

Ms. Ann DiDonato
U.S. EPA Region 3
1650 Arch Street
Mail Code 3HS31
Philadelphia, PA 19103

Arcadis U.S., Inc.
1 Harvard Way
Suite 5
Hillsborough
New Jersey 08844
Tel 908 526 1000
Fax 908 253 3295
www.arcadis.com

Subject:

Quarterly Progress Report: July through September 2021
Precision National Plating Services, Inc.
Clarks Summit, Pennsylvania
Docket No. CERC-03-2012-0031DC

ELECTRONIC MAIL

Dear Ms. DiDonato:

On behalf of Precision National Plating Services, Inc. (Precision), Arcadis U.S., Inc. (Arcadis) is submitting this progress report to summarize the activities completed between July 1, 2021 and September 30, 2021. This progress report is being submitted in accordance with Section 8.7 of the Administrative Settlement Agreement and Order on Consent (AS) for Removal Response Action (Docket No. CERC-03-2012-0031DC).

ENVIRONMENT

Date:
December 30, 2021

Contact:
Lawrence G. Brunt, PE

Phone:
908.526.1000

Email:
Larry.brun@arcadis.com

Our ref:
30090360.004

1. Response actions completed and the actions that have been taken toward achieving compliance with the Settlement Agreement:

General

Precision and Arcadis worked closely with the U.S. Environmental Protection Agency (U.S. EPA) from July through September 2021 to do the following:

- Precision performed semiannual surface water monitoring in July 2021 as approved in the RAP.
- Precision performed general site maintenance activities.
- Precision also provided the U.S. EPA and PADEP with available sampling information.

Ongoing Administrative Settlement (AS) Activities

Seep Remediation

- Precision continued the operation of the Seep Shed treatment system.

- The influent and effluent of the Seep Shed Treatment System were sampled on July 21, 2021, for hexavalent chromium and total chromium. The midpoints between the resin beds of the system also were sampled. At the time of sampling, the influent pH was 6.79 su and the temperature was 15.41° C.
- On July 21, 2021, the flow totalizer reading for the Seep Shed Treatment System was 7,229,845 gallons.
- The influent and effluent of the Seep Shed Treatment System were sampled on August 19, 2021, for hexavalent chromium and total chromium. The midpoints between the resin beds of the system were also sampled for hexavalent and total chromium. At the time of sampling, the influent pH was 7.07 su and the temperature was 16.91° C.
- On August 19, 2021, the Seep Shed flow totalizer reading was 7,261,003 gallons.
- The influent and effluent of the Seep Shed Treatment System were sampled on September 22, 2021, for hexavalent chromium and total chromium. The midpoints between the resin beds of the system were also sampled for hexavalent and total chromium. At the time of sampling, the influent pH was 7.11 su and the temperature was 16.82° C.
- On September 22, 2021, the flow totalizer reading for the Seep Shed Treatment System was 7,338,499 gallons.

Lagoon Assessment/Remediation Activities

- Precision continued the operation of the Lagoon Treatment System.
- The influent and system effluent of the Lagoon Treatment System were sampled on July 21, 2021, for hexavalent chromium and TAL metals. The effluent of the lead resin bed was also sampled for hexavalent chromium and total chromium. The pH of the lagoon system influent at the time of sampling was 7.11 su and the temperature was 17.29° C.
- By July 21, 2021, the total volume treated by the Lagoon Treatment System was approximately 37,776,317 gallons.
- The influent and system effluent of the Lagoon Treatment System were sampled on August 19, 2021, for hexavalent chromium and TAL metals. The effluent of the lead resin bed was also sampled for hexavalent chromium and total chromium. The pH of the lagoon system influent at the time of sampling was 7.10 su and the temperature was 17.24° C.
- By August 19, 2021, the total volume treated by the Lagoon Treatment System was 37,943,388 gallons.
- The influent and system effluent of the Lagoon Treatment System were sampled on September 22, 2021, for hexavalent chromium and TAL metals. The effluent of the lead resin bed was also

sampled for hexavalent chromium and total chromium. The pH of the lagoon system influent at the time of sampling was 7.07 su and the temperature was 16.29° C.

- By September 22, 2021, the total volume treated by the Lagoon Treatment System was approximately 38,250,303 gallons.

Semiannual Surface Water Monitoring

- As approved, surface water samples were collected in July 2021. Samples were analyzed for hexavalent chromium and total chromium. Analytical results were received from TestAmerica Laboratories and validated. Summaries of the data are attached.

