

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

Arcadis U.S., Inc.
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Subject:

Quarterly Progress Report: October through December 2018
Precision National Plating Services, Inc.
Clarks Summit, Pennsylvania
Docket No. CERC-03-2012-0031DC

ELECTRONIC MAIL

Dear Ms. DiDonato:

ENVIRONMENT

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 October 1, 2018 and December 31, 2018. 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).

Date:
June 6, 2019

Contact:
Lawrence G. Brunt, PE

Phone:
908.526.1000

Email:
Larry.brun@arcadis.com

Our ref:
BB014215.2018.00004

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 October through December 2018 to do the following:

- Precision performed quarterly surface water monitoring with the U.S. EPA on October 18, 2018 as approved in the RAP.
- Precision performed semiannual monitoring of groundwater and residential wells as approved in the RAP in October 2018.
- Calcium polysulfide injections, as proposed and approved by the U.S. EPA in the June 26, 2018 Supplemental In Situ Chemical Reduction Work Plan, continued through October and concluded on November 8, 2018. Perimeter air monitoring, groundwater monitoring, and surface water monitoring activities performed in conjunction with the injection activities were also continued through October and the first two weeks of November.
- 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 October 18, 2018 for hexavalent chromium and total chromium. The midpoints between the resin beds of the system also were sampled for hexavalent and total chromium. The influent sample was additionally analyzed for sulfate and sulfide to monitor the influence of the ongoing calcium polysulfide injection activities.
- On October 18, 2018, the flow totalizer reading for the Seep Shed Treatment System was 6,129,912 gallons.
- The influent and effluent of the Seep Shed Treatment System were sampled on November 30, 2018 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 7.10 su and the temperature was 10.0° C.
- On November 30, 2018, the Seep Shed flow totalizer reading was 6,286,480 gallons.
- The influent and effluent of the Seep Shed Treatment System were sampled on December 28, 2018 for hexavalent chromium and total chromium. The midpoints between the resin beds of the system were also sampled for hexavalent and total chromium.
- On December 28, 2018, the flow totalizer reading for the Seep Shed Treatment System was 6,290,817 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 October 23, 2018 for hexavalent chromium and TAL metals. The effluent of the lead resin bed was also sampled for hexavalent chromium and total chromium. The influent sample was additionally analyzed for sulfate and sulfide to monitor the influence of the ongoing calcium polysulfide injection activities.
- By October 23, 2018, the total volume treated by the Lagoon Treatment System was approximately 33,429,016 gallons.
- The influent and system effluent of the Lagoon Treatment System were sampled on November 30, 2018 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 6.43 su and the temperature was 6.6° C.
- By November 30, 2018 the total volume treated by the Lagoon Treatment System was 33,739,264 gallons.
- The influent and system effluent of the Lagoon Treatment System were sampled on December 26, 2018 for hexavalent chromium and TAL metals. The effluent of the lead resin bed was also

sampled for hexavalent chromium and total chromium. At the time of sampling, the pH of the Lagoon System influent was 6.70 su and the temperature was 14.9° C.

- By December 26, 2018, the total volume treated by the Lagoon Treatment System was 33,964,837 gallons.

Supplemental In Situ Chemical Reduction Monitoring

- As approved in the 2018 Supplemental Injection Work Plan, sampling of the residential wells in the vicinity of the Site was conducted on October 18, 2018 and November 30, 2018 to monitor the injection activities. Samples were analyzed for hexavalent chromium, total chromium, sulfate, and sulfide. Analytical results were received from TestAmerica Laboratories and validated. A summary of the data is attached.
- As approved in the 2018 Supplemental Injection Work Plan, surface water samples were collected from Ackerly Creek on October 18, 2018 to monitor the injection activities and satisfy the quarterly surface water monitoring requirement approved in the RAP. Samples were analyzed for hexavalent chromium, total chromium, sulfate, and sulfide. Analytical results were received from TestAmerica Laboratories and validated. A summary of the data is attached.
- Surface water locations in Ackerly Creek and additional monitoring wells on the Site and in the vicinity of the Site along the Trolley Tracks and Ackerly Creek were also monitored periodically for water quality parameters to assess the progress of the injection activities.

Quarterly Surface Water Monitoring

- As approved in the RAP, quarterly surface water sampling of Ackerly Creek was conducted on October 18, 2018. Samples were analyzed for hexavalent chromium and total chromium, as well as sulfate and sulfide to monitor the ongoing injection activities. 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 October 2018. 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 January, February, and March 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 January 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 October 18, 2018 sampling of the Seep Shed Treatment System and the October 23, 2018 sampling of 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 at an estimated concentration of 6.2 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 at a concentration of 12.0 ug/L which does not exceed the MCL of 100 ug/L.

- Laboratory data for the quarterly surface water samples collected on October 18, 2018 were received from TestAmerica Laboratories and validated. A summary of the data is attached.
- Laboratory data for the October 18, 2018 sampling of the residential potable wells and select Ackerly Creek locations to monitor the progress of the injection activities were received from TestAmerica Laboratories and validated. A summary of the data is attached.
- Laboratory data for the semiannual groundwater monitoring well samples collected between October 18, 2018 and November 1, 2018 were received from TestAmerica Laboratories and validated. A summary of the data is attached.
- Laboratory data for the November 30, 2018 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 at an estimated concentration of 8.5 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 35.3 ug/L, which does not exceed the MCL of 100 ug/L.

- Laboratory data for the November 30, 2018 sampling of the residential potable wells to monitor the progress of the injection activities were received from TestAmerica Laboratories and validated. A summary of the data is attached.
- Laboratory data for the December 26, 2018 sampling of the Lagoon Treatment System and the December 28, 2018 sampling of the Seep Shed Treatment Systems were received from TestAmerica Laboratories and validated. A summary of the data is attached.

Hexavalent chromium was detected at an estimated concentration of 4.1 ug/L in the effluent of the Lagoon Treatment System. Total chromium was 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 26.8 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.

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

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 October through December 2018. 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: 460-167122-1, 460-167124-1, 460-167449-1, 460-167479-1, 460-167481-1, 460-167532-1, 460-167561-1, 460-167627-1, 460-167676-1, 460-167727-1, 460-167783-1, 460-167991-1, 460-168020-1, 460-168095-1, 460-168135-1, 460-168182-1, 460-168240-1, 460-168281-1, 460-170272-1, 460-170273-1, 460-172294-1 and 460-172439-1.

