

October 26, 2010

92-002-202

Mr. Robert Lewis
Pennsylvania Department of Environmental Protection
2 Public Square
Wilkes-Barre, PA 18711-0770

RE: Sediment Basin Discharge Report
NPDES Permit No. PAI023508001
Marjol Battery Site, Throop, Pennsylvania

Dear Mr. Lewis:

Advanced GeoServices, on behalf of Gould Electronics Inc. (Gould), submits the enclosed report for stormwater discharge activities that occurred between Thursday, September 30, 2010 and Saturday, October 16, 2010 at the Marjol Battery Site (Site) in Throop, Pennsylvania. Corrective Measures at the Site are being conducted as required by the Final Administrative Order on Consent between U.S. Environmental Protection Agency (USEPA), Pennsylvania Department of Environmental Protection (PADEP) and Gould. Work activities are conducted in accordance with the Final (100%) Remedial Design approved by USEPA and PADEP on June 9, 2008 and NPDES Permit No. PAI023508001. Construction activities at the Site were concluded on August 27, 2010 and the Site is in the post-construction period. Tab 5 of the Sampling and Analysis Plan in the approved Final (100%) Design covers the basin discharge monitoring requirements which state that discharge monitoring will not occur post-construction. Gould has voluntarily continued sampling the basin discharge so far during the post-construction period, and the monitoring data is presented on that basis.

Since the weather station for the site was dismantled as part of demobilization, rainfall information for this report was obtained from a USGS rain gauge located in Jermyn, Pennsylvania (Jermyn gauge) approximately 9 miles northeast of the Marjol Site. The web address to access this site is:

http://waterdata.usgs.gov/pa/nwis/uv?cb_00045=on&format=html&period=7&site_no=01534490

Prior-Rain Event

Prior to the discharges discussed below, rain events occurred on September 27 and 28, 2010. The total combined rainfall for both days was approximately 0.32 inches. Discharge from the basin began on September 29, and the turbidity reading was 3.91 NTUs. The attached aerial photo shows the turbid water contained on the east side of the baffle while the west side, where the skimmer discharges the water, is clear.



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The remainder of this report discusses the rain events that occurred from September 30 through October 16, 2010, the turbidity sampling results and the water sample laboratory analysis for turbidity readings above 250 Nephelometric Turbidity Units (NTUs).

Thursday, September 30, and Friday October 1, 2010

Between the hours of 0615 on September 30 and 0615 on October 1, 2010 the Jermyn gauge recorded 5.52 inches of rainfall. This amount of rainfall is greater than the precipitation for a 50-yr 24-hr rain event (5.34 inches).

On September 30 at 0745, Advanced GeoServices collected a turbidity sample at the discharge point of the stormwater basin which is located at the perimeter fence line of the discharge channel. The result of the sampling was 67.1 NTUs. At 1350, Advanced GeoServices collected another turbidity sample at the discharge point. The result was 2,446 NTUs. Water samples were collected for total and dissolved lead analysis. The results of the sampling are provided in the table below. As the water level in the basin continued to rise and overtopped the outlet structure, the discharge was allowed to continue to prevent the basin from overtopping the emergency spillway. Considering the significant flow into the basin and continued heavy rains, it also was not feasible to add flocculant during this time. Photos are attached showing the water level in the basin.

On October 1 at 0805, Advanced GeoServices returned to the Site and collected a turbidity sample at the discharge point. The result was 1,167 NTUs. Water samples were collected for total and dissolved lead analysis. The results of the sampling are provided in the table below.

As no additional rain events were forecasted for the weekend, Advanced GeoServices requested that SCE rotate the skimmer to discontinue discharge and apply Pond Clear to the basin to help settle out the sediment over the weekend. SCE reported to the site, discontinued the discharge and added 800 pounds of flocculant. SCE also removed the organic debris that had accumulated over the outlet structure grate.

Sunday, October 3, 2010

Advanced GeoServices reported to the Site at 1600 to check the turbidity in the basin water. The turbidity levels dropped to a range of 575 to 650 NTUs. Due to the turbidity levels, there was no discharge of the basin.