Additional Monitoring

- To supplement the semiannual monitoring and monthly treatment system monitoring, samples were collected from the Lagoon Seep, Lagoon Sump, French Drain Sump, Bathtub Seep, and Cinderblock Seep on July 21, 2021 and August 19, 2021. Samples were collected from the French Drain Sump and Lagoon Sump on September 22, 2021. Samples were analyzed for hexavalent chromium and total chromium. Analytical results were received from TestAmerica Laboratories and validated. Summaries of the data are attached.

2. Description of all data anticipated, and activities scheduled for the next ninety (90) calendar days:

- Operation of the treatment systems will continue at the site.
- Precision will sample the Lagoon and Seep Shed Treatment systems monthly in October, November, and December 2021. Data is anticipated to be received four weeks after each sampling event.
- Semiannual monitoring of groundwater monitoring wells and seeps is scheduled for October 2021.

3. Description of any problems encountered or anticipated:

- None.

4. Any actions taken to prevent or mitigate such problems.

- None.

5. A schedule for completion of such actions:

- Containment and treatment of water in the lagoon will continue as needed.

- Operation of the Seep Shed treatment system will continue as needed.

6. Analytical data received during the reporting period:

- Laboratory data for the semiannual surface water samples collected in July 2021 were received from TestAmerica Laboratories and validated. Summaries of the data are attached.
- Laboratory data for the samples collected from the seeps and sumps on July 21, 2021 were received from TestAmerica Laboratories and validated. Summaries of the data are attached.
- Laboratory data for the July 21, 2021 sampling of the Seep Shed Treatment System and the Lagoon Treatment System were received from TestAmerica Laboratories and validated. A summary of the data is attached.

Hexavalent chromium was not detected above the laboratory method detection limit in the effluent of the Lagoon Treatment System. Total chromium was detected in the effluent at an estimated concentration of 7.2 ug/L, which does not exceed the MCL of 100 ug/L.

Hexavalent chromium was not detected above the laboratory method detection limit in the effluent of the Seep Shed Treatment System. Total chromium was detected in the effluent at an estimated concentration of 5.7 ug/L, which does not exceed the MCL of 100 ug/L.

- Laboratory data for the samples collected from the seeps and sumps on August 19, 2021 were received from TestAmerica Laboratories and validated. Summaries of the data are attached.
- Laboratory data for the August 19, 2021 sampling of the Lagoon and Seep Shed Treatment Systems were received from TestAmerica Laboratories and validated. A summary of the data is attached.

Hexavalent chromium was not detected above the laboratory method detection limit in the effluent of the Lagoon Treatment System. Total chromium was detected in the effluent at an estimated concentration of 5.9 ug/L, which does not exceed the MCL of 100 ug/L.

Hexavalent chromium was not detected above the laboratory method detection limit in the effluent of the Seep Shed Treatment System. Total chromium was detected in the effluent at a concentration of 18.9 ug/L, which does not exceed the MCL of 100 ug/L.

- Laboratory data for the September 22, 2021 sampling of the Lagoon Treatment System and the Seep Shed Treatment System were received from TestAmerica Laboratories and validated. A summary of the data is attached.

Hexavalent chromium and total chromium were not detected above the laboratory method detection limits in the effluent of the Lagoon Treatment System.

Hexavalent chromium was not detected above the laboratory method detection limit in the effluent of the Seep Shed Treatment System. Total chromium was detected in the effluent at a concentration of 36.6 ug/L, which does not exceed the MCL of 100 ug/L.

- Laboratory data for the samples collected from the lagoon and French drain sumps on September 22, 2021 were received from TestAmerica Laboratories and validated. Summaries of the data are attached.

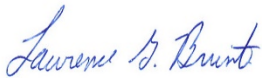
7. Modifications to the response action, RAP, and schedule made in accordance with Section XIV of the Settlement Agreement during this reporting period.

- None.

If you have any questions or require additional information, please call me at 908.526.1000.

Sincerely,

Arcadis U.S., Inc.



Lawrence G. Brunt, P.E.
Principal Engineer

Copies:
D. Rood - PADEP

Enclosure

Data Validation Summary

Arcadis U.S., Inc. (Arcadis) performed a level III data validation evaluation of the analytical data collected during the Precision National Plating site investigation. The data evaluation was conducted in accordance with the United States Environmental Protection Agency's (USEPA) Data Validation Functional Guidelines for Evaluating Environmental Analyses, "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review," dated October 1999, and "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review," dated October 2004 ("the USEPA Guidance"). The following is a summary of the analytical data review for samples collected and analyzed from July through September 2021. The samples were submitted to TestAmerica Laboratories located in Edison, New Jersey for analysis. The TestAmerica sample delivery groups (SDGs) evaluated for this report include: 460-239236-1, 460-239238-1, 460-241165-1, and 460-243407-1.

