.20	0.030	1	01/21/20 13:03	01/21/20 20:05	7439-97-6	1c
7470 Mercury, Lab Filtered	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	ND	ug/L	0.20	0.030	1	01/23/20 09:55	01/23/20 15:46	7439-97-6	1c
8270D MSSV Organics	Analytical Method: EPA 8270D Preparation Method: EPA 3510C								
Acenaphthene	**2.7**	ug/L	1.0	0.41	1	01/22/20 08:31	01/23/20 19:19	83-32-9	MH
Acenaphthylene	ND	ug/L	1.0	0.40	1	01/22/20 08:31	01/23/20 19:19	208-96-8	
Anthracene	ND	ug/L	1.0	0.28	1	01/22/20 08:31	01/23/20 19:19	120-12-7	MH
Azobenzene	ND	ug/L	1.0	0.37	1	01/22/20 08:31	01/23/20 19:19	103-33-3	
Benzo(a)anthracene	ND	ug/L	1.0	0.21	1	01/22/20 08:31	01/23/20 19:19	56-55-3	
Benzo(a)pyrene	ND	ug/L	1.0	0.19	1	01/22/20 08:31	01/23/20 19:19	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	1.0	0.25	1	01/22/20 08:31	01/23/20 19:19	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	1.0	0.31	1	01/22/20 08:31	01/23/20 19:19	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	1.0	0.27	1	01/22/20 08:31	01/23/20 19:19	207-08-9	
Benzoic acid	ND	ug/L	15.7	2.9	1	01/22/20 08:31	01/23/20 19:19	65-85-0	
Benzyl alcohol	ND	ug/L	1.0	0.73	1	01/22/20 08:31	01/23/20 19:19	100-51-6	
4-Bromophenylphenyl ether	ND	ug/L	1.0	0.41	1	01/22/20 08:31	01/23/20 19:19	101-55-3	
Butylbenzylphthalate	ND	ug/L	1.0	0.31	1	01/22/20 08:31	01/23/20 19:19	85-68-7	
Carbazole	ND	ug/L	1.0	0.25	1	01/22/20 08:31	01/23/20 19:19	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	1.0	0.46	1	01/22/20 08:31	01/23/20 19:19	59-50-7	
4-Chloroaniline	ND	ug/L	1.0	0.22	1	01/22/20 08:31	01/23/20 19:19	106-47-8	ML,R1
bis(2-Chloroethoxy)methane	ND	ug/L	1.0	0.37	1	01/22/20 08:31	01/23/20 19:19	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	1.0	0.43	1	01/22/20 08:31	01/23/20 19:19	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	1.0	0.42	1	01/22/20 08:31	01/23/20 19:19	108-60-1	
2-Chloronaphthalene	ND	ug/L	1.0	0.35	1	01/22/20 08:31	01/23/20 19:19	91-58-7	
2-Chlorophenol	ND	ug/L	1.0	0.34	1	01/22/20 08:31	01/23/20 19:19	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	1.0	0.38	1	01/22/20 08:31	01/23/20 19:19	7005-72-3	
Chrysene	ND	ug/L	1.0	0.22	1	01/22/20 08:31	01/23/20 19:19	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	1.0	0.33	1	01/22/20 08:31	01/23/20 19:19	53-70-3	
Dibenzofuran	**2.0**	ug/L	1.0	0.38	1	01/22/20 08:31	01/23/20 19:19	132-64-9	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.36	1	01/22/20 08:31	01/23/20 19:19	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.31	1	01/22/20 08:31	01/23/20 19:19	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.29	1	01/22/20 08:31	01/23/20 19:19	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/L	1.0	0.24	1	01/22/20 08:31	01/23/20 19:19	91-94-1	ML
2,4-Dichlorophenol	ND	ug/L	1.0	0.35	1	01/22/20 08:31	01/23/20 19:19	120-83-2	
Diethylphthalate	ND	ug/L	1.0	0.38	1	01/22/20 08:31	01/23/20 19:19	84-66-2	
2,4-Dimethylphenol	ND	ug/L	1.0	0.38	1	01/22/20 08:31	01/23/20 19:19	105-67-9	MH
Dimethylphthalate	ND	ug/L	1.0	0.46	1	01/22/20 08:31	01/23/20 19:19	131-11-3	
Di-n-butylphthalate	ND	ug/L	1.0	0.34	1	01/22/20 08:31	01/23/20 19:19	84-74-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: MW-33
Pace Project No.: 30345680

Sample: MW-33 **Lab ID: 30345680001** Collected: 01/16/20 09:01 Received: 01/17/20 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270D MSSV Organics	Analytical Method: EPA 8270D Preparation Method: EPA 3510C								
4,6-Dinitro-2-methylphenol	ND	ug/L	2.6	0.67	1	01/22/20 08:31	01/23/20 19:19	534-52-1	
2,4-Dinitrophenol	ND	ug/L	2.6	0.61	1	01/22/20 08:31	01/23/20 19:19	51-28-5	
2,4-Dinitrotoluene	**1.7**	ug/L	1.0	0.37	1	01/22/20 08:31	01/23/20 19:19	121-14-2	MH
2,6-Dinitrotoluene	ND	ug/L	1.0	0.42	1	01/22/20 08:31	01/23/20 19:19	606-20-2	
Di-n-octylphthalate	ND	ug/L	1.0	0.28	1	01/22/20 08:31	01/23/20 19:19	117-84-0	
bis(2-Ethylhexyl)phthalate	**2.4**	ug/L	1.0	0.38	1	01/22/20 08:31	01/23/20 19:19	117-81-7	B
Fluoranthene	ND	ug/L	1.0	0.25	1	01/22/20 08:31	01/23/20 19:19	206-44-0	MH
Fluorene	**4.2**	ug/L	1.0	0.39	1	01/22/20 08:31	01/23/20 19:19	86-73-7	MH
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.35	1	01/22/20 08:31	01/23/20 19:19	87-68-3	
Hexachlorobenzene	ND	ug/L	1.0	0.32	1	01/22/20 08:31	01/23/20 19:19	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	1.0	0.20	1	01/22/20 08:31	01/23/20 19:19	77-47-4	
Hexachloroethane	ND	ug/L	1.0	0.32	1	01/22/20 08:31	01/23/20 19:19	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	1.0	0.32	1	01/22/20 08:31	01/23/20 19:19	193-39-5	
Isophorone	ND	ug/L	1.0	0.60	1	01/22/20 08:31	01/23/20 19:19	78-59-1	
1-Methylnaphthalene	ND	ug/L	1.0	0.38	1	01/22/20 08:31	01/23/20 19:19	90-12-0	
2-Methylnaphthalene	ND	ug/L	1.0	0.36	1	01/22/20 08:31	01/23/20 19:19	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	1.0	0.38	1	01/22/20 08:31	01/23/20 19:19	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	2.1	2.0	1	01/22/20 08:31	01/23/20 19:19		
Naphthalene	ND	ug/L	1.0	0.37	1	01/22/20 08:31	01/23/20 19:19	91-20-3	MH
2-Nitroaniline	ND	ug/L	2.6	0.75	1	01/22/20 08:31	01/23/20 19:19	88-74-4	R1
3-Nitroaniline	ND	ug/L	2.6	1.0	1	01/22/20 08:31	01/23/20 19:19	99-09-2	
4-Nitroaniline	ND	ug/L	2.6	1.9	1	01/22/20 08:31	01/23/20 19:19	100-01-6	
Nitrobenzene	ND	ug/L	1.0	0.39	1	01/22/20 08:31	01/23/20 19:19	98-95-3	
2-Nitrophenol	ND	ug/L	1.0	0.37	1	01/22/20 08:31	01/23/20 19:19	88-75-5	
4-Nitrophenol	ND	ug/L	1.0	0.80	1	01/22/20 08:31	01/23/20 19:19	100-02-7	MH,R1
N-Nitrosodimethylamine	ND	ug/L	1.0	0.27	1	01/22/20 08:31	01/23/20 19:19	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/L	1.0	0.56	1	01/22/20 08:31	01/23/20 19:19	621-64-7	
N-Nitrosodiphenylamine	**2.1**	ug/L	1.0	0.27	1	01/22/20 08:31	01/23/20 19:19	86-30-6	MH
Pentachlorophenol	ND	ug/L	2.6	1.1	1	01/22/20 08:31	01/23/20 19:19	87-86-5	
Phenanthrene	**3.6**	ug/L	1.0	0.36	1	01/22/20 08:31	01/23/20 19:19	85-01-8	MH,R1
Phenol	ND	ug/L	1.0	0.23	1	01/22/20 08:31	01/23/20 19:19	108-95-2	
Pyrene	ND	ug/L	1.0	0.32	1	01/22/20 08:31	01/23/20 19:19	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.33	1	01/22/20 08:31	01/23/20 19:19	120-82-1	
2,4,5-Trichlorophenol	ND	ug/L	2.6	0.70	1	01/22/20 08:31	01/23/20 19:19	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	1.0	0.38	1	01/22/20 08:31	01/23/20 19:19	88-06-2	MH
Surrogates									
Nitrobenzene-d5 (S)	116	%.	10-120		1	01/22/20 08:31	01/23/20 19:19	4165-60-0	
2-Fluorobiphenyl (S)	72	%.	10-121		1	01/22/20 08:31	01/23/20 19:19	321-60-8	
Terphenyl-d14 (S)	75	%.	43-119		1	01/22/20 08:31	01/23/20 19:19	1718-51-0	
Phenol-d6 (S)	28	%.	10-58		1	01/22/20 08:31	01/23/20 19:19	13127-88-3	
2-Fluorophenol (S)	40	%.	10-84		1	01/22/20 08:31	01/23/20 19:19	367-12-4	
2,4,6-Tribromophenol (S)	95	%.	33-129		1	01/22/20 08:31	01/23/20 19:19	118-79-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: MW-33
Pace Project No.: 30345680

