



**We Energies**  
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Milwaukee, WI 53203  
www.we-energies.com

February 8, 2022

Submitted Electronically

Ms. Shanna Laube-Anderson  
Wisconsin Department of Natural Resources  
141 NW Barstow Street, Room 180  
Waukesha, WI 53188

**SUBJECT: Pleasant Prairie Power Plant  
Low Volume Wastewater Basin Abonnement Sample Results**

Dear Ms. Laube-Anderson:

Wisconsin Electric Power Company (doing business as We Energies) is submitting the enclosed sample results from the Low Volume Wastewater Basin abandonment at the Pleasant Prairie Power Plant. Per our conversation that occurred on December 21, 2021, We Energies will submit this report as supplemental information to existing BRRTS Case #09-30-527479 which addressed sulfate in groundwater at the plant.

If you have any questions or need additional information, please contact me at (414) 221-2156 or at [frank.dombrowski@wecenergygroup.com](mailto:frank.dombrowski@wecenergygroup.com).

Sincerely,

A handwritten signature in black ink, appearing to read 'Frank Dombrowski'.

Frank Dombrowski  
Principal Consultant – Environmental

**PLEASANT PRAIRE POWER PLANT  
LOW VOLUME WASTEWATER BASIN ABANDONMENT  
SAMPLE RESULTS**

**Prepared by: We Energies  
February 2022**

## **EXECUTIVE SUMMARY**

Pleasant Prairie Power Plant (PPPP) is a retired coal-fired steam-electric generating station owned by Wisconsin Electric Power Company (doing business as We Energies) and located in Pleasant Prairie, Wisconsin. The plant began operation in the 1980s and was permanently shut down in April of 2018. Plant demolition activities commenced in July, 2020 and will continue through mid-2022. The Low Volume Wastewater (LVW) Basin formerly served as part of the PPPP Wastewater Treatment System. Since the plant no longer generates wastewater, the LVW Basin was abandoned in accordance with NR 213, as approved by the Wisconsin Department of Natural Resources (WDNR) on September 7, 2021 (Approval No. S-2021-0696).

Condition number 5 of the WDNR abandonment approval requires that the soil investigation be done under the approved abandonment plan in accordance with requirements of s. NR 2013.07, Wis. Adm. Code and the results be submitted to the department Remediation and Redevelopment (RR) Program to determine if further remedial action is necessary to clean-up any soil contamination in compliance with ch. NR 720, Wis. Adm. Code. Samples were collected on December 8, 2021 per the approved abandonment plan and all results were below WDNR Background Threshold Values (BTV) with the exception of one Arsenic result which was 8.6 mg/kg (slightly above the WDNR BTV of 8 mg/kg).

Results were submitted to the Remediation and Redevelopment Program on December 20, 2021 and a follow up conversation was conducted between We Energies and WDNR on December 21, 2021 to discuss the next steps. During that conversation, We Energies explained that the one Arsenic result that exceeded the BTV threshold was the result of naturally occurring background concentrations at the site. Therefore, instead of submitting a release notification form and opening a new BRRTS case, WDNR recommended that We Energies submit the sample results via the RR Program Submittal Portal to supplement information included in the closed BRRTS Case # 09-30-527479 (formerly 02-30-527479) associated to sulfate in groundwater. The WDNR indicated that this supplemental information would not be subject to a review or a review fee.

## **BACKGROUND**

The dimensions of the LVW Basin are 553 feet long by 154 feet wide by 14 feet deep. The basin was originally designed with a clay liner and a capacity of approximately 3.2 million gallons. In 2010, the basin was modified which included the partial removal of the existing clay liner, replacement of wooden baffles, installation of a 12-inch perforated PVC underdrain main line, construction of an access ramp, installation of a 45 mm reinforced polypropylene (RPP) plastic liner, and installation of an 8-inch polypropylene fiber reinforced concrete working surface. The location of the basin is depicted in Attachment 1.

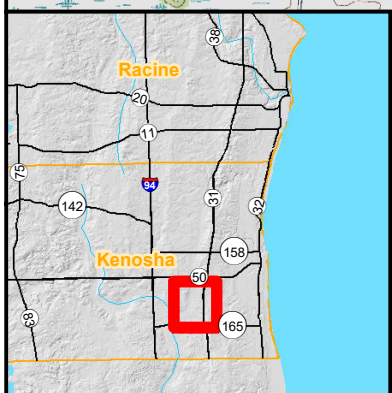
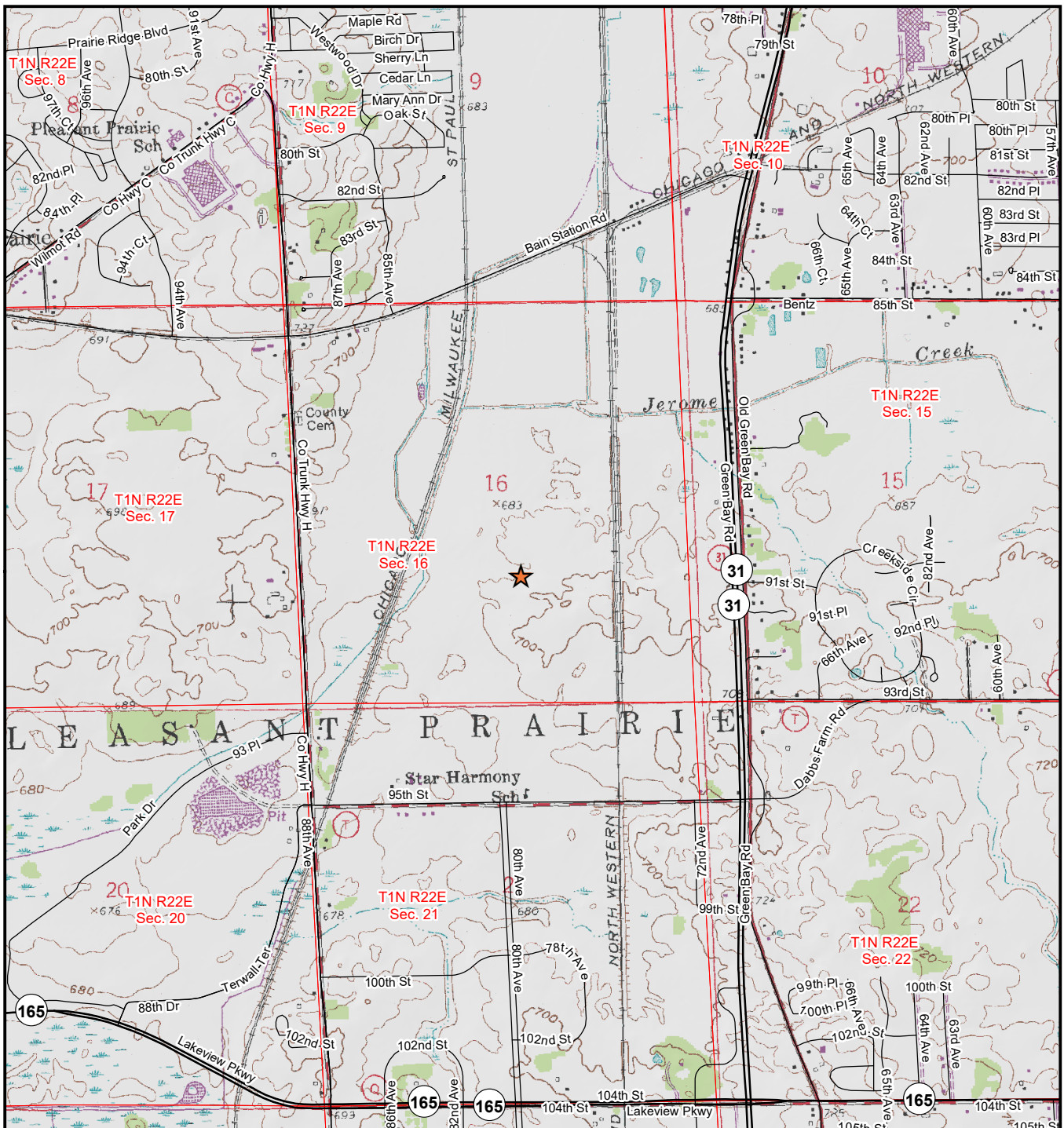
Prior to the plant ceasing operations, wastewater routed to the LVW Basin consisted of laboratory sinks, boiler room drains, equipment washdown, stormwater runoff, bottom ash system strainer backwash, water box drains, wastewater treatment drains, transformer and loading dock runoff, boiler drains, oil storage room drains, turbine oil cooling system drains, sand filter backwash, FGD cooling water, heating steam condensate drains, ash landfill leachate, and entrained flyash dust from the outage ventilation system. Wastewater was collected in the LVW Basin for flow equalization and sedimentation. The treated wastewater was discharged through Sample Point 103 and combined with other plant wastewater streams prior to reaching the final outfall at Lake Michigan approximately 5 miles east of the plant. The LVW Basin abandonment began on December 6, 2021 and was completed on January 19, 2022.




## **SAMPLE RESULTS AND SITE RESTORATION**



The soil from the LVW Basin was sampled on December 8, 2021, after the liner was removed. The sample result summary table is provided in Attachment 2 (Table 1 and Table 2) and the full lab report is provided in Attachment 3. All sample results were below the WDNR BTVs with the exception of one sample collected at location SS-05 as shown in Attachment 4. This sample returned an Arsenic concentration value of 8.6 mg/kg which exceeds the WDNR BTV of 8 mg/kg. Given the small variability of the data above the BTV, the arsenic concentration was concluded to be representative of background conditions.

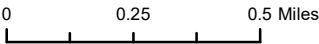
The material excavated from the LVW Basin was appropriately disposed in a licensed landfill, and the basin was backfilled and graded with clean soil. The area will be seeded once weather conditions allow. A stormwater management and erosion and sediment control plan was implemented as part of the basin removal and site restoration activities.

