

Ms. Ann DiDonato  
U.S. EPA Region 3  
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Subject:

Quarterly Progress Report: April through June 2019  
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 April 1, 2019 and June 30, 2019. 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).

### **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 April through June 2019 to do the following:

- Precision performed quarterly surface water monitoring with the U.S. EPA on April 15, 2019 as approved in the RAP.
- Precision performed semiannual groundwater and residential well monitoring in April 2019 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 April 19, 2019 for hexavalent chromium and total chromium.

#### ENVIRONMENT

Date:  
September 24, 2019

Contact:  
Lawrence G. Brunt, PE

Phone:  
908.526.1000

Email:  
Larry.brun@arcadis.com

Our ref:  
BB014215.2019.00004

The midpoints between the resin beds of the system also were sampled for hexavalent and total chromium. At the time of sampling, the influent pH was 7.40 su and the temperature was 10.7° C.

- On April 19, 2019, the flow totalizer reading for the Seep Shed Treatment System was 6,531,091 gallons.
- The influent and effluent of the Seep Shed Treatment System were sampled on May 16, 2019 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 7.4 su and the temperature was 15.8° C.
- On May 16, 2019, the Seep Shed flow totalizer reading was 6,586,118 gallons.
- The influent and effluent of the Seep Shed Treatment System were sampled on June 18, 2019 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 6.68 su and the temperature was 24.68° C.
- On June 18, 2019, the flow totalizer reading for the Seep Shed Treatment System was 6,650,828 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 April 19, 2019 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 7.27 su and the temperature was 11.1° C.
- By April 29, 2019, the total volume treated by the Lagoon Treatment System was approximately 34,747,212 gallons.
- The influent and system effluent of the Lagoon Treatment System were sampled on May 16, 2019 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 7.3 su and the temperature was 11.9° C.
- By May 16, 2019 the total volume treated by the Lagoon Treatment System was 35,004,834 gallons.
- The influent and system effluent of the Lagoon Treatment System were sampled on June 18, 2019 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 6.44 su and the temperature was 20.20° C.
- By June 18, 2019, the total volume treated by the Lagoon Treatment System was 35,330,295 gallons.

#### Quarterly Surface Water Monitoring

- As approved in the RAP, quarterly surface water sampling of Ackerly Creek was conducted on April 15, 2019. Samples were analyzed for hexavalent chromium and total chromium. Results were received from TestAmerica Laboratories and validated. A summary of the data is attached.

#### Semiannual Groundwater Monitoring

- As approved in the RAP, semiannual monitoring of groundwater monitoring wells, residential wells, and seeps was conducted in April 2019. Samples were analyzed for hexavalent chromium and total chromium. Results were received from TestAmerica Laboratories and validated. A summary of the data is 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 July, August, and September 2019. Data is anticipated to be received four weeks after each sampling event.
- Quarterly monitoring of surface water as approved in the RAP is scheduled for July 2019.

#### **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 April 19, 2019 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 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 at a concentration of 19.2 ug/L which does not exceed the MCL of 100 ug/L.

- Laboratory data for the quarterly surface water samples collected on April 15, 2019 were received from TestAmerica Laboratories and validated. A summary of the data is attached.
- Laboratory data for the semiannual groundwater monitoring well and residential potable well samples collected in April 2019 were received from TestAmerica Laboratories and validated. A summary of the data is attached.
- Laboratory data for the May 16, 2019 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 and total chromium were not detected above the laboratory method detection limit 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 10.8 ug/L, which does not exceed the MCL of 100 ug/L.

- Laboratory data for the June 18, 2019 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 was detected at an estimated concentration of 5.0 ug/L in the effluent of the Lagoon Treatment System. Total chromium was detected in the effluent at an estimated concentration of 7.1 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.

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

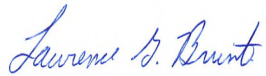
- None.

Ms. Ann DiDonato  
U.S. EPA  
September 24, 2019

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

Enclosures

## 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 January through March 2019. 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: 460-173861-1, 460-173931-1, 460-174022-1, 460-174023-1, 460-1741031-1, 460-174104-1, 460-175336-1, 460-175338-1, and 460-177043-1.

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 recoveries (MS/MSD)
- 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 laboratory blanks were all within compliance criteria for all samples.

The following items were noted during the data review:

There was an omission on the chain of custody submitted with SDG 460-174022-1 such that no analyses were selected for sample 460-174022-11 (Cinder Block Seep). The laboratory logged in the sample for analysis for hexavalent chromium and total chromium, the same as the other samples in the batch, and notified Arcadis. Arcadis confirmed via email that these were the correct analyses required for the Cinder Block Seep sample and the analyses were performed accordingly.

In metals batch 460-590667, which included samples from PNP SDG 460-175336-1, the relative percent difference between the concentrations of zinc in the initial result and the duplicate analysis performed along with the batch was greater than 20%. However, the concentrations of zinc in the sample and the duplicate were less than five times the method detection limit, so the criteria for comparison becomes the method detection limit. The difference in results is not greater than the method detection limit. The sample used for the duplicate analysis was not a PNP sample. All of the other QA/QC parameters were in compliance, so the results are not qualified.