The samples were analyzed using the following methods:

EPA Method 200.7 for metals
EPA Method 245.1 for mercury
EPA Method 7196A for hexavalent chromium

The data were evaluated based on the following parameters according to the USEPA Guidance for Level III data validation:

- data completeness
- holding times
- blanks
- duplicates and ICP serial dilution
- matrix spike/matrix spike duplicate/post-digestion spike recoveries (MS/MSD/PDS)
- laboratory control spike/laboratory control spike duplicate recoveries (LCS/LCSD)

A review of the laboratory reports revealed no issues which caused the data to be qualified. The sample temperature, hold times, calibrations, laboratory control samples, duplicates, serial dilutions, and all other laboratory blanks were all within compliance criteria for all samples.

The following items were noted during the data review:

The laboratory indicated the percent recovery of sodium in the matrix spike was lower than the acceptance criteria in metals analysis batch 460-797668 which included samples from PNP SDG 460-241165-1. The sample utilized for the matrix spike analysis was not a PNP sample. However, the concentration in the sample was greater than 10 times the spike amount, so the recovery acceptance criteria does not apply. All other QA/QC parameters were in compliance. Therefore, the sodium results are not qualified based on the matrix spike recovery.

Similarly, the recoveries of calcium, magnesium, and sodium were higher than the acceptance criteria in the matrix spike analyzed along with metals batch 460-804086 which included samples from PNP SDG 460-243407-1. The concentrations of these compounds were very high in the sample used for the MS analysis (2 to 8 times the spike concentration), which was not a PNP sample. The results of the post-digestion spike were within the acceptable range. Since the MS sample was not a PNP sample, and all other QA/QC parameters were in compliance, the results are not qualified based on the matrix spike recovery.

Summary of Quality Assurance/Quality Control Evaluation of Data

Based upon the QA/QC review, the project data are valid and available for use in site characterization without qualifications.

TREATMENT SYSTEM AND ADDITIONAL MONITORING RESULTS

Eurofins TestAmerica, Edison

TestAmerica Laboratories, Inc.

Eurofins TestAmerica, Edison

Lab Job ID: 460-239238-1

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	Lagoon Influent			Lagoon Post lead			Lagoon Effluent			Seep Shed Influent			Seep Shed Mid			Seep Shed Effluent		
Lab Sample ID	460-239238-1			460-239238-2			460-239238-3			460-239238-4			460-239238-5			460-239238-6		
Sampling Date	07/21/2021 14:40:00			07/21/2021 14:41:00			07/21/2021 14:42:00			07/21/2021 15:40:00			07/21/2021 15:41:00			07/21/2021 15:42:00		
Matrix	Water			Water			Water			Water			Water			Water		
Unit																		
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 200.7 REV 4.4(UG/L)																		
Aluminum	40.7	U	40.7	NR			40.7	U	40.7	NR			NR			NR		
Antimony	7.8	U	7.8	NR			7.8	U	7.8	NR			NR			NR		
Arsenic	3.6	U	3.6	NR			3.6	U	3.6	NR			NR			NR		
Barium	20.9	U	20.9	NR			20.9	U	20.9	NR			NR			NR		
Beryllium	0.35	U	0.35	NR			0.35	U	0.35	NR			NR			NR		
Cadmium	0.31	U	0.31	NR			0.31	U	0.31	NR			NR			NR		
Calcium	37500		358	NR			38100		358	NR			NR			NR		
Chromium	18.8		5.7	12.0		5.7	7.2	J	5.7	367		5.7	274		5.7	5.7	J	5.7
Cobalt	3.4	U	3.4	NR			3.4	U	3.4	NR			NR			NR		
Copper	6.1	U	6.1	NR			6.1	U	6.1	NR			NR			NR		
Iron	271		76.8	NR			76.8	U	76.8	NR			NR			NR		
Lead	6.1		3.1	NR			5.4		3.1	NR			NR			NR		
Magnesium	3490	J	329	NR			3480	J	329	NR			NR			NR		
Manganese	594		1.2	NR			1070		1.2	NR			NR			NR		
Nickel	27.4	J	3.6	NR			3.6	U	3.6	NR			NR			NR		
Potassium	948	J	492	NR			895	J	492	NR			NR			NR		
Selenium	8.6	U	8.6	NR			8.6	U	8.6	NR			NR			NR		
Silver	5.0	U	5.0	NR			5.0	U	5.0	NR			NR			NR		
Sodium	12700		502	NR			12100		502	NR			NR			NR		
Thallium	5.8	U	5.8	NR			5.8	U	5.8	NR			NR			NR		
Vanadium	3.9	U	3.9	NR			3.9	U	3.9	NR			NR			NR		
Zinc	19.6	J	4.5	NR			12.5	J	4.5	NR			NR			NR		

WATER BY 245.1(UG/L)																		
Mercury	0.091	U	0.091	NR			0.091	U	0.091	NR			NR			NR		

NR: Not Analyzed

J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

U : Indicates the analyte was analyzed for but not detected.