**ATTACHMENT 1**  
**LVW Basin Location**



-  Low Volume Wastewater Basin
-  Roadway
-  Section



**Pleasant Prairie Power Plant**

Low Volume Wastewater Basin Location

Source:  
USGS 7.5' series topographic maps

**ATTACHMENT 2**  
**LVW Basin Soil Sample Results Summary**

**TABLE 2**  
**SUMMARY OF POST-LINER REMOVAL SOIL SAMPLE LABORATORY ANALYTICAL RESULTS**  
 LOW VOLUME WASTEWATER BASIN ABANDONMENT  
 Pleasant Prairie Power Plant  
 Pleasant Prairie, Wisconsin

Sample ID	SS-01	SS-02	SS-03	SS-04	SS-05	SS-06	SS-07	SS-08	SS-09	SS-10	SS-10 DUP	WDNR Soil RCL			WDNR BTV
	Sample Collection Date	12/8/2021	12/8/2021	12/8/2021	12/8/2021	12/8/2021	12/8/2021	12/8/2021	12/8/2021	12/8/2021	12/8/2021	Direct Contact		Groundwater Protection (DF=2)	
Sample Depth (feet, bgs)	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	Non-Industrial	Industrial		
<b>Metals (mg/kg)</b>															
Arsenic	7.9	5.9	6.9	5.8	8.6	4.7	4.2	5.7	5.5	5.2	5.4	0.677	3	0.584	8
Cadmium	0.20	0.18	0.15	0.12	0.14	0.12	0.046 J	0.10	0.12	0.10	0.11	71.1	985	0.752	1
Chromium, trivalent	12	16	16	15	9.6	21	7.2	13	14	14	15	100000	100000	--	44
Chromium, hexavalent	< 0.44	< 0.45	< 0.44	< 0.44	< 0.42	< 0.44	< 0.45	< 0.45	< 0.45	< 0.45	< 0.46	0.301	6.36	--	
Copper	15	18	19	17	14	22	8.7	15	19	16	18	3130	46700	91.6	35
Iron	14,000	16,000	18,000	15,000	14,000	19,000	8,500	14,000	15,000	14,000	16,000	54800	100000	--	34314
Lead	13	13	12	10	10	11	4.8	9.1	9.7	9.1	10	400	800	27	52
Manganese	360	390	470	380	560	270	230	510	430	390	380	1830	25900	39.1244	2937
Sulfate	160	200	200	150	200	150	140	100	150	130	76	--	--	--	--
Zinc	44	45	44	43	33	59	19	35	40	37	44	23500	100000	--	150

*Notes:*

-- not analyzed, not established or not applicable

bgs - below ground surface

BTV - background threshold value

DF - dilution factor

DUP - duplicate

J - estimated concentration at or above the limit of detection and below the limit of quantitation

mg/kg - milligrams per kilogram

RCL - residual contaminant level (December 2018)

WDNR - Wisconsin Department of Natural Resources



**ATTACHMENT 3**  
**LVW Basin Soil Sample Lab Report**

## ANALYTICAL REPORT

Eurofins TestAmerica, Chicago  
2417 Bond Street  
University Park, IL 60484  
Tel: (708)534-5200

Laboratory Job ID: 500-209568-1  
Client Project/Site: PPPP - LVW Basin

**For:**

Geosyntec Consultants, Inc.  
10600 N. Port Washington Road, Suite 100  
Mequon, Wisconsin 53092

Attn: Jeremiah Johnson



*Authorized for release by:  
12/17/2021 4:56:28 PM*

Sandie Fredrick, Project Manager II  
(920)261-1660  
[sandra.fredrick@eurofinset.com](mailto:sandra.fredrick@eurofinset.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:

[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

*The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*



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# Case Narrative

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 500-209568-1

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**Job ID: 500-209568-1**

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**Laboratory: Eurofins TestAmerica, Chicago**

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**Narrative**

**Job Narrative  
500-209568-1**

**Comments**

No additional comments.

**Receipt**

The samples were received on 12/10/2021 10:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.1° C.

**Metals**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**General Chemistry**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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# Detection Summary

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 500-209568-1

## Client Sample ID: SS-01

## Lab Sample ID: 500-209568-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	160		4.5	2.1	mg/Kg	2	✳	300.0	Total/NA
Chromium, trivalent	12		0.11	0.11	mg/Kg	1	✳	7196A	Total/NA

## Client Sample ID: SS-02

## Lab Sample ID: 500-209568-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	200		4.6	2.2	mg/Kg	2	✳	300.0	Total/NA
Chromium, trivalent	16		0.12	0.12	mg/Kg	1	✳	7196A	Total/NA

## Client Sample ID: SS-03

## Lab Sample ID: 500-209568-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	200		4.5	2.1	mg/Kg	2	✳	300.0	Total/NA
Chromium, trivalent	16		0.11	0.11	mg/Kg	1	✳	7196A	Total/NA

## Client Sample ID: SS-04

## Lab Sample ID: 500-209568-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	150		4.5	2.2	mg/Kg	2	✳	300.0	Total/NA
Chromium, trivalent	15		0.11	0.11	mg/Kg	1	✳	7196A	Total/NA

## Client Sample ID: SS-05

## Lab Sample ID: 500-209568-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	200		4.3	2.1	mg/Kg	2	✳	300.0	Total/NA
Chromium, trivalent	9.6		0.11	0.11	mg/Kg	1	✳	7196A	Total/NA

## Client Sample ID: SS-06

## Lab Sample ID: 500-209568-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	150		4.4	2.1	mg/Kg	2	✳	300.0	Total/NA
Chromium, trivalent	21		0.11	0.11	mg/Kg	1	✳	7196A	Total/NA

## Client Sample ID: SS-07

## Lab Sample ID: 500-209568-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	140		4.6	2.2	mg/Kg	2	✳	300.0	Total/NA
Chromium, trivalent	7.2		0.12	0.12	mg/Kg	1	✳	7196A	Total/NA

## Client Sample ID: SS-08

## Lab Sample ID: 500-209568-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	100		2.2	1.1	mg/Kg	1	✳	300.0	Total/NA
Chromium, trivalent	13		0.12	0.12	mg/Kg	1	✳	7196A	Total/NA

## Client Sample ID: SS-09

## Lab Sample ID: 500-209568-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	150		4.6	2.2	mg/Kg	2	✳	300.0	Total/NA
Chromium, trivalent	14		0.12	0.12	mg/Kg	1	✳	7196A	Total/NA

## Client Sample ID: SS-10

## Lab Sample ID: 500-209568-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	130		4.7	2.2	mg/Kg	2	✳	300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Chicago

# Detection Summary

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 500-209568-1

## Client Sample ID: SS-10 (Continued)

Lab Sample ID: 500-209568-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium, trivalent	14		0.12	0.12	mg/Kg	1	✳	7196A	Total/NA

## Client Sample ID: SS-10 DUP

Lab Sample ID: 500-209568-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	76		2.4	1.1	mg/Kg	1	✳	300.0	Total/NA
Chromium, trivalent	15		0.12	0.12	mg/Kg	1	✳	7196A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Chicago

# Method Summary

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 500-209568-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL CHI
7196A	Chromium, Hexavalent	SW846	TAL CHI
7196A	Chromium, Trivalent (Colorimetric)	SW846	TAL CHI
Moisture	Percent Moisture	EPA	TAL CHI
300_Prep	Anions, Ion Chromatography, 10% Wt/Vol	MCAWW	TAL CHI
3060A	Alkaline Digestion (Chromium, Hexavalent)	SW846	TAL CHI

#### Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### Laboratory References:

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 500-209568-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-209568-1	SS-01	Solid	12/08/21 12:55	12/10/21 10:30
500-209568-2	SS-02	Solid	12/08/21 12:58	12/10/21 10:30
500-209568-3	SS-03	Solid	12/08/21 13:04	12/10/21 10:30
500-209568-4	SS-04	Solid	12/08/21 13:06	12/10/21 10:30
500-209568-5	SS-05	Solid	12/08/21 13:12	12/10/21 10:30
500-209568-6	SS-06	Solid	12/08/21 13:15	12/10/21 10:30
500-209568-7	SS-07	Solid	12/08/21 13:21	12/10/21 10:30
500-209568-8	SS-08	Solid	12/08/21 13:25	12/10/21 10:30
500-209568-9	SS-09	Solid	12/08/21 13:30	12/10/21 10:30
500-209568-10	SS-10	Solid	12/08/21 13:33	12/10/21 10:30
500-209568-11	SS-10 DUP	Solid	12/08/21 13:33	12/10/21 10:30

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# Client Sample Results

Client: Geosyntec Consultants, Inc.  
 Project/Site: PPPP - LVW Basin

Job ID: 500-209568-1

**Client Sample ID: SS-01**

**Lab Sample ID: 500-209568-1**

**Date Collected: 12/08/21 12:55**

**Matrix: Solid**

**Date Received: 12/10/21 10:30**

**Percent Solids: 88.1**

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Sulfate</b>	<b>160</b>		4.5	2.1	mg/Kg	☼	12/14/21 11:45	12/17/21 00:00	2
Chromium, hexavalent	<0.44		1.1	0.44	mg/Kg	☼	12/14/21 16:20	12/16/21 12:17	1
<b>Chromium, trivalent</b>	<b>12</b>		0.11	0.11	mg/Kg	☼		12/16/21 13:59	1

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# Client Sample Results

Client: Geosyntec Consultants, Inc.  
 Project/Site: PPPP - LVW Basin

Job ID: 500-209568-1

**Client Sample ID: SS-02**  
**Date Collected: 12/08/21 12:58**  
**Date Received: 12/10/21 10:30**

**Lab Sample ID: 500-209568-2**  
**Matrix: Solid**  
**Percent Solids: 86.0**

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Sulfate</b>	<b>200</b>		4.6	2.2	mg/Kg	☼	12/14/21 11:45	12/17/21 00:13	2
Chromium, hexavalent	<0.45		1.1	0.45	mg/Kg	☼	12/14/21 16:20	12/16/21 12:18	1
<b>Chromium, trivalent</b>	<b>16</b>		0.12	0.12	mg/Kg	☼		12/16/21 13:59	1

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# Client Sample Results

Client: Geosyntec Consultants, Inc.  
 Project/Site: PPPP - LVW Basin

Job ID: 500-209568-1

**Client Sample ID: SS-03**  
**Date Collected: 12/08/21 13:04**  
**Date Received: 12/10/21 10:30**

**Lab Sample ID: 500-209568-3**  
**Matrix: Solid**  
**Percent Solids: 87.7**

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Sulfate</b>	<b>200</b>		4.5	2.1	mg/Kg	☼	12/14/21 11:45	12/17/21 00:25	2
Chromium, hexavalent	<0.44		1.1	0.44	mg/Kg	☼	12/14/21 16:20	12/16/21 12:18	1
<b>Chromium, trivalent</b>	<b>16</b>		0.11	0.11	mg/Kg	☼		12/16/21 13:59	1

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# Client Sample Results

Client: Geosyntec Consultants, Inc.  
 Project/Site: PPPP - LVW Basin

Job ID: 500-209568-1

**Client Sample ID: SS-04**  
**Date Collected: 12/08/21 13:06**  
**Date Received: 12/10/21 10:30**

**Lab Sample ID: 500-209568-4**  
**Matrix: Solid**  
**Percent Solids: 87.5**

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Sulfate</b>	<b>150</b>		4.5	2.2	mg/Kg	☼	12/14/21 11:45	12/17/21 00:38	2
Chromium, hexavalent	<0.44		1.1	0.44	mg/Kg	☼	12/14/21 16:20	12/16/21 12:19	1
<b>Chromium, trivalent</b>	<b>15</b>		0.11	0.11	mg/Kg	☼		12/16/21 13:59	1