Sample: DUP **Lab ID: 30345680004** Collected: 01/16/20 09:01 Received: 01/17/20 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Aluminum	**5290**	ug/L	50.0	20.3	1	01/22/20 10:02	01/23/20 13:15	7429-90-5	
Antimony	ND	ug/L	6.0	3.3	1	01/22/20 10:02	01/23/20 13:15	7440-36-0	
Arsenic	ND	ug/L	5.0	2.0	1	01/22/20 10:02	01/23/20 15:15	7440-38-2	
Barium	**269**	ug/L	10.0	0.68	1	01/22/20 10:02	01/23/20 13:15	7440-39-3	
Beryllium	ND	ug/L	1.0	0.17	1	01/22/20 10:02	01/23/20 13:15	7440-41-7	
Boron	**466**	ug/L	50.0	2.3	1	01/22/20 10:02	01/23/20 13:15	7440-42-8	
Cadmium	ND	ug/L	3.0	0.34	1	01/22/20 10:02	01/23/20 13:15	7440-43-9	
Calcium	**231000**	ug/L	1000	99.9	1	01/22/20 10:02	01/23/20 13:15	7440-70-2	
Chromium	**9.0**	ug/L	5.0	0.35	1	01/22/20 10:02	01/23/20 13:15	7440-47-3	
Cobalt	ND	ug/L	5.0	0.53	1	01/22/20 10:02	01/23/20 13:15	7440-48-4	
Copper	**16.1**	ug/L	5.0	2.7	1	01/22/20 10:02	01/23/20 13:15	7440-50-8	
Iron	**23300**	ug/L	70.0	40.9	1	01/22/20 10:02	01/23/20 13:15	7439-89-6	
Lead	**16.9**	ug/L	5.0	4.9	1	01/22/20 10:02	01/23/20 13:15	7439-92-1	
Magnesium	**27300**	ug/L	200	28.4	1	01/22/20 10:02	01/23/20 13:15	7439-95-4	
Manganese	**2150**	ug/L	5.0	1.2	1	01/22/20 10:02	01/23/20 13:15	7439-96-5	
Molybdenum	ND	ug/L	20.0	0.85	1	01/22/20 10:02	01/23/20 13:15	7439-98-7	
Nickel	ND	ug/L	10.0	1.5	1	01/22/20 10:02	01/23/20 13:15	7440-02-0	
Potassium	**28900**	ug/L	500	72.4	1	01/22/20 10:02	01/23/20 13:15	7440-09-7	
Selenium	ND	ug/L	8.0	5.5	1	01/22/20 10:02	01/23/20 13:15	7782-49-2	
Silver	ND	ug/L	6.0	1.4	1	01/22/20 10:02	01/23/20 13:15	7440-22-4	
Sodium	**153000**	ug/L	1000	423	1	01/22/20 10:02	01/23/20 13:15	7440-23-5	
Thallium	ND	ug/L	10.0	4.0	1	01/22/20 10:02	01/23/20 13:15	7440-28-0	
Vanadium	**9.0**	ug/L	5.0	0.57	1	01/22/20 10:02	01/23/20 13:15	7440-62-2	
Zinc	**27.8**	ug/L	10.0	2.4	1	01/22/20 10:02	01/23/20 13:15	7440-66-6	
6010C MET ICP, Lab Filtered	Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Aluminum, Dissolved	ND	ug/L	50.0	20.3	1	01/22/20 19:10	01/23/20 12:47	7429-90-5	
Antimony, Dissolved	ND	ug/L	6.0	3.3	1	01/22/20 19:10	01/23/20 12:47	7440-36-0	
Arsenic, Dissolved	ND	ug/L	5.0	2.0	1	01/22/20 19:10	01/23/20 14:49	7440-38-2	
Barium, Dissolved	**156**	ug/L	10.0	0.68	1	01/22/20 19:10	01/23/20 12:47	7440-39-3	
Beryllium, Dissolved	ND	ug/L	1.0	0.17	1	01/22/20 19:10	01/23/20 12:47	7440-41-7	
Boron, Dissolved	**472**	ug/L	50.0	2.3	1	01/22/20 19:10	01/23/20 12:47	7440-42-8	
Cadmium, Dissolved	ND	ug/L	3.0	0.34	1	01/22/20 19:10	01/23/20 12:47	7440-43-9	
Calcium, Dissolved	**233000**	ug/L	1000	99.9	1	01/22/20 19:10	01/23/20 12:47	7440-70-2	
Chromium, Dissolved	ND	ug/L	5.0	0.35	1	01/22/20 19:10	01/23/20 12:47	7440-47-3	
Cobalt, Dissolved	ND	ug/L	5.0	0.53	1	01/22/20 19:10	01/23/20 12:47	7440-48-4	
Copper, Dissolved	ND	ug/L	5.0	2.7	1	01/22/20 19:10	01/23/20 12:47	7440-50-8	
Iron, Dissolved	ND	ug/L	70.0	40.9	1	01/22/20 19:10	01/23/20 12:47	7439-89-6	
Lead, Dissolved	ND	ug/L	5.0	4.9	1	01/22/20 19:10	01/23/20 12:47	7439-92-1	
Magnesium, Dissolved	**26000**	ug/L	200	28.4	1	01/22/20 19:10	01/23/20 12:47	7439-95-4	
Manganese, Dissolved	**2010**	ug/L	5.0	1.2	1	01/22/20 19:10	01/23/20 12:47	7439-96-5	
Molybdenum, Dissolved	ND	ug/L	20.0	0.85	1	01/22/20 19:10	01/23/20 12:47	7439-98-7	
Nickel, Dissolved	ND	ug/L	10.0	1.5	1	01/22/20 19:10	01/23/20 12:47	7440-02-0	
Potassium, Dissolved	**28800**	ug/L	500	72.4	1	01/22/20 19:10	01/23/20 12:47	7440-09-7	
Selenium, Dissolved	ND	ug/L	8.0	5.5	1	01/22/20 19:10	01/23/20 12:47	7782-49-2	
Silver, Dissolved	ND	ug/L	6.0	1.4	1	01/22/20 19:10	01/23/20 12:47	7440-22-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: MW-33
Pace Project No.: 30345680

Sample: DUP **Lab ID: 30345680004** Collected: 01/16/20 09:01 Received: 01/17/20 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Lab Filtered	Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Sodium, Dissolved	**157000**	ug/L	1000	423	1	01/22/20 19:10	01/23/20 12:47	7440-23-5	
Thallium, Dissolved	ND	ug/L	10.0	4.0	1	01/22/20 19:10	01/23/20 12:47	7440-28-0	
Vanadium, Dissolved	ND	ug/L	5.0	0.57	1	01/22/20 19:10	01/23/20 12:47	7440-62-2	
Zinc, Dissolved	ND	ug/L	10.0	2.4	1	01/22/20 19:10	01/23/20 12:47	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	ug/L	0.20	0.030	1	01/21/20 13:03	01/21/20 20:15	7439-97-6	
7470 Mercury, Lab Filtered	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	ND	ug/L	0.20	0.030	1	01/23/20 09:55	01/23/20 16:00	7439-97-6	
8270D MSSV Organics	Analytical Method: EPA 8270D Preparation Method: EPA 3510C								
Acenaphthene	ND	ug/L	1.0	0.39	1	01/22/20 08:31	01/23/20 20:24	83-32-9	IS
Acenaphthylene	**12.7**	ug/L	1.0	0.38	1	01/22/20 08:31	01/23/20 20:24	208-96-8	IS
Anthracene	**12.8**	ug/L	1.0	0.27	1	01/22/20 08:31	01/23/20 20:24	120-12-7	
Azobenzene	ND	ug/L	1.0	0.35	1	01/22/20 08:31	01/23/20 20:24	103-33-3	
Benzo(a)anthracene	ND	ug/L	1.0	0.20	1	01/22/20 08:31	01/23/20 20:24	56-55-3	
Benzo(a)pyrene	ND	ug/L	1.0	0.18	1	01/22/20 08:31	01/23/20 20:24	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	1.0	0.24	1	01/22/20 08:31	01/23/20 20:24	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	1.0	0.30	1	01/22/20 08:31	01/23/20 20:24	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	1.0	0.26	1	01/22/20 08:31	01/23/20 20:24	207-08-9	
Benzoic acid	ND	ug/L	15.0	2.8	1	01/22/20 08:31	01/23/20 20:24	65-85-0	
Benzyl alcohol	ND	ug/L	1.0	0.70	1	01/22/20 08:31	01/23/20 20:24	100-51-6	
4-Bromophenylphenyl ether	ND	ug/L	1.0	0.39	1	01/22/20 08:31	01/23/20 20:24	101-55-3	
Butylbenzylphthalate	ND	ug/L	1.0	0.30	1	01/22/20 08:31	01/23/20 20:24	85-68-7	
Carbazole	ND	ug/L	1.0	0.23	1	01/22/20 08:31	01/23/20 20:24	86-74-8	
4-Chloro-3-methylphenol	**2.2**	ug/L	1.0	0.44	1	01/22/20 08:31	01/23/20 20:24	59-50-7	
4-Chloroaniline	**1.9**	ug/L	1.0	0.21	1	01/22/20 08:31	01/23/20 20:24	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	1.0	0.36	1	01/22/20 08:31	01/23/20 20:24	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	1.0	0.41	1	01/22/20 08:31	01/23/20 20:24	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	1.0	0.40	1	01/22/20 08:31	01/23/20 20:24	108-60-1	
2-Chloronaphthalene	ND	ug/L	1.0	0.33	1	01/22/20 08:31	01/23/20 20:24	91-58-7	IS
2-Chlorophenol	ND	ug/L	1.0	0.32	1	01/22/20 08:31	01/23/20 20:24	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	1.0	0.36	1	01/22/20 08:31	01/23/20 20:24	7005-72-3	IS
Chrysene	**1.7**	ug/L	1.0	0.21	1	01/22/20 08:31	01/23/20 20:24	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	1.0	0.31	1	01/22/20 08:31	01/23/20 20:24	53-70-3	
Dibenzofuran	**7.6**	ug/L	1.0	0.36	1	01/22/20 08:31	01/23/20 20:24	132-64-9	IS
1,2-Dichlorobenzene	ND	ug/L	1.0	0.34	1	01/22/20 08:31	01/23/20 20:24	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.30	1	01/22/20 08:31	01/23/20 20:24	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.28	1	01/22/20 08:31	01/23/20 20:24	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/L	1.0	0.23	1	01/22/20 08:31	01/23/20 20:24	91-94-1	
2,4-Dichlorophenol	ND	ug/L	1.0	0.34	1	01/22/20 08:31	01/23/20 20:24	120-83-2	
Diethylphthalate	ND	ug/L	1.0	0.36	1	01/22/20 08:31	01/23/20 20:24	84-66-2	IS
2,4-Dimethylphenol	**2.7**	ug/L	1.0	0.36	1	01/22/20 08:31	01/23/20 20:24	105-67-9	
Dimethylphthalate	ND	ug/L	1.0	0.44	1	01/22/20 08:31	01/23/20 20:24	131-11-3	IS
Di-n-butylphthalate	ND	ug/L	1.0	0.32	1	01/22/20 08:31	01/23/20 20:24	84-74-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: MW-33
Pace Project No.: 30345680