Lab Contact:

Grace Chang

Project Manager II

(732)593-2579

TestAmerica Laboratories, Inc
Eurofins TestAmerica, Edison
Lab Job ID: 460-239238-1
Job Description: Precision National Pla
For:
ARCADIS U.S., Inc
1 Harvard Way
Hillsborough, New Jersey 08844

Client ID	Bathtub seep			Cinderblock Seep			Lagoon SW			French Drain Sump			Lagoon Sump		
Lab Sample ID	460-239238-7			460-239238-8			460-239238-9			460-239238-10			460-239238-11		
Sampling Date	07/21/2021 15:30:00			07/21/2021 15:35:00			07/21/2021 15:50:00			07/21/2021 15:55:00			07/21/2021 15:10:00		
Matrix	Water			Water			Water			Water			Water		
Unit															
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 200.7 REV 4.4(UG/L)															
Aluminum	NR			NR			NR			NR			NR		
Antimony	NR			NR			NR			NR			NR		
Arsenic	NR			NR			NR			NR			NR		
Barium	NR			NR			NR			NR			NR		
Beryllium	NR			NR			NR			NR			NR		
Cadmium	NR			NR			NR			NR			NR		
Calcium	NR			NR			NR			NR			NR		
Chromium	13.1		5.7	178		5.7	36.5		5.7	85.3		5.7	19.4		5.7
Cobalt	NR			NR			NR			NR			NR		
Copper	NR			NR			NR			NR			NR		
Iron	NR			NR			NR			NR			NR		
Lead	NR			NR			NR			NR			NR		
Magnesium	NR			NR			NR			NR			NR		
Manganese	NR			NR			NR			NR			NR		
Nickel	NR			NR			NR			NR			NR		
Potassium	NR			NR			NR			NR			NR		
Selenium	NR			NR			NR			NR			NR		
Silver	NR			NR			NR			NR			NR		
Sodium	NR			NR			NR			NR			NR		
Thallium	NR			NR			NR			NR			NR		
Vanadium	NR			NR			NR			NR			NR		
Zinc	NR			NR			NR			NR			NR		
WATER BY 245.1(UG/L)															
Mercury	NR			NR			NR			NR			NR		

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Grace Chang
Project Manager II
(732)593-2579

TestAmerica Laboratories, Inc.**Eurofins TestAmerica, Edison**

Lab Job ID: 460-239238-1

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	Lagoon Influent			Lagoon Post lead			Lagoon Effluent			Seep Shed Influent			Seep Shed Mid			Seep Shed Effluent		
Lab Sample ID	460-239238-1			460-239238-2			460-239238-3			460-239238-4			460-239238-5			460-239238-6		
Sampling Date	07/21/2021 14:40:00			07/21/2021 14:41:00			07/21/2021 14:42:00			07/21/2021 15:40:00			07/21/2021 15:41:00			07/21/2021 15:42:00		
Matrix	Water			Water			Water			Water			Water			Water		
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 7196A																		
Cr (VI) (ug/l)	8.1	U	8.1	8.1	U	8.1	8.1	U	8.1	305		16.3	8.1	U	8.1	8.1	U	8.1

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Lab Contact:

Grace Chang

Project Manager II

(732)593-2579

TestAmerica Laboratories, Inc
Eurofins TestAmerica, Edison
Lab Job ID: 460-239238-1
Job Description: Precision National Pla
For:
ARCADIS U.S., Inc
1 Harvard Way
Hillsborough, New Jersey 08844

Client ID	Bathtub seep			Cinderblock Seep			Lagoon SW			French Drain Sump			Lagoon Sump		
Lab Sample ID	460-239238-7			460-239238-8			460-239238-9			460-239238-10			460-239238-11		
Sampling Date	07/21/2021 15:30:00			07/21/2021 15:35:00			07/21/2021 15:50:00			07/21/2021 15:55:00			07/21/2021 15:10:00		
Matrix	Water			Water			Water			Water			Water		
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 7196A															
Cr (VI) (ug/l)	8.1	U	8.1	8.1	U	8.1	8.7	J	8.1	49.6		8.1	8.1	U	8.1

J : Result is less than the RL but greater tha
U : Indicates the analyte was analyzed for l