## 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 qualification.

## **TREATMENT SYSTEM MONITORING RESULTS**

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

SUMMARY OF ANALYTICAL RESULTS: 460-

180020-1

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			Lagoon Seep			Seep Shed Influent			Seep Shed Mid			Seep Shed Effluent		
Lab Sample ID	460-180020-1			460-180020-2			460-180020-3			460-180020-4			460-180020-5			460-180020-6			460-180020-7		
Sampling Date	04/19/2019 12:50:00			04/19/2019 12:51:00			04/19/2019 12:52:00			04/19/2019 12:45:00			04/19/2019 10:20:00			04/19/2019 15:21:00			04/19/2019 15:22:00		
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
<b>WATER BY 200.7 REV 4.4(UG/L)</b>																					
Aluminum	95.7	U	95.7	NR			95.7	U	95.7	NR			NR			NR			NR		
Antimony	4.1	U	4.1	NR			4.1	U	4.1	NR			NR			NR			NR		
Arsenic	4.2	U	4.2	NR			4.2	U	4.2	NR			NR			NR			NR		
Barium	15.1	J	10.5	NR			15.9	J	10.5	NR			NR			NR			NR		
Beryllium	1.5	U	1.5	NR			1.5	U	1.5	NR			NR			NR			NR		
Cadmium	2.1	U	2.1	NR			2.1	U	2.1	NR			NR			NR			NR		
Calcium	59100		608	NR			60400		608	NR			NR			NR			NR		
Chromium	133		5.9	36.7		5.9	5.9	U	5.9	35500		58.9	416		5.9	18.1		5.9	19.2		5.9
Cobalt	5.5	U	5.5	NR			5.5	U	5.5	NR			NR			NR			NR		
Copper	5.5	U	5.5	NR			5.5	U	5.5	NR			NR			NR			NR		
Iron	1940		111	NR			111	U	111	NR			NR			NR			NR		
Lead	3.8	U	3.8	NR			3.8	U	3.8	NR			NR			NR			NR		
Magnesium	5550		578	NR			5680		578	NR			NR			NR			NR		
Manganese	125		5.0	NR			5.0	U	5.0	NR			NR			NR			NR		
Nickel	6.3	U	6.3	NR			6.3	U	6.3	NR			NR			NR			NR		
Potassium	975	J	207	NR			973	J	207	NR			NR			NR			NR		
Selenium	4.2	U	4.2	NR			4.2	U	4.2	NR			NR			NR			NR		
Silver	1.3	U	1.3	NR			1.3	U	1.3	NR			NR			NR			NR		
Sodium	24100		846	NR			25200		846	NR			NR			NR			NR		
Thallium	8.7	U	8.7	NR			8.7	U	8.7	NR			NR			NR			NR		
Vanadium	6.0	U	6.0	NR			6.0	U	6.0	NR			NR			NR			NR		
Zinc	49.0		5.4	NR			5.4	U	5.4	NR			NR			NR			NR		
<b>WATER BY 245.1(UG/L)</b>																					
Mercury	0.12	U	0.12	NR			0.12	U	0.12	NR			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**

## SUMMARY OF ANALYTICAL

RESULTS: 460-180020-1

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			Lagoon Seep			Seep Shed Influent			Seep Shed Mid			Seep Shed Effluent		
Lab Sample ID	460-180020-1			460-180020-2			460-180020-3			460-180020-4			460-180020-5			460-180020-6			460-180020-7		
Sampling Date	04/19/2019 12:50:00			04/19/2019 12:51:00			04/19/2019 12:52:00			04/19/2019 12:45:00			04/19/2019 10:20:00			04/19/2019 15:21:00			04/19/2019 15:22:00		
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
<b>WATER BY 7196A</b>																					
Cr (VI) (ug/l)	108		3.0	21.2		3.0	3.0	U	3.0	171		3.0	362		15.1	3.0	U	3.0	3.0	U	3.0

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**

**SUMMARY OF ANALYTICAL RESULTS: 460-182202-1**

**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			Lagoon Seep		
Lab Sample ID	460-182202-1			460-182202-2			460-182202-3			460-182202-4			460-182202-5			460-182202-6			460-182202-7		
Sampling Date	05/16/2019 15:45:00			05/16/2019 15:46:00			05/16/2019 15:47:00			05/16/2019 16:15:00			05/16/2019 16:16:00			05/16/2019 16:17:00			05/16/2019 15:15:00		
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
<b>WATER BY 200.7 REV 4.4(UG/L)</b>																					
Aluminum	95.7	U	95.7	NR			95.7	U	95.7	NR			NR			NR			NR		
Antimony	4.1	U	4.1	NR			4.1	U	4.1	NR			NR			NR			NR		
Arsenic	4.2	U	4.2	NR			4.2	U	4.2	NR			NR			NR			NR		
Barium	10.5	U	10.5	NR			10.6	J	10.5	NR			NR			NR			NR		
Beryllium	1.5	U	1.5	NR			1.5	U	1.5	NR			NR			NR			NR		
Cadmium	2.1	U	2.1	NR			2.1	U	2.1	NR			NR			NR			NR		
Calcium	43700		608	NR			48000		608	NR			NR			NR			NR		
Chromium	88.9		5.9	26.7		5.9	5.9	U	5.9	325		5.9	20.1		5.9	10.8		5.9	4740		5.9
Cobalt	5.5	U	5.5	NR			5.5	U	5.5	NR			NR			NR			NR		
Copper	5.5	U	5.5	NR			5.5	U	5.5	NR			NR			NR			NR		
Iron	111	U	111	NR			111	U	111	NR			NR			NR			NR		
Lead	3.8	U	3.8	NR			3.8	U	3.8	NR			NR			NR			NR		
Magnesium	3940	J	578	NR			4500	J	578	NR			NR			NR			NR		
Manganese	26.7		5.0	NR			10.4	J	5.0	NR			NR			NR			NR		
Nickel	11.0	J	6.3	NR			6.3	U	6.3	NR			NR			NR			NR		
Potassium	774	J	207	NR			834	J	207	NR			NR			NR			NR		
Selenium	4.2	U	4.2	NR			4.2	U	4.2	NR			NR			NR			NR		
Silver	1.3	U	1.3	NR			1.3	U	1.3	NR			NR			NR			NR		
Sodium	18900		846	NR			19900		846	NR			NR			NR			NR		
Thallium	8.7	U	8.7	NR			8.7	U	8.7	NR			NR			NR			NR		
Vanadium	6.0	U	6.0	NR			6.0	U	6.0	NR			NR			NR			NR		
Zinc	13.8	J	5.4	NR			5.4	U	5.4	NR			NR			NR			NR		
<b>WATER BY 245.1(UG/L)</b>																					
Mercury	0.12	U	0.12	NR			0.12	U	0.12	NR			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:

Patricia Grieco

Senior Project Manager

(732)593-2507

Grace Chang

Project Manager II

(732)593-2579

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

## SUMMARY OF ANALYTICAL

RESULTS: 460-182202-1

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			Lagoon Seep		
Lab Sample ID	460-182202-1			460-182202-2			460-182202-3			460-182202-4			460-182202-5			460-182202-6			460-182202-7		
Sampling Date	05/16/2019 15:45:00			05/16/2019 15:46:00			05/16/2019 15:47:00			05/16/2019 16:15:00			05/16/2019 16:16:00			05/16/2019 16:17:00			05/16/2019 15:15:00		
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
<b>WATER BY 7196A</b>																					
Cr (VI) (ug/l)	72.1		3.0	15.7		3.0	3.0	U	3.0	331		6.0	3.0	U	3.0	3.0	U	3.0	95.8		3.0

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

Lab Contact:

Patricia Grieco

Senior Project Manager

(732)593-2507

Grace Chang

Project Manager II

(732)593-2579

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

SUMMARY OF ANALYTICAL RESULTS: 460-184637-1

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			Lagoon Seep		
Lab Sample ID	460-184637-1			460-184637-2			460-184637-3			460-184637-4			460-184637-5			460-184637-6			460-184637-7		
Sampling Date	06/18/2019 14:45:00			06/18/2019 14:45:00			06/18/2019 14:46:00			06/18/2019 12:30:00			06/18/2019 12:31:00			06/18/2019 12:32:00			06/18/2019 15:00:00		
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
<b>WATER BY 200.7 REV 4.4(UG/L)</b>																					
Aluminum	95.7	U	95.7	NR			95.7	U	95.7	NR			NR			NR			NR		
Antimony	4.1	U	4.1	NR			4.1	U	4.1	NR			NR			NR			NR		
Arsenic	4.2	U	4.2	NR			4.2	U	4.2	NR			NR			NR			NR		
Barium	10.5	U	10.5	NR			10.5	U	10.5	NR			NR			NR			NR		
Beryllium	1.5	U	1.5	NR			1.5	U	1.5	NR			NR			NR			NR		
Cadmium	2.1	U	2.1	NR			2.1	U	2.1	NR			NR			NR			NR		
Calcium	28100		608	NR			30100		608	NR			NR			NR			NR		
Chromium	64.3		5.9	52.9		5.9	7.1	J	5.9	403		5.9	36.9		5.9	18.9		5.9	75500		29.5
Cobalt	5.5	U	5.5	NR			5.5	U	5.5	NR			NR			NR			NR		
Copper	8.5	J	5.5	NR			5.5	U	5.5	NR			NR			NR			NR		
Iron	198		111	NR			111	U	111	NR			NR			NR			NR		
Lead	3.8	U	3.8	NR			3.8	U	3.8	NR			NR			NR			NR		
Magnesium	2670	J	578	NR			2830	J	578	NR			NR			NR			NR		
Manganese	70.8		5.0	NR			8.0	J	5.0	NR			NR			NR			NR		
Nickel	20.6	J	6.3	NR			6.3	U	6.3	NR			NR			NR			NR		
Potassium	559	J	207	NR			452	J	207	NR			NR			NR			NR		
Selenium	4.2	U	4.2	NR			4.2	U	4.2	NR			NR			NR			NR		
Silver	1.3	U	1.3	NR			1.3	U	1.3	NR			NR			NR			NR		
Sodium	13300		846	NR			14200		846	NR			NR			NR			NR		
Thallium	8.7	U	8.7	NR			8.7	U	8.7	NR			NR			NR			NR		
Vanadium	6.0	U	6.0	NR			6.0	U	6.0	NR			NR			NR			NR		
Zinc	17.9	J	5.4	NR			5.4	U	5.4	NR			NR			NR			NR		

<b>WATER BY 245.1(UG/L)</b>																					
Mercury	0.12	U	0.12	NR			0.12	U	0.12	NR			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:

Sadia Malik

Project Management Assistant I

(732)549-3900

Grace Chang

Project Manager II

(732)593-2579

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

SUMMARY OF ANALYTICAL RESULTS: 460-184637-1

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			Lagoon Seep		
Lab Sample ID	460-184637-1			460-184637-2			460-184637-3			460-184637-4			460-184637-5			460-184637-6			460-184637-7		
Sampling Date	06/18/2019 14:45:00			06/18/2019 14:45:00			06/18/2019 14:46:00			06/18/2019 12:30:00			06/18/2019 12:31:00			06/18/2019 12:32:00			06/18/2019 15:00:00		
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
<b>WATER BY 7196A</b>																					
Cr (VI) (ug/l)	41.9		3.0	31.5		3.0	5.0	J	3.0	348		15.1	3.0	U	3.0	3.0	U	3.0	198		15.1

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:

Sadia Malik

Project Management Assistant I

(732)549-3900

Grace Chang

Project Manager II

(732)593-2579

## **QUARTERLY SURFACE WATER SAMPLING RESULTS**

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

## SUMMARY OF ANALYTICAL

RESULTS: 460-179670-1

Job Description: Precision National

Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	SW-10			SW-14			SW-148C2			SW-14DE			SW-14G			SW-15			SW-16		
Lab Sample ID	460-179670-1			460-179670-2			460-179670-3			460-179670-4			460-179670-5			460-179670-6			460-179670-7		
Sampling Date	04/15/2019 11:25:00			04/15/2019 11:30:00			04/15/2019 11:40:00			04/15/2019 11:45:00			04/15/2019 11:50:00			04/15/2019 11:55:00			04/15/2019 12:00:00		
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	5.9	U	5.9	5.9	U	5.9	5.9	U	5.9	5.9	U	5.9	5.9	U	5.9	5.9	U	5.9	5.9	U	5.9

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**

## SUMMARY OF ANALYTICAL

RESULTS: 460-179670-1

Job Description: Precision

National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	SW-10			SW-14			SW-14BC2			SW-14DE			SW-14G			SW-15			SW-16		
Lab Sample ID	460-179670-1			460-179670-2			460-179670-3			460-179670-4			460-179670-5			460-179670-6			460-179670-7		
Sampling Date	04/15/2019 11:25:00			04/15/2019 11:30:00			04/15/2019 11:40:00			04/15/2019 11:45:00			04/15/2019 11:50:00			04/15/2019 11:55:00			04/15/2019 12:00:00		
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
<b>WATER BY 7196A</b>																					
Cr (VI) (ug/l)	3.0	U	3.0	3.0	U	3.0	3.0	U	3.0	3.0	U	3.0	3.0	U	3.0	3.0	U	3.0	3.0	U	3.0

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

Lab Contact:

Grace Chang

Project Manager II

(732)593-2579



## **SEMIANNUAL MONITORING RESULTS**

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

SUMMARY OF ANALYTICAL RESULTS: 460-179669-1

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	AGM-5I			AGM-5S		
Lab Sample ID	460-179669-1			460-179669-2		
Sampling Date	04/15/2019 13:20:00			04/15/2019 12:25:00		
Matrix	Water			Water		
Unit						
	Result	Q	MDL	Result	Q	MDL
WATER BY 200.7 REV 4.4(UG/L)						
Chromium	5.9	U	5.9	218		5.9

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****SUMMARY OF ANALYTICAL RESULTS: 460-179669-1****Job Description: Precision National Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

<b>Client ID</b>	<b>AGM-5I</b>			<b>AGM-5S</b>		
<b>Lab Sample ID</b>	460-179669-1			460-179669-2		
<b>Sampling Date</b>	04/15/2019 13:20:00			04/15/2019 12:25:00		
<b>Matrix</b>	Water			Water		
	Result	Q	MDL	Result	Q	MDL
<b>WATER BY 7196A</b>						
Cr (VI) (ug/l)	3.0	U	3.0	30.1	U	30.1

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****SUMMARY OF ANALYTICAL RESULTS: 460-****179701-1****Job Description: Precision National****Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID	SB-11			SB-12			SB-29		
Lab Sample ID	460-179701-1			460-179701-2			460-179701-3		
Sampling Date	04/15/2019 16:20:00			04/15/2019 16:05:00			04/15/2019 17:25:00		
Matrix	Water			Water			Water		
Unit									
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
<b>WATER BY 200.7 REV 4.4(UG/L)</b>									
Chromium	227		5.9	42.3		5.9	13.6		5.9

Lab Contact:

Grace Chang

Project Manager II

(732)593-2579

**TestAmerica Laboratories, Inc.****Eurofins TestAmerica, Edison****SUMMARY OF ANALYTICAL RESULTS: 460-****179701-1****Job Description: Precision National****Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID	SB-11			SB-12			SB-29		
Lab Sample ID	460-179701-1			460-179701-2			460-179701-3		
Sampling Date	04/15/2019 16:20:00			04/15/2019 16:05:00			04/15/2019 17:25:00		
Matrix	Water			Water			Water		
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
<b>WATER BY 7196A</b>									
Cr (VI) (ug/l)	3.0	U	3.0	3.0	U	3.0	3.0	U	3.0

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****SUMMARY OF ANALYTICAL RESULTS: 460-****179736-1****Job Description: Precision National****Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID																		
Lab Sample ID	460-179736-1			460-179736-2			460-179736-3			460-179736-4			460-179736-5			460-179736-6		
Sampling Date	04/16/2019 13:15:00			04/16/2019 12:05:00			04/16/2019 11:20:00			04/16/2019 13:10:00			04/16/2019 12:20:00			04/16/2019 11:35:00		
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)																		
Chromium	5.9	U	5.9	490		5.9	324		5.9	55.7		5.9	6.7	J	5.9	203		5.9

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, |**  
**Eurofins TestAmerica, Edis**

**SUMMARY OF ANALYTICAL RESULTS: 460-**

**179736-1**

**Job Description: Precision National**

**Plating**

**For:**

**ARCADIS U.S., Inc**

**1 Harvard Way**

**Hillsborough, New Jersey 08844**

<b>Client ID</b>									
<b>Lab Sample ID</b>	460-179736-7			460-179736-8			460-179736-9		
<b>Sampling Date</b>	04/16/2019 10:25:00			04/16/2019 11:35:00			04/16/2019 10:10:00		
<b>Matrix</b>	Water			Water			Water		
<b>Unit</b>									
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
<b>WATER BY 200.7 REV 4.4(UG/L)</b>									
Chromium	174		5.9	5.9	U	5.9	5.9	U	5.9