Sample: DUP **Lab ID: 30345680004** Collected: 01/16/20 09:01 Received: 01/17/20 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270D MSSV Organics	Analytical Method: EPA 8270D Preparation Method: EPA 3510C								
4,6-Dinitro-2-methylphenol	ND	ug/L	2.5	0.64	1	01/22/20 08:31	01/23/20 20:24	534-52-1	
2,4-Dinitrophenol	ND	ug/L	2.5	0.58	1	01/22/20 08:31	01/23/20 20:24	51-28-5	IS
2,4-Dinitrotoluene	ND	ug/L	5.0	1.8	5	01/22/20 08:31	01/25/20 02:04	121-14-2	D3
2,6-Dinitrotoluene	**11.8**	ug/L	1.0	0.40	1	01/22/20 08:31	01/23/20 20:24	606-20-2	IS
Di-n-octylphthalate	ND	ug/L	1.0	0.27	1	01/22/20 08:31	01/23/20 20:24	117-84-0	
bis(2-Ethylhexyl)phthalate	**1.9**	ug/L	1.0	0.36	1	01/22/20 08:31	01/23/20 20:24	117-81-7	B
Fluoranthene	**1.9**	ug/L	1.0	0.23	1	01/22/20 08:31	01/23/20 20:24	206-44-0	
Fluorene	**5.5**	ug/L	1.0	0.37	1	01/22/20 08:31	01/23/20 20:24	86-73-7	IS
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.33	1	01/22/20 08:31	01/23/20 20:24	87-68-3	
Hexachlorobenzene	ND	ug/L	1.0	0.30	1	01/22/20 08:31	01/23/20 20:24	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	1.0	0.19	1	01/22/20 08:31	01/23/20 20:24	77-47-4	IS
Hexachloroethane	ND	ug/L	1.0	0.30	1	01/22/20 08:31	01/23/20 20:24	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	1.0	0.30	1	01/22/20 08:31	01/23/20 20:24	193-39-5	
Isophorone	ND	ug/L	1.0	0.57	1	01/22/20 08:31	01/23/20 20:24	78-59-1	
1-Methylnaphthalene	**1.1**	ug/L	1.0	0.36	1	01/22/20 08:31	01/23/20 20:24	90-12-0	
2-Methylnaphthalene	ND	ug/L	1.0	0.34	1	01/22/20 08:31	01/23/20 20:24	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	1.0	0.37	1	01/22/20 08:31	01/23/20 20:24	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	2.0	1.9	1	01/22/20 08:31	01/23/20 20:24		
Naphthalene	**1.7**	ug/L	1.0	0.35	1	01/22/20 08:31	01/23/20 20:24	91-20-3	
2-Nitroaniline	ND	ug/L	2.5	0.71	1	01/22/20 08:31	01/23/20 20:24	88-74-4	IS
3-Nitroaniline	ND	ug/L	2.5	0.96	1	01/22/20 08:31	01/23/20 20:24	99-09-2	IS
4-Nitroaniline	ND	ug/L	2.5	1.9	1	01/22/20 08:31	01/23/20 20:24	100-01-6	IS
Nitrobenzene	**3.2**	ug/L	1.0	0.38	1	01/22/20 08:31	01/23/20 20:24	98-95-3	
2-Nitrophenol	ND	ug/L	1.0	0.35	1	01/22/20 08:31	01/23/20 20:24	88-75-5	
4-Nitrophenol	ND	ug/L	1.0	0.76	1	01/22/20 08:31	01/23/20 20:24	100-02-7	IS
N-Nitrosodimethylamine	ND	ug/L	1.0	0.26	1	01/22/20 08:31	01/23/20 20:24	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/L	1.0	0.54	1	01/22/20 08:31	01/23/20 20:24	621-64-7	
N-Nitrosodiphenylamine	**4.6**	ug/L	1.0	0.25	1	01/22/20 08:31	01/23/20 20:24	86-30-6	
Pentachlorophenol	ND	ug/L	2.5	1.0	1	01/22/20 08:31	01/23/20 20:24	87-86-5	
Phenanthrene	ND	ug/L	1.0	0.34	1	01/22/20 08:31	01/23/20 20:24	85-01-8	
Phenol	ND	ug/L	1.0	0.22	1	01/22/20 08:31	01/23/20 20:24	108-95-2	
Pyrene	**3.9**	ug/L	1.0	0.30	1	01/22/20 08:31	01/23/20 20:24	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.32	1	01/22/20 08:31	01/23/20 20:24	120-82-1	
2,4,5-Trichlorophenol	**4.6**	ug/L	2.5	0.67	1	01/22/20 08:31	01/23/20 20:24	95-95-4	IS
2,4,6-Trichlorophenol	ND	ug/L	1.0	0.37	1	01/22/20 08:31	01/23/20 20:24	88-06-2	IS
Surrogates									
Nitrobenzene-d5 (S)	150	%.	10-120		1	01/22/20 08:31	01/23/20 20:24	4165-60-0	S0,ST
2-Fluorobiphenyl (S)	463	%.	10-121		1	01/22/20 08:31	01/23/20 20:24	321-60-8	E,IS,S0, ST
Terphenyl-d14 (S)	78	%.	43-119		1	01/22/20 08:31	01/23/20 20:24	1718-51-0	
Phenol-d6 (S)	27	%.	10-58		1	01/22/20 08:31	01/23/20 20:24	13127-88-3	
2-Fluorophenol (S)	41	%.	10-84		1	01/22/20 08:31	01/23/20 20:24	367-12-4	
2,4,6-Tribromophenol (S)	123	%.	33-129		1	01/22/20 08:31	01/23/20 20:24	118-79-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: MW-33
Pace Project No.: 30345680

Sample: MW-32 **Lab ID: 30345680005** Collected: 01/16/20 10:00 Received: 01/17/20 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Aluminum	**3360**	ug/L	50.0	20.3	1	01/22/20 10:02	01/23/20 13:17	7429-90-5	
Antimony	ND	ug/L	6.0	3.3	1	01/22/20 10:02	01/23/20 13:17	7440-36-0	
Arsenic	**7.4**	ug/L	5.0	2.0	1	01/22/20 10:02	01/23/20 15:17	7440-38-2	
Barium	**315**	ug/L	10.0	0.68	1	01/22/20 10:02	01/23/20 13:17	7440-39-3	
Beryllium	ND	ug/L	1.0	0.17	1	01/22/20 10:02	01/23/20 13:17	7440-41-7	
Boron	**602**	ug/L	50.0	2.3	1	01/22/20 10:02	01/23/20 13:17	7440-42-8	
Cadmium	ND	ug/L	3.0	0.34	1	01/22/20 10:02	01/23/20 13:17	7440-43-9	
Calcium	**167000**	ug/L	1000	99.9	1	01/22/20 10:02	01/23/20 13:17	7440-70-2	
Chromium	**7.0**	ug/L	5.0	0.35	1	01/22/20 10:02	01/23/20 13:17	7440-47-3	
Cobalt	ND	ug/L	5.0	0.53	1	01/22/20 10:02	01/23/20 13:17	7440-48-4	
Copper	**11.5**	ug/L	5.0	2.7	1	01/22/20 10:02	01/23/20 13:17	7440-50-8	
Iron	**28500**	ug/L	70.0	40.9	1	01/22/20 10:02	01/23/20 13:17	7439-89-6	
Lead	**11.3**	ug/L	5.0	4.9	1	01/22/20 10:02	01/23/20 13:17	7439-92-1	
Magnesium	**25400**	ug/L	200	28.4	1	01/22/20 10:02	01/23/20 13:17	7439-95-4	
Manganese	**4810**	ug/L	5.0	1.2	1	01/22/20 10:02	01/23/20 13:17	7439-96-5	
Molybdenum	ND	ug/L	20.0	0.85	1	01/22/20 10:02	01/23/20 13:17	7439-98-7	
Nickel	ND	ug/L	10.0	1.5	1	01/22/20 10:02	01/23/20 13:17	7440-02-0	
Potassium	**10400**	ug/L	500	72.4	1	01/22/20 10:02	01/23/20 13:17	7440-09-7	
Selenium	ND	ug/L	8.0	5.5	1	01/22/20 10:02	01/23/20 13:17	7782-49-2	
Silver	ND	ug/L	6.0	1.4	1	01/22/20 10:02	01/23/20 13:17	7440-22-4	
Sodium	**21800**	ug/L	1000	423	1	01/22/20 10:02	01/23/20 13:17	7440-23-5	
Thallium	ND	ug/L	10.0	4.0	1	01/22/20 10:02	01/23/20 13:17	7440-28-0	
Vanadium	ND	ug/L	5.0	0.57	1	01/22/20 10:02	01/23/20 13:17	7440-62-2	
Zinc	**24.3**	ug/L	10.0	2.4	1	01/22/20 10:02	01/23/20 13:17	7440-66-6	
6010C MET ICP, Lab Filtered	Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Aluminum, Dissolved	ND	ug/L	50.0	20.3	1	01/22/20 19:10	01/23/20 12:50	7429-90-5	
Antimony, Dissolved	ND	ug/L	6.0	3.3	1	01/22/20 19:10	01/23/20 12:50	7440-36-0	
Arsenic, Dissolved	ND	ug/L	5.0	2.0	1	01/22/20 19:10	01/23/20 14:51	7440-38-2	
Barium, Dissolved	**215**	ug/L	10.0	0.68	1	01/22/20 19:10	01/23/20 12:50	7440-39-3	
Beryllium, Dissolved	ND	ug/L	1.0	0.17	1	01/22/20 19:10	01/23/20 12:50	7440-41-7	
Boron, Dissolved	**609**	ug/L	50.0	2.3	1	01/22/20 19:10	01/23/20 12:50	7440-42-8	
Cadmium, Dissolved	ND	ug/L	3.0	0.34	1	01/22/20 19:10	01/23/20 12:50	7440-43-9	
Calcium, Dissolved	**165000**	ug/L	1000	99.9	1	01/22/20 19:10	01/23/20 12:50	7440-70-2	
Chromium, Dissolved	ND	ug/L	5.0	0.35	1	01/22/20 19:10	01/23/20 12:50	7440-47-3	
Cobalt, Dissolved	ND	ug/L	5.0	0.53	1	01/22/20 19:10	01/23/20 12:50	7440-48-4	
Copper, Dissolved	ND	ug/L	5.0	2.7	1	01/22/20 19:10	01/23/20 12:50	7440-50-8	
Iron, Dissolved	**546**	ug/L	70.0	40.9	1	01/22/20 19:10	01/23/20 12:50	7439-89-6	
Lead, Dissolved	ND	ug/L	5.0	4.9	1	01/22/20 19:10	01/23/20 12:50	7439-92-1	
Magnesium, Dissolved	**24600**	ug/L	200	28.4	1	01/22/20 19:10	01/23/20 12:50	7439-95-4	
Manganese, Dissolved	**4800**	ug/L	5.0	1.2	1	01/22/20 19:10	01/23/20 12:50	7439-96-5	
Molybdenum, Dissolved	ND	ug/L	20.0	0.85	1	01/22/20 19:10	01/23/20 12:50	7439-98-7	
Nickel, Dissolved	ND	ug/L	10.0	1.5	1	01/22/20 19:10	01/23/20 12:50	7440-02-0	
Potassium, Dissolved	**9780**	ug/L	500	72.4	1	01/22/20 19:10	01/23/20 12:50	7440-09-7	
Selenium, Dissolved	ND	ug/L	8.0	5.5	1	01/22/20 19:10	01/23/20 12:50	7782-49-2	
Silver, Dissolved	ND	ug/L	6.0	1.4	1	01/22/20 19:10	01/23/20 12:50	7440-22-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: MW-33
Pace Project No.: 30345680