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# Client Sample Results

Client: Geosyntec Consultants, Inc.  
 Project/Site: PPPP - LVW Basin

Job ID: 500-209568-1

**Client Sample ID: SS-05**  
**Date Collected: 12/08/21 13:12**  
**Date Received: 12/10/21 10:30**

**Lab Sample ID: 500-209568-5**  
**Matrix: Solid**  
**Percent Solids: 90.8**

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Sulfate</b>	<b>200</b>		4.3	2.1	mg/Kg	☼	12/14/21 11:45	12/17/21 00:51	2
Chromium, hexavalent	<0.42		1.1	0.42	mg/Kg	☼	12/14/21 16:20	12/16/21 12:20	1
<b>Chromium, trivalent</b>	<b>9.6</b>		0.11	0.11	mg/Kg	☼		12/16/21 13:59	1

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# Client Sample Results

Client: Geosyntec Consultants, Inc.  
 Project/Site: PPPP - LVW Basin

Job ID: 500-209568-1

**Client Sample ID: SS-06**  
**Date Collected: 12/08/21 13:15**  
**Date Received: 12/10/21 10:30**

**Lab Sample ID: 500-209568-6**  
**Matrix: Solid**  
**Percent Solids: 88.1**

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Sulfate</b>	<b>150</b>		4.4	2.1	mg/Kg	☼	12/14/21 11:45	12/17/21 01:03	2
Chromium, hexavalent	<0.44		1.1	0.44	mg/Kg	☼	12/14/21 16:20	12/16/21 12:20	1
<b>Chromium, trivalent</b>	<b>21</b>		0.11	0.11	mg/Kg	☼		12/16/21 13:59	1

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# Client Sample Results

Client: Geosyntec Consultants, Inc.  
 Project/Site: PPPP - LVW Basin

Job ID: 500-209568-1

**Client Sample ID: SS-07**  
**Date Collected: 12/08/21 13:21**  
**Date Received: 12/10/21 10:30**

**Lab Sample ID: 500-209568-7**  
**Matrix: Solid**  
**Percent Solids: 84.1**

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Sulfate</b>	<b>140</b>		4.6	2.2	mg/Kg	☼	12/14/21 11:45	12/17/21 10:36	2
Chromium, hexavalent	<0.45		1.2	0.45	mg/Kg	☼	12/14/21 16:20	12/16/21 12:21	1
<b>Chromium, trivalent</b>	<b>7.2</b>		0.12	0.12	mg/Kg	☼		12/16/21 13:59	1

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# Client Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 500-209568-1

**Client Sample ID: SS-08**

**Lab Sample ID: 500-209568-8**

**Date Collected: 12/08/21 13:25**

**Matrix: Solid**

**Date Received: 12/10/21 10:30**

**Percent Solids: 86.1**

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Sulfate</b>	<b>100</b>		2.2	1.1	mg/Kg	☼	12/14/21 11:45	12/14/21 19:39	1
Chromium, hexavalent	<0.45		1.2	0.45	mg/Kg	☼	12/14/21 16:20	12/16/21 12:21	1
<b>Chromium, trivalent</b>	<b>13</b>		0.12	0.12	mg/Kg	☼		12/16/21 13:59	1

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# Client Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 500-209568-1

**Client Sample ID: SS-09**

**Lab Sample ID: 500-209568-9**

**Date Collected: 12/08/21 13:30**

**Matrix: Solid**

**Date Received: 12/10/21 10:30**

**Percent Solids: 85.6**

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Sulfate</b>	<b>150</b>		4.6	2.2	mg/Kg	☼	12/14/21 11:45	12/17/21 01:16	2
Chromium, hexavalent	<0.45		1.2	0.45	mg/Kg	☼	12/14/21 16:20	12/16/21 12:21	1
<b>Chromium, trivalent</b>	<b>14</b>		0.12	0.12	mg/Kg	☼		12/16/21 13:59	1



# Client Sample Results

Client: Geosyntec Consultants, Inc.  
 Project/Site: PPPP - LVW Basin

Job ID: 500-209568-1

**Client Sample ID: SS-10**

**Lab Sample ID: 500-209568-10**

**Date Collected: 12/08/21 13:33**

**Matrix: Solid**

**Date Received: 12/10/21 10:30**

**Percent Solids: 83.3**

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Sulfate</b>	<b>130</b>		4.7	2.2	mg/Kg	☼	12/14/21 11:45	12/17/21 10:48	2
Chromium, hexavalent	<0.45		1.2	0.45	mg/Kg	☼	12/14/21 16:20	12/16/21 12:22	1
<b>Chromium, trivalent</b>	<b>14</b>		0.12	0.12	mg/Kg	☼		12/16/21 13:59	1

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# Client Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 500-209568-1

**Client Sample ID: SS-10 DUP**

**Lab Sample ID: 500-209568-11**

**Date Collected: 12/08/21 13:33**

**Matrix: Solid**

**Date Received: 12/10/21 10:30**

**Percent Solids: 83.7**

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Sulfate</b>	<b>76</b>		2.4	1.1	mg/Kg	☼	12/14/21 11:45	12/14/21 20:42	1
Chromium, hexavalent	<0.46		1.2	0.46	mg/Kg	☼	12/14/21 16:20	12/16/21 12:22	1
<b>Chromium, trivalent</b>	<b>15</b>		0.12	0.12	mg/Kg	☼		12/16/21 13:59	1

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# Definitions/Glossary

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 500-209568-1

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

# QC Association Summary

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 500-209568-1

## General Chemistry

### Analysis Batch: 633453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-209568-1	SS-01	Total/NA	Solid	Moisture	
500-209568-2	SS-02	Total/NA	Solid	Moisture	
500-209568-3	SS-03	Total/NA	Solid	Moisture	
500-209568-4	SS-04	Total/NA	Solid	Moisture	
500-209568-5	SS-05	Total/NA	Solid	Moisture	
500-209568-6	SS-06	Total/NA	Solid	Moisture	
500-209568-7	SS-07	Total/NA	Solid	Moisture	
500-209568-8	SS-08	Total/NA	Solid	Moisture	
500-209568-9	SS-09	Total/NA	Solid	Moisture	
500-209568-10	SS-10	Total/NA	Solid	Moisture	
500-209568-11	SS-10 DUP	Total/NA	Solid	Moisture	

### Analysis Batch: 633464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-209568-1	SS-01	Total/NA	Solid	7196A	
500-209568-2	SS-02	Total/NA	Solid	7196A	
500-209568-3	SS-03	Total/NA	Solid	7196A	
500-209568-4	SS-04	Total/NA	Solid	7196A	
500-209568-5	SS-05	Total/NA	Solid	7196A	
500-209568-6	SS-06	Total/NA	Solid	7196A	
500-209568-7	SS-07	Total/NA	Solid	7196A	
500-209568-8	SS-08	Total/NA	Solid	7196A	
500-209568-9	SS-09	Total/NA	Solid	7196A	
500-209568-10	SS-10	Total/NA	Solid	7196A	
500-209568-11	SS-10 DUP	Total/NA	Solid	7196A	

### Prep Batch: 633634

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-209568-1	SS-01	Total/NA	Solid	3060A	
500-209568-2	SS-02	Total/NA	Solid	3060A	
500-209568-3	SS-03	Total/NA	Solid	3060A	
500-209568-4	SS-04	Total/NA	Solid	3060A	
500-209568-5	SS-05	Total/NA	Solid	3060A	
500-209568-6	SS-06	Total/NA	Solid	3060A	
500-209568-7	SS-07	Total/NA	Solid	3060A	
500-209568-8	SS-08	Total/NA	Solid	3060A	
500-209568-9	SS-09	Total/NA	Solid	3060A	
500-209568-10	SS-10	Total/NA	Solid	3060A	
500-209568-11	SS-10 DUP	Total/NA	Solid	3060A	
MB 500-633634/1-A	Method Blank	Total/NA	Solid	3060A	
LCS 500-633634/2-A	Lab Control Sample	Total/NA	Solid	3060A	
LCS 500-633634/3-A	Lab Control Sample	Total/NA	Solid	3060A	

### Prep Batch: 633673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-209568-1	SS-01	Total/NA	Solid	300_Prep	
500-209568-2	SS-02	Total/NA	Solid	300_Prep	
500-209568-3	SS-03	Total/NA	Solid	300_Prep	
500-209568-4	SS-04	Total/NA	Solid	300_Prep	
500-209568-5	SS-05	Total/NA	Solid	300_Prep	
500-209568-6	SS-06	Total/NA	Solid	300_Prep	

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# QC Association Summary

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 500-209568-1

## General Chemistry (Continued)

### Prep Batch: 633673 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-209568-7	SS-07	Total/NA	Solid	300_Prep	
500-209568-8	SS-08	Total/NA	Solid	300_Prep	
500-209568-9	SS-09	Total/NA	Solid	300_Prep	
500-209568-10	SS-10	Total/NA	Solid	300_Prep	
500-209568-11	SS-10 DUP	Total/NA	Solid	300_Prep	
MB 500-633673/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 500-633673/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

### Analysis Batch: 633704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-209568-8	SS-08	Total/NA	Solid	300.0	633673
500-209568-11	SS-10 DUP	Total/NA	Solid	300.0	633673
MB 500-633673/1-A	Method Blank	Total/NA	Solid	300.0	633673
LCS 500-633673/2-A	Lab Control Sample	Total/NA	Solid	300.0	633673

### Analysis Batch: 634090

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-209568-1	SS-01	Total/NA	Solid	7196A	633634
500-209568-2	SS-02	Total/NA	Solid	7196A	633634
500-209568-3	SS-03	Total/NA	Solid	7196A	633634
500-209568-4	SS-04	Total/NA	Solid	7196A	633634
500-209568-5	SS-05	Total/NA	Solid	7196A	633634
500-209568-6	SS-06	Total/NA	Solid	7196A	633634
500-209568-7	SS-07	Total/NA	Solid	7196A	633634
500-209568-8	SS-08	Total/NA	Solid	7196A	633634
500-209568-9	SS-09	Total/NA	Solid	7196A	633634
500-209568-10	SS-10	Total/NA	Solid	7196A	633634
500-209568-11	SS-10 DUP	Total/NA	Solid	7196A	633634
MB 500-633634/1-A	Method Blank	Total/NA	Solid	7196A	633634
LCS 500-633634/2-A	Lab Control Sample	Total/NA	Solid	7196A	633634
LCS 500-633634/3-A	Lab Control Sample	Total/NA	Solid	7196A	633634

### Analysis Batch: 634184

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-209568-1	SS-01	Total/NA	Solid	300.0	633673
500-209568-2	SS-02	Total/NA	Solid	300.0	633673
500-209568-3	SS-03	Total/NA	Solid	300.0	633673
500-209568-4	SS-04	Total/NA	Solid	300.0	633673
500-209568-5	SS-05	Total/NA	Solid	300.0	633673
500-209568-6	SS-06	Total/NA	Solid	300.0	633673
500-209568-9	SS-09	Total/NA	Solid	300.0	633673
MB 500-633673/1-A	Method Blank	Total/NA	Solid	300.0	633673
LCS 500-633673/2-A	Lab Control Sample	Total/NA	Solid	300.0	633673