Lab Contact:
Grace Chang
Project Manager II
(732)593-2579

TestAmerica Laboratories, Inc.**Eurofins TestAmerica, Edison**

Lab Job ID: 460-241165-1

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	Lagoon Influent			Lagoon Post Lead			Lagoon Effluent			Seep Shed Influent			Seep Shed Mid			Seep Shed Effluent		
Lab Sample ID	460-241165-1			460-241165-2			460-241165-3			460-241165-4			460-241165-5			460-241165-6		
Sampling Date	08/19/2021 14:00:00			08/19/2021 14:01:00			08/19/2021 14:02:00			08/19/2021 11:40:00			08/19/2021 11:41:00			08/19/2021 11:42:00		
Matrix	Water			Water			Water			Water			Water			Water		
Unit																		
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 200.7 REV 4.4(UG/L)																		
Aluminum	41.2	J	40.7	NR			40.7	U	40.7	NR			NR			NR		
Antimony	7.8	U	7.8	NR			7.8	U	7.8	NR			NR			NR		
Arsenic	3.6	U	3.6	NR			3.6	U	3.6	NR			NR			NR		
Barium	20.9	U	20.9	NR			20.9	U	20.9	NR			NR			NR		
Beryllium	0.35	U	0.35	NR			0.35	U	0.35	NR			NR			NR		
Cadmium	0.31	U	0.31	NR			0.31	U	0.31	NR			NR			NR		
Calcium	26800		358	NR			26500		358	NR			NR			NR		
Chromium	33.0		5.7	12.3		5.7	5.9	J	5.7	393		5.7	72.6		5.7	18.9		5.7
Cobalt	3.4	U	3.4	NR			3.4	U	3.4	NR			NR			NR		
Copper	6.1	U	6.1	NR			6.1	U	6.1	NR			NR			NR		
Iron	305		76.8	NR			76.8	U	76.8	NR			NR			NR		
Lead	3.2	J	3.1	NR			4.1	J	3.1	NR			NR			NR		
Magnesium	2490	J	329	NR			2390	J	329	NR			NR			NR		
Manganese	111		1.2	NR			136		1.2	NR			NR			NR		
Nickel	6.1	J	3.6	NR			3.6	U	3.6	NR			NR			NR		
Potassium	918	J	492	NR			933	J	492	NR			NR			NR		
Selenium	8.6	U	8.6	NR			8.6	U	8.6	NR			NR			NR		
Silver	5.0	U	5.0	NR			5.0	U	5.0	NR			NR			NR		
Sodium	11200		502	NR			10900		502	NR			NR			NR		
Thallium	5.8	U	5.8	NR			5.8	U	5.8	NR			NR			NR		
Vanadium	3.9	U	3.9	NR			3.9	U	3.9	NR			NR			NR		
Zinc	11.7	J	4.5	NR			7.3	J	4.5	NR			NR			NR		

WATER BY 245.1(UG/L)																		
Mercury	0.091	U	0.091	NR			0.091	U	0.091	NR			NR			NR		

NR: Not Analyzed

J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

U : Indicates the analyte was analyzed for but not detected.

Lab Contact:
Grace Chang
Project Manager II
(732)593-2579

TestAmerica Laboratories, Inc.
Eurofins TestAmerica, Edison

Lab Job ID: 460-241165-1

Job Description: Precision National Pla

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	Bathtub Seep			Cinder Block Seep			Trolley Track Seep			French Drain Sump			Lagoon Sump			Lagoon SW		
Lab Sample ID	460-241165-7			460-241165-8			460-241165-9			460-241165-10			460-241165-11			460-241165-12		
Sampling Date	08/19/2021 11:45:00			08/19/2021 11:50:00			08/19/2021 12:00:00			08/19/2021 12:05:00			08/19/2021 12:10:00			08/19/2021 12:15:00		
Matrix	Water			Water			Water			Water			Water			Water		
Unit																		
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 200.7 REV 4.4(UG/L)																		
Aluminum	NR			NR			NR			NR			NR			NR		
Antimony	NR			NR			NR			NR			NR			NR		
Arsenic	NR			NR			NR			NR			NR			NR		
Barium	NR			NR			NR			NR			NR			NR		
Beryllium	NR			NR			NR			NR			NR			NR		
Cadmium	NR			NR			NR			NR			NR			NR		
Calcium	NR			NR			NR			NR			NR			NR		
Chromium	47.5		5.7	416		5.7	105		5.7	115		5.7	29.4		5.7	38.2		5.7
Cobalt	NR			NR			NR			NR			NR			NR		
Copper	NR			NR			NR			NR			NR			NR		
Iron	NR			NR			NR			NR			NR			NR		
Lead	NR			NR			NR			NR			NR			NR		
Magnesium	NR			NR			NR			NR			NR			NR		
Manganese	NR			NR			NR			NR			NR			NR		
Nickel	NR			NR			NR			NR			NR			NR		
Potassium	NR			NR			NR			NR			NR			NR		
Selenium	NR			NR			NR			NR			NR			NR		
Silver	NR			NR			NR			NR			NR			NR		
Sodium	NR			NR			NR			NR			NR			NR		
Thallium	NR			NR			NR			NR			NR			NR		
Vanadium	NR			NR			NR			NR			NR			NR		
Zinc	NR			NR			NR			NR			NR			NR		