Sample: MW-32 **Lab ID: 30345680005** Collected: 01/16/20 10:00 Received: 01/17/20 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Lab Filtered	Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Sodium, Dissolved	**21900**	ug/L	1000	423	1	01/22/20 19:10	01/23/20 12:50	7440-23-5	
Thallium, Dissolved	ND	ug/L	10.0	4.0	1	01/22/20 19:10	01/23/20 12:50	7440-28-0	
Vanadium, Dissolved	ND	ug/L	5.0	0.57	1	01/22/20 19:10	01/23/20 12:50	7440-62-2	
Zinc, Dissolved	ND	ug/L	10.0	2.4	1	01/22/20 19:10	01/23/20 12:50	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	ug/L	0.20	0.030	1	01/21/20 13:03	01/21/20 20:17	7439-97-6	
7470 Mercury, Lab Filtered	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	ND	ug/L	0.20	0.030	1	01/23/20 09:55	01/23/20 16:02	7439-97-6	
8270D MSSV Organics	Analytical Method: EPA 8270D Preparation Method: EPA 3510C								
Acenaphthene	**2.6**	ug/L	1.0	0.40	1	01/22/20 08:31	01/23/20 20:46	83-32-9	
Acenaphthylene	ND	ug/L	1.0	0.39	1	01/22/20 08:31	01/23/20 20:46	208-96-8	
Anthracene	**1.4**	ug/L	1.0	0.27	1	01/22/20 08:31	01/23/20 20:46	120-12-7	
Azobenzene	ND	ug/L	1.0	0.36	1	01/22/20 08:31	01/23/20 20:46	103-33-3	
Benzo(a)anthracene	ND	ug/L	1.0	0.21	1	01/22/20 08:31	01/23/20 20:46	56-55-3	
Benzo(a)pyrene	ND	ug/L	1.0	0.19	1	01/22/20 08:31	01/23/20 20:46	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	1.0	0.24	1	01/22/20 08:31	01/23/20 20:46	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	1.0	0.30	1	01/22/20 08:31	01/23/20 20:46	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	1.0	0.26	1	01/22/20 08:31	01/23/20 20:46	207-08-9	
Benzoic acid	ND	ug/L	15.3	2.9	1	01/22/20 08:31	01/23/20 20:46	65-85-0	
Benzyl alcohol	ND	ug/L	1.0	0.71	1	01/22/20 08:31	01/23/20 20:46	100-51-6	
4-Bromophenylphenyl ether	ND	ug/L	1.0	0.40	1	01/22/20 08:31	01/23/20 20:46	101-55-3	
Butylbenzylphthalate	ND	ug/L	1.0	0.30	1	01/22/20 08:31	01/23/20 20:46	85-68-7	
Carbazole	ND	ug/L	1.0	0.24	1	01/22/20 08:31	01/23/20 20:46	86-74-8	
4-Chloro-3-methylphenol	ND	ug/L	1.0	0.45	1	01/22/20 08:31	01/23/20 20:46	59-50-7	
4-Chloroaniline	ND	ug/L	1.0	0.22	1	01/22/20 08:31	01/23/20 20:46	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	1.0	0.36	1	01/22/20 08:31	01/23/20 20:46	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	1.0	0.42	1	01/22/20 08:31	01/23/20 20:46	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	1.0	0.41	1	01/22/20 08:31	01/23/20 20:46	108-60-1	
2-Chloronaphthalene	ND	ug/L	1.0	0.34	1	01/22/20 08:31	01/23/20 20:46	91-58-7	
2-Chlorophenol	ND	ug/L	1.0	0.33	1	01/22/20 08:31	01/23/20 20:46	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	1.0	0.37	1	01/22/20 08:31	01/23/20 20:46	7005-72-3	
Chrysene	ND	ug/L	1.0	0.21	1	01/22/20 08:31	01/23/20 20:46	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	1.0	0.32	1	01/22/20 08:31	01/23/20 20:46	53-70-3	
Dibenzofuran	**1.2**	ug/L	1.0	0.37	1	01/22/20 08:31	01/23/20 20:46	132-64-9	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.35	1	01/22/20 08:31	01/23/20 20:46	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.31	1	01/22/20 08:31	01/23/20 20:46	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.28	1	01/22/20 08:31	01/23/20 20:46	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/L	1.0	0.23	1	01/22/20 08:31	01/23/20 20:46	91-94-1	
2,4-Dichlorophenol	ND	ug/L	1.0	0.34	1	01/22/20 08:31	01/23/20 20:46	120-83-2	
Diethylphthalate	ND	ug/L	1.0	0.37	1	01/22/20 08:31	01/23/20 20:46	84-66-2	
2,4-Dimethylphenol	ND	ug/L	1.0	0.37	1	01/22/20 08:31	01/23/20 20:46	105-67-9	
Dimethylphthalate	ND	ug/L	1.0	0.45	1	01/22/20 08:31	01/23/20 20:46	131-11-3	
Di-n-butylphthalate	ND	ug/L	1.0	0.33	1	01/22/20 08:31	01/23/20 20:46	84-74-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: MW-33
Pace Project No.: 30345680

Sample: MW-32 **Lab ID: 30345680005** Collected: 01/16/20 10:00 Received: 01/17/20 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270D MSSV Organics	Analytical Method: EPA 8270D Preparation Method: EPA 3510C								
4,6-Dinitro-2-methylphenol	ND	ug/L	2.6	0.65	1	01/22/20 08:31	01/23/20 20:46	534-52-1	
2,4-Dinitrophenol	ND	ug/L	2.6	0.60	1	01/22/20 08:31	01/23/20 20:46	51-28-5	
2,4-Dinitrotoluene	**2.3**	ug/L	1.0	0.37	1	01/22/20 08:31	01/23/20 20:46	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	1.0	0.41	1	01/22/20 08:31	01/23/20 20:46	606-20-2	
Di-n-octylphthalate	ND	ug/L	1.0	0.27	1	01/22/20 08:31	01/23/20 20:46	117-84-0	
bis(2-Ethylhexyl)phthalate	**1.1**	ug/L	1.0	0.37	1	01/22/20 08:31	01/23/20 20:46	117-81-7	B
Fluoranthene	ND	ug/L	1.0	0.24	1	01/22/20 08:31	01/23/20 20:46	206-44-0	
Fluorene	**4.1**	ug/L	1.0	0.38	1	01/22/20 08:31	01/23/20 20:46	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.34	1	01/22/20 08:31	01/23/20 20:46	87-68-3	
Hexachlorobenzene	ND	ug/L	1.0	0.31	1	01/22/20 08:31	01/23/20 20:46	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	1.0	0.19	1	01/22/20 08:31	01/23/20 20:46	77-47-4	
Hexachloroethane	ND	ug/L	1.0	0.31	1	01/22/20 08:31	01/23/20 20:46	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	1.0	0.31	1	01/22/20 08:31	01/23/20 20:46	193-39-5	
Isophorone	ND	ug/L	1.0	0.59	1	01/22/20 08:31	01/23/20 20:46	78-59-1	
1-Methylnaphthalene	**8.2**	ug/L	1.0	0.37	1	01/22/20 08:31	01/23/20 20:46	90-12-0	
2-Methylnaphthalene	ND	ug/L	1.0	0.35	1	01/22/20 08:31	01/23/20 20:46	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	1.0	0.37	1	01/22/20 08:31	01/23/20 20:46	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	2.0	1.9	1	01/22/20 08:31	01/23/20 20:46		
Naphthalene	ND	ug/L	1.0	0.36	1	01/22/20 08:31	01/23/20 20:46	91-20-3	
2-Nitroaniline	ND	ug/L	2.6	0.73	1	01/22/20 08:31	01/23/20 20:46	88-74-4	
3-Nitroaniline	ND	ug/L	2.6	0.98	1	01/22/20 08:31	01/23/20 20:46	99-09-2	
4-Nitroaniline	ND	ug/L	2.6	1.9	1	01/22/20 08:31	01/23/20 20:46	100-01-6	
Nitrobenzene	**1.3**	ug/L	1.0	0.38	1	01/22/20 08:31	01/23/20 20:46	98-95-3	
2-Nitrophenol	ND	ug/L	1.0	0.36	1	01/22/20 08:31	01/23/20 20:46	88-75-5	
4-Nitrophenol	ND	ug/L	1.0	0.78	1	01/22/20 08:31	01/23/20 20:46	100-02-7	
N-Nitrosodimethylamine	ND	ug/L	1.0	0.27	1	01/22/20 08:31	01/23/20 20:46	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/L	1.0	0.55	1	01/22/20 08:31	01/23/20 20:46	621-64-7	
N-Nitrosodiphenylamine	**3.7**	ug/L	1.0	0.26	1	01/22/20 08:31	01/23/20 20:46	86-30-6	
Pentachlorophenol	ND	ug/L	2.6	1.1	1	01/22/20 08:31	01/23/20 20:46	87-86-5	
Phenanthrene	**3.6**	ug/L	1.0	0.35	1	01/22/20 08:31	01/23/20 20:46	85-01-8	
Phenol	ND	ug/L	1.0	0.23	1	01/22/20 08:31	01/23/20 20:46	108-95-2	
Pyrene	ND	ug/L	1.0	0.31	1	01/22/20 08:31	01/23/20 20:46	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.32	1	01/22/20 08:31	01/23/20 20:46	120-82-1	
2,4,5-Trichlorophenol	ND	ug/L	2.6	0.68	1	01/22/20 08:31	01/23/20 20:46	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	1.0	0.37	1	01/22/20 08:31	01/23/20 20:46	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	107	%.	10-120		1	01/22/20 08:31	01/23/20 20:46	4165-60-0	
2-Fluorobiphenyl (S)	124	%.	10-121		1	01/22/20 08:31	01/23/20 20:46	321-60-8	S0,ST
Terphenyl-d14 (S)	78	%.	43-119		1	01/22/20 08:31	01/23/20 20:46	1718-51-0	
Phenol-d6 (S)	28	%.	10-58		1	01/22/20 08:31	01/23/20 20:46	13127-88-3	
2-Fluorophenol (S)	40	%.	10-84		1	01/22/20 08:31	01/23/20 20:46	367-12-4	
2,4,6-Tribromophenol (S)	113	%.	33-129		1	01/22/20 08:31	01/23/20 20:46	118-79-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: MW-33
Pace Project No.: 30345680

QC Batch: 380357 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 30345680001, 30345680004, 30345680005

METHOD BLANK: 1843999 Matrix: Water
Associated Lab Samples: 30345680001, 30345680004, 30345680005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.030	01/21/20 20:02	

LABORATORY CONTROL SAMPLE: 1844000

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	1	1.0	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1844002 1844219

Parameter	Units	30345680001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	2.5	2.6	98	102	75-125	4	20	

SAMPLE DUPLICATE: 1844001

Parameter	Units	30345680001 Result	Dup Result	RPD	Max RPD	Qualifiers
Mercury	ug/L	ND	.12J		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: MW-33
Pace Project No.: 30345680