### Analysis Batch: 634251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-209568-7	SS-07	Total/NA	Solid	300.0	633673
500-209568-10	SS-10	Total/NA	Solid	300.0	633673
MB 500-633673/1-A	Method Blank	Total/NA	Solid	300.0	633673
LCS 500-633673/2-A	Lab Control Sample	Total/NA	Solid	300.0	633673

# QC Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 500-209568-1

## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 500-633673/1-A  
Matrix: Solid  
Analysis Batch: 633704

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 633673

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<0.95		2.0	0.95	mg/Kg		12/14/21 11:45	12/14/21 12:32	1

Lab Sample ID: MB 500-633673/1-A  
Matrix: Solid  
Analysis Batch: 634184

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 633673

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<0.95		2.0	0.95	mg/Kg		12/14/21 11:45	12/16/21 23:35	1

Lab Sample ID: MB 500-633673/1-A  
Matrix: Solid  
Analysis Batch: 634251

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 633673

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<0.95		2.0	0.95	mg/Kg		12/14/21 11:45	12/17/21 10:10	1

Lab Sample ID: LCS 500-633673/2-A  
Matrix: Solid  
Analysis Batch: 633704

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 633673

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Sulfate	50.0	50.2		mg/Kg		100	90 - 110

Lab Sample ID: LCS 500-633673/2-A  
Matrix: Solid  
Analysis Batch: 634184

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 633673

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Sulfate	50.0	50.8		mg/Kg		102	90 - 110

Lab Sample ID: LCS 500-633673/2-A  
Matrix: Solid  
Analysis Batch: 634251

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 633673

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Sulfate	50.0	52.8		mg/Kg		106	90 - 110

## Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 500-633634/1-A  
Matrix: Solid  
Analysis Batch: 634090

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 633634

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	<0.39		1.0	0.39	mg/Kg		12/14/21 16:20	12/16/21 12:14	1

# QC Sample Results

Client: Geosyntec Consultants, Inc.  
 Project/Site: PPPP - LVW Basin

Job ID: 500-209568-1

## Method: 7196A - Chromium, Hexavalent (Continued)

**Lab Sample ID: LCS 500-633634/2-A**  
**Matrix: Solid**  
**Analysis Batch: 634090**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 633634**  
**%Rec.**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Chromium, hexavalent	10.0	8.40		mg/Kg		84	80 - 120

**Lab Sample ID: LCS 500-633634/3-A**  
**Matrix: Solid**  
**Analysis Batch: 634090**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 633634**  
**%Rec.**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Chromium, hexavalent	1190	963		mg/Kg		81	80 - 120

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# Lab Chronicle

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 500-209568-1

**Client Sample ID: SS-01**

**Date Collected: 12/08/21 12:55**

**Date Received: 12/10/21 10:30**

**Lab Sample ID: 500-209568-1**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	633453	12/13/21 15:10	LWN	TAL CHI

**Client Sample ID: SS-01**

**Date Collected: 12/08/21 12:55**

**Date Received: 12/10/21 10:30**

**Lab Sample ID: 500-209568-1**

**Matrix: Solid**

**Percent Solids: 88.1**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	300_Prep			633673	12/14/21 11:45	PFK	TAL CHI
Total/NA	Analysis	300.0		2	634184	12/17/21 00:00	EAT	TAL CHI
Total/NA	Analysis	7196A		1	633464	12/16/21 13:59	PFK	TAL CHI
Total/NA	Prep	3060A			633634	12/14/21 16:20	EAT	TAL CHI
Total/NA	Analysis	7196A		1	634090	12/16/21 12:17	EAT	TAL CHI

**Client Sample ID: SS-02**

**Date Collected: 12/08/21 12:58**

**Date Received: 12/10/21 10:30**

**Lab Sample ID: 500-209568-2**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	633453	12/13/21 15:10	LWN	TAL CHI

**Client Sample ID: SS-02**

**Date Collected: 12/08/21 12:58**

**Date Received: 12/10/21 10:30**

**Lab Sample ID: 500-209568-2**

**Matrix: Solid**

**Percent Solids: 86.0**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	300_Prep			633673	12/14/21 11:45	PFK	TAL CHI
Total/NA	Analysis	300.0		2	634184	12/17/21 00:13	EAT	TAL CHI
Total/NA	Analysis	7196A		1	633464	12/16/21 13:59	PFK	TAL CHI
Total/NA	Prep	3060A			633634	12/14/21 16:20	EAT	TAL CHI
Total/NA	Analysis	7196A		1	634090	12/16/21 12:18	EAT	TAL CHI

**Client Sample ID: SS-03**

**Date Collected: 12/08/21 13:04**

**Date Received: 12/10/21 10:30**

**Lab Sample ID: 500-209568-3**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	633453	12/13/21 15:10	LWN	TAL CHI

**Client Sample ID: SS-03**

**Date Collected: 12/08/21 13:04**

**Date Received: 12/10/21 10:30**

**Lab Sample ID: 500-209568-3**

**Matrix: Solid**

**Percent Solids: 87.7**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	300_Prep			633673	12/14/21 11:45	PFK	TAL CHI
Total/NA	Analysis	300.0		2	634184	12/17/21 00:25	EAT	TAL CHI
Total/NA	Analysis	7196A		1	633464	12/16/21 13:59	PFK	TAL CHI

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# Lab Chronicle

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 500-209568-1

## Client Sample ID: SS-03

Date Collected: 12/08/21 13:04

Date Received: 12/10/21 10:30

## Lab Sample ID: 500-209568-3

Matrix: Solid

Percent Solids: 87.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3060A			633634	12/14/21 16:20	EAT	TAL CHI
Total/NA	Analysis	7196A		1	634090	12/16/21 12:18	EAT	TAL CHI

## Client Sample ID: SS-04

Date Collected: 12/08/21 13:06

Date Received: 12/10/21 10:30

## Lab Sample ID: 500-209568-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	633453	12/13/21 15:10	LWN	TAL CHI

## Client Sample ID: SS-04

Date Collected: 12/08/21 13:06

Date Received: 12/10/21 10:30

## Lab Sample ID: 500-209568-4

Matrix: Solid

Percent Solids: 87.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	300_Prep			633673	12/14/21 11:45	PFK	TAL CHI
Total/NA	Analysis	300.0		2	634184	12/17/21 00:38	EAT	TAL CHI
Total/NA	Analysis	7196A		1	633464	12/16/21 13:59	PFK	TAL CHI
Total/NA	Prep	3060A			633634	12/14/21 16:20	EAT	TAL CHI
Total/NA	Analysis	7196A		1	634090	12/16/21 12:19	EAT	TAL CHI

## Client Sample ID: SS-05

Date Collected: 12/08/21 13:12

Date Received: 12/10/21 10:30

## Lab Sample ID: 500-209568-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	633453	12/13/21 15:10	LWN	TAL CHI

## Client Sample ID: SS-05

Date Collected: 12/08/21 13:12

Date Received: 12/10/21 10:30

## Lab Sample ID: 500-209568-5

Matrix: Solid

Percent Solids: 90.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	300_Prep			633673	12/14/21 11:45	PFK	TAL CHI
Total/NA	Analysis	300.0		2	634184	12/17/21 00:51	EAT	TAL CHI
Total/NA	Analysis	7196A		1	633464	12/16/21 13:59	PFK	TAL CHI
Total/NA	Prep	3060A			633634	12/14/21 16:20	EAT	TAL CHI
Total/NA	Analysis	7196A		1	634090	12/16/21 12:20	EAT	TAL CHI

## Client Sample ID: SS-06

Date Collected: 12/08/21 13:15

Date Received: 12/10/21 10:30

## Lab Sample ID: 500-209568-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	633453	12/13/21 15:10	LWN	TAL CHI

# Lab Chronicle

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 500-209568-1

**Client Sample ID: SS-06**

**Lab Sample ID: 500-209568-6**

Date Collected: 12/08/21 13:15

Matrix: Solid

Date Received: 12/10/21 10:30

Percent Solids: 88.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	300_Prep			633673	12/14/21 11:45	PFK	TAL CHI
Total/NA	Analysis	300.0		2	634184	12/17/21 01:03	EAT	TAL CHI
Total/NA	Analysis	7196A		1	633464	12/16/21 13:59	PFK	TAL CHI
Total/NA	Prep	3060A			633634	12/14/21 16:20	EAT	TAL CHI
Total/NA	Analysis	7196A		1	634090	12/16/21 12:20	EAT	TAL CHI

**Client Sample ID: SS-07**

**Lab Sample ID: 500-209568-7**

Date Collected: 12/08/21 13:21

Matrix: Solid

Date Received: 12/10/21 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	633453	12/13/21 15:10	LWN	TAL CHI

**Client Sample ID: SS-07**

**Lab Sample ID: 500-209568-7**

Date Collected: 12/08/21 13:21

Matrix: Solid

Date Received: 12/10/21 10:30

Percent Solids: 84.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	300_Prep			633673	12/14/21 11:45	PFK	TAL CHI
Total/NA	Analysis	300.0		2	634251	12/17/21 10:36	EAT	TAL CHI
Total/NA	Analysis	7196A		1	633464	12/16/21 13:59	PFK	TAL CHI
Total/NA	Prep	3060A			633634	12/14/21 16:20	EAT	TAL CHI
Total/NA	Analysis	7196A		1	634090	12/16/21 12:21	EAT	TAL CHI

**Client Sample ID: SS-08**

**Lab Sample ID: 500-209568-8**

Date Collected: 12/08/21 13:25

Matrix: Solid

Date Received: 12/10/21 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	633453	12/13/21 15:10	LWN	TAL CHI

**Client Sample ID: SS-08**

**Lab Sample ID: 500-209568-8**

Date Collected: 12/08/21 13:25

Matrix: Solid

Date Received: 12/10/21 10:30

Percent Solids: 86.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	300_Prep			633673	12/14/21 11:45	PFK	TAL CHI
Total/NA	Analysis	300.0		1	633704	12/14/21 19:39	EAT	TAL CHI
Total/NA	Analysis	7196A		1	633464	12/16/21 13:59	PFK	TAL CHI
Total/NA	Prep	3060A			633634	12/14/21 16:20	EAT	TAL CHI
Total/NA	Analysis	7196A		1	634090	12/16/21 12:21	EAT	TAL CHI

# Lab Chronicle

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 500-209568-1

**Client Sample ID: SS-09**

**Date Collected: 12/08/21 13:30**

**Date Received: 12/10/21 10:30**

**Lab Sample ID: 500-209568-9**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	633453	12/13/21 15:10	LWN	TAL CHI

**Client Sample ID: SS-09**

**Date Collected: 12/08/21 13:30**

**Date Received: 12/10/21 10:30**

**Lab Sample ID: 500-209568-9**

**Matrix: Solid**

**Percent Solids: 85.6**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	300_Prep			633673	12/14/21 11:45	PFK	TAL CHI
Total/NA	Analysis	300.0		2	634184	12/17/21 01:16	EAT	TAL CHI
Total/NA	Analysis	7196A		1	633464	12/16/21 13:59	PFK	TAL CHI
Total/NA	Prep	3060A			633634	12/14/21 16:20	EAT	TAL CHI
Total/NA	Analysis	7196A		1	634090	12/16/21 12:21	EAT	TAL CHI