J : Result is less than the RL but greater than

U : Indicates the analyte was analyzed for b

Lab Contact:

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Project Manager II

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**TestAmerica Laboratories, Inc.****Eurofins TestAmerica, Edison****SUMMARY OF ANALYTICAL RESULTS: 460-****179736-1****Job Description: Precision National****Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID																		
Lab Sample ID	460-179736-1			460-179736-2			460-179736-3			460-179736-4			460-179736-5			460-179736-6		
Sampling Date	04/16/2019 13:15:00			04/16/2019 12:05:00			04/16/2019 11:20:00			04/16/2019 13:10:00			04/16/2019 12:20:00			04/16/2019 11:35:00		
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
<b>WATER BY 7196A</b>																		
Cr (VI) (ug/l)	3.0	U	3.0	148		3.0	170		3.0	15.1	U	15.1	6.0	J	3.0	3.0	U	3.0

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, |**  
**Eurofins TestAmerica, Edis**

SUMMARY OF ANALYTICAL RESULTS: 460-  
 179736-1

Job Description: Precision National  
 Plating

For:

ARCADIS U.S., Inc  
 1 Harvard Way

Hillsborough, New Jersey 08844

Client ID									
Lab Sample ID	460-179736-7			460-179736-8			460-179736-9		
Sampling Date	04/16/2019 10:25:00			04/16/2019 11:35:00			04/16/2019 10:10:00		
Matrix	Water			Water			Water		
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
<b>WATER BY 7196A</b>									
Cr (VI) (ug/l)	153		3.0	3.0	U	3.0	3.7	J	3.0

J : Result is less than the RL but greater thar

U : Indicates the analyte was analyzed for b

Lab Contact:

Grace Chang

Project Manager II

(732)593-2579

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

SUMMARY OF ANALYTICAL RESULTS: 400

179818-1

Job Description: Precision National

Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	MW-4D			MW-BO1S			MW-BO1D			SB-1			MW-4S			SB-E		
Lab Sample ID	460-179818-1			460-179818-2			460-179818-3			460-179818-4			460-179818-5			460-179818-6		
Sampling Date	04/16/2019 16:20:00			04/16/2019 17:40:00			04/16/2019 17:35:00			04/16/2019 16:00:00			04/16/2019 16:05:00			04/16/2019 17:35:00		
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
<b>WATER BY 200.7 REV 4.4(UG/L)</b>																		
Chromium	5.9	U	5.9	52.8		5.9	267		5.9	196		5.9	5.9	U	5.9	16200		5.9

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****SUMMARY OF ANALYTICAL RESULTS: 460-****179818-1****Job Description: Precision National  
Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID	MW-4D			MW-BO1S			MW-BO1D			SB-1			MW-4S			SB-E		
Lab Sample ID	460-179818-1			460-179818-2			460-179818-3			460-179818-4			460-179818-5			460-179818-6		
Sampling Date	04/16/2019 16:20:00			04/16/2019 17:40:00			04/16/2019 17:35:00			04/16/2019 16:00:00			04/16/2019 16:05:00			04/16/2019 17:35:00		
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
<b>WATER BY 7196A</b>																		
Cr (VI) (ug/l)	3.0	U	3.0	3.0	U	3.0	3.0	U	3.0	3.0	U	3.0	3.0	U	3.0	301	U	301

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**

179833-1

Job Description: Precision National

Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	MW-15S			OMW-15			OMW-24			[REDACTED]			MW-9D			MW-9IB		
Lab Sample ID	460-179833-1			460-179833-2			460-179833-3			460-179833-4			460-179833-5			460-179833-6		
Sampling Date	04/17/2019 12:45:00			04/17/2019 11:45:00			04/17/2019 10:50:00			04/17/2019 10:20:00			04/17/2019 11:40:00			04/17/2019 11:00:00		
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)																		
Chromium	26.7		5.9	5.9	U	5.9	283		5.9	5.9	U	5.9	5.9	U	5.9	9.8	J	5.9

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:

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(732)593-2579

**TestAmerica Laboratories, |**  
**Eurofins TestAmerica, Edis**

179833-1

Job Description: Precision National

Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID				MW-9S			MW-14S			Cinderblock Seep			Bathtub Seep		
Lab Sample ID	460-179833-7			460-179833-8			460-179833-9			460-179833-10			460-179833-11		
Sampling Date	04/17/2019 10:10:00			04/17/2019 12:15:00			04/17/2019 11:00:00			04/17/2019 12:20:00			04/17/2019 12:15:00		
Matrix	Water			Water			Water			Water			Water		
Unit															
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
<b>WATER BY 200.7 REV 4.4(UG/L)</b>															
Chromium	5.9	U	5.9	235		5.9	295		5.9	283		5.9	769		5.9

J : Result is less than the RL but greater than

U : Indicates the analyte was analyzed for b

Lab Contact:

Grace Chang

Project Manager II

(732)593-2579

**TestAmerica Laboratories, Inc.****Eurofins TestAmerica, Edison****SUMMARY OF ANALYTICAL RESULTS: 460-****179833-1****Job Description: Precision National****Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID	MW-15S			OMW-15			OMW-24						MW-9D			MW-9IB		
Lab Sample ID	460-179833-1			460-179833-2			460-179833-3			460-179833-4			460-179833-5			460-179833-6		
Sampling Date	04/17/2019 12:45:00			04/17/2019 11:45:00			04/17/2019 10:50:00			04/17/2019 10:20:00			04/17/2019 11:40:00			04/17/2019 11:00:00		
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)	3.0	U	3.0	3.0	U	3.0	3.0	U	3.0	3.0	U	3.0	3.0	U	3.0	11.3		3.0