Monday, October 4, 2010

Advanced GeoServices reported to the Site at about 0800 to check the basin water. Turbidity readings showed a decrease to a range from 450 to 600 NTUs. Rain continued and in order to prevent overtopping of the baffle and the outlet structure, the skimmer was rotated at 1400 that



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afternoon and discharge was allowed to resume. The turbidity readings obtained at the discharge point were 297, 310 and 314 NTUs. Water samples were collected for total and dissolved lead analysis. The results of the sampling are provided in the table below. Approximately 0.53 inches of rain was received in this event between 0200 and 2115.

Tuesday, October 5, 2010

Approximately 0.77 inches of rain was received from 0115 to 2345. Advanced GeoServices reported to the Site at 0810. A turbidity reading was collected, and the result was 287 NTUs. Water samples were collected for total and dissolved lead analysis. The results of the sampling are provided in the table below. Water had overtopped the outlet structure and was flowing through the top of the grate as well as the skimmer. Later that afternoon, another turbidity reading was collected with a result of 251 NTUs. No additional water samples were obtained as the earlier sample was taken when the turbidity reading was higher.

Wednesday, October 6, 2010

Advanced GeoServices reported to the Site at 0730. The turbidity reading was 256 NTUs. Water samples were collected for total and dissolved lead analysis. The results of the sampling are provided in the table below.

Thursday, October 7, 2010

Advanced GeoServices reported to the Site at 0830. The turbidity readings were 251 and 283 NTUs. Water samples were collected for total and dissolved lead analysis. The results of the sampling are provided in the table below.

Friday, October 8, 2010

Advanced GeoServices reported to the Site at 0810. The turbidity reading was 188 NTUs. Later that day at 1320, another turbidity reading was 178 NTUs. The skimmer was allowed to discharge over the weekend. Water samples were collected for total and dissolved lead analysis. The results of the sampling are provided in the table below.

Monday, October 11, 2010

Advanced GeoServices reported to the Site at 0835. Discharge continued with a turbidity result of 95.5 NTUs. Rain was forecasted for later that night and the skimmer was left in the discharge position. No water samples were taken on this day.



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Tuesday, October 12, 2010

The site received approximately 0.76 inches between 1730 on October 11 and 0115 on October 12. Advanced GeoServices reported to the Site at 0710. A turbidity sample was collected with a result of 346 NTUs. Water samples were collected for total and dissolved lead analysis. The results of the sampling are provided in the table below. As no additional rain was forecasted, SCE, at the request of Advanced GeoServices, reported to the site to add additional flocculants to the basin. The skimmer was rotated at 0740 to stop discharge from the basin.

Wednesday, October 13, 2010

There was no discharge from the basin in order to add more time for the flocculants to help settle the sediment.

SCE mobilized to the Site to perform erosion repair in the North Ravine, the silt fence adjacent to the temporary stockpiles and the Containment Area.

Thursday, October 14, 2010

Due to an impending rain event, the skimmer was rotated to allow flow at 1500. The water level was just below the baffle near the outlet structure. The water was discharged to allow capacity for flow into the basin. Turbidity readings were 324 NTUs (1515), 312 NTUs (1530), and 287 NTUs (1535). Water samples were collected for total and dissolved lead analysis. The results of the sampling are provided in the table below. Approximately 0.34 inches was received in this event between the hours of 1430 and 2345.

Friday, October 15, 2010

Advanced GeoServices reported to the Site at 0730. A turbidity sample was collected and the result was 300 NTUs. Water samples were collected for total and dissolved lead analysis. The results of the sampling are provided in the table below. Discharge was allowed to continue over the weekend.

Saturday, October 16, 2010

Advanced GeoServices reported to the Site at 1125. A turbidity sample was collected and the result was 260 NTUs. Water samples were collected for total and dissolved lead analysis. The results of the sampling are provided in the table below.



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Sunday, October 17, 2010

Advanced GeoServices reported to the Site at 0810. A turbidity sample was collected and the result was 169 NTUs. Water samples were collected for total and dissolved lead analysis but were archived as the turbidity was below 250 NTUs.

Monday, October 18, 2010

Advanced GeoServices reported to the Site at 1025. A turbidity sample was collected and the result was 111 NTUs. Water samples were collected for total and dissolved lead analysis but were archived as the turbidity was below 250 NTUs.

