



March 2, 2017

Maria Bebenek
Manager, Clean Water Program
DEP, SCRO
909 Elmerton Avenue
Harrisburg, Pa 17110

RE: Monthly Report, Site-Specific Study Plan, **February 2017**

Dear Ms. Bebenek;

In accordance with Section 3.e of the August 21, 2015 Consent Order and Agreement, the following is the January 2017 monthly report for the Site-Specific Methylmercury Water Quality Criterion Stream Study Plan (the Plan).

Activities Accomplished:

- Water quality samples were collected on February 14, 2017. Samples were collected at stream stations RR-01 (identified in figure 3-1 of the Plan), Rambo-Down (located in the mixed zone below NPDES-01), EC-02 (identified in figure 3-2 of Plan) and Ebaughs-Down (located in the mixed zone below NPDES-02). Samples were also collected from the discharges from the remediation systems at NPDES-01 and NPDES-02.
- The NPDES-01 and NPDES-02 samples were sent to Geochemical Testing.
- Stream samples RR-01, Rambo-Down, EC-02 and Ebaughs-Down were sent to Brooks Applied Laboratory.
- Due to past detections of mercury in equipment blank samples, the field procedure was modified starting with the January 2017 samples. Single use tubing was used for each water sample, including the equipment blank sample. The January 2017 equipment blank sample had no detectable mercury at the Method Detection Limits of 0.10 ng/l for total Hg and 0.020 ng/l for MeHg.

Results Received:

- Attached are the analytical results as reported by Brooks Applied Laboratory for stream samples collected on January 17, 2017. Included are results from RR-01, Rambo-Down, EC-02 and Ebaughs-Down.
- Attached are the analytical results as reported by Geochemical Testing from the February 14, 2017 samples for NPDES-01 and NPDES-02.
- An error was found in the December 8, 2016 NPDES analysis by Geochemical Testing. Attached are revised reports for the December 8, 2016 results for NPDES-01 and NPDES-02.

- Stream discharge measurements were taken on February 14, 2017 in the area where stream samples are collected at RR-01 and EC-02. The following are the results.

- RR-01:

Measurement 1: 2.26 ft³/sec

Measurement 2: 2.12 ft³/sec

Average: 2.19 ft³/sec

- EC-02:

Measurement 1: 3.16 ft³/sec

Measurement 2: 3.03 ft³/sec

Average*: 3.10 ft³/sec

*Three measurements were taken but the first was a significant outlier at 7.02 ft³/sec and not used in calculating the average discharge.

Feel free to contact me if you have any questions or comments on the information provided in this monthly report.

Respectfully,



Richard A. Hazenstab, P.G.

Coordinator

Operations and Environmental Programs

cc: D. Vollero; D. Jasitt; J. Beuschlein; J. Collins

Attached: Brooks Applied Laboratory analysis for stream samples
Geochemical Testing analysis for NPDES-01, February 14, 2017
Geochemical Testing analysis for NPDES-02, February 14, 2017
Revised Geochemical Testing analysis for NPDES-01, December 8, 2016
Revised Geochemical Testing analysis for NPDES-02, December 8, 2016



Sample Information

Sample	Lab ID	Report Matrix	Type	Sampled	Received
RR-01	1703019-01	Water	QC Sample	01/17/2017	01/18/2017
RR-01	1703019-02	Water	QC Sample	01/17/2017	01/18/2017
Rambo Down	1703019-03	Water	Sample	01/17/2017	01/18/2017
Rambo Down	1703019-04	Water	Sample	01/17/2017	01/18/2017
EC-02	1703019-05	Water	Sample	01/17/2017	01/18/2017
EC-02	1703019-06	Water	Sample	01/17/2017	01/18/2017
Ebaughs Down	1703019-07	Water	Sample	01/17/2017	01/18/2017
Ebaughs Down	1703019-08	Water	Sample	01/17/2017	01/18/2017
Equipment Blank	1703019-09	Water	Equip. Blank	01/17/2017	01/18/2017
Equipment Blank	1703019-10	Water	Equip. Blank	01/17/2017	01/18/2017
Rambo Down-Dup	1703019-11	Water	Field Duplicate	01/17/2017	01/18/2017
Rambo Down-Dup	1703019-12	Water	Field Duplicate	01/17/2017	01/18/2017