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
ASTM Method D516-90, 02 for sulfate
Standard Method 4500 S2 F for sulfide

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:

In metals batch 460-564116, which included samples from PNP SDG 460-167479-1, the relative percent difference between the concentrations of antimony and selenium in the initial result and the duplicate analysis performed along with the batch was greater than 20%. However, the concentrations of antimony and selenium 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.

The matrix spike and duplicate QC samples in hexavalent chromium batch 460-562993, which included samples from PNP SDGs 460-167561-1 and 460-167627-1, were analyzed outside of the 24-hour hold time allowed for this method. The sample used for the matrix spike and duplicate analysis was not a PNP sample. All PNP samples were analyzed within the allowable holding time. All of the other QA/QC parameters were in compliance, so the results are not qualified.

The matrix spike recovery was lower than the QC criteria for hexavalent chromium batch 460-563290, which included samples from PNP SDG 460-167727-1. The sample used for the matrix spike was PNP

Data Validation Summary

sample MW-AS (460-167727-2) which did not have a detectable concentration of hexavalent chromium. The matrix spike was repeated at two times and four times the spike concentration, with similar low recoveries. The low recovery is most likely attributable to the presence of residual calcium polysulfide from the in situ chemical reduction activities ongoing at the Site during the monitoring event. All other QA/QC parameters were in compliance; therefore, the results are not qualified.

Similarly, the recovery of hexavalent chromium was low in the matrix spike in batch 460-565220, which included samples from PNP SDGs 460-168240-1 and 460-168281-1. The sample used for the matrix spike analysis was PNP sample MW-28I (460-168240-4), which had a non-detect result for hexavalent chromium. The matrix spike was repeated at two times and four times the spike concentration, with similar low recoveries. The low recovery is most likely attributable to the presence of residual calcium polysulfide from the in situ chemical reduction activities ongoing at the Site during the monitoring event. All other QA/QC parameters were in compliance; therefore, the results are not qualified.

In metals batch 460-573048, the recovery of sodium in the matrix spike analysis was higher than the QC range. This batch included samples from PNP SDG 460-170272-1. However, the sample used for the matrix spike was not a PNP sample. The concentration of sodium in the sample used for the matrix spike was greater than four times the spike concentration; therefore, the high recovery is acceptable, and the data are not qualified.

There were notes included in the laboratory report narratives for PNP SDG 460-167783-1 and 460-168095-1 regarding discrepancies between some sample IDs written on the sample bottle labels and those recorded on the chain of custody. The samples were logged in and reported properly according to the information on the chain of custody.

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

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

**SUMMARY OF ANALYTICAL RESULTS: 460-167479-1****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		
Lab Sample ID	460-167479-1			460-167479-2			460-167479-3		
Sampling Date	10/23/2018 13:00:00			10/23/2018 13:02:00			10/23/2018 13:04:00		
Matrix	Water			Water			Water		
Unit									
METALS-WATER	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 200.7 REV 4.4(UG/L)									
Aluminum	242		95.7	NR			204		95.7
Antimony	4.1	U	4.1	NR			4.1	U	4.1
Arsenic	4.2	U	4.2	NR			4.2	U	4.2
Barium	82.4	J	10.5	NR			27.1	J	10.5
Beryllium	1.5	U	1.5	NR			1.5	U	1.5
Cadmium	2.1	U	2.1	NR			2.1	U	2.1
Calcium	84600		608	NR			84300		608
Chromium	28.2		5.9	13.0	5.9		6.2	J	5.9
Cobalt	5.5	U	5.5	NR			5.5	U	5.5
Copper	8.4	J	5.5	NR			11.3	J	5.5
Iron	3210		111	NR			111	U	111
Lead	3.8	U	3.8	NR			3.8	U	3.8
Magnesium	7670		578	NR			7580		578
Manganese	11700		5.0	NR			4140		5.0
Nickel	19.5	J	6.3	NR			6.3	U	6.3
Potassium	1330	J	207	NR			1300	J	207
Selenium	4.2	U	4.2	NR			4.2	U	4.2
Silver	1.3	U	1.3	NR			1.3	U	1.3
Sodium	30200		846	NR			29300		846
Thallium	8.7	U	8.7	NR			8.7	U	8.7
Vanadium	6.0	U	6.0	NR			6.0	U	6.0
Zinc	13.5	J	5.4	NR			5.8	J	5.4
WATER BY 245.1(UG/L)									
Mercury	0.12	U	0.12	NR			0.12	U	0.12

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:

Morgan Merriweather

Project Management Assistant I

(732)549-3900

Grace Chang

Project Manager II

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

**SUMMARY OF ANALYTICAL RESULTS: 460-167479-1****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		
Lab Sample ID	460-167479-1			460-167479-2			460-167479-3		
Sampling Date	10/23/2018 13:00:00			10/23/2018 13:02:00			10/23/2018 13:04:00		
Matrix	Water			Water			Water		
WETCHEM-WATER	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

WATER BY D516-90, 02									
Sulfate (mg/l)	256		48.2	NR			NR		

WATER BY SM 4500 S2 F									
Sulfide (mg/l)	0.58	U	0.58	NR			NR		

NR: Not Analyzed

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

Lab Contact:

Morgan Merriweather

Project Management Assistant I

(732)549-3900

Grace Chang

Project Manager II

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

35 Columbia Road

Branchburg, New Jersey 08876

**SUMMARY OF ANALYTICAL RESULTS:**

460-167122-1

Job Description: Precision National

Plating

For:

ARCADIS U.S., Inc

35 Columbia Road

Branchburg, New Jersey 08876

Client ID	Seep Shed Influent			Seep Shed Mid			Seep Shed effluent		
Lab Sample ID	460-167122-1			460-167122-2			460-167122-3		
Sampling Date	10/18/2018 16:40:00			10/18/2018 16:42:00			10/18/2018 16:43:00		
Matrix	Water			Water			Water		
Unit									
METALS-WATER	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 200.7 REV 4.4(UG/L)									
Chromium	8410		5.9	609		5.9	12.0		5.9

Lab Contact:

Morgan Merriweather

Project Management Assistant I

(732)549-3900

Grace Chang

Project Manager II

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

35 Columbia Road

Branchburg, New Jersey 08876

**SUMMARY OF ANALYTICAL RESULTS:**

460-167122-1

Job Description: Precision National

Plating

For:

ARCADIS U.S., Inc

35 Columbia Road

Branchburg, New Jersey 08876

Client ID	Seep Shed Influent			Seep Shed Mid			Seep Shed effluent		
Lab Sample ID	460-167122-1			460-167122-2			460-167122-3		
Sampling Date	10/18/2018 16:40:00			10/18/2018 16:42:00			10/18/2018 16:43:00		
Matrix	Water			Water			Water		
WETCHEM-WATER	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 7196A									
Cr (VI) (ug/l)	597		15.1	3.0	U	3.0	3.0	U	3.0

WATER BY D516-90, 02									
Sulfate (mg/l)	122		12.1	NR			NR		

WATER BY SM 4500 S2 F									
Sulfide (mg/l)	0.58	U	0.58	NR			NR		

NR: Not Analyzed

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

Lab Contact:

Morgan Merriweather

Project Management Assistant I

(732)549-3900

Grace Chang

Project Manager II

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844



SUMMARY OF ANALYTICAL

RESULTS: 460-170272-1

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	460-170272-1			460-170272-2			460-170272-3			460-170272-4			460-170272-5			460-170272-6			460-170272-7		
Sampling Date	11/30/2018 11:30:00			11/30/2018 11:32:00			11/30/2018 11:34:00			11/30/2018 11:50:00			11/30/2018 12:54:00			11/30/2018 12:56:00			11/30/2018 12:58:00		
Matrix	Water			Water			Water			Water			Water			Water			Water		
Unit																					
METALS-WATER	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)																					
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	14.5	J	10.5	NR			12.8	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	47100		608	NR			45900		608	NR			NR			NR			NR		
Chromium	79.1		5.9	54.0		5.9	8.5	J	5.9	20000		5.9	530		5.9	363		5.9	35.3		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	346		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	4740	J	578	NR			4650	J	578	NR			NR			NR			NR		
Manganese	277		5.0	NR			17.7		5.0	NR			NR			NR			NR		
Nickel	30.2	J	6.3	NR			6.3	U	6.3	NR			NR			NR			NR		
Potassium	1760	J	207	NR			1810	J	207	NR			NR			NR			NR		
Selenium	4.2	U	4.2	NR			8.4	U	8.4	NR			NR			NR			NR		
Silver	1.3	U	1.3	NR			1.3	U	1.3	NR			NR			NR			NR		
Sodium	18200		846	NR			17700		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	35.6		5.4	NR			5.4	U	5.4	NR			NR			NR			NR		
WATER BY 245.1(UG/L)																					
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

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

**SUMMARY OF ANALYTICAL RESULTS: 460-170272-**

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	460-170272-1			460-170272-2			460-170272-3			460-170272-4			460-170272-5			460-170272-6			460-170272-7		
Sampling Date	11/30/2018 11:30:00			11/30/2018 11:32:00			11/30/2018 11:34:00			11/30/2018 11:50:00			11/30/2018 12:54:00			11/30/2018 12:56:00			11/30/2018 12:58:00		
Matrix	Water			Water			Water			Water			Water			Water			Water		
WETCHEM-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)	68.9		3.0	48.4		3.0	3.0	U	3.0	30.1	U	30.1	367		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

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

**SUMMARY OF ANALYTICAL RESULTS: 460-172294-1**

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		
Lab Sample ID	460-172294-1			460-172294-2			460-172294-3			460-172294-4		
Sampling Date	12/26/2018 11:05:00			12/26/2018 11:07:00			12/26/2018 11:09:00			12/26/2018 11:20:00		
Matrix	Water			Water			Water			Water		
Unit												
METALS-WATER	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 200.7 REV 4.4(UG/L)												
Aluminum	95.7	U	95.7	NR			95.7	U	95.7	NR		
Antimony	4.1	U	4.1	NR			4.1	U	4.1	NR		
Arsenic	4.2	U	4.2	NR			4.2	U	4.2	NR		
Barium	22.3	J	10.5	NR			14.7	J	10.5	NR		
Beryllium	1.5	U	1.5	NR			1.5	U	1.5	NR		
Cadmium	2.1	U	2.1	NR			2.1	U	2.1	NR		
Calcium	64600		608	NR			65000		608	NR		
Chromium	128		5.9	61.5		5.9	5.9	U	5.9	4050		5.9
Cobalt	5.5	U	5.5	NR			5.5	U	5.5	NR		
Copper	9.2	J	5.5	NR			5.5	U	5.5	NR		
Iron	2810		111	NR			111	U	111	NR		
Lead	4.6	J	3.8	NR			3.8	U	3.8	NR		
Magnesium	6340		578	NR			6480		578	NR		
Manganese	175		5.0	NR			5.0	U	5.0	NR		
Nickel	48.5		6.3	NR			6.3	U	6.3	NR		
Potassium	1420	J	207	NR			1440	J	207	NR		
Selenium	4.2	U	4.2	NR			4.2	U	4.2	NR		
Silver	1.3	U	1.3	NR			1.3	U	1.3	NR		
Sodium	26200		846	NR			26600		846	NR		
Thallium	8.7	U	8.7	NR			8.7	U	8.7	NR		
Vanadium	6.0	U	6.0	NR			6.0	U	6.0	NR		
Zinc	72.1		5.4	NR			5.4	U	5.4	NR		
WATER BY 245.1(UG/L)												
Mercury	0.12	U	0.12	NR			0.12	U	0.12	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

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

**SUMMARY OF ANALYTICAL RESULTS: 460-172294-1****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		
Lab Sample ID	460-172294-1			460-172294-2			460-172294-3			460-172294-4		
Sampling Date	12/26/2018 11:05:00			12/26/2018 11:07:00			12/26/2018 11:09:00			12/26/2018 11:20:00		
Matrix	Water			Water			Water			Water		
WETCHEM-WATER	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 7196A												
Cr (VI) (ug/l)	110		3.0	50.3		3.0	4.1	J	3.0	60.0		15.1

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

Lab Contact:

Grace Chang

Project Manager II

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

**SUMMARY OF ANALYTICAL RESULTS: 460-172439-1**

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	Seep Shed Influent			Seep Shed Mid			Seep Shed Effluent		
Lab Sample ID	460-172439-1			460-172439-2			460-172439-3		
Sampling Date	12/28/2018 12:45:00			12/28/2018 12:47:00			12/28/2018 12:50:00		
Matrix	Water			Water			Water		
Unit									
METALS-WATER	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 200.7 REV 4.4(UG/L)									
Chromium	491		5.9	490		5.9	26.8		5.9

Lab Contact:

Grace Chang

Project Manager II

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

**SUMMARY OF ANALYTICAL RESULTS: 460-172439-1****Job Description: Precision National Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID	Seep Shed Influent			Seep Shed Mid			Seep Shed Effluent		
Lab Sample ID	460-172439-1			460-172439-2			460-172439-3		
Sampling Date	12/28/2018 12:45:00			12/28/2018 12:47:00			12/28/2018 12:50:00		
Matrix	Water			Water			Water		
WETCHEM-WATER	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 7196A									
Cr (VI) (ug/l)	537		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

QUARTERLY SURFACE WATER SAMPLING RESULTS

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

35 Columbia Road

Branchburg, New Jersey 08876

**SUMMARY OF ANALYTICAL RESULTS:****460-167124-1****Job Description: Precision National****Plating****For:****ARCADIS U.S., Inc****35 Columbia Road****Branchburg, New Jersey 08876**

Client ID	SW-10			SW-14			SW-14BC2			SW-14DE			SW-14G		
Lab Sample ID	460-167124-1			460-167124-2			460-167124-3			460-167124-4			460-167124-5		
Sampling Date	10/18/2018 12:00:00			10/18/2018 12:10:00			10/18/2018 12:25:00			10/18/2018 12:31:00			10/18/2018 12:40:00		
Matrix	Water			Water			Water			Water			Water		
Unit															
METALS-WATER	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

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

Lab Contact:

Morgan Merriweather

Project Management Assistant I

(732)549-3900

Grace Chang

Project Manager II

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

35 Columbia Road

Branchburg, New Jersey 08876

**SUMMARY OF ANALYTICAL RESULTS:**

460-167124-1

Job Description: Precision National

Plating

For:

ARCADIS U.S., Inc

35 Columbia Road

Branchburg, New Jersey 08876

Client ID	SW-15			SW-16			AGM-5S			AGM-5I					
Lab Sample ID	460-167124-6			460-167124-7			460-167124-8			460-167124-9			460-167124-10		
Sampling Date	10/18/2018 12:45:00			10/18/2018 13:10:00			10/18/2018 13:12:00			10/18/2018 14:40:00			10/18/2018 15:40:00		
Matrix	Water			Water			Water			Water			Water		
Unit															
METALS-WATER	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	37.2		5.9	5.9	U	5.9	5.9	U	5.9

U : Indicates the analyte was analyzed for t

Lab Contact:

Morgan Merriweather

Project Management Assistant I

(732)549-3900

Grace Chang

Project Manager II

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

35 Columbia Road

Branchburg, New Jersey 08876

**SUMMARY OF ANALYTICAL****RESULTS: 460-167124-1****Job Description: Precision National****Plating****For:****ARCADIS U.S., Inc****35 Columbia Road****Branchburg, New Jersey 08876**

Client ID	SW-10			SW-14			SW-14BC2			SW-14DE			SW-14G		
Lab Sample ID	460-167124-1			460-167124-2			460-167124-3			460-167124-4			460-167124-5		
Sampling Date	10/18/2018 12:00:00			10/18/2018 12:10:00			10/18/2018 12:25:00			10/18/2018 12:31:00			10/18/2018 12:40:00		
Matrix	Water			Water			Water			Water			Water		
WETCHEM-WATER	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
WATER BY D516-90, 02															
Sulfate (mg/l)	15.2		2.4	12.3		2.4	13.2		2.4	12.7		2.4	14.4		2.4
WATER BY SM 4500 S2 F															
Sulfide (mg/l)	0.58	U	0.58	0.58	U	0.58	0.58	U	0.58	0.58	U	0.58	0.58	U	0.58

NR: Not Analyzed

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

Lab Contact:

Morgan Merriweather

Project Management Assistant I

(732)549-3900

Grace Chang

Project Manager II

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

35 Columbia Road

Branchburg, New Jersey 08876

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

SUMMARY OF ANALYTICAL**RESULTS: 460-167124-1****Job Description: Precision National****Plating****For:****ARCADIS U.S., Inc****35 Columbia Road****Branchburg, New Jersey 08876**

Client ID	SW-15			SW-16			AGM-5S			AGM-5I					
Lab Sample ID	460-167124-6			460-167124-7			460-167124-8			460-167124-9			460-167124-10		
Sampling Date	10/18/2018 12:45:00			10/18/2018 13:10:00			10/18/2018 13:12:00			10/18/2018 14:40:00			10/18/2018 15:40:00		
Matrix	Water			Water			Water			Water			Water		
WETCHEM-WATER	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
WATER BY D516-90, 02															
Sulfate (mg/l)	11.2		2.4	9.8		2.4	NR			NR			17.3		2.4
WATER BY SM 4500 S2 F															
Sulfide (mg/l)	0.58	U	0.58	0.58	U	0.58	NR			NR			0.58	U	0.58

NR: Not Analyzed

U : Indicates the analyte was analyzed for

Lab Contact:

Morgan Merriweather

Project Management Assistant I

(732)549-3900

Grace Chang

Project Manager II

(732)593-2579

BEDROCK INJECTION PERFORMANCE MONITORING RESULTS

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844



SUMMARY OF ANALYTICAL RESULTS:

460-170273-1

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	
Lab Sample ID	460-170273-1
Sampling Date	11/30/2018 13:15:00
Matrix	Water
Unit	
METALS-WATER	Result Q MDL
WATER BY 200.7 REV 4.4(UG/L)	
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

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

**SUMMARY OF ANALYTICAL RESULTS:****460-170273-1****Job Description: Precision National****Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID			
Lab Sample ID	460-170273-1		
Sampling Date	11/30/2018 13:15:00		
Matrix	Water		
WETCHEM-WATER	Result	Q	MDL
WATER BY 7196A			
Cr (VI) (ug/l)	3.0	U	3.0
WATER BY D516-90, 02			
Sulfate (mg/l)	15.6		2.6
WATER BY SM 4500 S2 F			
Sulfide (mg/l)	0.58	U	0.58

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

Lab Contact:

Grace Chang

Project Manager II

(732)593-2579

SEMIANNUAL MONITORING WELL SAMPLING RESULTS

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

SUMMARY OF ANALYTICAL RESULTS:**460-167481-1****Job Description: Precision National****Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID							OMW-24		
Lab Sample ID	460-167481-6			460-167481-7			460-167481-8		
Sampling Date	10/23/2018 11:21:00			10/23/2018 10:10:00			10/23/2018 09:00:00		
Matrix	Water			Water			Water		
Unit									
METALS-WATER	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 200.7 REV 4.4(UG/L)									
Chromium	8.0	J	5.9	230		5.9	52.9		5.9