**Client Sample ID: SS-10**

**Date Collected: 12/08/21 13:33**

**Date Received: 12/10/21 10:30**

**Lab Sample ID: 500-209568-10**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	633453	12/13/21 15:10	LWN	TAL CHI

**Client Sample ID: SS-10**

**Date Collected: 12/08/21 13:33**

**Date Received: 12/10/21 10:30**

**Lab Sample ID: 500-209568-10**

**Matrix: Solid**

**Percent Solids: 83.3**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	300_Prep			633673	12/14/21 11:45	PFK	TAL CHI
Total/NA	Analysis	300.0		2	634251	12/17/21 10:48	EAT	TAL CHI
Total/NA	Analysis	7196A		1	633464	12/16/21 13:59	PFK	TAL CHI
Total/NA	Prep	3060A			633634	12/14/21 16:20	EAT	TAL CHI
Total/NA	Analysis	7196A		1	634090	12/16/21 12:22	EAT	TAL CHI

**Client Sample ID: SS-10 DUP**

**Date Collected: 12/08/21 13:33**

**Date Received: 12/10/21 10:30**

**Lab Sample ID: 500-209568-11**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	633453	12/13/21 15:10	LWN	TAL CHI

**Client Sample ID: SS-10 DUP**

**Date Collected: 12/08/21 13:33**

**Date Received: 12/10/21 10:30**

**Lab Sample ID: 500-209568-11**

**Matrix: Solid**

**Percent Solids: 83.7**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	300_Prep			633673	12/14/21 11:45	PFK	TAL CHI
Total/NA	Analysis	300.0		1	633704	12/14/21 20:42	EAT	TAL CHI
Total/NA	Analysis	7196A		1	633464	12/16/21 13:59	PFK	TAL CHI

Eurofins TestAmerica, Chicago

# Lab Chronicle

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 500-209568-1

**Client Sample ID: SS-10 DUP**

**Lab Sample ID: 500-209568-11**

**Date Collected: 12/08/21 13:33**

**Matrix: Solid**

**Date Received: 12/10/21 10:30**

**Percent Solids: 83.7**

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Prepared or Analyzed</u>	<u>Analyst</u>	<u>Lab</u>
Total/NA	Prep	3060A			633634	12/14/21 16:20	EAT	TAL CHI
Total/NA	Analysis	7196A		1	634090	12/16/21 12:22	EAT	TAL CHI

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

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# Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 500-209568-1

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999580010	08-31-22

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# Chain of Custody Record



Regulatory Program:  DW  NPDES  RCRA  Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

<b>Client Contact</b>		<b>Project Manager: Jeremiah Johnson</b>		<b>Site Contact: Jeremiah Johnson</b>		<b>Date:</b>		<b>COC No 01</b>	
Geosyntec Consultants		Email: jjohnson@geosyntec.com		Tel/Fax: 414-322-1164		Lab Contact: Sandie Fredrick		Carrier:	
10600 N Port Washington Road, Suite 100		<b>Analysis Turnaround Time</b>						TALS Project #	
Mequon, WI 53092		<input type="checkbox"/> CALENDAR DAYS <input checked="" type="checkbox"/> WORKING DAYS						Sampler: Brandon Mayfield	
(414)-322-1164 Phone		TAT if different from Below _5 working days _____						For Lab Use Only:	
FAX		<input type="checkbox"/> 2 weeks						Walk-in Client:	
Project Name PPPP - LVW Basin		<input type="checkbox"/> 1 week						Lab Sampling	
Site We Energies PPPP		<input type="checkbox"/> 2 days						Job / SDG No	
P O # WEC Energy Group (Taulia)		<input type="checkbox"/> 1 day						500-209568	



500-209568 COC

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	sulfate (EPA Method 300.0)	hexavalent chromium (EPA Method 7199)	Sample Specific Notes
SS-01	12/8/2021	12 55	G	S	1		X	X		
SS-02	12/8/2021	12 58	G	S	1		X	X		
SS-03	12/8/2021	13 04	G	S	1		X	X		
SS-04	12/8/2021	13 06	G	S	1		X	X		
SS-05	12/8/2021	13 12	G	S	1		X	X		
SS-06	12/8/2021	13 15	G	S	1		X	X		
SS-07	12/8/2021	13 21	G	S	1		X	X		
SS-08	12/8/2021	13 25	G	S	1		X	X		
SS-09	12/8/2021	13 30	G	S	1		X	X		
SS-10	12/8/2021	13 33	G	S	1		X	X		
SS-10 DUP	12/8/2021	13 33	G	S	1		X	X		

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Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4=HNO3, 5=NaOH, 6= Other

<b>Possible Hazard Identification:</b> Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample		<b>Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)</b>	
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown		<input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months	

**Special Instructions/QC Requirements & Comments:**  
Send samples to the Chicago lab for quick TAT (5 day)  
Invoice WEC Energy Group through the on-line system (Taulia) - Attn Elizabeth Hellman, elizabeth.hellman@wecenergygroup.com

Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No		Cooler Temp (°C) Obs'd <u>11</u> Corr'd _____		Therm ID No _____	
Relinquished by <i>Brandon Mayfield</i>	Company <i>Geosyntec</i>	Date/Time <i>12/9/21 11:00</i>	Received by <i>[Signature]</i>	Company <i>TA</i>	Date/Time <i>12/9/21 11:00</i>		
Relinquished by <i>[Signature]</i>	Company <i>TA</i>	Date/Time <i>12/9/21 17:00</i>	Received by	Company	Date/Time		
Relinquished by	Company	Date/Time	Received in Laboratory by <i>[Signature]</i>	Company <i>TA</i>	Date/Time <i>12/10/21 10:30</i>		

# Login Sample Receipt Checklist

Client: Geosyntec Consultants, Inc.

Job Number: 500-209568-1

**Login Number: 209568**

**List Source: Eurofins TestAmerica, Chicago**

**List Number: 1**

**Creator: Scott, Sherri L**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





## ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh  
301 Alpha Drive  
RIDC Park  
Pittsburgh, PA 15238  
Tel: (412)963-7058

Laboratory Job ID: 180-131076-1  
Client Project/Site: PPPP - LVW Basin

For:  
Geosyntec Consultants, Inc.  
10600 N. Port Washington Road, Suite 100  
Mequon, Wisconsin 53092

Attn: Jeremiah Johnson



Authorized for release by:  
12/16/2021 12:18:56 PM

Sandie Fredrick, Project Manager II  
(920)261-1660  
[sandra.fredrick@eurofinset.com](mailto:sandra.fredrick@eurofinset.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

PA Lab ID: 02-00416



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# Case Narrative

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 180-131076-1

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## Job ID: 180-131076-1

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Laboratory: Eurofins TestAmerica, Pittsburgh

### Narrative

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#### Job Narrative 180-131076-1

#### Receipt

The samples were received on 12/10/2021 9:30 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.6°C

#### Metals

Method 6020B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 180-381854 and analytical batch 180-382419 were outside control limits for multiple analytes. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 6020B: The post digestion spike % recovery for manganese associated with batch 180-382419 was outside of control limits. The associated sample is: SS-01 (180-131076-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### General Chemistry

Method Moisture: The sample duplicate precision for the following sample associated with analytical batch 180-382013 was outside control limits for percent moisture: SS-10 DUP (180-131076-11). The RPD was greater than 10%, but within 20%.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.



# Definitions/Glossary

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 180-131076-1

## Qualifiers

### Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### General Chemistry

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control limit

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

# Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 180-131076-1

## Laboratory: Eurofins TestAmerica, Pittsburgh

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998027800	08-31-22

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# Sample Summary

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 180-131076-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-131076-1	SS-01	Solid	12/08/21 12:55	12/10/21 09:30
180-131076-2	SS-02	Solid	12/08/21 12:58	12/10/21 09:30
180-131076-3	SS-03	Solid	12/08/21 13:04	12/10/21 09:30
180-131076-4	SS-04	Solid	12/08/21 13:06	12/10/21 09:30
180-131076-5	SS-05	Solid	12/08/21 13:12	12/10/21 09:30
180-131076-6	SS-06	Solid	12/08/21 13:15	12/10/21 09:30
180-131076-7	SS-07	Solid	12/08/21 13:21	12/10/21 09:30
180-131076-8	SS-08	Solid	12/08/21 13:25	12/10/21 09:30
180-131076-9	SS-09	Solid	12/08/21 13:30	12/10/21 09:30
180-131076-10	SS-10	Solid	12/08/21 13:33	12/10/21 09:30
180-131076-11	SS-10 DUP	Solid	12/08/21 13:33	12/10/21 09:30

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# Method Summary

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 180-131076-1

Method	Method Description	Protocol	Laboratory
EPA 6020B	Metals (ICP/MS)	SW846	TAL PIT
2540G	SM 2540G	SM22	TAL PIT
3050B	Preparation, Metals	SW846	TAL PIT

**Protocol References:**

SM22 = Standard Methods For The Examination Of Water And Wastewater, 22nd Edition

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058



# Lab Chronicle

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 180-131076-1

**Client Sample ID: SS-01**

**Lab Sample ID: 180-131076-1**

Date Collected: 12/08/21 12:55

Matrix: Solid

Date Received: 12/10/21 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			382013	12/13/21 15:00	SMW	TAL PIT
Instrument ID: NOEQUIP										

**Client Sample ID: SS-01**

**Lab Sample ID: 180-131076-1**

Date Collected: 12/08/21 12:55

Matrix: Solid

Date Received: 12/10/21 09:30

Percent Solids: 86.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.56 g	100 mL	381854	12/11/21 12:23	KFS	TAL PIT
Total/NA	Analysis	EPA 6020B		1			382419	12/15/21 19:12	RSK	TAL PIT
Instrument ID: DORY										

**Client Sample ID: SS-02**

**Lab Sample ID: 180-131076-2**

Date Collected: 12/08/21 12:58

Matrix: Solid

Date Received: 12/10/21 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			382013	12/13/21 15:00	SMW	TAL PIT
Instrument ID: NOEQUIP										

**Client Sample ID: SS-02**

**Lab Sample ID: 180-131076-2**

Date Collected: 12/08/21 12:58

Matrix: Solid

Date Received: 12/10/21 09:30

Percent Solids: 86.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.70 g	100 mL	381854	12/11/21 12:23	KFS	TAL PIT
Total/NA	Analysis	EPA 6020B		1			382419	12/15/21 19:37	RSK	TAL PIT
Instrument ID: DORY										