QC Batch: 380767 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury Dissolved
Associated Lab Samples: 30345680001, 30345680004, 30345680005

METHOD BLANK: 1845699 Matrix: Water
Associated Lab Samples: 30345680001, 30345680004, 30345680005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	0.030	01/23/20 15:43	

LABORATORY CONTROL SAMPLE: 1845700

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	1	0.94	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1845704 1845705

Parameter	Units	30345680001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	2.5	2.5	2.6	2.7	103	108	75-125	5	20	

SAMPLE DUPLICATE: 1845703

Parameter	Units	30345680001 Result	Dup Result	RPD	Max RPD	Qualifiers
Mercury, Dissolved	ug/L	ND	ND		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: MW-33
Pace Project No.: 30345680

QC Batch: 380502 Analysis Method: EPA 6010C
QC Batch Method: EPA 3005A Analysis Description: 6010C MET
Associated Lab Samples: 30345680001, 30345680004, 30345680005

METHOD BLANK: 1844689 Matrix: Water
Associated Lab Samples: 30345680001, 30345680004, 30345680005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	ug/L	ND	50.0	20.3	01/23/20 12:58	
Antimony	ug/L	ND	6.0	3.3	01/23/20 12:58	
Arsenic	ug/L	ND	5.0	2.0	01/23/20 14:58	
Barium	ug/L	ND	10.0	0.68	01/23/20 12:58	
Beryllium	ug/L	ND	1.0	0.17	01/23/20 12:58	
Boron	ug/L	ND	50.0	2.3	01/23/20 12:58	
Cadmium	ug/L	ND	3.0	0.34	01/23/20 12:58	
Calcium	ug/L	ND	1000	99.9	01/23/20 12:58	
Chromium	ug/L	ND	5.0	0.35	01/23/20 12:58	
Cobalt	ug/L	ND	5.0	0.53	01/23/20 12:58	
Copper	ug/L	ND	5.0	2.7	01/23/20 12:58	
Iron	ug/L	ND	70.0	40.9	01/23/20 12:58	
Lead	ug/L	ND	5.0	4.9	01/23/20 12:58	
Magnesium	ug/L	ND	200	28.4	01/23/20 12:58	
Manganese	ug/L	ND	5.0	1.2	01/23/20 12:58	
Molybdenum	ug/L	ND	20.0	0.85	01/23/20 12:58	
Nickel	ug/L	ND	10.0	1.5	01/23/20 12:58	
Potassium	ug/L	ND	500	72.4	01/23/20 12:58	
Selenium	ug/L	ND	8.0	5.5	01/23/20 12:58	
Silver	ug/L	ND	6.0	1.4	01/23/20 12:58	
Sodium	ug/L	ND	1000	423	01/23/20 12:58	
Thallium	ug/L	ND	10.0	4.0	01/23/20 12:58	
Vanadium	ug/L	ND	5.0	0.57	01/23/20 12:58	
Zinc	ug/L	ND	10.0	2.4	01/23/20 12:58	

LABORATORY CONTROL SAMPLE: 1844690

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	5000	5200	104	80-120	
Antimony	ug/L	500	512	102	80-120	
Arsenic	ug/L	500	522	104	80-120	
Barium	ug/L	500	506	101	80-120	
Beryllium	ug/L	500	502	100	80-120	
Boron	ug/L	500	517	103	80-120	
Cadmium	ug/L	500	521	104	80-120	
Calcium	ug/L	5000	5200	104	80-120	
Chromium	ug/L	500	509	102	80-120	
Cobalt	ug/L	500	492	98	80-120	
Copper	ug/L	500	504	101	80-120	
Iron	ug/L	5000	5180	104	80-120	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: MW-33
Pace Project No.: 30345680

LABORATORY CONTROL SAMPLE: 1844690

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	500	497	99	80-120	
Magnesium	ug/L	5000	5110	102	80-120	
Manganese	ug/L	500	502	100	80-120	
Molybdenum	ug/L	500	500	100	80-120	
Nickel	ug/L	500	519	104	80-120	
Potassium	ug/L	5000	5140	103	80-120	
Selenium	ug/L	500	513	103	80-120	
Silver	ug/L	250	254	102	80-120	
Sodium	ug/L	5000	5180	104	80-120	
Thallium	ug/L	500	477	95	80-120	
Vanadium	ug/L	500	495	99	80-120	
Zinc	ug/L	500	504	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1844692 1844693

Parameter	Units	30345680001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	5980	5000	5000	12600	15600	132	193	75-125	22	20	MH,R1
Antimony	ug/L	ND	500	500	521	508	104	102	75-125	3	20	
Arsenic	ug/L	ND	500	500	524	537	104	107	75-125	2	20	
Barium	ug/L	268	500	500	801	821	107	111	75-125	3	20	
Beryllium	ug/L	ND	500	500	518	522	104	104	75-125	1	20	
Boron	ug/L	464	500	500	973	964	102	100	75-125	1	20	
Cadmium	ug/L	ND	500	500	526	523	105	104	75-125	1	20	
Calcium	ug/L	230000	5000	5000	231000	234000	32	94	75-125	1	20	ML
Chromium	ug/L	9.5	500	500	516	520	101	102	75-125	1	20	
Cobalt	ug/L	ND	500	500	518	521	103	104	75-125	0	20	
Copper	ug/L	16.1	500	500	530	541	103	105	75-125	2	20	
Iron	ug/L	24500	5000	5000	27400	30900	59	128	75-125	12	20	MH,ML
Lead	ug/L	19.8	500	500	520	526	100	101	75-125	1	20	
Magnesium	ug/L	27400	5000	5000	31800	32800	88	108	75-125	3	20	
Manganese	ug/L	2140	500	500	2610	2650	94	102	75-125	2	20	
Molybdenum	ug/L	ND	500	500	556	554	111	110	75-125	0	20	
Nickel	ug/L	ND	500	500	497	499	98	98	75-125	0	20	
Potassium	ug/L	28700	5000	5000	34800	35800	121	143	75-125	3	20	MH
Selenium	ug/L	ND	500	500	520	521	104	104	75-125	0	20	
Silver	ug/L	ND	250	250	265	262	106	105	75-125	1	20	
Sodium	ug/L	152000	5000	5000	155000	157000	58	104	75-125	1	20	ML
Thallium	ug/L	ND	500	500	464	465	93	93	75-125	0	20	
Vanadium	ug/L	9.8	500	500	521	523	102	103	75-125	0	20	
Zinc	ug/L	32.1	500	500	512	519	96	97	75-125	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: MW-33
Pace Project No.: 30345680

SAMPLE DUPLICATE: 1844691

Parameter	Units	30345680001 Result	Dup Result	RPD	Max RPD	Qualifiers
Aluminum	ug/L	5980	6200	4	20	
Antimony	ug/L	ND	ND		20	
Arsenic	ug/L	ND	ND		20	
Barium	ug/L	268	276	3	20	
Beryllium	ug/L	ND	ND		20	
Boron	ug/L	464	472	2	20	
Cadmium	ug/L	ND	.62J		20	
Calcium	ug/L	230000	235000	2	20	
Chromium	ug/L	9.5	9.8	2	20	
Cobalt	ug/L	ND	3.1J		20	
Copper	ug/L	16.1	17.7	9	20	
Iron	ug/L	24500	25000	2	20	
Lead	ug/L	19.8	18.1	9	20	
Magnesium	ug/L	27400	27900	2	20	
Manganese	ug/L	2140	2190	3	20	
Molybdenum	ug/L	ND	ND		20	
Nickel	ug/L	ND	9.6J		20	
Potassium	ug/L	28700	29500	3	20	
Selenium	ug/L	ND	ND		20	
Silver	ug/L	ND	ND		20	
Sodium	ug/L	152000	156000	3	20	
Thallium	ug/L	ND	ND		20	
Vanadium	ug/L	9.8	10.2	4	20	
Zinc	ug/L	32.1	32.5	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: MW-33
Pace Project No.: 30345680

QC Batch: 380667 Analysis Method: EPA 6010C
QC Batch Method: EPA 3005A Analysis Description: 6010C MET Dissolved
Associated Lab Samples: 30345680001, 30345680004, 30345680005

METHOD BLANK: 1845389 Matrix: Water
Associated Lab Samples: 30345680001, 30345680004, 30345680005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	50.0	20.3	01/23/20 12:31	
Antimony, Dissolved	ug/L	ND	6.0	3.3	01/23/20 12:31	
Arsenic, Dissolved	ug/L	ND	5.0	2.0	01/23/20 14:32	
Barium, Dissolved	ug/L	ND	10.0	0.68	01/23/20 12:31	
Beryllium, Dissolved	ug/L	ND	1.0	0.17	01/23/20 12:31	
Boron, Dissolved	ug/L	ND	50.0	2.3	01/23/20 12:31	
Cadmium, Dissolved	ug/L	ND	3.0	0.34	01/23/20 12:31	
Calcium, Dissolved	ug/L	ND	1000	99.9	01/23/20 12:31	
Chromium, Dissolved	ug/L	ND	5.0	0.35	01/23/20 12:31	
Cobalt, Dissolved	ug/L	ND	5.0	0.53	01/23/20 12:31	
Copper, Dissolved	ug/L	ND	5.0	2.7	01/23/20 12:31	
Iron, Dissolved	ug/L	ND	70.0	40.9	01/23/20 12:31	
Lead, Dissolved	ug/L	ND	5.0	4.9	01/23/20 12:31	
Magnesium, Dissolved	ug/L	ND	200	28.4	01/23/20 12:31	
Manganese, Dissolved	ug/L	ND	5.0	1.2	01/23/20 12:31	
Molybdenum, Dissolved	ug/L	ND	20.0	0.85	01/23/20 12:31	
Nickel, Dissolved	ug/L	ND	10.0	1.5	01/23/20 12:31	
Potassium, Dissolved	ug/L	ND	500	72.4	01/23/20 12:31	
Selenium, Dissolved	ug/L	ND	8.0	5.5	01/23/20 12:31	
Silver, Dissolved	ug/L	ND	6.0	1.4	01/23/20 12:31	
Sodium, Dissolved	ug/L	ND	1000	423	01/23/20 12:31	
Thallium, Dissolved	ug/L	ND	10.0	4.0	01/23/20 12:31	
Vanadium, Dissolved	ug/L	ND	5.0	0.57	01/23/20 12:31	
Zinc, Dissolved	ug/L	ND	10.0	2.4	01/23/20 12:31	

LABORATORY CONTROL SAMPLE: 1845390

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	5000	4910	98	80-120	
Antimony, Dissolved	ug/L	500	486	97	80-120	
Arsenic, Dissolved	ug/L	500	487	97	80-120	
Barium, Dissolved	ug/L	500	493	99	80-120	
Beryllium, Dissolved	ug/L	500	492	98	80-120	
Boron, Dissolved	ug/L	500	486	97	80-120	
Cadmium, Dissolved	ug/L	500	497	99	80-120	
Calcium, Dissolved	ug/L	5000	4960	99	80-120	
Chromium, Dissolved	ug/L	500	488	98	80-120	
Cobalt, Dissolved	ug/L	500	472	94	80-120	
Copper, Dissolved	ug/L	500	492	98	80-120	
Iron, Dissolved	ug/L	5000	4920	98	80-120	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: MW-33
Pace Project No.: 30345680