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

Lab Contact:

Grace Chang

Project Manager II

(732)593-2579

**TestAmerica Laboratories, |**  
**Eurofins TestAmerica, Edis**

**SUMMARY OF ANALYTICAL RESULTS: 460-179833-1**

**Job Description: Precision National**

**Plating**

**For:**

**ARCADIS U.S., Inc**

**1 Harvard Way**

**Hillsborough, New Jersey 08844**

Client ID				MW-9S			MW-14S			Cinderblock Seep			Bathtub Seep		
Lab Sample ID	460-179833-7			460-179833-8			460-179833-9			460-179833-10			460-179833-11		
Sampling Date	04/17/2019 10:10:00			04/17/2019 12:15:00			04/17/2019 11:00:00			04/17/2019 12:20:00			04/17/2019 12:15:00		
Matrix	Water			Water			Water			Water			Water		
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
<b>WATER BY 7196A</b>															
Cr (VI) (ug/l)	3.0	U	3.0	239		6.0	306		15.1	125		30.1	719		15.1

U : Indicates the analyte was analyzed for b

Lab Contact:

Grace Chang

Project Manager II

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

## SUMMARY OF ANALYTICAL RESULTS: 460-

179883-1

Job Description: Precision National

Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	SB-2			OMW-11			MW-30		
Lab Sample ID	460-179883-1			460-179883-2			460-179883-3		
Sampling Date	04/17/2019 15:15:00			04/17/2019 15:55:00			04/17/2019 16:00:00		
Matrix	Water			Water			Water		
Unit									
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
<b>WATER BY 200.7 REV 4.4(UG/L)</b>									
Chromium	1290		5.9	27.7		5.9	20.4		5.9

Lab Contact:

Grace Chang

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**TestAmerica Laboratories, Inc.****Eurofins TestAmerica, Edison****SUMMARY OF ANALYTICAL RESULTS: 460-****179883-1****Job Description: Precision National****Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID	SB-2			OMW-11			MW-30		
Lab Sample ID	460-179883-1			460-179883-2			460-179883-3		
Sampling Date	04/17/2019 15:15:00			04/17/2019 15:55:00			04/17/2019 16:00:00		
Matrix	Water			Water			Water		
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
<b>WATER BY 7196A</b>									
Cr (VI) (ug/l)	3.0	U	3.0	3.0	U	3.0	3.0	U	3.0

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

Lab Contact:

Grace Chang

Project Manager II

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

## SUMMARY OF ANALYTICAL RESULTS:

460-179922-1

Job Description: Precision National

Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	AGM-3I			OMW-29			OMW-26			AGM-2I			OMW-28			AGM-2S			Trolley Track Seep		
Lab Sample ID	460-179922-1			460-179922-2			460-179922-3			460-179922-4			460-179922-5			460-179922-6			460-179922-7		
Sampling Date	04/18/2019 12:35:00			04/18/2019 10:05:00			04/18/2019 12:50:00			04/18/2019 11:35:00			04/18/2019 11:10:00			04/18/2019 10:45:00			04/18/2019 12:55:00		
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
<b>WATER BY 200.7 REV 4.4(UG/L)</b>																					
Chromium	5.9	U	5.9	59.0		5.9	16.7		5.9	5.9	U	5.9	191		5.9	6.0	J	5.9	504		5.9

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****SUMMARY OF ANALYTICAL RESULTS:****460-179922-1****Job Description: Precision National****Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID	AGM-3I			OMW-29			OMW-26			AGM-2I			OMW-28			AGM-2S			Trolley Track Seep		
Lab Sample ID	460-179922-1			460-179922-2			460-179922-3			460-179922-4			460-179922-5			460-179922-6			460-179922-7		
Sampling Date	04/18/2019 12:35:00			04/18/2019 10:05:00			04/18/2019 12:50:00			04/18/2019 11:35:00			04/18/2019 11:10:00			04/18/2019 10:45:00			04/18/2019 12:55:00		
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
<b>WATER BY 7196A</b>																					
Cr (VI) (ug/l)	3.0	U	3.0	3.0	U	3.0	3.2	J	3.0	4.4	J	3.0	4.4	J	3.0	3.0	U	3.0	102		30.1

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**

SUMMARY OF ANALYTICAL RESULTS: 460-180015-1

Job Description: Precision National

Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	MW-3D			MW-3S			AGM-4S		
Lab Sample ID	460-180015-1			460-180015-2			460-180015-3		
Sampling Date	04/18/2019 16:20:00			04/18/2019 15:25:00			04/18/2019 16:10:00		
Matrix	Water			Water			Water		
Unit									
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
<b>WATER BY 200.7 REV 4.4(UG/L)</b>									
Chromium	147		5.9	50.7		5.9	35.0		5.9

Lab Contact:

Grace Chang

Project Manager II

(732)593-2579

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

SUMMARY OF ANALYTICAL RESULTS: 460-  
 180015-1

Job Description: Precision National

Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	MW-3D			MW-3S			AGM-4S		
Lab Sample ID	460-180015-1			460-180015-2			460-180015-3		
Sampling Date	04/18/2019 16:20:00			04/18/2019 15:25:00			04/18/2019 16:10:00		
Matrix	Water			Water			Water		
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
<b>WATER BY 7196A</b>									
Cr (VI) (ug/l)	3.0	U	3.0	3.0	U	3.0	4.4	J	3.0