Reseeding of the Containment Area and other areas of the Facility was conducted on October 20 and 21, 2010. Erosion repair is being conducted as needed based on weekly inspections and following rain events.

Water Sampling Results

Date of Collection	Sample ID	Turbidity (NTUs)	Total Lead (ug/L)	Dissolved Lead (ug/L)	Acute Dissolved Lead Performance Standard (ug/L)
09-30-10	DIS-093010	2,446	50.2 J	0.26 J	650
10-01-10	DIS-100110	1,167	25	0.36 J	650
10-04-10	DIS-100410	314	12.5 J	0.025 B, J	650
10-05-10	DIS-100510	287	10.6 J	0.17 B,J	650
10-06-10	DIS-100610	256	9.8 J	0.4 B, J	650
10-07-10	DIS-100710	283	9.3 J	0.56 B, J	650
10-08-10	DIS-100810	188	5.8	0.4 B	650
10-12-10	DIS-101210	346	15	0.15 B	650
10-14-10	DIS-101410	324	14.7	0.024 B	650
10-15-10	DIS-101510	300	12	0.037 B	650
10-16-10	DIS-101610	260	10	0.023 B	650

Qualifiers

- B: Concentration below reporting limit but above the instrument detection limit
- J: Estimated



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Total lead discharges ranged from 5.8 to 50.2 $\mu\text{g/L}$. All dissolved lead results were below the reporting limit of 1 $\mu\text{g/L}$, consistent with previous water sampling at the discharge point and well below the acute and chronic (quarterly average) performance standards for dissolved lead.

If there are any questions, please contact Kevin O'Rourke at (610) 840-9159 or Barbara Forslund at (610) 840-9145.

Sincerely,

ADVANCED GEOSERVICES


Kevin O'Rourke, P.E.
Advanced GeoServices Field Coordinator

 FOR
Barbara L. Forslund, P.E.
Advanced GeoServices Project Coordinator

KO:BLF:vm

Enclosures

cc: L. Ayers
M. Baltrusaitus
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J. Cronmiller
J. DiJoseph
M. Essenthier
T. Matechak
B. Mackowski
C. Reitman
T. Rich
L. Zelinka
Throop Borough Council



PRELIMINARY LABORATORY RESULTS

TESTAMERICA LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: C0J020418 **Advanced GeoServices Corporation** PAGE 1
AGC - Marjol Scranton, PA Date Reported: 10/26/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
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Client Sample ID: DIS-093010

Sample #: 001 Date Sampled: 09/30/10 13:50 Date Received: 10/02/10 Matrix: WATER

ICP-MS (6020)					Reviewed
Lead	50.2	1.0	ug/L	SW846 6020	
Lead	Dissolved 0.26 B	1.0	ug/L	SW846 6020	

B Estimated result. Result is less than RL.

Client Sample ID: DIS-100110

Sample #: 002 Date Sampled: 10/01/10 08:05 Date Received: 10/02/10 Matrix: WATER

ICP-MS (6020)					Reviewed
Lead	25.0	1.0	ug/L	SW846 6020	
Lead	Dissolved 0.36 B	1.0	ug/L	SW846 6020	

B Estimated result. Result is less than RL.

TESTAMERICA LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: C0J080576 **Advanced GeoServices Corporation** PAGE 1
AGC - Marjol Scranton, PA Date Reported: 10/26/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
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Client Sample ID: DIS-100510

Sample #: 001 Date Sampled: 10/05/10 08:10 Date Received: 10/08/10 Matrix: WATER

ICP-MS (6020)					Reviewed
Lead	10.6	1.0	ug/L	SW846 6020	
Lead	Dissolved 0.17 B	1.0	ug/L	SW846 6020	

B Estimated result. Result is less than RL.

Client Sample ID: DIS-100410

Sample #: 002 Date Sampled: 10/04/10 15:27 Date Received: 10/08/10 Matrix: WATER

ICP-MS (6020)					Reviewed
Lead	12.5	1.0	ug/L	SW846 6020	
Lead	Dissolved 0.025 B	1.0	ug/L	SW846 6020	

B Estimated result. Result is less than RL.