LABORATORY CONTROL SAMPLE: 1845390

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead, Dissolved	ug/L	500	475	95	80-120	
Magnesium, Dissolved	ug/L	5000	4850	97	80-120	
Manganese, Dissolved	ug/L	500	494	99	80-120	
Molybdenum, Dissolved	ug/L	500	468	94	80-120	
Nickel, Dissolved	ug/L	500	498	100	80-120	
Potassium, Dissolved	ug/L	5000	4950	99	80-120	
Selenium, Dissolved	ug/L	500	490	98	80-120	
Silver, Dissolved	ug/L	250	243	97	80-120	
Sodium, Dissolved	ug/L	5000	4990	100	80-120	
Thallium, Dissolved	ug/L	500	461	92	80-120	
Vanadium, Dissolved	ug/L	500	480	96	80-120	
Zinc, Dissolved	ug/L	500	485	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1845392 1845393

Parameter	Units	30345680001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	5000	5000	5330	5440	106	108	75-125	2	20	
Antimony, Dissolved	ug/L	ND	500	500	555	547	111	109	75-125	2	20	
Arsenic, Dissolved	ug/L	ND	500	500	563	548	113	109	75-125	3	20	
Barium, Dissolved	ug/L	148	500	500	703	709	111	112	75-125	1	20	
Beryllium, Dissolved	ug/L	ND	500	500	545	548	109	110	75-125	1	20	
Boron, Dissolved	ug/L	472	500	500	1020	1010	109	107	75-125	1	20	
Cadmium, Dissolved	ug/L	ND	500	500	555	558	111	112	75-125	1	20	
Calcium, Dissolved	ug/L	229000	5000	5000	237000	237000	154	156	75-125	0	20	MH
Chromium, Dissolved	ug/L	ND	500	500	530	531	106	106	75-125	0	20	
Cobalt, Dissolved	ug/L	ND	500	500	537	542	107	108	75-125	1	20	
Copper, Dissolved	ug/L	ND	500	500	549	554	109	110	75-125	1	20	
Iron, Dissolved	ug/L	321	5000	5000	5500	5750	104	109	75-125	5	20	
Lead, Dissolved	ug/L	ND	500	500	532	537	106	107	75-125	1	20	
Magnesium, Dissolved	ug/L	25700	5000	5000	31000	31000	106	105	75-125	0	20	
Manganese, Dissolved	ug/L	1780	500	500	2360	2360	117	117	75-125	0	20	
Molybdenum, Dissolved	ug/L	ND	500	500	585	577	117	115	75-125	1	20	
Nickel, Dissolved	ug/L	ND	500	500	517	521	103	104	75-125	1	20	
Potassium, Dissolved	ug/L	28300	5000	5000	34200	34200	118	119	75-125	0	20	
Selenium, Dissolved	ug/L	ND	500	500	550	554	109	110	75-125	1	20	
Silver, Dissolved	ug/L	ND	250	250	279	276	112	111	75-125	1	20	
Sodium, Dissolved	ug/L	156000	5000	5000	162000	162000	124	124	75-125	0	20	
Thallium, Dissolved	ug/L	ND	500	500	486	493	97	98	75-125	1	20	
Vanadium, Dissolved	ug/L	ND	500	500	531	534	106	107	75-125	1	20	
Zinc, Dissolved	ug/L	ND	500	500	514	520	102	104	75-125	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: MW-33
Pace Project No.: 30345680

SAMPLE DUPLICATE: 1845391

Parameter	Units	30345680001 Result	Dup Result	RPD	Max RPD	Qualifiers
Aluminum, Dissolved	ug/L	ND	30.7J		20	
Antimony, Dissolved	ug/L	ND	ND		20	
Arsenic, Dissolved	ug/L	ND	ND		20	
Barium, Dissolved	ug/L	148	149	1	20	
Beryllium, Dissolved	ug/L	ND	ND		20	
Boron, Dissolved	ug/L	472	477	1	20	
Cadmium, Dissolved	ug/L	ND	.58J		20	
Calcium, Dissolved	ug/L	229000	231000	1	20	
Chromium, Dissolved	ug/L	ND	.84J		20	
Cobalt, Dissolved	ug/L	ND	ND		20	
Copper, Dissolved	ug/L	ND	2.8J		20	
Iron, Dissolved	ug/L	321	322	0	20	
Lead, Dissolved	ug/L	ND	ND		20	
Magnesium, Dissolved	ug/L	25700	25900	1	20	
Manganese, Dissolved	ug/L	1780	1780	0	20	
Molybdenum, Dissolved	ug/L	ND	ND		20	
Nickel, Dissolved	ug/L	ND	ND		20	
Potassium, Dissolved	ug/L	28300	28600	1	20	
Selenium, Dissolved	ug/L	ND	ND		20	
Silver, Dissolved	ug/L	ND	ND		20	
Sodium, Dissolved	ug/L	156000	157000	1	20	
Thallium, Dissolved	ug/L	ND	ND		20	
Vanadium, Dissolved	ug/L	ND	ND		20	
Zinc, Dissolved	ug/L	ND	ND		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: MW-33
Pace Project No.: 30345680

QC Batch: 380371 Analysis Method: EPA 8270D
QC Batch Method: EPA 3510C Analysis Description: 8270D Water MSSV
Associated Lab Samples: 30345680001, 30345680004, 30345680005

METHOD BLANK: 1844075 Matrix: Water
Associated Lab Samples: 30345680001, 30345680004, 30345680005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	1.0	0.32	01/23/20 15:21	
1,2-Dichlorobenzene	ug/L	ND	1.0	0.34	01/23/20 15:21	
1,3-Dichlorobenzene	ug/L	ND	1.0	0.30	01/23/20 15:21	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.28	01/23/20 15:21	
1-Methylnaphthalene	ug/L	ND	1.0	0.36	01/23/20 15:21	
2,4,5-Trichlorophenol	ug/L	ND	2.5	0.67	01/23/20 15:21	
2,4,6-Trichlorophenol	ug/L	ND	1.0	0.37	01/23/20 15:21	
2,4-Dichlorophenol	ug/L	ND	1.0	0.34	01/23/20 15:21	
2,4-Dimethylphenol	ug/L	ND	1.0	0.36	01/23/20 15:21	
2,4-Dinitrophenol	ug/L	ND	2.5	0.58	01/23/20 15:21	
2,4-Dinitrotoluene	ug/L	ND	1.0	0.36	01/23/20 15:21	
2,6-Dinitrotoluene	ug/L	ND	1.0	0.40	01/23/20 15:21	
2-Chloronaphthalene	ug/L	ND	1.0	0.33	01/23/20 15:21	
2-Chlorophenol	ug/L	ND	1.0	0.32	01/23/20 15:21	
2-Methylnaphthalene	ug/L	ND	1.0	0.34	01/23/20 15:21	
2-Methylphenol(o-Cresol)	ug/L	ND	1.0	0.37	01/23/20 15:21	
2-Nitroaniline	ug/L	ND	2.5	0.71	01/23/20 15:21	
2-Nitrophenol	ug/L	ND	1.0	0.35	01/23/20 15:21	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	2.0	1.9	01/23/20 15:21	
3,3'-Dichlorobenzidine	ug/L	ND	1.0	0.23	01/23/20 15:21	
3-Nitroaniline	ug/L	ND	2.5	0.96	01/23/20 15:21	
4,6-Dinitro-2-methylphenol	ug/L	ND	2.5	0.64	01/23/20 15:21	
4-Bromophenylphenyl ether	ug/L	ND	1.0	0.39	01/23/20 15:21	
4-Chloro-3-methylphenol	ug/L	ND	1.0	0.44	01/23/20 15:21	
4-Chloroaniline	ug/L	ND	1.0	0.21	01/23/20 15:21	
4-Chlorophenylphenyl ether	ug/L	ND	1.0	0.36	01/23/20 15:21	
4-Nitroaniline	ug/L	ND	2.5	1.9	01/23/20 15:21	
4-Nitrophenol	ug/L	ND	1.0	0.76	01/23/20 15:21	
Acenaphthene	ug/L	ND	1.0	0.39	01/23/20 15:21	
Acenaphthylene	ug/L	ND	1.0	0.38	01/23/20 15:21	
Anthracene	ug/L	ND	1.0	0.27	01/23/20 15:21	
Azobenzene	ug/L	ND	1.0	0.35	01/23/20 15:21	
Benzo(a)anthracene	ug/L	ND	1.0	0.20	01/23/20 15:21	
Benzo(a)pyrene	ug/L	ND	1.0	0.18	01/23/20 15:21	
Benzo(b)fluoranthene	ug/L	ND	1.0	0.24	01/23/20 15:21	
Benzo(g,h,i)perylene	ug/L	ND	1.0	0.30	01/23/20 15:21	
Benzo(k)fluoranthene	ug/L	ND	1.0	0.26	01/23/20 15:21	
Benzoic acid	ug/L	ND	15.0	2.8	01/23/20 15:21	
Benzyl alcohol	ug/L	ND	1.0	0.70	01/23/20 15:21	
bis(2-Chloroethoxy)methane	ug/L	ND	1.0	0.36	01/23/20 15:21	
bis(2-Chloroethyl) ether	ug/L	ND	1.0	0.41	01/23/20 15:21	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: MW-33
Pace Project No.: 30345680