**Client Sample ID: SS-03**

**Lab Sample ID: 180-131076-3**

Date Collected: 12/08/21 13:04

Matrix: Solid

Date Received: 12/10/21 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			382013	12/13/21 15:00	SMW	TAL PIT
Instrument ID: NOEQUIP										

**Client Sample ID: SS-03**

**Lab Sample ID: 180-131076-3**

Date Collected: 12/08/21 13:04

Matrix: Solid

Date Received: 12/10/21 09:30

Percent Solids: 86.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.45 g	100 mL	381854	12/11/21 12:23	KFS	TAL PIT
Total/NA	Analysis	EPA 6020B		1			382419	12/15/21 19:40	RSK	TAL PIT
Instrument ID: DORY										

Eurofins TestAmerica, Pittsburgh



# Lab Chronicle

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 180-131076-1

## Client Sample ID: SS-04

Date Collected: 12/08/21 13:06

Date Received: 12/10/21 09:30

## Lab Sample ID: 180-131076-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			382013	12/13/21 15:00	SMW	TAL PIT
Instrument ID: NOEQUIP										

## Client Sample ID: SS-04

Date Collected: 12/08/21 13:06

Date Received: 12/10/21 09:30

## Lab Sample ID: 180-131076-4

Matrix: Solid

Percent Solids: 89.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.70 g	100 mL	381854	12/11/21 12:23	KFS	TAL PIT
Total/NA	Analysis	EPA 6020B		1			382419	12/15/21 19:44	RSK	TAL PIT
Instrument ID: DORY										

## Client Sample ID: SS-05

Date Collected: 12/08/21 13:12

Date Received: 12/10/21 09:30

## Lab Sample ID: 180-131076-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			382013	12/13/21 15:00	SMW	TAL PIT
Instrument ID: NOEQUIP										

## Client Sample ID: SS-05

Date Collected: 12/08/21 13:12

Date Received: 12/10/21 09:30

## Lab Sample ID: 180-131076-5

Matrix: Solid

Percent Solids: 90.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.77 g	100 mL	381854	12/11/21 12:23	KFS	TAL PIT
Total/NA	Analysis	EPA 6020B		1			382419	12/15/21 19:47	RSK	TAL PIT
Instrument ID: DORY										

## Client Sample ID: SS-06

Date Collected: 12/08/21 13:15

Date Received: 12/10/21 09:30

## Lab Sample ID: 180-131076-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			382013	12/13/21 15:00	SMW	TAL PIT
Instrument ID: NOEQUIP										

## Client Sample ID: SS-06

Date Collected: 12/08/21 13:15

Date Received: 12/10/21 09:30

## Lab Sample ID: 180-131076-6

Matrix: Solid

Percent Solids: 86.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.79 g	100 mL	381854	12/11/21 12:23	KFS	TAL PIT
Total/NA	Analysis	EPA 6020B		1			382419	12/15/21 19:51	RSK	TAL PIT
Instrument ID: DORY										

Eurofins TestAmerica, Pittsburgh

# Lab Chronicle

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 180-131076-1

**Client Sample ID: SS-07**

**Date Collected: 12/08/21 13:21**

**Date Received: 12/10/21 09:30**

**Lab Sample ID: 180-131076-7**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			382013	12/13/21 15:00	SMW	TAL PIT
Instrument ID: NOEQUIP										

**Client Sample ID: SS-07**

**Date Collected: 12/08/21 13:21**

**Date Received: 12/10/21 09:30**

**Lab Sample ID: 180-131076-7**

**Matrix: Solid**

**Percent Solids: 84.1**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.83 g	100 mL	381854	12/11/21 12:23	KFS	TAL PIT
Total/NA	Analysis	EPA 6020B		1			382419	12/15/21 20:01	RSK	TAL PIT
Instrument ID: DORY										

**Client Sample ID: SS-08**

**Date Collected: 12/08/21 13:25**

**Date Received: 12/10/21 09:30**

**Lab Sample ID: 180-131076-8**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			382013	12/13/21 15:00	SMW	TAL PIT
Instrument ID: NOEQUIP										

**Client Sample ID: SS-08**

**Date Collected: 12/08/21 13:25**

**Date Received: 12/10/21 09:30**

**Lab Sample ID: 180-131076-8**

**Matrix: Solid**

**Percent Solids: 84.5**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.47 g	100 mL	381854	12/11/21 12:23	KFS	TAL PIT
Total/NA	Analysis	EPA 6020B		1			382419	12/15/21 20:05	RSK	TAL PIT
Instrument ID: DORY										

**Client Sample ID: SS-09**

**Date Collected: 12/08/21 13:30**

**Date Received: 12/10/21 09:30**

**Lab Sample ID: 180-131076-9**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			382013	12/13/21 15:00	SMW	TAL PIT
Instrument ID: NOEQUIP										

**Client Sample ID: SS-09**

**Date Collected: 12/08/21 13:30**

**Date Received: 12/10/21 09:30**

**Lab Sample ID: 180-131076-9**

**Matrix: Solid**

**Percent Solids: 86.4**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.71 g	100 mL	381854	12/11/21 12:23	KFS	TAL PIT
Total/NA	Analysis	EPA 6020B		1			382419	12/15/21 20:08	RSK	TAL PIT
Instrument ID: DORY										

Eurofins TestAmerica, Pittsburgh

# Lab Chronicle

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 180-131076-1

**Client Sample ID: SS-10**

**Date Collected: 12/08/21 13:33**

**Date Received: 12/10/21 09:30**

**Lab Sample ID: 180-131076-10**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			382013	12/13/21 15:00	SMW	TAL PIT
Instrument ID: NOEQUIP										

**Client Sample ID: SS-10**

**Date Collected: 12/08/21 13:33**

**Date Received: 12/10/21 09:30**

**Lab Sample ID: 180-131076-10**

**Matrix: Solid**

**Percent Solids: 84.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.71 g	100 mL	381854	12/11/21 12:23	KFS	TAL PIT
Total/NA	Analysis	EPA 6020B		1			382419	12/15/21 20:12	RSK	TAL PIT
Instrument ID: DORY										

**Client Sample ID: SS-10 DUP**

**Date Collected: 12/08/21 13:33**

**Date Received: 12/10/21 09:30**

**Lab Sample ID: 180-131076-11**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			382013	12/13/21 15:00	SMW	TAL PIT
Instrument ID: NOEQUIP										

**Client Sample ID: SS-10 DUP**

**Date Collected: 12/08/21 13:33**

**Date Received: 12/10/21 09:30**

**Lab Sample ID: 180-131076-11**

**Matrix: Solid**

**Percent Solids: 84.0**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.82 g	100 mL	381854	12/11/21 12:23	KFS	TAL PIT
Total/NA	Analysis	EPA 6020B		1			382419	12/15/21 20:15	RSK	TAL PIT
Instrument ID: DORY										

## Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

## Analyst References:

Lab: TAL PIT

Batch Type: Prep

KFS = Kelly Shannon

Batch Type: Analysis

RSK = Robert Kurtz

SMW = Shelby Walters

Eurofins TestAmerica, Pittsburgh

# Client Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 180-131076-1

**Client Sample ID: SS-01**

**Lab Sample ID: 180-131076-1**

Date Collected: 12/08/21 12:55

Matrix: Solid

Date Received: 12/10/21 09:30

Percent Solids: 86.5

**Method: EPA 6020B - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.9	F1	0.074	0.024	mg/Kg	☼	12/11/21 12:23	12/15/21 19:12	1
Cadmium	0.20		0.074	0.013	mg/Kg	☼	12/11/21 12:23	12/15/21 19:12	1
Copper	15	F1	0.22	0.15	mg/Kg	☼	12/11/21 12:23	12/15/21 19:12	1
Iron	14000		3.7	3.5	mg/Kg	☼	12/11/21 12:23	12/15/21 19:12	1
Lead	13		0.074	0.074	mg/Kg	☼	12/11/21 12:23	12/15/21 19:12	1
Manganese	360		0.37	0.32	mg/Kg	☼	12/11/21 12:23	12/15/21 19:12	1
Zinc	44	F1	0.37	0.36	mg/Kg	☼	12/11/21 12:23	12/15/21 19:12	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	13.5		0.1	0.1	%			12/13/21 15:00	1
Percent Solids	86.5		0.1	0.1	%			12/13/21 15:00	1



# Client Sample Results

Client: Geosyntec Consultants, Inc.  
 Project/Site: PPPP - LVW Basin

Job ID: 180-131076-1

**Client Sample ID: SS-02**

**Lab Sample ID: 180-131076-2**

Date Collected: 12/08/21 12:58

Matrix: Solid

Date Received: 12/10/21 09:30

Percent Solids: 86.4

**Method: EPA 6020B - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.9		0.068	0.022	mg/Kg	☼	12/11/21 12:23	12/15/21 19:37	1
Cadmium	0.18		0.068	0.012	mg/Kg	☼	12/11/21 12:23	12/15/21 19:37	1
Copper	18		0.20	0.14	mg/Kg	☼	12/11/21 12:23	12/15/21 19:37	1
Iron	16000		3.4	3.3	mg/Kg	☼	12/11/21 12:23	12/15/21 19:37	1
Lead	13		0.068	0.068	mg/Kg	☼	12/11/21 12:23	12/15/21 19:37	1
Manganese	390		0.34	0.29	mg/Kg	☼	12/11/21 12:23	12/15/21 19:37	1
Zinc	45		0.34	0.33	mg/Kg	☼	12/11/21 12:23	12/15/21 19:37	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	13.6		0.1	0.1	%			12/13/21 15:00	1
Percent Solids	86.4		0.1	0.1	%			12/13/21 15:00	1



# Client Sample Results

Client: Geosyntec Consultants, Inc.  
 Project/Site: PPPP - LVW Basin

Job ID: 180-131076-1

**Client Sample ID: SS-03**

**Lab Sample ID: 180-131076-3**

Date Collected: 12/08/21 13:04

Matrix: Solid

Date Received: 12/10/21 09:30

Percent Solids: 86.7

**Method: EPA 6020B - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	6.9		0.080	0.025	mg/Kg	☼	12/11/21 12:23	12/15/21 19:40	1
Cadmium	0.15		0.080	0.014	mg/Kg	☼	12/11/21 12:23	12/15/21 19:40	1
Copper	19		0.24	0.16	mg/Kg	☼	12/11/21 12:23	12/15/21 19:40	1
Iron	18000		4.0	3.8	mg/Kg	☼	12/11/21 12:23	12/15/21 19:40	1
Lead	12		0.080	0.080	mg/Kg	☼	12/11/21 12:23	12/15/21 19:40	1
Manganese	470		0.40	0.34	mg/Kg	☼	12/11/21 12:23	12/15/21 19:40	1
Zinc	44		0.40	0.38	mg/Kg	☼	12/11/21 12:23	12/15/21 19:40	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	13.3		0.1	0.1	%			12/13/21 15:00	1
Percent Solids	86.7		0.1	0.1	%			12/13/21 15:00	1