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**

**SUMMARY OF ANALYTICAL RESULTS: 460-180019-1**

**Job Description: Precision National  
 Plating**

**For:**  
**ARCADIS U.S., Inc**  
**1 Harvard Way**  
**Hillsborough, New Jersey 08844**

Client ID	MW-8S			OMW-13			French Drain Sump			OMW-18			MW-AD			MW-AS			MW-9IA		
Lab Sample ID	460-180019-1			460-180019-2			460-180019-3			460-180019-4			460-180019-5			460-180019-6			460-180019-7		
Sampling Date	04/19/2019 10:25:00			04/19/2019 12:20:00			04/19/2019 12:50:00			04/19/2019 11:30:00			04/19/2019 12:35:00			04/19/2019 11:45:00			04/19/2019 10:05:00		
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
<b>WATER BY 200.7 REV 4.4(UG/L)</b>																					
Chromium	65.8		5.9	6.2	J	5.9	27.6		5.9	5.9	U	5.9	152		5.9	216		5.9	119		5.9

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****SUMMARY OF ANALYTICAL RESULTS: 460-180019-1**

Job Description: Precision National

Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	MW-8S			OMW-13			French Drain Sump			OMW-18			MW-AD			MW-AS			MW-9IA		
Lab Sample ID	460-180019-1			460-180019-2			460-180019-3			460-180019-4			460-180019-5			460-180019-6			460-180019-7		
Sampling Date	04/19/2019 10:25:00			04/19/2019 12:20:00			04/19/2019 12:50:00			04/19/2019 11:30:00			04/19/2019 12:35:00			04/19/2019 11:45:00			04/19/2019 10:05:00		
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
<b>WATER BY 7196A</b>																					
Cr (VI) (ug/l)	30.1	U	30.1	3.0	U	3.0	15.4		3.0	3.0	U	3.0	3.0	U	3.0	3.0	U	3.0	99.0		3.0

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****SUMMARY OF ANALYTICAL RESULTS: 460-****180163-1****Job Description: Precision National****Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID	MW-28I			MW-28S			MW-32S			MW-32I		
Lab Sample ID	460-180163-1			460-180163-2			460-180163-3			460-180163-4		
Sampling Date	04/22/2019 11:25:00			04/22/2019 10:10:00			04/22/2019 11:50:00			04/22/2019 12:40:00		
Matrix	Water			Water			Water			Water		
Unit												
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
<b>WATER BY 200.7 REV 4.4(UG/L)</b>												
Chromium	41.2		5.9	38.5		5.9	27.8		5.9	169		5.9

Lab Contact:

Grace Chang

Project Manager II

(732)593-2579



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

SUMMARY OF ANALYTICAL RESULTS: 460-180163-1

Job Description: Precision National  
Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	MW-28I			MW-28S			MW-32S			MW-32I		
Lab Sample ID	460-180163-1			460-180163-2			460-180163-3			460-180163-4		
Sampling Date	04/22/2019 11:25:00			04/22/2019 10:10:00			04/22/2019 11:50:00			04/22/2019 12:40:00		
Matrix	Water			Water			Water			Water		
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
<b>WATER BY 7196A</b>												
Cr (VI) (ug/l)	3.0	U	3.0	3.0	U	3.0	3.0	U	3.0	3.0	U	3.0

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****180187-1****Job Description: Precision National****Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID	MW-CI			MW-CS			MW-26S		
Lab Sample ID	460-180187-1			460-180187-2			460-180187-3		
Sampling Date	04/22/2019 16:35:00			04/22/2019 15:45:00			04/22/2019 16:05:00		
Matrix	Water			Water			Water		
Unit									
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
<b>WATER BY 200.7 REV 4.4(UG/L)</b>									
Chromium	38.2		5.9	54.7		5.9	225		5.9

Lab Contact:

Grace Chang

Project Manager II

(732)593-2579

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

SUMMARY OF ANALYTICAL RESULTS FOR

**180187-1****Job Description: Precision National****Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID	MW-CI			MW-CS			MW-26S		
Lab Sample ID	460-180187-1			460-180187-2			460-180187-3		
Sampling Date	04/22/2019 16:35:00			04/22/2019 15:45:00			04/22/2019 16:05:00		
Matrix	Water			Water			Water		
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
<b>WATER BY 7196A</b>									
Cr (VI) (ug/l)	3.0	U	3.0	3.0	U	3.0	3.0	U	3.0

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****SUMMARY OF ANALYTICAL RESULTS: 460-****180240-1****Job Description: Precision National****Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID	OMW-16			MW-10S			MW-11S			MW-10I			OMW-30			MW-18S			MW-18I		
Lab Sample ID	460-180240-1			460-180240-2			460-180240-3			460-180240-4			460-180240-5			460-180240-6			460-180240-7		
Sampling Date	04/23/2019 09:50:00			04/23/2019 11:15:00			04/23/2019 12:50:00			04/23/2019 09:55:00			04/23/2019 12:35:00			04/23/2019 12:15:00			04/23/2019 11:15:00		
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
<b>WATER BY 200.7 REV 4.4(UG/L)</b>																					
Chromium	5.9	U	5.9	240		5.9	324		5.9	103		5.9	2990		5.9	37.5		5.9	82.6		5.9

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****180240-1****Job Description: Precision National****Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID	OMW-16			MW-10S			MW-11S			MW-10I			OMW-30			MW-18S			MW-18I		
Lab Sample ID	460-180240-1			460-180240-2			460-180240-3			460-180240-4			460-180240-5			460-180240-6			460-180240-7		
Sampling Date	04/23/2019 09:50:00			04/23/2019 11:15:00			04/23/2019 12:50:00			04/23/2019 09:55:00			04/23/2019 12:35:00			04/23/2019 12:15:00			04/23/2019 11:15:00		
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
<b>WATER BY 7196A</b>																					
Cr (VI) (ug/l)	3.0	U	3.0	3.0	U	3.0	3.0	U	3.0	3.0	U	3.0	1270		30.1	3.0	U	3.0	6.0	U	6.0