J : Result is less than the RL but greater than

Lab Contact:

Morgan Merriweather

Project Management Assistant I

(732)549-3900

Grace Chang

Project Manager II

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

SUMMARY OF ANALYTICAL RESULTS:**460-167481-1****Job Description: Precision National****Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID	SB-6																	
Lab Sample ID	460-167481-1			460-167481-2			460-167481-3			460-167481-4			460-167481-5					
Sampling Date	10/23/2018 12:05:00			10/23/2018 13:18:00			10/23/2018 13:08:00			10/23/2018 12:15:00			10/23/2018 10:45:00					
Matrix	Water			Water			Water			Water			Water					
WETCHEM-WATER	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL			
WATER BY 7196A																		
Cr (VI) (ug/l)	6.0	U	6.0	3.0	U	3.0	12.6		3.0	3.0	U	3.0	216		15.1			

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

**SUMMARY OF ANALYTICAL RESULTS:****460-167481-1****Job Description: Precision National****Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID							OMW-24		
Lab Sample ID	460-167481-6			460-167481-7			460-167481-8		
Sampling Date	10/23/2018 11:21:00			10/23/2018 10:10:00			10/23/2018 09:00:00		
Matrix	Water			Water			Water		
WETCHEM-WATER	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 7196A									
Cr (VI) (ug/l)	4.7	J	3.0	30.1	U	30.1	15.1	U	15.1

J : Result is less than the RL but greater than the RL

U : Indicates the analyte was analyzed for but not detected

Lab Contact:

Morgan Merriweather

Project Management Assistant I

(732)549-3900

or

Grace Chang

Project Manager II

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

35 Columbia Road

Branchburg, New Jersey 08876

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

SUMMARY OF ANALYTICAL**RESULTS: 460-167449-1****Job Description: Precision National****Plating****For:****ARCADIS U.S., Inc****35 Columbia Road****Branchburg, New Jersey 08876**

Client ID	OMW-15			MW-9IB			MW-9S			MW-9D			MW-15S			MW-14S			MW-9IA		
Lab Sample ID	460-167449-1			460-167449-2			460-167449-3			460-167449-4			460-167449-5			460-167449-6			460-167449-7		
Sampling Date	10/22/2018 15:08:00			10/22/2018 15:47:00			10/22/2018 15:55:00			10/22/2018 15:30:00			10/22/2018 16:23:00			10/22/2018 17:28:00			10/22/2018 17:03:00		
Matrix	Water			Water			Water			Water			Water			Water			Water		
Unit																					
METALS-WATER	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	309		5.9	71.3		5.9	31.5		5.9	135		5.9	39.1		5.9

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

Lab Contact:

Morgan Merriweather

Project Management Assistant I

(732)549-3900

Grace Chang

Project Manager II

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

35 Columbia Road

Branchburg, New Jersey 08876

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

SUMMARY OF ANALYTICAL RESULTS:

460-167449-1

Job Description: Precision National
Plating

For:

ARCADIS U.S., Inc

35 Columbia Road

Branchburg, New Jersey 08876

Client ID	OMW-15			MW-9IB			MW-9S			MW-9D			MW-15S			MW-14S			MW-9IA		
Lab Sample ID	460-167449-1			460-167449-2			460-167449-3			460-167449-4			460-167449-5			460-167449-6			460-167449-7		
Sampling Date	10/22/2018 15:08:00			10/22/2018 15:47:00			10/22/2018 15:55:00			10/22/2018 15:30:00			10/22/2018 16:23:00			10/22/2018 17:28:00			10/22/2018 17:03:00		
Matrix	Water			Water			Water			Water			Water			Water			Water		
WETCHEM-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)	3.1	J	3.0	3.0	U	3.0	267		6.0	14.6		3.0	4.2	J	3.0	117		3.0	25.0		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:

Morgan Merriweather

Project Management Assistant

(732)549-3900

Grace Chang

Project Manager II

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

SUMMARY OF ANALYTICAL RESULTS:**460-167481-1****Job Description: Precision National****Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID							OMW-24		
Lab Sample ID	460-167481-6			460-167481-7			460-167481-8		
Sampling Date	10/23/2018 11:21:00			10/23/2018 10:10:00			10/23/2018 09:00:00		
Matrix	Water			Water			Water		
Unit									
METALS-WATER	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 200.7 REV 4.4(UG/L)									
Chromium	8.0	J	5.9	230		5.9	52.9		5.9

J : Result is less than the RL but greater than

Lab Contact:

Morgan Merriweather

Project Management Assistant I

(732)549-3900

Grace Chang

Project Manager II

(732)593-2579

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

460-167481-1 ☐

Job Description: Precision National

Plating

For: ☐

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	SB-6																													
Lab Sample ID	460-167481-1						460-167481-2						460-167481-3						460-167481-4						460-167481-5					
Sampling Date	10/23/2018 12:05:00						10/23/2018 13:18:00						10/23/2018 13:08:00						10/23/2018 12:15:00						10/23/2018 10:45:00					
Matrix	Water						Water						Water						Water						Water					
WETCHEM-WATER	Result	Q	MDL				Result	Q	MDL				Result	Q	MDL				Result	Q	MDL				Result	Q	MDL			
WATER BY 7196A																														
Cr (VI) (ug/l)	6.0	U	6.0				3.0	U	3.0				12.6		3.0				3.0	U	3.0				216		15.1			

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

Lab Contact: ☐

Morgan Merriweather ☐

Project Management Assistant I ☐

(732)549-3900

Grace Chang Project Manager II ☐

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

SUMMARY OF ANALYTICAL RESULTS:**460-167481-1****Job Description: Precision National****Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID							OMW-24		
Lab Sample ID	460-167481-6			460-167481-7			460-167481-8		
Sampling Date	10/23/2018 11:21:00			10/23/2018 10:10:00			10/23/2018 09:00:00		
Matrix	Water			Water			Water		
WETCHEM-WATER	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 7196A									
Cr (VI) (ug/l)	4.7	J	3.0	30.1	U	30.1	15.1	U	15.1

J : Result is less than the RL but greater than the RL

U : Indicates the analyte was analyzed for but not detected

Lab Contact:

Morgan Merriweather

Project Management Assistant I

(732)549-3900

□

Grace Chang

Project Manager II

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

**SUMMARY OF ANALYTICAL RESULTS:**

460-167532-1

Job Description: Precision National

Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	AGM-2I			AGM-2S			OMW-27			OMW-28			OMW-29		
Lab Sample ID	460-167532-1			460-167532-2			460-167532-3			460-167532-4			460-167532-5		
Sampling Date	10/23/2018 16:38:00			10/23/2018 17:28:00			10/23/2018 17:45:00			10/23/2018 16:20:00			10/23/2018 16:24:00		
Matrix	Water			Water			Water			Water			Water		
Unit															
METALS-WATER	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	8480		5.9	194		5.9	99.8		5.9

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

Lab Contact:

Morgan Merriweather

Project Management Assistant I

(732)549-3900

Grace Chang

Project Manager II

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

**SUMMARY OF ANALYTICAL RESULTS:**

460-167532-1

Job Description: Precision National
Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	AGM-21			AGM-2S			OMW-27			OMW-28			OMW-29		
Lab Sample ID	460-167532-1			460-167532-2			460-167532-3			460-167532-4			460-167532-5		
Sampling Date	10/23/2018 16:38:00			10/23/2018 17:28:00			10/23/2018 17:45:00			10/23/2018 16:20:00			10/23/2018 16:24:00		
Matrix	Water			Water			Water			Water			Water		
WETCHEM-WATER	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	288		75.3	3.0	U	3.0	15.1	U	15.1

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

Lab Contact:

Morgan Merriweather

Project Management Assistant I

(732)549-3900

Grace Chang

Project Manager II

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

**SUMMARY OF ANALYTICAL RESULTS: 460-167561-1**

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	OMW-17			MW-11I			MW-11S			OMW-30			MW-18S			MW-18I		
Lab Sample ID	460-167561-1			460-167561-2			460-167561-3			460-167561-4			460-167561-5			460-167561-6		
Sampling Date	10/24/2018 12:52:00			10/24/2018 13:20:00			10/24/2018 12:52:00			10/24/2018 11:25:00			10/24/2018 11:15:00			10/24/2018 11:30:00		
Matrix	Water			Water			Water			Water			Water			Water		
Unit																		
METALS-WATER	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	781		5.9	76.9		5.9	54.6		5.9	950		5.9	24.0		5.9	89.6		5.9

Lab Contact:

Grace Chang

Project Manager II

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

**SUMMARY OF ANALYTICAL RESULTS: 460-167561-1**

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	OMW-17			MW-11I			MW-11S			OMW-30			MW-18S			MW-18I		
Lab Sample ID	460-167561-1			460-167561-2			460-167561-3			460-167561-4			460-167561-5			460-167561-6		
Sampling Date	10/24/2018 12:52:00			10/24/2018 13:20:00			10/24/2018 12:52:00			10/24/2018 11:25:00			10/24/2018 11:15:00			10/24/2018 11:30:00		
Matrix	Water			Water			Water			Water			Water			Water		
WETCHEM-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)	151	U	151	3.0	U	3.0	3.0	U	3.0	93.7		3.0	3.0	U	3.0	3.0	U	3.0

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

Lab Contact:

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Project Manager II

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

**SUMMARY OF ANALYTICAL RESULTS: 460-167627-1****Job Description: Precision National Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID	MW-10S			OMW-16			MW-10I			OMW-2		
Lab Sample ID	460-167627-1			460-167627-2			460-167627-3			460-167627-4		
Sampling Date	10/24/2018 16:25:00			10/24/2018 16:30:00			10/24/2018 16:30:00			10/24/2018 16:00:00		
Matrix	Water			Water			Water			Water		
Unit												
METALS-WATER	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 200.7 REV 4.4(UG/L)												
Chromium	295		5.9	5.9	U	5.9	205		5.9	173		5.9

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

Lab Contact:

Morgan Merriweather

Project Management Assistant I

(732)549-3900

Grace Chang

Project Manager II

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

**SUMMARY OF ANALYTICAL RESULTS: 460-167627-1****Job Description: Precision National Plating**

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	MW-10S			OMW-16			MW-10I			OMW-2		
Lab Sample ID	460-167627-1			460-167627-2			460-167627-3			460-167627-4		
Sampling Date	10/24/2018 16:25:00			10/24/2018 16:30:00			10/24/2018 16:30:00			10/24/2018 16:00:00		
Matrix	Water			Water			Water			Water		
WETCHEM-WATER	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	63.0		3.0

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

Lab Contact:

Morgan Merriweather

Project Management Assistant I

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Grace Chang

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(732)593-2579

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

SUMMARY OF ANALYTICAL RESULTS:**460-167676-1****Job Description: Precision National****Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID	MW-B01S			MW-B01D			MW-B5			MW-BD			OMW-6			OMW-3			OMW-18		
Lab Sample ID	460-167676-1			460-167676-2			460-167676-3			460-167676-4			460-167676-5			460-167676-6			460-167676-7		
Sampling Date	10/25/2018 11:00:00			10/25/2018 12:05:00			10/25/2018 11:05:00			10/25/2018 13:20:00			10/25/2018 12:27:00			10/25/2018 10:47:00			10/25/2018 12:47:00		
Matrix	Water			Water			Water			Water			Water			Water			Water		
Unit																					
METALS-WATER	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	70.4		5.9	132		5.9	6.2	J	5.9	32.4		5.9	331		5.9	65.0		5.9	5.9	U	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

THE LEADER IN ENVIRONMENTAL TESTING

SUMMARY OF ANALYTICAL

RESULTS: 460-167676-1

Job Description: Precision

National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	MW-B01S			MW-B01D			MW-B5			MW-BD			OMW-6			OMW-3			OMW-18		
Lab Sample ID	460-167676-1			460-167676-2			460-167676-3			460-167676-4			460-167676-5			460-167676-6			460-167676-7		
Sampling Date	10/25/2018 11:00:00			10/25/2018 12:05:00			10/25/2018 11:05:00			10/25/2018 13:20:00			10/25/2018 12:27:00			10/25/2018 10:47:00			10/25/2018 12:47:00		
Matrix	Water			Water			Water			Water			Water			Water			Water		
WETCHEM-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)	3.0	U	3.0	3.0	U	3.0	3.0	U	3.0	3.0	U	3.0	299		6.0	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