Batch Summary

Analyte	Lab Matrix	Method	Prepared	Analyzed	Batch	Sequence
Hg	Water	EPA 1631 E	01/23/2017	01/24/2017	B170178	1700088
MeHg	Water	EPA 1630	01/31/2017	02/01/2017	B170254	1700118



Sample Results

Sample	Analyte	Report Matrix	Basis	Result	Qualifier	MDL	MRL	Unit	Batch	Sequence
Ebaughs Down										
1703019-07	Hg	Water	TR	165		0.10	0.40	ng/L	B170178	1700088
1703019-08	MeHg	Water	D	≤ 0.020	U	0.020	0.049	ng/L	B170254	1700118
EC-02										
1703019-05	Hg	Water	TR	0.90		0.10	0.40	ng/L	B170178	1700088
1703019-06	MeHg	Water	D	≤ 0.020	U	0.020	0.049	ng/L	B170254	1700118
Equipment Blank										
1703019-09	Hg	Water	TR	≤ 0.10	U	0.10	0.40	ng/L	B170178	1700088
1703019-10	MeHg	Water	D	≤ 0.020	U	0.020	0.050	ng/L	B170254	1700118
Rambo Down										
1703019-03	Hg	Water	TR	152		0.10	0.40	ng/L	B170178	1700088
1703019-04	MeHg	Water	D	0.029	B	0.019	0.049	ng/L	B170254	1700118
Rambo Down-Dup										
1703019-11	Hg	Water	TR	151		0.10	0.40	ng/L	B170178	1700088
1703019-12	MeHg	Water	D	0.027	B	0.020	0.049	ng/L	B170254	1700118
RR-01										
1703019-01	Hg	Water	TR	0.65		0.10	0.40	ng/L	B170178	1700088
1703019-02	MeHg	Water	D	≤ 0.020	U	0.020	0.049	ng/L	B170254	1700118

Laboratory Results

Geochemical Testing

Date: 23-Feb-17

CLIENT:	YORK COUNTY SWRA	Client Sample ID:	NPDES-1
Lab Order:	G1702839	Sampled By:	YCSWA
Project:	York 600 M	Collection Date:	2/14/2017 11:30:00 AM
Lab ID:	G1702839-001	Received Date:	2/15/2017 12:52:36 PM
Matrix:	AQUEOUS		

Analyses	Result	QL	Q	Units	DF	Date Prepared	Date Analyzed
PH BY SM 4500 H+B		Analyst: AM					
Lab pH	7.83		H	S.U.	1		SM 4500-H+ B 02/15/17 1:36 PM
TOTAL METALS		Analyst: SLY					
Mercury	305	20.0		ng/L	10	02/16/17 1:45 PM	EPA 245.7 02/17/17 7:33 AM
INORGANIC METALS		Analyst: RLR					
Antimony	< 2.0	2.0		µg/L	1	02/16/17 10:35 AM	EPA 200.2 02/21/17 2:43 PM
Cadmium	< 0.2	0.2		µg/L	1	02/16/17 10:35 AM	02/21/17 2:43 PM
Copper	< 4.0	4.0		µg/L	1	02/16/17 10:35 AM	02/21/17 2:43 PM
Lead	< 1.0	1.0		µg/L	1	02/16/17 10:35 AM	02/21/17 2:43 PM
Silver	< 0.4	0.4		µg/L	1	02/16/17 10:35 AM	02/21/17 2:43 PM
VOLATILE ORGANIC COMPOUNDS		Analyst: SJM					
1,1,1-Trichloroethane	< 0.5	0.5		µg/L	1		EPA 624 02/17/17 7:10 AM
1,1-Dichloroethane	< 0.5	0.5		µg/L	1		02/17/17 7:10 AM
1,1-Dichloroethene	< 0.5	0.5		µg/L	1		02/17/17 7:10 AM
Chloroethane	< 0.5	0.5		µg/L	1		02/17/17 7:10 AM
cis-1,2-Dichloroethene	< 0.5	0.5		µg/L	1		02/17/17 7:10 AM
Dichlorodifluoromethane	< 0.5	0.5		µg/L	1		02/17/17 7:10 AM
Methylene Chloride	< 0.5	0.5		µg/L	1		02/17/17 7:10 AM
Tetrachloroethene	< 0.5	0.5		µg/L	1		02/17/17 7:10 AM
Tetrahydrofuran	< 1.0	1.0		µg/L	1		02/17/17 7:10 AM
Trichloroethene	< 0.5	0.5		µg/L	1		02/17/17 7:10 AM
Trichlorofluoromethane	< 0.5	0.5		µg/L	1		02/17/17 7:10 AM
Vinyl Chloride	< 0.5	0.5		µg/L	1		02/17/17 7:10 AM
Surr: 1,2-Dichloroethane-d4	106	80-120		%REC	1		02/17/17 7:10 AM
Surr: 4-Bromofluorobenzene	99.1	80-120		%REC	1		02/17/17 7:10 AM
Surr: Toluene-d8	103	80-120		%REC	1		02/17/17 7:10 AM