METHOD BLANK: 1844075 Matrix: Water
Associated Lab Samples: 30345680001, 30345680004, 30345680005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
bis(2-Chloroisopropyl) ether	ug/L	ND	1.0	0.40	01/23/20 15:21	
bis(2-Ethylhexyl)phthalate	ug/L	1.3	1.0	0.36	01/23/20 15:21	B
Butylbenzylphthalate	ug/L	ND	1.0	0.30	01/23/20 15:21	
Carbazole	ug/L	ND	1.0	0.23	01/23/20 15:21	
Chrysene	ug/L	ND	1.0	0.21	01/23/20 15:21	
Di-n-butylphthalate	ug/L	ND	1.0	0.32	01/23/20 15:21	
Di-n-octylphthalate	ug/L	ND	1.0	0.27	01/23/20 15:21	
Dibenz(a,h)anthracene	ug/L	ND	1.0	0.31	01/23/20 15:21	
Dibenzofuran	ug/L	ND	1.0	0.36	01/23/20 15:21	
Diethylphthalate	ug/L	ND	1.0	0.36	01/23/20 15:21	
Dimethylphthalate	ug/L	ND	1.0	0.44	01/23/20 15:21	
Fluoranthene	ug/L	ND	1.0	0.23	01/23/20 15:21	
Fluorene	ug/L	ND	1.0	0.37	01/23/20 15:21	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	0.33	01/23/20 15:21	
Hexachlorobenzene	ug/L	ND	1.0	0.30	01/23/20 15:21	
Hexachlorocyclopentadiene	ug/L	ND	1.0	0.19	01/23/20 15:21	
Hexachloroethane	ug/L	ND	1.0	0.30	01/23/20 15:21	
Indeno(1,2,3-cd)pyrene	ug/L	ND	1.0	0.30	01/23/20 15:21	
Isophorone	ug/L	ND	1.0	0.57	01/23/20 15:21	
N-Nitroso-di-n-propylamine	ug/L	ND	1.0	0.54	01/23/20 15:21	
N-Nitrosodimethylamine	ug/L	ND	1.0	0.26	01/23/20 15:21	
N-Nitrosodiphenylamine	ug/L	ND	1.0	0.25	01/23/20 15:21	
Naphthalene	ug/L	ND	1.0	0.35	01/23/20 15:21	
Nitrobenzene	ug/L	ND	1.0	0.38	01/23/20 15:21	
Pentachlorophenol	ug/L	ND	2.5	1.0	01/23/20 15:21	
Phenanthrene	ug/L	ND	1.0	0.34	01/23/20 15:21	
Phenol	ug/L	ND	1.0	0.22	01/23/20 15:21	
Pyrene	ug/L	ND	1.0	0.30	01/23/20 15:21	
2,4,6-Tribromophenol (S)	%.	75	33-129		01/23/20 15:21	
2-Fluorobiphenyl (S)	%.	71	10-121		01/23/20 15:21	
2-Fluorophenol (S)	%.	42	10-84		01/23/20 15:21	
Nitrobenzene-d5 (S)	%.	67	10-120		01/23/20 15:21	
Phenol-d6 (S)	%.	31	10-58		01/23/20 15:21	
Terphenyl-d14 (S)	%.	87	43-119		01/23/20 15:21	

LABORATORY CONTROL SAMPLE: 1844076

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	10	6.6	66	21-80	
1,2-Dichlorobenzene	ug/L	10	6.1	61	22-94	
1,3-Dichlorobenzene	ug/L	10	6.0	60	13-96	
1,4-Dichlorobenzene	ug/L	10	6.4	64	23-95	
1-Methylnaphthalene	ug/L	10	7.3	73	25-86	
2,4,5-Trichlorophenol	ug/L	10	8.6	86	46-114	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: MW-33
Pace Project No.: 30345680

LABORATORY CONTROL SAMPLE: 1844076

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4,6-Trichlorophenol	ug/L	10	7.9	79	40-121	
2,4-Dichlorophenol	ug/L	10	7.8	78	22-94	
2,4-Dimethylphenol	ug/L	10	7.3	73	12-77	
2,4-Dinitrophenol	ug/L	10	8.5	85	10-136	
2,4-Dinitrotoluene	ug/L	10	9.1	91	47-108	
2,6-Dinitrotoluene	ug/L	10	9.0	90	37-122	
2-Chloronaphthalene	ug/L	10	7.1	71	24-107	
2-Chlorophenol	ug/L	10	6.9	69	23-101	
2-Methylnaphthalene	ug/L	10	7.4	74	23-83	
2-Methylphenol(o-Cresol)	ug/L	10	6.5	65	28-117	
2-Nitroaniline	ug/L	10	8.9	89	31-130	
2-Nitrophenol	ug/L	10	7.6	76	19-92	
3&4-Methylphenol(m&p Cresol)	ug/L	20	12.2	61	24-122	
3,3'-Dichlorobenzidine	ug/L	10	9.1	91	36-120	
3-Nitroaniline	ug/L	10	9.0	90	20-160	
4,6-Dinitro-2-methylphenol	ug/L	10	10	100	18-155	
4-Bromophenylphenyl ether	ug/L	10	8.5	85	35-119	
4-Chloro-3-methylphenol	ug/L	10	8.4	84	25-102	
4-Chloroaniline	ug/L	10	5.1	51	10-82	
4-Chlorophenylphenyl ether	ug/L	10	8.3	83	30-117	
4-Nitroaniline	ug/L	10	9.3	93	21-175	
4-Nitrophenol	ug/L	10	5.1	51	15-67	
Acenaphthene	ug/L	10	7.9	79	30-116	
Acenaphthylene	ug/L	10	8.0	80	29-112	
Anthracene	ug/L	10	9.4	94	44-109	
Azobenzene	ug/L	10	8.6	86	28-121	
Benzo(a)anthracene	ug/L	10	9.9	99	50-121	
Benzo(a)pyrene	ug/L	10	10.1	101	47-116	
Benzo(b)fluoranthene	ug/L	10	11.3	113	48-123	
Benzo(g,h,i)perylene	ug/L	10	9.3	93	40-131	
Benzo(k)fluoranthene	ug/L	10	9.2	92	47-126	
Benzoic acid	ug/L	10	ND	17	10-56	
Benzyl alcohol	ug/L	10	6.9	69	13-118	
bis(2-Chloroethoxy)methane	ug/L	10	7.8	78	14-95	
bis(2-Chloroethyl) ether	ug/L	10	6.6	66	18-101	
bis(2-Chloroisopropyl) ether	ug/L	10	6.4	64	10-117	
bis(2-Ethylhexyl)phthalate	ug/L	10	11.7	117	50-133	
Butylbenzylphthalate	ug/L	10	10.6	106	51-131	
Carbazole	ug/L	10	8.6	86	46-123	
Chrysene	ug/L	10	9.6	96	51-123	
Di-n-butylphthalate	ug/L	10	10.4	104	56-124	
Di-n-octylphthalate	ug/L	10	11.1	111	45-132	
Dibenz(a,h)anthracene	ug/L	10	9.2	92	41-138	
Dibenzofuran	ug/L	10	8.0	80	27-117	
Diethylphthalate	ug/L	10	9.3	93	47-121	
Dimethylphthalate	ug/L	10	8.8	88	37-119	
Fluoranthene	ug/L	10	10.2	102	52-126	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: MW-33
Pace Project No.: 30345680

LABORATORY CONTROL SAMPLE: 1844076

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluorene	ug/L	10	8.4	84	34-120	
Hexachloro-1,3-butadiene	ug/L	10	6.6	66	17-96	
Hexachlorobenzene	ug/L	10	8.9	89	16-116	
Hexachlorocyclopentadiene	ug/L	10	2.0	20	10-86	
Hexachloroethane	ug/L	10	5.9	59	17-103	
Indeno(1,2,3-cd)pyrene	ug/L	10	9.3	93	42-135	
Isophorone	ug/L	10	6.2	62	21-88	
N-Nitroso-di-n-propylamine	ug/L	10	7.4	74	23-122	
N-Nitrosodimethylamine	ug/L	10	4.8	48	10-77	
N-Nitrosodiphenylamine	ug/L	10	8.4	84	28-89	
Naphthalene	ug/L	10	7.2	72	23-82	
Nitrobenzene	ug/L	10	7.1	71	17-126	
Pentachlorophenol	ug/L	10	10.4	104	23-138	
Phenanthrene	ug/L	10	9.0	90	45-119	
Phenol	ug/L	10	3.4	34	10-54	
Pyrene	ug/L	10	9.8	98	46-127	
2,4,6-Tribromophenol (S)	%.			88	33-129	
2-Fluorobiphenyl (S)	%.			74	10-121	
2-Fluorophenol (S)	%.			41	10-84	
Nitrobenzene-d5 (S)	%.			69	10-120	
Phenol-d6 (S)	%.			31	10-58	
Terphenyl-d14 (S)	%.			83	43-119	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1844077 1844078

Parameter	Units	30345680001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2,4-Trichlorobenzene	ug/L	ND	10.1	9.9	7.7	7.0	76	71	10-87	9	25	
1,2-Dichlorobenzene	ug/L	ND	10.1	9.9	6.1	5.4	60	55	10-95	11	25	
1,3-Dichlorobenzene	ug/L	ND	10.1	9.9	6.2	5.6	62	56	10-89	11	25	
1,4-Dichlorobenzene	ug/L	ND	10.1	9.9	6.4	5.4	63	55	10-121	16	25	
1-Methylnaphthalene	ug/L	ND	10.1	9.9	8.8	8.4	79	77	10-89	4	25	
2,4,5-Trichlorophenol	ug/L	ND	10.1	9.9	10.4	10.1	103	102	23-132	3	25	
2,4,6-Trichlorophenol	ug/L	ND	10.1	9.9	15.0	13.7	148	138	10-143	9	25	MH
2,4-Dichlorophenol	ug/L	ND	10.1	9.9	10.2	9.5	101	96	10-102	7	25	
2,4-Dimethylphenol	ug/L	ND	10.1	9.9	10.7	10.3	99	97	10-91	4	25	MH
2,4-Dinitrophenol	ug/L	ND	10.1	9.9	10.5	10.1	104	102	10-137	4	25	
2,4-Dinitrotoluene	ug/L	1.7	10.1	9.9	14.4	12.5	125	109	36-114	14	25	MH
2,6-Dinitrotoluene	ug/L	ND	10.1	9.9	9.0	8.5	89	86	24-115	5	25	
2-Chloronaphthalene	ug/L	ND	10.1	9.9	10.5	9.9	104	100	10-104	7	25	
2-Chlorophenol	ug/L	ND	10.1	9.9	7.8	7.1	77	72	16-91	10	25	
2-Methylnaphthalene	ug/L	ND	10.1	9.9	7.0	8.0	69	81	11-81	13	25	
2-Methylphenol(o-Cresol)	ug/L	ND	10.1	9.9	6.3	6.1	62	62	10-140	3	25	
2-Nitroaniline	ug/L	ND	10.1	9.9	8.5	11.3	84	114	29-115	28	25	R1
2-Nitrophenol	ug/L	ND	10.1	9.9	8.7	8.3	86	84	10-97	4	25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: MW-33
Pace Project No.: 30345680