# Client Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 180-131076-1

**Client Sample ID: SS-04**

**Lab Sample ID: 180-131076-4**

Date Collected: 12/08/21 13:06

Matrix: Solid

Date Received: 12/10/21 09:30

Percent Solids: 89.0

**Method: EPA 6020B - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.8		0.066	0.021	mg/Kg	☼	12/11/21 12:23	12/15/21 19:44	1
Cadmium	0.12		0.066	0.011	mg/Kg	☼	12/11/21 12:23	12/15/21 19:44	1
Copper	17		0.20	0.14	mg/Kg	☼	12/11/21 12:23	12/15/21 19:44	1
Iron	15000		3.3	3.2	mg/Kg	☼	12/11/21 12:23	12/15/21 19:44	1
Lead	10		0.066	0.066	mg/Kg	☼	12/11/21 12:23	12/15/21 19:44	1
Manganese	380		0.33	0.28	mg/Kg	☼	12/11/21 12:23	12/15/21 19:44	1
Zinc	43		0.33	0.32	mg/Kg	☼	12/11/21 12:23	12/15/21 19:44	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	11.0		0.1	0.1	%			12/13/21 15:00	1
Percent Solids	89.0		0.1	0.1	%			12/13/21 15:00	1



# Client Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 180-131076-1

**Client Sample ID: SS-05**

**Lab Sample ID: 180-131076-5**

Date Collected: 12/08/21 13:12

Matrix: Solid

Date Received: 12/10/21 09:30

Percent Solids: 90.2

**Method: EPA 6020B - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	8.6		0.063	0.020	mg/Kg	☼	12/11/21 12:23	12/15/21 19:47	1
Cadmium	0.14		0.063	0.011	mg/Kg	☼	12/11/21 12:23	12/15/21 19:47	1
Copper	14		0.19	0.13	mg/Kg	☼	12/11/21 12:23	12/15/21 19:47	1
Iron	14000		3.1	3.0	mg/Kg	☼	12/11/21 12:23	12/15/21 19:47	1
Lead	10		0.063	0.063	mg/Kg	☼	12/11/21 12:23	12/15/21 19:47	1
Manganese	560		0.31	0.27	mg/Kg	☼	12/11/21 12:23	12/15/21 19:47	1
Zinc	33		0.31	0.30	mg/Kg	☼	12/11/21 12:23	12/15/21 19:47	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	9.8		0.1	0.1	%			12/13/21 15:00	1
Percent Solids	90.2		0.1	0.1	%			12/13/21 15:00	1





# Client Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 180-131076-1

**Client Sample ID: SS-06**

**Lab Sample ID: 180-131076-6**

Date Collected: 12/08/21 13:15

Matrix: Solid

Date Received: 12/10/21 09:30

Percent Solids: 86.2

**Method: EPA 6020B - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.7		0.065	0.021	mg/Kg	☼	12/11/21 12:23	12/15/21 19:51	1
Cadmium	0.12		0.065	0.011	mg/Kg	☼	12/11/21 12:23	12/15/21 19:51	1
Copper	22		0.19	0.13	mg/Kg	☼	12/11/21 12:23	12/15/21 19:51	1
Iron	19000		3.2	3.1	mg/Kg	☼	12/11/21 12:23	12/15/21 19:51	1
Lead	11		0.065	0.065	mg/Kg	☼	12/11/21 12:23	12/15/21 19:51	1
Manganese	270		0.32	0.28	mg/Kg	☼	12/11/21 12:23	12/15/21 19:51	1
Zinc	59		0.32	0.31	mg/Kg	☼	12/11/21 12:23	12/15/21 19:51	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	13.8		0.1	0.1	%			12/13/21 15:00	1
Percent Solids	86.2		0.1	0.1	%			12/13/21 15:00	1



# Client Sample Results

Client: Geosyntec Consultants, Inc.  
 Project/Site: PPPP - LVW Basin

Job ID: 180-131076-1

**Client Sample ID: SS-07**

**Lab Sample ID: 180-131076-7**

Date Collected: 12/08/21 13:21

Matrix: Solid

Date Received: 12/10/21 09:30

Percent Solids: 84.1

**Method: EPA 6020B - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.2		0.065	0.021	mg/Kg	☼	12/11/21 12:23	12/15/21 20:01	1
Cadmium	0.046	J	0.065	0.011	mg/Kg	☼	12/11/21 12:23	12/15/21 20:01	1
Copper	8.7		0.20	0.13	mg/Kg	☼	12/11/21 12:23	12/15/21 20:01	1
Iron	8500		3.3	3.1	mg/Kg	☼	12/11/21 12:23	12/15/21 20:01	1
Lead	4.8		0.065	0.065	mg/Kg	☼	12/11/21 12:23	12/15/21 20:01	1
Manganese	230		0.33	0.28	mg/Kg	☼	12/11/21 12:23	12/15/21 20:01	1
Zinc	19		0.33	0.31	mg/Kg	☼	12/11/21 12:23	12/15/21 20:01	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	15.9		0.1	0.1	%			12/13/21 15:00	1
Percent Solids	84.1		0.1	0.1	%			12/13/21 15:00	1



# Client Sample Results

Client: Geosyntec Consultants, Inc.  
 Project/Site: PPPP - LVW Basin

Job ID: 180-131076-1

**Client Sample ID: SS-08**

**Lab Sample ID: 180-131076-8**

Date Collected: 12/08/21 13:25

Matrix: Solid

Date Received: 12/10/21 09:30

Percent Solids: 84.5

**Method: EPA 6020B - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.7		0.080	0.026	mg/Kg	☼	12/11/21 12:23	12/15/21 20:05	1
Cadmium	0.10		0.080	0.014	mg/Kg	☼	12/11/21 12:23	12/15/21 20:05	1
Copper	15		0.24	0.17	mg/Kg	☼	12/11/21 12:23	12/15/21 20:05	1
Iron	14000		4.0	3.8	mg/Kg	☼	12/11/21 12:23	12/15/21 20:05	1
Lead	9.1		0.080	0.080	mg/Kg	☼	12/11/21 12:23	12/15/21 20:05	1
Manganese	510		0.40	0.35	mg/Kg	☼	12/11/21 12:23	12/15/21 20:05	1
Zinc	35		0.40	0.39	mg/Kg	☼	12/11/21 12:23	12/15/21 20:05	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	15.5		0.1	0.1	%			12/13/21 15:00	1
Percent Solids	84.5		0.1	0.1	%			12/13/21 15:00	1



# Client Sample Results

Client: Geosyntec Consultants, Inc.  
 Project/Site: PPPP - LVW Basin

Job ID: 180-131076-1

**Client Sample ID: SS-09**

**Lab Sample ID: 180-131076-9**

Date Collected: 12/08/21 13:30

Matrix: Solid

Date Received: 12/10/21 09:30

Percent Solids: 86.4

**Method: EPA 6020B - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.5		0.068	0.022	mg/Kg	☼	12/11/21 12:23	12/15/21 20:08	1
Cadmium	0.12		0.068	0.012	mg/Kg	☼	12/11/21 12:23	12/15/21 20:08	1
Copper	19		0.20	0.14	mg/Kg	☼	12/11/21 12:23	12/15/21 20:08	1
Iron	15000		3.4	3.2	mg/Kg	☼	12/11/21 12:23	12/15/21 20:08	1
Lead	9.7		0.068	0.068	mg/Kg	☼	12/11/21 12:23	12/15/21 20:08	1
Manganese	430		0.34	0.29	mg/Kg	☼	12/11/21 12:23	12/15/21 20:08	1
Zinc	40		0.34	0.33	mg/Kg	☼	12/11/21 12:23	12/15/21 20:08	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	13.6		0.1	0.1	%			12/13/21 15:00	1
Percent Solids	86.4		0.1	0.1	%			12/13/21 15:00	1



# Client Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 180-131076-1

**Client Sample ID: SS-10**

**Lab Sample ID: 180-131076-10**

Date Collected: 12/08/21 13:33

Matrix: Solid

Date Received: 12/10/21 09:30

Percent Solids: 84.6

**Method: EPA 6020B - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.2		0.069	0.022	mg/Kg	☼	12/11/21 12:23	12/15/21 20:12	1
Cadmium	0.10		0.069	0.012	mg/Kg	☼	12/11/21 12:23	12/15/21 20:12	1
Copper	16		0.21	0.14	mg/Kg	☼	12/11/21 12:23	12/15/21 20:12	1
Iron	14000		3.5	3.3	mg/Kg	☼	12/11/21 12:23	12/15/21 20:12	1
Lead	9.1		0.069	0.069	mg/Kg	☼	12/11/21 12:23	12/15/21 20:12	1
Manganese	390		0.35	0.30	mg/Kg	☼	12/11/21 12:23	12/15/21 20:12	1
Zinc	37		0.35	0.33	mg/Kg	☼	12/11/21 12:23	12/15/21 20:12	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	15.4		0.1	0.1	%			12/13/21 15:00	1
Percent Solids	84.6		0.1	0.1	%			12/13/21 15:00	1



# Client Sample Results

Client: Geosyntec Consultants, Inc.  
 Project/Site: PPPP - LVW Basin

Job ID: 180-131076-1

**Client Sample ID: SS-10 DUP**

**Lab Sample ID: 180-131076-11**

Date Collected: 12/08/21 13:33

Matrix: Solid

Date Received: 12/10/21 09:30

Percent Solids: 84.0

**Method: EPA 6020B - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.4		0.065	0.021	mg/Kg	☼	12/11/21 12:23	12/15/21 20:15	1
Cadmium	0.11		0.065	0.011	mg/Kg	☼	12/11/21 12:23	12/15/21 20:15	1
Copper	18		0.20	0.13	mg/Kg	☼	12/11/21 12:23	12/15/21 20:15	1
Iron	16000		3.3	3.1	mg/Kg	☼	12/11/21 12:23	12/15/21 20:15	1
Lead	10		0.065	0.065	mg/Kg	☼	12/11/21 12:23	12/15/21 20:15	1
Manganese	380		0.33	0.28	mg/Kg	☼	12/11/21 12:23	12/15/21 20:15	1
Zinc	44		0.33	0.32	mg/Kg	☼	12/11/21 12:23	12/15/21 20:15	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	16.0		0.1	0.1	%			12/13/21 15:00	1
Percent Solids	84.0		0.1	0.1	%			12/13/21 15:00	1