Laboratory Results

Geochemical Testing

Date: 23-Feb-17

CLIENT:	YORK COUNTY SWRA	Client Sample ID:	NPDES-2
Lab Order:	G1702841		
Project:	York 600 M	Sampled By:	YCSWA
Lab ID:	G1702841-001	Collection Date:	2/14/2017 12:20:00 PM
Matrix:	AQUEOUS	Received Date:	2/15/2017 12:56:37 PM

Analyses	Result	QL	Q	Units	DF	Date Prepared	Date Analyzed
PH BY SM 4500 H+B				Analyst: AM		SM 4500-H+ B	
Lab pH	7.62		H	S.U.	1		02/15/17 1:38 PM
TOTAL METALS				Analyst: SLY		EPA 245.7	EPA 245.7
Mercury	163	4.0		ng/L	2	02/16/17 1:45 PM	02/17/17 7:36 AM
INORGANIC METALS				Analyst: RLR		EPA 200.2	EPA 200.8
Antimony	< 2.0	2.0		µg/L	1	02/16/17 10:35 AM	02/21/17 2:50 PM
Cadmium	< 0.2	0.2		µg/L	1	02/16/17 10:35 AM	02/21/17 2:50 PM
Copper	< 4.0	4.0		µg/L	1	02/16/17 10:35 AM	02/21/17 2:50 PM
Lead	< 1.0	1.0		µg/L	1	02/16/17 10:35 AM	02/21/17 2:50 PM
Silver	< 0.4	0.4		µg/L	1	02/16/17 10:35 AM	02/21/17 2:50 PM
VOLATILE ORGANIC COMPOUNDS				Analyst: SJM		EPA 624	
1,1,1-Trichloroethane	< 0.5	0.5		µg/L	1		02/17/17 7:58 AM
1,1-Dichloroethane	< 0.5	0.5		µg/L	1		02/17/17 7:58 AM
1,1-Dichloroethene	< 0.5	0.5		µg/L	1		02/17/17 7:58 AM
Chloroethane	< 0.5	0.5		µg/L	1		02/17/17 7:58 AM
cis-1,2-Dichloroethene	< 0.5	0.5		µg/L	1		02/17/17 7:58 AM
Dichlorodifluoromethane	< 0.5	0.5		µg/L	1		02/17/17 7:58 AM
Methylene Chloride	< 0.5	0.5		µg/L	1		02/17/17 7:58 AM
Tetrachloroethene	< 0.5	0.5		µg/L	1		02/17/17 7:58 AM
Tetrahydrofuran	< 1.0	1.0		µg/L	1		02/17/17 7:58 AM
Trichloroethene	< 0.5	0.5		µg/L	1		02/17/17 7:58 AM
Trichlorofluoromethane	< 0.5	0.5		µg/L	1		02/17/17 7:58 AM
Vinyl Chloride	< 0.5	0.5		µg/L	1		02/17/17 7:58 AM
Surr: 1,2-Dichloroethane-d4	105	80-120		%REC	1		02/17/17 7:58 AM
Surr: 4-Bromofluorobenzene	98.9	80-120		%REC	1		02/17/17 7:58 AM
Surr: Toluene-d8	104	80-120		%REC	1		02/17/17 7:58 AM