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1844077 1844078

Parameter	Units	30345680001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
3&4-Methylphenol(m&p Cresol)	ug/L	ND	20.2	19.8	12.3	11.6	61	59	10-146	6	25	
3,3'-Dichlorobenzidine	ug/L	ND	10.1	9.9	ND	ND	0	2	10-126		25	ML
3-Nitroaniline	ug/L	ND	10.1	9.9	4.1	4.7	41	47	10-142	13	25	
4,6-Dinitro-2-methylphenol	ug/L	ND	10.1	9.9	9.6	9.8	95	99	10-144	2	25	
4-Bromophenylphenyl ether	ug/L	ND	10.1	9.9	9.4	9.2	94	93	11-125	3	25	
4-Chloro-3-methylphenol	ug/L	ND	10.1	9.9	9.7	7.6	96	76	10-109	25	25	
4-Chloroaniline	ug/L	ND	10.1	9.9	1.1	2.3	1	14	10-76	74	25	ML,R1
4-Chlorophenylphenyl ether	ug/L	ND	10.1	9.9	10.3	9.5	102	96	10-120	8	25	
4-Nitroaniline	ug/L	ND	10.1	9.9	7.8	7.5	78	75	10-167	5	25	
4-Nitrophenol	ug/L	ND	10.1	9.9	8.0	6.0	79	61	10-74	29	25	MH,R1
Acenaphthene	ug/L	2.7	10.1	9.9	12.8	15.9	100	134	10-114	22	25	MH
Acenaphthylene	ug/L	ND	10.1	9.9	9.7	9.9	93	97	10-111	2	25	
Anthracene	ug/L	ND	10.1	9.9	11.3	10.7	112	108	31-104	5	25	MH
Azobenzene	ug/L	ND	10.1	9.9	7.7	7.9	76	79	10-125	2	25	
Benzo(a)anthracene	ug/L	ND	10.1	9.9	9.9	9.5	98	96	43-114	4	25	
Benzo(a)pyrene	ug/L	ND	10.1	9.9	9.7	9.3	96	93	41-109	4	25	
Benzo(b)fluoranthene	ug/L	ND	10.1	9.9	11.8	10.6	116	107	40-123	10	25	
Benzo(g,h,i)perylene	ug/L	ND	10.1	9.9	7.7	7.6	77	77	10-130	2	25	
Benzo(k)fluoranthene	ug/L	ND	10.1	9.9	8.4	8.3	83	83	40-122	2	25	
Benzoic acid	ug/L	ND	10.1	9.9	5.3J	5.7J	37	41	10-83		25	
Benzyl alcohol	ug/L	ND	10.1	9.9	7.6	6.7	75	68	10-106	12	25	
bis(2-Chloroethoxy)methane	ug/L	ND	10.1	9.9	8.9	8.4	85	81	10-94	7	25	
bis(2-Chloroethyl) ether	ug/L	ND	10.1	9.9	7.4	6.5	74	66	10-95	13	25	
bis(2-Chloroisopropyl) ether	ug/L	ND	10.1	9.9	6.7	6.4	66	65	10-101	4	25	
bis(2-Ethylhexyl)phthalate	ug/L	2.4	10.1	9.9	11.6	11.0	91	87	43-126	5	25	
Butylbenzylphthalate	ug/L	ND	10.1	9.9	9.7	9.3	96	94	44-127	4	25	
Carbazole	ug/L	ND	10.1	9.9	9.5	9.1	92	89	46-125	5	25	
Chrysene	ug/L	ND	10.1	9.9	10	9.6	95	93	42-116	4	25	
Di-n-butylphthalate	ug/L	ND	10.1	9.9	10.7	10.2	105	101	47-117	5	25	
Di-n-octylphthalate	ug/L	ND	10.1	9.9	9.5	9.3	94	94	34-142	2	25	
Dibenz(a,h)anthracene	ug/L	ND	10.1	9.9	8.5	8.5	84	86	22-125	0	25	
Dibenzofuran	ug/L	2.0	10.1	9.9	11.1	10.6	90	87	10-116	4	25	
Diethylphthalate	ug/L	ND	10.1	9.9	10.0	9.6	99	97	32-118	4	25	
Dimethylphthalate	ug/L	ND	10.1	9.9	9.1	9.3	88	91	23-117	2	25	
Fluoranthene	ug/L	ND	10.1	9.9	12.2	11.7	119	117	44-116	4	25	MH
Fluorene	ug/L	4.2	10.1	9.9	16.5	14.7	121	106	18-115	11	25	MH
Hexachloro-1,3-butadiene	ug/L	ND	10.1	9.9	8.1	7.2	80	73	10-136	11	25	
Hexachlorobenzene	ug/L	ND	10.1	9.9	10.4	10.1	103	102	10-127	3	25	
Hexachlorocyclopentadiene	ug/L	ND	10.1	9.9	3.3	2.8	32	28	10-70	16	25	
Hexachloroethane	ug/L	ND	10.1	9.9	8.4	7.2	83	73	10-127	15	25	
Indeno(1,2,3-cd)pyrene	ug/L	ND	10.1	9.9	8.4	8.4	83	84	11-128	1	25	
Isophorone	ug/L	ND	10.1	9.9	6.8	8.5	68	85	10-94	21	25	
N-Nitroso-di-n-propylamine	ug/L	ND	10.1	9.9	7.8	7.6	77	77	10-114	2	25	
N-Nitrosodimethylamine	ug/L	ND	10.1	9.9	5.4	4.7	53	47	10-65	14	25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: MW-33
Pace Project No.: 30345680

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1844077 1844078

Parameter	Units	30345680001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
N-Nitrosodiphenylamine	ug/L	2.1	10.1	9.9	11.9	11.2	98	92	18-87	7	25	MH
Naphthalene	ug/L	ND	10.1	9.9	10.1	9.5	97	92	10-91	7	25	MH
Nitrobenzene	ug/L	ND	10.1	9.9	8.8	8.8	87	89	10-161	0	25	
Pentachlorophenol	ug/L	ND	10.1	9.9	13.9	13.6	136	136	10-175	2	25	
Phenanthrene	ug/L	3.6	10.1	9.9	17.6	13.2	139	97	33-115	29	25	MH,R1
Phenol	ug/L	ND	10.1	9.9	3.2	2.9	32	29	10-45	11	25	
Pyrene	ug/L	ND	10.1	9.9	9.9	9.5	88	86	40-121	4	25	
2,4,6-Tribromophenol (S)	%.						111	109	33-129			
2-Fluorobiphenyl (S)	%.						90	119	10-121			
2-Fluorophenol (S)	%.						42	38	10-84			
Nitrobenzene-d5 (S)	%.						138	129	10-120			ST
Phenol-d6 (S)	%.						28	25	10-58			
Terphenyl-d14 (S)	%.						76	78	43-119			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: MW-33
Pace Project No.: 30345680

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-PA	Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

1c	The PDS recovery was outside of the laboratory control limits. Result may be biased high
2c	The PDS recovery was outside of the laboratory control limits. Result may be biased high.
3c	The PDS recovery was outside of the laboratory control limits. Result may be biased low.
B	Analyte was detected in the associated method blank.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
IS	The internal standard response is below criteria. Results may be biased high.
MH	Matrix spike recovery and/or matrix spike duplicate recovery was above laboratory control limits. Result may be biased high.
ML	Matrix spike recovery and/or matrix spike duplicate recovery was below laboratory control limits. Result may be biased low.
R1	RPD value was outside control limits.
S0	Surrogate recovery outside laboratory control limits.
ST	Surrogate recovery was above laboratory control limits. Results may be biased high.

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: MW-33
Pace Project No.: 30345680

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30345680001	**MW-33**	EPA 3005A	380502	EPA 6010C	380639
30345680004	**DUP**	EPA 3005A	380502	EPA 6010C	380639
30345680005	**MW-32**	EPA 3005A	380502	EPA 6010C	380639
30345680001	**MW-33**	EPA 3005A	380667	EPA 6010C	380692
30345680004	**DUP**	EPA 3005A	380667	EPA 6010C	380692
30345680005	**MW-32**	EPA 3005A	380667	EPA 6010C	380692
30345680001	**MW-33**	EPA 7470A	380357	EPA 7470A	380382
30345680004	**DUP**	EPA 7470A	380357	EPA 7470A	380382
30345680005	**MW-32**	EPA 7470A	380357	EPA 7470A	380382
30345680001	**MW-33**	EPA 7470A	380767	EPA 7470A	380786
30345680004	**DUP**	EPA 7470A	380767	EPA 7470A	380786
30345680005	**MW-32**	EPA 7470A	380767	EPA 7470A	380786
30345680001	**MW-33**	EPA 3510C	380371	EPA 8270D	380548
30345680004	**DUP**	EPA 3510C	380371	EPA 8270D	380548
30345680005	**MW-32**	EPA 3510C	380371	EPA 8270D	380548

To Pittsburgh

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY

WO#: 30345680

30345680

Container Pr

Company: Envirospec Engineering, PLLC

Address: 349 Northern Blvd Albany, NY

Report To: rfarnum@envirospeceng.com

Copy To:

Billing Information: Adam Schultz, Couch White, PO Box 22222 Albany, NY

Email To: rfarnum@envirospeceng.com

Site Collection Info/Address: Green Island, NY

Customer Project Name/Number:

State: / County/City: Time Zone Collected: [ ] PT [ ] MT [ ] CT [ ] ET

Phone: 518-453-2203
Email:

Site/Facility ID #:

Compliance Monitoring? [ ] Yes [X] No

Collected By (print): Rachel Farnum

Purchase Order #:
Quote #:

DW PWS ID #:
DW Location Code:

Collected By (signature): [signature]

Turnaround Date Required: Standard

Immediately Packed on Ice: [X] Yes [ ] No

Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: ______ [ ] Hold: ______

Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No
Analysis: Dissolved metals

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other ______

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Time	Composite End Date	Time	Res Cl	# of Ctns	Total metals Hg by 6010/7470	Dissolved metals/Hg by 6010/7470	SVOCs by 8270	Lab Sample # / Comments
MW-33	GW		1/16/20	9:01AM					X	X	X	001
MS	|		|	9:01AM					X	X	X	002
MSD	|		|	9:01AM					X	X	X	003
DUP	|		|	9:01AM					X	X	X	004
MW-32	|		|	10:00AM					X	X	X	005

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	(Y) N NA
Custody Signatures Present	(Y) N NA
Collector Signature Present	(Y) N NA
Bottles Intact	(Y) N NA
Correct Bottles	(Y) N NA
Sufficient Volume	(Y) N NA
Samples Received on Ice	(Y) N NA
VOA - Headspace Acceptable	Y N (NA)
USDA Regulated Soils	Y N (NA)
Samples in Holding Time	(Y) N NA
Residual Chlorine Present	Y (N) (NA) JSM 1/17/20
Cl Strips:	
Sample pH Acceptable	(Y) N NA
pH Strips:	10D0301
Sulfide Present	Y N (NA)
Lead Acetate Strips:	

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards: need lab filtration for dissolved metals

Type of Ice Used: (Wet) Blue Dry None

Packing Material Used: Ice Bubble Wrap

Radchem sample(s) screened (<500 cpm): Y N (NA)

SHORT HOLDS PRESENT (<72 hours): Y (N) N/A

Lab Tracking #: 2462139

Samples received via: (FEDEX) UPS Client Courier Pace Courier — 1224 8331 4346

Lab Sample Temperature Info:
Temp Blank Received: Y N (NA)
Therm ID#: 90
Cooler 1 Temp Upon Receipt: 4.7 oC
Cooler 1 Therm Corr. Factor: 0 oC
Cooler 1 Corrected Temp: 4.7 oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
[signature] / Envirospec Engineering	1/16/2020 1:04PM	[signature] PACE	1/16/2020 13:04
[signature] PACE	1/16/2020 16:00	via FedEx	
		[signature]	1/17/20 1030

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N (NA)
HCL MeOH TSP Other

Non Conformance(s): YES / (NO)

Page: 1 of: 1