Client Sample ID: DIS-100610

Sample #: 003 Date Sampled: 10/06/10 09:00 Date Received: 10/08/10 Matrix: WATER

ICP-MS (6020)					Reviewed
Lead	9.8	1.0	ug/L	SW846 6020	
Lead	Dissolved 0.40 B	1.0	ug/L	SW846 6020	

B Estimated result. Result is less than RL.

TESTAMERICA LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: C0J080580 **Advanced GeoServices Corporation** PAGE 1
AGC - Marjol Scranton, PA Date Reported: 10/26/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
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Client Sample ID: DIS-100710

Sample #: 001 Date Sampled: 10/07/10 08:30 Date Received: 10/08/10 Matrix: WATER

ICP-MS (6020)					Reviewed
Lead	9.3	1.0	ug/L	SW846 6020	
Lead	Dissolved 0.56 B	1.0	ug/L	SW846 6020	

B Estimated result. Result is less than RL.

TESTAMERICA LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: C0J110477 **Advanced GeoServices Corporation** PAGE 1
AGC - Marjol Scranton, PA Date Reported: 10/26/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
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Client Sample ID: DIS-100810

Sample #: 001 Date Sampled: 10/08/10 13:20 Date Received: 10/11/10 Matrix: WATER

ICP-MS (6020)					Reviewed
Lead	5.8	1.0	ug/L	SW846 6020	
Lead	Dissolved 0.40 B	1.0	ug/L	SW846 6020	

B Estimated result. Result is less than RL.

TESTAMERICA LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: C0J130596 **Advanced GeoServices Corporation** PAGE 1
AGC - Marjol Scranton, PA Date Reported: 10/26/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL</u> <u>METHOD</u>
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Client Sample ID: DIS-101210

Sample #: 001 Date Sampled: 10/12/10 07:35 Date Received: 10/13/10 Matrix: WATER

ICP-MS (6020)

Reviewed

Lead	15.0	1.0	ug/L	SW846 6020
Lead	Dissolved 0.15 B	1.0	ug/L	SW846 6020

B Estimated result. Result is less than RL.

TESTAMERICA LABORATORIES, INC.
PRELIMINARY DATA SUMMARY

 The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: COJ180409 **Advanced GeoServices Corporation** PAGE 1
 AGC - Marjol Scranton, PA Date Reported: 10/22/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
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Client Sample ID: DIS-101410

Sample #: 001 Date Sampled: 10/14/10 15:35 Date Received: 10/16/10 Matrix: WATER

ICP-MS (6020)					Reviewed
Lead	14.7	1.0	ug/L	SW846 6020	
Lead	Dissolved 0.024 B	1.0	ug/L	SW846 6020	

B Estimated result. Result is less than RL.

Client Sample ID: DIS-101510

Sample #: 002 Date Sampled: 10/15/10 08:15 Date Received: 10/16/10 Matrix: WATER

ICP-MS (6020)					Reviewed
Lead	12.0	1.0	ug/L	SW846 6020	
Lead	Dissolved 0.037 B	1.0	ug/L	SW846 6020	

B Estimated result. Result is less than RL.

TESTAMERICA LABORATORIES, INC.
PRELIMINARY DATA SUMMARY

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: C0J190403 **Advanced GeoServices Corporation** PAGE 1
AGC - Marjol Scranton, PA Date Reported: 10/25/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	<u>UNITS</u>	<u>ANALYTICAL</u>
		<u>LIMIT</u>		<u>METHOD</u>

Client Sample ID: DIS-101610

Sample #: 001 Date Sampled: 10/16/10 11:25 Date Received: 10/19/10 Matrix: WATER

ICP-MS (6020)

In Review

Lead	10	1.0	ug/L	SW846 6020
Lead	Dissolved 0.023 B	1.0	ug/L	SW846 6020

B Estimated result. Result is less than RL.



PHOTOGRAPHS



Aerial View of Site on September 28, 2010



Aerial View of Site on September 28, 2010



View of Sediment Basin on September 30, 2010 (toward Sulphur Creek)



View of Sediment Basin on September 30, 2010 (facing northeast)