Geochemical Testing

Date: 23-Feb-17

CLIENT: YORK COUNTY SWRA
Project: York 600 M
Lab Order: G1612526

CASE NARRATIVE

No problems were encountered during analysis of this workorder, except if noted in this report.

REVISED REPORT: (02/23/17)

The dilution factor (prep factor) was not used when determining the original Mercury by EPA 245.7 value. The Mercury value has been calculated with the dilution factor in place and is now correct. Note: This is a reissue of a previously generated report. Information herein supersedes that of previously issued report(s).

Legend: ND - Not Detected
J - Indicates an estimated value.
U - The analyte was not detected at or above the listed concentration, which is below the laboratory quantitation limit.
B - Analyte detected in the associated Method Blank
Q - Qualifier QL - Quantitation Limit DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
** - Value exceeds Action Limit
H - Method Hold Time Exceeded
MCL - Contaminant Limit



Laboratory Results

Geochemical Testing

Date: 23-Feb-17

CLIENT:	YORK COUNTY SWRA	Client Sample ID:	NPDES-1
Lab Order:	G1612526	Sampled By:	York County SW
Project:	York 600 M	Collection Date:	12/8/2016 12:05:00 PM
Lab ID:	G1612526-001	Received Date:	12/9/2016 10:34:40 AM
Matrix:	AQUEOUS		

Analyses	Result	QL	Q	Units	DF	Date Prepared	Date Analyzed
PH BY SM 4500 H+B				Analyst: AM		SM 4500-H+ B	
Lab pH	7.89		H	S.U.	1		12/09/16 3:28 PM
TOTAL METALS				Analyst: SLY		EPA 245.7	EPA 245.7
Mercury	173	20.0		ng/L	10	12/15/16 3:40 PM	12/16/16 7:40 AM
INORGANIC METALS				Analyst: RLR		EPA 200.2	EPA 200.8
Antimony	< 2.0	2.0		µg/L	1	12/12/16 9:35 AM	12/14/16 9:41 AM
Cadmium	< 0.2	0.2		µg/L	1	12/12/16 9:35 AM	12/14/16 9:41 AM
Copper	< 4.0	4.0		µg/L	1	12/12/16 9:35 AM	12/14/16 9:41 AM
Lead	< 1.0	1.0		µg/L	1	12/12/16 9:35 AM	12/14/16 9:41 AM
Silver	< 0.4	0.4		µg/L	1	12/12/16 9:35 AM	12/14/16 9:41 AM
VOLATILE ORGANIC COMPOUNDS				Analyst: SJM		EPA 624	
1,1,1-Trichloroethane	< 0.5	0.5		µg/L	1		12/09/16 10:51 PM
1,1-Dichloroethane	< 0.5	0.5		µg/L	1		12/09/16 10:51 PM
1,1-Dichloroethene	< 0.5	0.5		µg/L	1		12/09/16 10:51 PM
Chloroethane	< 0.5	0.5		µg/L	1		12/09/16 10:51 PM
cis-1,2-Dichloroethene	< 0.5	0.5		µg/L	1		12/09/16 10:51 PM
Dichlorodifluoromethane	< 0.5	0.5		µg/L	1		12/09/16 10:51 PM
Methylene Chloride	< 0.5	0.5		µg/L	1		12/09/16 10:51 PM
Tetrachloroethene	< 0.5	0.5		µg/L	1		12/09/16 10:51 PM
Tetrahydrofuran	< 1.0	1.0		µg/L	1		12/09/16 10:51 PM
Trichloroethene	< 0.5	0.5		µg/L	1		12/09/16 10:51 PM
Trichlorofluoromethane	< 0.5	0.5		µg/L	1		12/09/16 10:51 PM
Vinyl Chloride	< 0.5	0.5		µg/L	1		12/09/16 10:51 PM
Surr: 1,2-Dichloroethane-d4	101	80-120		%REC	1		12/09/16 10:51 PM
Surr: 4-Bromofluorobenzene	103	80-120		%REC	1		12/09/16 10:51 PM
Surr: Toluene-d8	101	80-120		%REC	1		12/09/16 10:51 PM