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

**SUMMARY OF ANALYTICAL RESULTS:**

460-167727-1

Job Description: Precision National

Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	OMW-13			MW-AS			MW-AD		
Lab Sample ID	460-167727-1			460-167727-2			460-167727-3		
Sampling Date	10/25/2018 17:00:00			10/25/2018 16:50:00			10/25/2018 17:07:00		
Matrix	Water			Water			Water		
Unit									
METALS-WATER	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 200.7 REV 4.4(UG/L)									
Chromium	10.9		5.9	29.4		5.9	56.3		5.9

Lab Contact:

Morgan Merriweather

Project Management Assistant I

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Grace Chang

Project Manager II

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844



SUMMARY OF ANALYTICAL RESULTS:

460-167727-1

Job Description: Precision National

Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Client ID	OMW-13			MW-AS			MW-AD		
Lab Sample ID	460-167727-1			460-167727-2			460-167727-3		
Sampling Date	10/25/2018 17:00:00			10/25/2018 16:50:00			10/25/2018 17:07:00		
Matrix	Water			Water			Water		
WETCHEM-WATER	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 7196A									
Cr (VI) (ug/l)	3.0	U	3.0	3.0	J F1	3.0	3.0	U	3.0

F1 : MS and/or MSD Recovery is outside acceptance limits.

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

Lab Contact:

Morgan Merriweather

Project Management Assistant I

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Grace Chang

Project Manager II

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

**SUMMARY OF ANALYTICAL RESULTS: 460-167783-1**

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	SB-1			SB-2			MW-3S			MW-3D		
Lab Sample ID	460-167783-1			460-167783-2			460-167783-3			460-167783-4		
Sampling Date	10/26/2018 12:20:00			10/26/2018 12:55:00			10/26/2018 11:51:00			10/26/2018 11:25:00		
Matrix	Water			Water			Water			Water		
Unit												
METALS-WATER	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 200.7 REV 4.4(UG/L)												
Chromium	403		5.9	3260		5.9	31.1		5.9	31.0		5.9

Lab Contact:

Morgan Merriweather

Project Management Assistant I

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Project Manager II

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

**SUMMARY OF ANALYTICAL RESULTS:**

460-167783-1

Job Description: Precision National
Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	SB-1			SB-2			MW-3S			MW-3D		
Lab Sample ID	460-167783-1			460-167783-2			460-167783-3			460-167783-4		
Sampling Date	10/26/2018 12:20:00			10/26/2018 12:55:00			10/26/2018 11:51:00			10/26/2018 11:25:00		
Matrix	Water			Water			Water			Water		
WETCHEM-WATER	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

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

Lab Contact:

Morgan Merriweather

Project Management Assistant I

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Grace Chang

Project Manager II

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

**SUMMARY OF ANALYTICAL RESULTS:**

460-167991-1

Job Description: Precision National

Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	MW-25			MW-30			OMW-26		
Lab Sample ID	460-167991-1			460-167991-2			460-167991-3		
Sampling Date	10/29/2018 15:02:00			10/29/2018 15:45:00			10/29/2018 17:00:00		
Matrix	Water			Water			Water		
Unit									
METALS-WATER	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 200.7 REV 4.4(UG/L)									
Chromium	5.9	U	5.9	12.4		5.9	29.5	U	29.5

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

Lab Contact:

Morgan Merriweather

Project Management Assistant I

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Project Manager II

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

**SUMMARY OF ANALYTICAL RESULTS: 460-167991-1****Job Description: Precision National Plating**

For:

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

Client ID	MW-25			MW-30			OMW-26		
Lab Sample ID	460-167991-1			460-167991-2			460-167991-3		
Sampling Date	10/29/2018 15:02:00			10/29/2018 15:45:00			10/29/2018 17:00:00		
Matrix	Water			Water			Water		
WETCHEM-WATER	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

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

Lab Contact:

Morgan Merriweather

Project Management Assistant I

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Project Manager II

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

**SUMMARY OF ANALYTICAL RESULTS: 460-168020-1****Job Description: Precision National Plating**

For:

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

Client ID	MW-36S			MW-26S			Lagoon Sump			Lagoon Seep		
Lab Sample ID	460-168020-1			460-168020-2			460-168020-3			460-168020-4		
Sampling Date	10/30/2018 13:10:00			10/30/2018 12:00:00			10/30/2018 12:15:00			10/30/2018 12:10:00		
Matrix	Water			Water			Water			Water		
Unit												
METALS-WATER	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 200.7 REV 4.4(UG/L)												
Chromium	11.1		5.9	38.3		5.9	50.9		5.9	13900		5.9

Lab Contact:

Grace Chang

Project Manager II

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

**SUMMARY OF ANALYTICAL RESULTS: 460-168020-1****Job Description: Precision National Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID	MW-36S			MW-26S			Lagoon Sump			Lagoon Seep		
Lab Sample ID	460-168020-1			460-168020-2			460-168020-3			460-168020-4		
Sampling Date	10/30/2018 13:10:00			10/30/2018 12:00:00			10/30/2018 12:15:00			10/30/2018 12:10:00		
Matrix	Water			Water			Water			Water		
WETCHEM-WATER	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	39.4		3.0	56.9		12.0

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

Lab Contact:

Grace Chang

Project Manager II

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

**SUMMARY OF ANALYTICAL RESULTS: 460-168095-1****Job Description: Precision National Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID	MW-32S			MW-32I			MW-CS		
Lab Sample ID	460-168095-1			460-168095-2			460-168095-3		
Sampling Date	10/30/2018 15:50:00			10/30/2018 16:55:00			10/30/2018 16:50:00		
Matrix	Water			Water			Water		
Unit									
METALS-WATER	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 200.7 REV 4.4(UG/L)									
Chromium	14.8		5.9	356		5.9	11.2		5.9

Lab Contact:

Morgan Merriweather

Project Management Assistant I

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(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

**SUMMARY OF ANALYTICAL RESULTS: 460-168095-1****Job Description: Precision National Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID	MW-32S			MW-32I			MW-CS		
Lab Sample ID	460-168095-1			460-168095-2			460-168095-3		
Sampling Date	10/30/2018 15:50:00			10/30/2018 16:55:00			10/30/2018 16:50:00		
Matrix	Water			Water			Water		
WETCHEM-WATER	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 7196A									
Cr (VI) (ug/l)	3.9	J	3.0	3.0	U	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:

Morgan Merriweather

Project Management Assistant I

(732)549-3900

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Grace Chang

Project Manager II

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

**SUMMARY OF ANALYTICAL****RESULTS: 460-168135-1****Job Description: Precision National
Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID	French Drain Sump			OMW-11			MW-27D			MW-CI			MW-33S		
Lab Sample ID	460-168135-1			460-168135-2			460-168135-3			460-168135-4			460-168135-5		
Sampling Date	10/31/2018 13:30:00			10/31/2018 12:00:00			10/31/2018 13:20:00			10/31/2018 12:37:00			10/31/2018 14:10:00		
Matrix	Water			Water			Water			Water			Water		
Unit															
METALS-WATER	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	16.4		5.9	143		5.9	148		5.9	68.8		5.9	5.9	U	5.9

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

Lab Contact:

Morgan Merriweather

Project Management Assistant I

(732)549-3900

Grace Chang

Project Manager II

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

SUMMARY OF ANALYTICAL**RESULTS: 460-168135-1****Job Description: Precision****National Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID	French Drain Sump			OMW-11			MW-27D			MW-CI			MW-33S		
Lab Sample ID	460-168135-1			460-168135-2			460-168135-3			460-168135-4			460-168135-5		
Sampling Date	10/31/2018 13:30:00			10/31/2018 12:00:00			10/31/2018 13:20:00			10/31/2018 12:37:00			10/31/2018 14:10:00		
Matrix	Water			Water			Water			Water			Water		
WETCHEM-WATER	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 7196A															
Cr (VI) (ug/l)	11.0		3.0	3.0	J	3.0	15.1	U	15.1	3.0	J	3.0	3.0	U	3.0
WATER BY D516-90, 02															
Sulfate (mg/l)	NR			NR			NR			NR			13.4		2.4
WATER BY SM 4500 S2 F															
Sulfide (mg/l)	NR			NR			NR			NR			0.58	U	0.58

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:

Morgan Merriweather

Project Management Assistant I

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Grace Chang

Project Manager II

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

**SUMMARY OF ANALYTICAL RESULTS: 460-168182-1**

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

Client ID	MW-8S			Trolley Track Seep			MW-35S			MW-33I			MW-35I		
Lab Sample ID	460-168182-1			460-168182-2			460-168182-3			460-168182-4			460-168182-5		
Sampling Date	10/31/2018 16:20:00			10/31/2018 16:40:00			10/31/2018 16:50:00			10/31/2018 16:11:00			10/31/2018 17:20:00		
Matrix	Water			Water			Water			Water			Water		
Unit															
METALS-WATER	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	41.9		5.9	511		5.9	235		5.9	45.2		5.9	89.0		5.9

Lab Contact:

Morgan Merriweather

Project Management Assistant I

(732)549-3900

Grace Chang

Project Manager II

(732)593-2579

Job Description: Precision National Plating

For:

ARCADIS U.S., Inc

1 Harvard Way

Hillsborough, New Jersey 08844

**SUMMARY OF ANALYTICAL RESULTS: 460-168182-1****Job Description: Precision National Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID	MW-8S			Trolley Track Seep			MW-35S			MW-33I			MW-35I		
Lab Sample ID	460-168182-1			460-168182-2			460-168182-3			460-168182-4			460-168182-5		
Sampling Date	10/31/2018 16:20:00			10/31/2018 16:40:00			10/31/2018 16:50:00			10/31/2018 16:11:00			10/31/2018 17:20:00		
Matrix	Water			Water			Water			Water			Water		
WETCHEM-WATER	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 7196A															
Cr (VI) (ug/l)	15.1	U	15.1	19.7	J	6.0	3.0	U	3.0	6.0	U	6.0	6.0	U	6.0

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:

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Job Description: Precision National Plating

For:

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**SUMMARY OF ANALYTICAL RESULTS: 460-168240-1****Job Description: Precision National Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID	MW-34S			MW-34I			MW-28S			MW-28I		
Lab Sample ID	460-168240-1			460-168240-2			460-168240-3			460-168240-4		
Sampling Date	11/01/2018 11:50:00			11/01/2018 12:05:00			11/01/2018 13:30:00			11/01/2018 13:20:00		
Matrix	Water			Water			Water			Water		
Unit												
METALS-WATER	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 200.7 REV 4.4(UG/L)												
Chromium	178		5.9	26.4		5.9	52.0		5.9	59.2		5.9

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Job Description: Precision National Plating

For:

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1 Harvard Way

Hillsborough, New Jersey 08844

**SUMMARY OF ANALYTICAL RESULTS: 460-168240-1****Job Description: Precision National Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID	MW-34S			MW-34I			MW-28S			MW-28I		
Lab Sample ID	460-168240-1			460-168240-2			460-168240-3			460-168240-4		
Sampling Date	11/01/2018 11:50:00			11/01/2018 12:05:00			11/01/2018 13:30:00			11/01/2018 13:20:00		
Matrix	Water			Water			Water			Water		
WETCHEM-WATER	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	6.0	U	6.0	3.0	J F1	3.0

F1 : MS and/or MSD Recovery is outside acceptance limits.

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

Lab Contact:

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Job Description: Precision National Plating

For:

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Hillsborough, New Jersey 08844

**SUMMARY OF ANALYTICAL RESULTS: 460-168281-1****Job Description: Precision National Plating****For:****ARCADIS U.S., Inc****1 Harvard Way****Hillsborough, New Jersey 08844**

Client ID	MW-4S			MW-4D			Bathtub Seep			Cinderblock Seep		
Lab Sample ID	460-168281-1			460-168281-2			460-168281-3			460-168281-4		
Sampling Date	11/01/2018 15:57:00			11/01/2018 15:55:00			11/01/2018 16:30:00			11/01/2018 16:40:00		
Matrix	Water			Water			Water			Water		
Unit												
METALS-WATER	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
WATER BY 200.7 REV 4.4(UG/L)												
Chromium	41.9		5.9	5.9	U	5.9	1640		5.9	331		5.9

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

Lab Contact:

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Job Description: Precision National Plating

For:

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1 Harvard Way

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**SUMMARY OF ANALYTICAL RESULTS: 460-168281-1****Job Description: Precision National Plating**

For:

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

Client ID	MW-4S			MW-4D			Bathtub Seep			Cinderblock Seep		
Lab Sample ID	460-168281-1			460-168281-2			460-168281-3			460-168281-4		
Sampling Date	11/01/2018 15:57:00			11/01/2018 15:55:00			11/01/2018 16:30:00			11/01/2018 16:40:00		
Matrix	Water			Water			Water			Water		
WETCHEM-WATER	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	934		30.1	6.0	U	6.0

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

Lab Contact:

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