WATER BY 245.1(UG/L)																		
Mercury	NR			NR			NR			NR			NR			NR		

NR: Not Analyzed

J : Result is less than the RL but greater tha

U : Indicates the analyte was analyzed for l

Lab Contact:
 Grace Chang
 Project Manager II
 (732)593-2579

TestAmerica Laboratories, Inc.**Eurofins TestAmerica, Edison**

Lab Job ID: 460-241165-1

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	Lagoon Influent			Lagoon Post Lead			Lagoon Effluent			Seep Shed Influent			Seep Shed Mid			Seep Shed Effluent		
Lab Sample ID	460-241165-1			460-241165-2			460-241165-3			460-241165-4			460-241165-5			460-241165-6		
Sampling Date	08/19/2021 14:00:00			08/19/2021 14:01:00			08/19/2021 14:02:00			08/19/2021 11:40:00			08/19/2021 11:41:00			08/19/2021 11:42:00		
Matrix	Water			Water			Water			Water			Water			Water		
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 7196A																		
Cr (VI) (ug/l)	11.5		8.1	8.1	U F1	8.1	8.1	U	8.1	299		16.3	8.1	U	8.1	8.1	U	8.1

F1 : MS and/or MSD recovery exceeds control limits.

J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

U : Indicates the analyte was analyzed for but not detected.

Lab Contact:

Grace Chang

Project Manager II

(732)593-2579

TestAmerica Laboratories, Inc.
Eurofins TestAmerica, Edison
Lab Job ID: 460-241165-1
Job Description: Precision National Pla
For:
ARCADIS U.S., Inc
1 Harvard Way
Hillsborough, New Jersey 08844

Client ID	Bathtub Seep			Cinder Block Seep			Trolley Track Seep			French Drain Sump			Lagoon Sump			Lagoon SW		
Lab Sample ID	460-241165-7			460-241165-8			460-241165-9			460-241165-10			460-241165-11			460-241165-12		
Sampling Date	08/19/2021 11:45:00			08/19/2021 11:50:00			08/19/2021 12:00:00			08/19/2021 12:05:00			08/19/2021 12:10:00			08/19/2021 12:15:00		
Matrix	Water			Water			Water			Water			Water			Water		
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 7196A																		
Cr (VI) (ug/l)	8.1	U	8.1	8.1	U	8.1	52.4		8.1	67.9		8.1	8.2	J	8.1	10.4		8.1

F1 : MS and/or MSD recovery exceeds cont
J : Result is less than the RL but greater tha
U : Indicates the analyte was analyzed for l

Lab Contact:
Grace Chang
Project Manager II
(732)593-2579

TestAmerica Laboratories, Inc.**Eurofins TestAmerica, Edison**

Lab Job ID: 460-243407-1

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	Lagoon Influent			Lagoon Post Lead			Lagoon Effluent			French Drain Sump			Lagoon Sump		
Lab Sample ID	460-243407-1			460-243407-2			460-243407-3			460-243407-4			460-243407-5		
Sampling Date	09/22/2021 12:05:00			09/22/2021 12:06:00			09/22/2021 12:07:00			09/22/2021 11:40:00			09/22/2021 11:35:00		
Matrix	Water			Water			Water			Water			Water		
Unit															
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 200.7 REV 4.4(UG/L)															
Aluminum	40.7	U	40.7	NR			40.7	U	40.7	NR			NR		
Antimony	7.8	U	7.8	NR			7.8	U	7.8	NR			NR		
Arsenic	3.6	U	3.6	NR			3.6	U	3.6	NR			NR		
Barium	20.9	U	20.9	NR			20.9	U	20.9	NR			NR		
Beryllium	0.35	U	0.35	NR			0.35	U	0.35	NR			NR		
Cadmium	0.31	U	0.31	NR			0.31	U	0.31	NR			NR		
Calcium	53600		358	NR			53500		358	NR			NR		
Chromium	37.2		5.7	5.7	U	5.7	5.7	U	5.7	9.2	J	5.7	45.0		5.7
Cobalt	3.4	U	3.4	NR			3.4	U	3.4	NR			NR		
Copper	6.1	U	6.1	NR			6.1	U	6.1	NR			NR		
Iron	2560		76.8	NR			76.8	U	76.8	NR			NR		
Lead	7.7		3.1	NR			5.0		3.1	NR			NR		
Magnesium	4970	J	329	NR			5010		329	NR			NR		
Manganese	2560		1.2	NR			46.8		1.2	NR			NR		
Nickel	5.2	J	3.6	NR			3.6	U	3.6	NR			NR		
Potassium	729	J	492	NR			780	J	492	NR			NR		
Selenium	8.6	U	8.6	NR			8.6	U	8.6	NR			NR		
Silver	5.0	U	5.0	NR			5.0	U	5.0	NR			NR		
Sodium	22700		502	NR			22900		502	NR			NR		
Thallium	7.3	J	5.8	NR			5.8	U	5.8	NR			NR		
Vanadium	3.9	U	3.9	NR			3.9	U	3.9	NR			NR		
Zinc	41.0		4.5	NR			13.8	J	4.5	NR			NR		
WATER BY 245.1(UG/L)															
Mercury	0.091	U	0.091	NR			0.091	U	0.091	NR			NR		