# QC Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 180-131076-1

## Method: EPA 6020B - Metals (ICP/MS)

**Lab Sample ID: MB 180-381854/1-A**  
**Matrix: Solid**  
**Analysis Batch: 382419**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 381854**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.032		0.10	0.032	mg/Kg		12/11/21 12:23	12/15/21 10:07	1
Cadmium	<0.017		0.10	0.017	mg/Kg		12/11/21 12:23	12/15/21 10:07	1
Copper	<0.21		0.30	0.21	mg/Kg		12/11/21 12:23	12/15/21 10:07	1
Iron	<4.8		5.0	4.8	mg/Kg		12/11/21 12:23	12/15/21 10:07	1
Lead	<0.10		0.10	0.10	mg/Kg		12/11/21 12:23	12/15/21 10:07	1
Manganese	<0.43		0.50	0.43	mg/Kg		12/11/21 12:23	12/15/21 10:07	1
Zinc	<0.48		0.50	0.48	mg/Kg		12/11/21 12:23	12/15/21 10:07	1

**Lab Sample ID: LCS 180-381854/2-A**  
**Matrix: Solid**  
**Analysis Batch: 382419**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 381854**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	100	88.3		mg/Kg		88	80 - 120
Cadmium	50.0	50.1		mg/Kg		100	80 - 120
Chromium	50.0	49.7		mg/Kg		99	80 - 120
Copper	50.0	46.1		mg/Kg		92	80 - 120
Iron	500	506		mg/Kg		101	80 - 120
Lead	50.0	49.4		mg/Kg		99	80 - 120
Manganese	50.0	48.2		mg/Kg		96	80 - 120
Zinc	25.0	22.3		mg/Kg		89	80 - 120

**Lab Sample ID: 180-131076-1 MS**  
**Matrix: Solid**  
**Analysis Batch: 382419**

**Client Sample ID: SS-01**  
**Prep Type: Total/NA**  
**Prep Batch: 381854**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	7.9	F1	74.1	60.0	F1	mg/Kg	☼	70	75 - 125
Cadmium	0.20		37.0	29.9		mg/Kg	☼	80	75 - 125
Chromium	12	B F1	37.0	40.2		mg/Kg	☼	75	75 - 125
Copper	15	F1	37.0	44.0		mg/Kg	☼	78	75 - 125
Iron	14000		370	14700	4	mg/Kg	☼	189	75 - 125
Lead	13		37.0	45.2		mg/Kg	☼	88	75 - 125
Manganese	360		37.0	425	4	mg/Kg	☼	181	75 - 125
Zinc	44	F1	18.5	56.3	F1	mg/Kg	☼	64	75 - 125

**Lab Sample ID: 180-131076-1 MSD**  
**Matrix: Solid**  
**Analysis Batch: 382419**

**Client Sample ID: SS-01**  
**Prep Type: Total/NA**  
**Prep Batch: 381854**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	7.9	F1	74.1	58.4	F1	mg/Kg	☼	68	75 - 125	3	20
Cadmium	0.20		37.0	29.3		mg/Kg	☼	78	75 - 125	2	20
Chromium	12	B F1	37.0	39.8	F1	mg/Kg	☼	74	75 - 125	1	20
Copper	15	F1	37.0	42.7	F1	mg/Kg	☼	74	75 - 125	3	20
Iron	14000		370	14700	4	mg/Kg	☼	180	75 - 125	0	20
Lead	13		37.0	41.6		mg/Kg	☼	78	75 - 125	8	20
Manganese	360		37.0	390	4	mg/Kg	☼	85	75 - 125	9	20
Zinc	44	F1	18.5	57.8	F1	mg/Kg	☼	72	75 - 125	3	20

Eurofins TestAmerica, Pittsburgh

# QC Sample Results

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 180-131076-1

## Method: 2540G - SM 2540G

**Lab Sample ID: 180-131076-1 DU**  
**Matrix: Solid**  
**Analysis Batch: 382013**

**Client Sample ID: SS-01**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	13.5		13.9		%		3	10
Percent Solids	86.5		86.1		%		0.4	10

**Lab Sample ID: 180-131076-11 DU**  
**Matrix: Solid**  
**Analysis Batch: 382013**

**Client Sample ID: SS-10 DUP**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	16.0		19.3	F3	%		19	10
Percent Solids	84.0		80.7		%		4	10





# QC Association Summary

Client: Geosyntec Consultants, Inc.  
Project/Site: PPPP - LVW Basin

Job ID: 180-131076-1

## Metals

### Prep Batch: 381854

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-131076-1	SS-01	Total/NA	Solid	3050B	
180-131076-2	SS-02	Total/NA	Solid	3050B	
180-131076-3	SS-03	Total/NA	Solid	3050B	
180-131076-4	SS-04	Total/NA	Solid	3050B	
180-131076-5	SS-05	Total/NA	Solid	3050B	
180-131076-6	SS-06	Total/NA	Solid	3050B	
180-131076-7	SS-07	Total/NA	Solid	3050B	
180-131076-8	SS-08	Total/NA	Solid	3050B	
180-131076-9	SS-09	Total/NA	Solid	3050B	
180-131076-10	SS-10	Total/NA	Solid	3050B	
180-131076-11	SS-10 DUP	Total/NA	Solid	3050B	
MB 180-381854/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 180-381854/2-A	Lab Control Sample	Total/NA	Solid	3050B	
180-131076-1 MS	SS-01	Total/NA	Solid	3050B	
180-131076-1 MSD	SS-01	Total/NA	Solid	3050B	

### Analysis Batch: 382419

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-131076-1	SS-01	Total/NA	Solid	EPA 6020B	381854
180-131076-2	SS-02	Total/NA	Solid	EPA 6020B	381854
180-131076-3	SS-03	Total/NA	Solid	EPA 6020B	381854
180-131076-4	SS-04	Total/NA	Solid	EPA 6020B	381854
180-131076-5	SS-05	Total/NA	Solid	EPA 6020B	381854
180-131076-6	SS-06	Total/NA	Solid	EPA 6020B	381854
180-131076-7	SS-07	Total/NA	Solid	EPA 6020B	381854
180-131076-8	SS-08	Total/NA	Solid	EPA 6020B	381854
180-131076-9	SS-09	Total/NA	Solid	EPA 6020B	381854
180-131076-10	SS-10	Total/NA	Solid	EPA 6020B	381854
180-131076-11	SS-10 DUP	Total/NA	Solid	EPA 6020B	381854
MB 180-381854/1-A	Method Blank	Total/NA	Solid	EPA 6020B	381854
LCS 180-381854/2-A	Lab Control Sample	Total/NA	Solid	EPA 6020B	381854
180-131076-1 MS	SS-01	Total/NA	Solid	EPA 6020B	381854
180-131076-1 MSD	SS-01	Total/NA	Solid	EPA 6020B	381854

## General Chemistry

### Analysis Batch: 382013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-131076-1	SS-01	Total/NA	Solid	2540G	
180-131076-2	SS-02	Total/NA	Solid	2540G	
180-131076-3	SS-03	Total/NA	Solid	2540G	
180-131076-4	SS-04	Total/NA	Solid	2540G	
180-131076-5	SS-05	Total/NA	Solid	2540G	
180-131076-6	SS-06	Total/NA	Solid	2540G	
180-131076-7	SS-07	Total/NA	Solid	2540G	
180-131076-8	SS-08	Total/NA	Solid	2540G	
180-131076-9	SS-09	Total/NA	Solid	2540G	
180-131076-10	SS-10	Total/NA	Solid	2540G	
180-131076-11	SS-10 DUP	Total/NA	Solid	2540G	
180-131076-1 DU	SS-01	Total/NA	Solid	2540G	
180-131076-11 DU	SS-10 DUP	Total/NA	Solid	2540G	

Eurofins TestAmerica, Pittsburgh

**Eurofins TestAmerica, Pittsburgh**

301 Alpha Drive  
 RIDC Park  
 Pittsburgh, PA 15238-2907  
 phone 412.963.7058 fax 412.963.2468

**Chain of Custody Record**



TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Regulatory Program:  DW  NPDES  RCRA  Other:

<b>Project Manager: Jeremiah Johnson</b>		COC No: 01	
<b>Client Contact</b>		Date: _____	
Email: <a href="mailto:jpjohnson@geosyntec.com">jpjohnson@geosyntec.com</a>		Site Contact: Jeremiah Johnson	
Tel/Fax: 414-322-1164		Lab Contact: Sandie Fredrick	
Geosyntec Consultants		Carrier: _____	
10600 N. Port Washington Road, Suite 100		TALS Project #:	
Mequon, WI 53092		Sampler: Brandon Mayfield	
(414)-322-1164 Phone		For Lab Use Only:	
FAX		Walk-in Client: _____	
Project Name: PPPP - LVW Basin		Lab Sampling: _____	
Site: We Energies PPPP		Job / SDG No.: _____	
P O #: WEC Energy Group (Taulia)			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y / N)	metals (As, Cd, triv Cr, Pb, Fe, Mn, Cu, Zn) - EPA Method 6020A	Sample Specific Notes:												
SS-01	12/8/2021	12:55	G	S	1		X														
SS-02	12/8/2021	12:58	G	S	1		X														
SS-03	12/8/2021	13:04	G	S	1		X														
SS-04	12/8/2021	13:06	G	S	1		X														
SS-05	12/8/2021	13:12	G	S	1		X														
SS-06	12/8/2021	13:15	G	S	1		X														
SS-07	12/8/2021	13:21	G	S	1		X														
SS-08	12/8/2021	13:25	G	S	1		X														
SS-09	12/8/2021	13:30	G	S	1		X														
SS-10	12/8/2021	13:33	G	S	1		X														
SS-10 DUP	12/8/2021	13:33	G	S	1		X														



**Preservation Used:** 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other \_\_\_\_\_

**Possible Hazard Identification:**  
 Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**  
 Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months

**Special Instructions/QC Requirements & Comments:**  
 Send samples to the Pittsburgh lab for quick TAT (5 day)  
 Invoice WEC Energy Group through the on-line system (Taulia) - Attn: Elizabeth Hellman; elizabeth.hellman@wecenergygroup.com

Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No.:	Cooler Temp. (°C):	Obs'd:	Corr'd:	Therm ID No.:
Relinquished by: <i>Brandon Mayfield</i>	Company: <i>Geosyntec</i>	Date/Time: <i>12/9/21 11:00</i>	Received by: <i>[Signature]</i>	Company: <i>[Signature]</i>	Date/Time: <i>12-9-21 11:00</i>
Relinquished by: <i>[Signature]</i>	Company: <i>[Signature]</i>	Date/Time: <i>12.9.21 1700</i>	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

# Login Sample Receipt Checklist

Client: Geosyntec Consultants, Inc.

Job Number: 180-131076-1

**Login Number: 131076**

**List Source: Eurofins TestAmerica, Pittsburgh**

**List Number: 1**

**Creator: Abernathy, Eric L**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

**ATTACHMENT 4**  
**Soil Sample Location Map**

# Pleasant Prairie Power Plant

8000 95th St., Pleasant Prairie, WI 53158

## Legend

● APPROXIMATE SOIL SAMPLE LOCATION

LOW VOLUME  
WASTEWATER BASIN

SS-10

SS-09

SS-07

SS-08

SS-06

SS-05

SS-03

SS-04

SS-01

SS-02

SOIL SAMPLE  
LOCATION MAP

400 ft