Geochemical Testing

Date: 23-Feb-17

CLIENT: YORK COUNTY SWRA
Project: York 600 M
Lab Order: G1612527

CASE NARRATIVE

No problems were encountered during analysis of this workorder, except if noted in this report.

REVISED REPORT: (02/23/17)

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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
** - Value exceeds Action Limit
H - Method Hold Time Exceeded
MCL - Contaminant Limit



Laboratory Results

Geochemical Testing

Date: 23-Feb-17

CLIENT: YORK COUNTY SWRA

Client Sample ID: NPDES-2

Lab Order: G1612527

Project: York 600 M

Sampled By: York County

Lab ID: G1612527-001

Collection Date: 12/8/2016 1:50:00 PM

Matrix: AQUEOUS

Received Date: 12/9/2016 10:38:39 AM

Analyses	Result	QL	Q	Units	DF	Date Prepared	Date Analyzed
PH BY SM 4500 H+B				Analyst: AM		SM 4500-H+ B	
Lab pH	7.63		H	S.U.	1		12/09/16 3:31 PM
TOTAL METALS				Analyst: SLY		EPA 245.7	EPA 245.7
Mercury	154	4.0		ng/L	2	12/15/16 3:40 PM	12/16/16 7:43 AM
INORGANIC METALS				Analyst: RLR		EPA 200.2	EPA 200.8
Antimony	< 2.0	2.0		µg/L	1	12/12/16 10:45 AM	12/14/16 10:03 AM
Cadmium	< 0.2	0.2		µg/L	1	12/12/16 10:45 AM	12/14/16 10:03 AM
Copper	< 4.0	4.0		µg/L	1	12/12/16 10:45 AM	12/14/16 10:03 AM
Lead	< 1.0	1.0		µg/L	1	12/12/16 10:45 AM	12/14/16 10:03 AM
Silver	< 0.4	0.4		µg/L	1	12/12/16 10:45 AM	12/14/16 10:03 AM
VOLATILE ORGANIC COMPOUNDS				Analyst: SJM		EPA 624	
1,1,1-Trichloroethane	< 0.5	0.5		µg/L	1		12/09/16 11:39 PM
1,1-Dichloroethane	< 0.5	0.5		µg/L	1		12/09/16 11:39 PM
1,1-Dichloroethene	< 0.5	0.5		µg/L	1		12/09/16 11:39 PM
Chloroethane	< 0.5	0.5		µg/L	1		12/09/16 11:39 PM
cis-1,2-Dichloroethene	< 0.5	0.5		µg/L	1		12/09/16 11:39 PM
Dichlorodifluoromethane	< 0.5	0.5		µg/L	1		12/09/16 11:39 PM
Methylene Chloride	< 0.5	0.5		µg/L	1		12/09/16 11:39 PM
Tetrachloroethene	< 0.5	0.5		µg/L	1		12/09/16 11:39 PM
Tetrahydrofuran	< 1.0	1.0		µg/L	1		12/09/16 11:39 PM
Trichloroethene	< 0.5	0.5		µg/L	1		12/09/16 11:39 PM
Trichlorofluoromethane	< 0.5	0.5		µg/L	1		12/09/16 11:39 PM
Vinyl Chloride	< 0.5	0.5		µg/L	1		12/09/16 11:39 PM
Surr: 1,2-Dichloroethane-d4	102	80-120		%REC	1		12/09/16 11:39 PM
Surr: 4-Bromofluorobenzene	103	80-120		%REC	1		12/09/16 11:39 PM
Surr: Toluene-d8	101	80-120		%REC	1		12/09/16 11:39 PM