NR: Not Analyzed

J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

U : Indicates the analyte was analyzed for but not detected.

Lab Contact:

Grace Chang

Project Manager II

(732)593-2579

TestAmerica Laboratorie**Eurofins TestAmerica, Edison**

Lab Job ID: 460-243407-1

Job Description: Precision National

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	Seep Shed Inffluent			Seep Shed Mid			Seep Shed Effluent		
Lab Sample ID	460-243407-6			460-243407-7			460-243407-8		
Sampling Date	09/22/2021 13:45:00			09/22/2021 13:46:00			09/22/2021 13:47:00		
Matrix	Water			Water			Water		
Unit									
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 200.7 REV 4.4(UG/L)									
Aluminum	NR			NR			NR		
Antimony	NR			NR			NR		
Arsenic	NR			NR			NR		
Barium	NR			NR			NR		
Beryllium	NR			NR			NR		
Cadmium	NR			NR			NR		
Calcium	NR			NR			NR		
Chromium	590		5.7	421		5.7	36.6		5.7
Cobalt	NR			NR			NR		
Copper	NR			NR			NR		
Iron	NR			NR			NR		
Lead	NR			NR			NR		
Magnesium	NR			NR			NR		
Manganese	NR			NR			NR		
Nickel	NR			NR			NR		
Potassium	NR			NR			NR		
Selenium	NR			NR			NR		
Silver	NR			NR			NR		
Sodium	NR			NR			NR		
Thallium	NR			NR			NR		
Vanadium	NR			NR			NR		
Zinc	NR			NR			NR		
WATER BY 245.1(UG/L)									
Mercury	NR			NR			NR		

NR: Not Analyzed

J : Result is less than the RL but greater

U : Indicates the analyte was analyzed

Lab Contact:

Grace Chang

Project Manager II

(732)593-2579

TestAmerica Laboratories, Inc.**Eurofins TestAmerica, Edison**

Lab Job ID: 460-243407-1

Job Description: Precision National

Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Client ID	Lagoon Influent			Lagoon Post Lead			Lagoon Effluent			French Drain Sump			Lagoon Sump		
Lab Sample ID	460-243407-1			460-243407-2			460-243407-3			460-243407-4			460-243407-5		
Sampling Date	09/22/2021 12:05:00			09/22/2021 12:06:00			09/22/2021 12:07:00			09/22/2021 11:40:00			09/22/2021 11:35:00		
Matrix	Water			Water			Water			Water			Water		
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 7196A															
Cr (VI) (ug/l)	8.1	U	8.1	8.1	U	8.1	8.1	U	8.1	8.1	U	8.1	8.1	U	8.1

U : Indicates the analyte was analyzed for but not detected.

Lab Contact:

Grace Chang

Project Manager II

(732)593-2579

TestAmerica Labora

Eurofins TestAmeric

Lab Job ID: 460-243407-1

Job Description: Precision N

Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Client ID	Seep Shed Inffluent			Seep Shed Mid			Seep Shed Effluent		
Lab Sample ID	460-243407-6			460-243407-7			460-243407-8		
Sampling Date	09/22/2021 13:45:00			09/22/2021 13:46:00			09/22/2021 13:47:00		
Matrix	Water			Water			Water		
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 7196A									
Cr (VI) (ug/l)	470		40.7	8.1	U	8.1	8.1	U	8.1

U : Indicates the analyte was an

Lab Contact:

Grace Chang

Project Manager II

(732)593-2579

TestAmerica Laboratories, Inc.**Eurofins TestAmerica, Edison**

Lab Job ID: 460-243407-1

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	Sed-1			Sed-1		
Lab Sample ID	460-243407-9			460-243407-9		
Sampling Date	09/22/2021 14:00:00			09/22/2021 14:00:00		
Matrix	Soil			Soil		
Dilution Factor	1			1		
Unit	%			% passing		
	Result	Q	MDL	Result	Q	MDL
SOIL BY D422						
Clay	55.3			NR		
Coarse Sand	1.8			NR		
Fine Sand	13.3			NR		
Gravel	0.0			NR		
Hydrometer Reading 1 - Percent Finer	NR			93.9		
Hydrometer Reading 2 - Percent Finer	NR			70.8		
Hydrometer Reading 3 - Percent Finer	NR			63.1		
Hydrometer Reading 4 - Percent Finer	NR			63.1		
Hydrometer Reading 5 - Percent Finer	NR			55.3		
Hydrometer Reading 6 - Percent Finer	NR			55.3		
Hydrometer Reading 7 - Percent Finer	NR			39.9		
Medium Sand	3.2			NR		
Sand	18.3			NR		
Sieve Size #10 - Percent Finer	NR			98.2		
Sieve Size #100 - Percent Finer	NR			86.1		
Sieve Size #20 - Percent Finer	NR			97.2		
Sieve Size #200 - Percent Finer	NR			81.7		
Sieve Size #4 - Percent Finer	NR			100.0		
Sieve Size #40 - Percent Finer	NR			95.0		
Sieve Size #60 - Percent Finer	NR			91.6		
Sieve Size #80 - Percent Finer	NR			89.1		
Sieve Size 0.375 inch - Percent Finer	NR			100.0		
Sieve Size 0.75 inch - Percent Finer	NR			100.0		
Sieve Size 1 inch - Percent Finer	NR			100.0		
Sieve Size 1.5 inch - Percent Finer	NR			100.0		
Sieve Size 2 inch - Percent Finer	NR			100.0		
Sieve Size 3 inch - Percent Finer	NR			100.0		
Silt	26.4			NR		

NR: Not Analyzed

Lab Contact:

Grace Chang

Project Manager II

(732)593-2579

SEMIANNUAL SURFACE WATER MONITORING RESULTS

TestAmerica Laboratories, Inc.
Eurofins TestAmerica, Edison
Lab Job ID: 460-239236-1
Job Description: Precision National Plating
For:
ARCADIS U.S., Inc
1 Harvard Way
Hillsborough, New Jersey 08844

Client ID	SW-10			SW-14			SW-14 BC2			SW-14 DE			SW-14 G			SW-15			SW-16		
Lab Sample ID	460-239236-1			460-239236-2			460-239236-3			460-239236-4			460-239236-5			460-239236-6			460-239236-7		
Sampling Date	07/21/2021 11:20:00			07/21/2021 11:40:00			07/21/2021 11:57:00			07/21/2021 12:10:00			07/21/2021 12:16:00			07/21/2021 12:25:00			07/21/2021 12:35:00		
Matrix	Water			Water			Water			Water			Water			Water			Water		
Unit																					
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 200.7 REV 4.4(UG/L)																					
Chromium	5.7	U	5.7	5.7	U	5.7	5.7	U	5.7	5.7	U	5.7	5.7	U	5.7	5.7	U	5.7	5.7	U	5.7

U : Indicates the analyte was analyzed for but not detected.

Lab Contact:
Grace Chang
Project Manager II
(732)593-2579

Eurofins TestAmerica, Edison

TestAmerica Laboratories, Inc.

Eurofins TestAmerica, Edison

Lab Job ID: 460-239236-1

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	SW-10			SW-14			SW-14 BC2			SW-14 DE			SW-14 G			SW-15			SW-16		
Lab Sample ID	460-239236-1			460-239236-2			460-239236-3			460-239236-4			460-239236-5			460-239236-6			460-239236-7		
Sampling Date	07/21/2021 11:20:00			07/21/2021 11:40:00			07/21/2021 11:57:00			07/21/2021 12:10:00			07/21/2021 12:16:00			07/21/2021 12:25:00			07/21/2021 12:35:00		
Matrix	Water			Water			Water			Water			Water			Water			Water		
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 7196A																					
Cr (VI) (ug/l)	8.1	U	8.1	8.1	U	8.1	8.1	U	8.1	8.1	U	8.1	8.1	U	8.1	8.1	U	8.1	8.1	U	8.1

U : Indicates the analyte was analyzed for but not detected.

Lab Contact:

Grace Chang

Project Manager II

(732)593-2579