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**

SUMMARY OF ANALYTICAL RESULTS: 460-  
 180272-1

Job Description: Precision National

Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	OMW-17			MW-11I			OMW-2					
Lab Sample ID	460-180272-1			460-180272-2			460-180272-3			460-180272-4		
Sampling Date	04/23/2019 15:55:00			04/23/2019 16:00:00			04/23/2019 15:15:00			04/23/2019 14:45:00		
Matrix	Water			Water			Water			Water		
Unit												
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
<b>WATER BY 200.7 REV 4.4(UG/L)</b>												
Chromium	10.4		5.9	57.3		5.9	62.3		5.9	5.9	U	5.9

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****SUMMARY OF ANALYTICAL RESULTS: 460-****180272-1****Job Description: Precision National****Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID	OMW-17			MW-11I			OMW-2								
Lab Sample ID	460-180272-1			460-180272-2			460-180272-3			460-180272-4			460-180272-5		
Sampling Date	04/23/2019 15:55:00			04/23/2019 16:00:00			04/23/2019 15:15:00			04/23/2019 14:45:00			04/23/2019 15:00:00		
Matrix	Water			Water			Water			Water			Water		
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
<b>WATER BY 7196A</b>															
Cr (VI) (ug/l)	3.0	U	3.0	3.0	U	3.0	13.5		3.0	3.0	U	3.0	3.0	U	3.0

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****SUMMARY OF ANALYTICAL RESULTS: 460-180272-2****Job Description: Precision National Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID			
Lab Sample ID	460-180272-5		
Sampling Date	04/23/2019 15:00:00		
Matrix	Water		
Unit			
	Result	Q	MDL
<b>WATER BY 200.7 REV 4.4(UG/L)</b>			
Chromium	5.9	U	5.9

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**

SUMMARY OF ANALYTICAL RESULTS: 460-  
 180294-1

Job Description: Precision National

Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	OMW-3			OMW-32			MW-BS			MW-BD		
Lab Sample ID	460-180294-1			460-180294-2			460-180294-3			460-180294-4		
Sampling Date	04/24/2019 10:45:00			04/24/2019 11:50:00			04/24/2019 11:50:00			04/24/2019 11:00:00		
Matrix	Water			Water			Water			Water		
Unit												
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 200.7 REV 4.4(UG/L)												
Chromium	611		5.9	210		5.9	24.3		5.9	41.8		5.9

Lab Contact:

Grace Chang

Project Manager II

(732)593-2579

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

SUMMARY OF ANALYTICAL RESULTS: 460-180294-1

Job Description: Precision National

Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	OMW-3			OMW-32			MW-BS			MW-BD		
Lab Sample ID	460-180294-1			460-180294-2			460-180294-3			460-180294-4		
Sampling Date	04/24/2019 10:45:00			04/24/2019 11:50:00			04/24/2019 11:50:00			04/24/2019 11:00:00		
Matrix	Water			Water			Water			Water		
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
<b>WATER BY 7196A</b>												
Cr (VI) (ug/l)	259		15.1	3.0	U	3.0	3.0	U	3.0	3.0	U	3.0

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

Lab Contact:

Grace Chang

Project Manager II

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

SUMMARY OF ANALYTICAL RESULTS: 460-

180359-1

Job Description: Precision National

Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	MW-35S			MW-35I			MW-27I		
Lab Sample ID	460-180359-1			460-180359-2			460-180359-3		
Sampling Date	04/24/2019 15:15:00			04/24/2019 16:10:00			04/24/2019 15:55:00		
Matrix	Water			Water			Water		
Unit									
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
<b>WATER BY 200.7 REV 4.4(UG/L)</b>									
Chromium	81.4		5.9	75.4		5.9	119		5.9

Lab Contact:

Grace Chang

Project Manager II

(732)593-2579

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

SUMMARY OF ANALYTICAL RESULTS: 460-  
 180359-1

Job Description: Precision National

Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	MW-35S			MW-35I			MW-27I		
Lab Sample ID	460-180359-1			460-180359-2			460-180359-3		
Sampling Date	04/24/2019 15:15:00			04/24/2019 16:10:00			04/24/2019 15:55:00		
Matrix	Water			Water			Water		
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
<b>WATER BY 7196A</b>									
Cr (VI) (ug/l)	3.0	U	3.0	6.0	U	6.0	3.0	U	3.0

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**

SUMMARY OF ANALYTICAL RESULTS: 460-180373-1

Job Description: Precision National

Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	MW-33S			MW-34I			MW-34S		
Lab Sample ID	460-180373-1			460-180373-2			460-180373-3		
Sampling Date	04/25/2019 10:45:00			04/25/2019 11:15:00			04/25/2019 10:30:00		
Matrix	Water			Water			Water		
Unit									
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
<b>WATER BY 200.7 REV 4.4(UG/L)</b>									
Chromium	187		5.9	370		5.9	12.3		5.9

Lab Contact:

Grace Chang

Project Manager II

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

SUMMARY OF ANALYTICAL RESULTS: 460-180373-1

Job Description: Precision National  
Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	MW-33S			MW-34I			MW-34S		
Lab Sample ID	460-180373-1			460-180373-2			460-180373-3		
Sampling Date	04/25/2019 10:45:00			04/25/2019 11:15:00			04/25/2019 10:30:00		
Matrix	Water			Water			Water		
	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
<b>WATER BY 7196A</b>									
Cr (VI) (ug/l)	15.1	U	15.1	15.1	U	15.1	6.0	U	6.0

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

Lab Contact:

Grace Chang

Project Manager II

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